

CHAPTER I

INTRODUCTION

1.1 Background of the study

The development of any country largely depends upon the economic health (i.e. trade, industry, agriculture etc) and condition of the country. To develop these sectors a continuous and adequate supply of resources is required. Now a day the financial institution is viewed as catalyst in the process of the economic growth. The mobilization of the domestic resources is one of the key factors in the economic development of the country. Commercial banks and other financial institutions collect immobilized money in the form of deposits from every corner and parts of the country. This will provide capital for the development of the industry, trade and business and other resources deficit sectors. Integrated and speedy development of the country is only possible when competitive and reliable banking services are reached and operated every corner of the country. Commercial banks formulate sound investment policies to make it more effective, which eventually contribute to the economic development of the country. Formulation of sound investment policies and coordinated and planned efforts pushes forward the forces of economic growth.

It has been fully established that economic development if any country can be active only through a balanced growth in the field of industry, trade, commerce and agriculture. It has equally self-evident that the development in these fields cannot be made possible without the existence of sound banking system in the country. Many countries, aspiring for the rapid economic development have developed several banking and non-banking specialized financial institutions with objectives of meeting the financial needs of their economy.

There are various concepts among the economists about the origin of word “Banking”. The term bank derives from the Latin word Bancus, which refers to the bench on which the banker would keep its money and his records. Some persons trace its origin to the French word “Banque” and Italian word “Banca” Which means a bench for keeping, lending and exchanging go money in the market.

Bank is a financial intermediary accepting depositing and granting loans. It offers the widest menu of services of any financial institution. In fact, a modern bank performs such a variety of functions that it is difficult to give a precise and general definition of a bank. At present context bank is not only confined to accepting deposits and disbursing loan. In addition to this, a bank may be engaged in different types of functions such as remittance, exchange currency, joint venture, underwriting, bank guarantee, discounting bills etc.

Bank plays a predominant role in under developed economy in many ways as they promote capital formation by developing banking habit of people and collection saving. People have mobilized them in productive channels. Thus their role in the economic development is to remove the deficiency of capital by stimulating saving and investment.

1.2 Commercial Bank and Investment Policy

Commercial bank is an entity, which accepts deposits and makes short-term loans to business enterprises, regardless of the scope of its other services.

American Institution of Banking, 1972:345-346)

Commercial banks are major financial institutions, which occupy quite an important place in the framework of every economy. Commercial banks render numerous services to their customer in view of facilitating their economic and social life. All the economic activities of each and every country are greatly

influenced by the commercial banking business of that country. Commercial banks, by playing active roles, have changed the economic structure of the world. Thus, commercial banks have become the heart of financial system.

Commercial bank in current year presents a new picture of innovation in practice of wider horizon and of new enterprises. The most remarkable diversification of banking function in the banks increasing participation in medium and long term financing industries and other sector so they are not only financial institution of finance agriculture and industry and other economic activities but are more than financial institution in the sense that they help saving, create deposits and make the subsequent distribution of such accumulated funds.

In addition to the acceptance of deposits, lending and investing they provide a multiple of services including accepting traveler's cheque and underwriting, purchase and sales of securities, government bonds of customers, buy and sale of foreign exchange, the insurance of commercial letter of credit supply of timely credit and market information, providing remittance facilities and so on.

Commercial Bank act 2031 B.S. defines "A Commercial Bank is that bank which exchange money, accepts deposits, grants loan and performs banking function." For the poor and least developed countries like Nepal, having low per capita income and GDP, faces many economic problems such as inflation and deflation of monetary trade, trade deficit and budget deficit. Commercial banks play important role in removing such problems by capital formulation for deficits spending units (trade and industry as well as general public). They also finance in small and cottage industries and agricultural sector under priority sector investment scheme to serve the marginal people.

The American Institute of Banking has laid down the four major functions of the commercial banks such as receiving and handling deposits, handling payments for its clients, making loans and investment and creating money by extension of credit.

Nepal commercial bank act 2031 B.S. has defined commercial bank as stated earlier and it has also emphasized on their functions. Major of them is as follows:-

1. They accept custody of funds with or without interest and open fixed accounts and saving accounts in the name of depositions.
2. They supply loans (Short term debt as well as long term debts whatever necessary for trade and commerce) or make investment.
3. They help to issue shares and debentures of any company or any other corporate body, guarantee or underwrite such shares or debentures and undertaken agency business but not become a managing agent.
4. Conduct transactions in bonds, provisionary notes or bills of exchange foreign exchange relating to commerce or corporation as are redeemable within the kingdom.
5. They grant overdraft.
6. They issue letter of credit draft and traveler's cheque.
7. They remit or transit fund to different place with in or outside kingdom.
8. They purchase, sell or accept the securities of HMG.

Besides this, the commercial bank arranges the amount of foreign exchange required by various organizations and travelers. Moreover foreign trade transactions are facilitated through the issuance of letter of credit. Bank also provides locker facilities or the customers to keep valuable ornaments and documents. Bank also provides reference about the financial position of their customers as and when required. The bank works as an agent of its customers to receive and make payments, pay and collect rent, pay insurance premium etc. In case of joint venture commercial bank it issues internationally valid credit cards,

ATM cards, Tele banking etc. Besides bank has many more functions and roles in the development of national economy.

Commercial banks must mobilize its deposits and other funds to profitable, secured, stable and marketable sector. Then only it can earn more profit as well as it should be secured can be converted into cash whenever needed. But, commercial banks have to pay due consideration while formulating investment policy regarding loan and investment. Investment policy is one facet of the overall spectrum of policies that guide bank's investment operations. A healthy development of any bank depends heavily upon its investment policy. A sound and viable investment policy attracts both borrowers and lenders, which helps to increase the volume and quality of deposits, loan and investment. Commercial bank should be careful while performing the credit creation function. The bank should never invest its funds in those securities, which are subject to too much depreciation and fluctuations because a little difference may cause a great loss. It must not invest its funds into speculative businessman who may be bankrupt at once and who may earn millions in a minute.

Commercial banks must follow the rules and regulation as well as different directions issued by the central bank, ministry of finance, ministry of law and other regulatory bodies while mobilizing its funds. So, the bank should invest its funds in legal securities only. Diana Mc Naughton in her research paper '**Banking Institutions in Developing Market**' states that investment policy should incorporate several elements such as regulatory environment, the availability of funds the selection of risk, loan portfolio balance and term structure of the liabilities (MC Naughton;1994:19). Thus commercial banks should incorporate several elements while making investment policy. The loan provided by commercial bank is guided by several principles such as length of time, their purpose profitability, safety etc. These fundamental principles of commercial bank's investment are fully considered while making investment decisions.

In developing countries especially like ours, there is always a dearth of capital. The government cannot contribute to the economic development all alone. Nevertheless, the private sector also cannot reinforce due to low per capita income and higher propensity to consume of the people. Hence due to low income, saving is low which on the other hand results in low capital formation. Thus, investment is one of the vital aspects in the improvement of the economic condition of a country.

An investment is a commitment of funds made in the expectation of the positive rate of return. If the investment is properly undertaken the return will be commensurate with the risk, the investor assumes. Investment is concerned with the management of investors. Wealth, which is the sum of current income and present values of all future income funds to be invested, came from assets already owned borrowed money and saving or foregone consumption by the investor.

In general investment means to pay out money to get more and is generally uncertain. Investment has to undergo various types of risk e.g. Business risk, possibility of being wane in earning power of investment due to competition, uncontrollable cost, change in demand etc., market risk, possibility of change in market price and collateral value of securities and real properties. Therefore investment is a very risky job for a purposeful safe and profitable investment, making an investment is not sufficient one should follow sound investment policy. The fundamental principle of investment must be followed thoroughly for profitable investment. Investment policy should ensure maximum amount of investment to all sectors with proper utilization. There is high liquidity in the market and it seems no profitable place to invest these. Investment policy provides the bank several inputs through which they can handle their investment operation efficiently ensuring the maximum return with minimum risk, which ultimately

leads the bank to the path of success to achieve its organizational objectives of shareholders wealth maximization.

This is a common factor that investment is possible only when there are adequate savings. If all of the income is spend on for daily usage, there will be no amount left for making investment. So, collection and investment are always inter-related and go hand in hand. Every people wish to collect or save their income and invest in highly return firm. In terms of bank, collection means deposits, borrowing, income saving of customers etc.

Investments are made in assets. Assets generally are of two types. Real assets (i.e. land, building, factories etc) and financial assets (i.e. Stocks, bonds, T-bill etc). These two types of investments are not competitive but complementary, highly-developed institutions for financial investment greatly facilitating real investment. Investment policy fixes responsibilities for the investment deposition of the bank assets in term of allocation funds for investment and loan establishing responsibility for day to day management of those assets.

James B. Baxley, 1987:124)

Investment by individual, business and government involves a present sacrifice of income to get on expected future benefit; as a result investment raises a nation's standard of living.

The World Book Encyclopedia, 1976; 232)

Investment is the sacrifice of current dollars for future dollars and time and risk is involved in investment. A sacrifice takes place in the present and is certain. The reward comes later, it at all, and the magnitude is generally uncertain. In some case the element of time predominates. In other cases risk is the dominant attribute.

William F. Sharpe, Alexander, Gorden J. and Jeffery V.Bailey.1994:1

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.

J.K. Francies, 1991:1

According to Sharpe, Alexander and Bailey (1999), “Investment can be categorized as real investments and financial investments. Real investments generally involve some kinds of tangible assets such as land, machinery or factories. Financial investments involve contracts written on pieces of paper, such as common stocks and bonds.”

William F. Sharpe and Alexander J. Gordon (1998) define investment as, “Investment in its broadest sense, means the sacrifice of certain present value for (possible uncertain) future value.”

Above mentioned definition about the investment clarifies the investment means to trade money for exceed the current cash out flow which is the benefits to the investors for sacrificing the time and commitment or due to uncertainty and risk factors. Financial institution must be able to mobilize their deposits collection funds in profitable, secured and marketable sector so that they can earn good return to their investment.

The bank and finance companies are such type of financial institutions which deal in money and substitute of money, or deal with credit and credit instrument. Good management of credit and credit instrument in very important for the banks and financial institutions to collect funds and utilize it in good investment sector. Any way the goal of investment is the maximization of the owner’s economic welfare.

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

1.3 Features of Sound Investment Policy

The income and profit of the bank depends upon its lending procedure, lending policy and investment of its fund in different securities. The greater the credit created by the bank, the higher will be the profitability. A sound lending and investment policy is not only pre-requisite for profitability, but also crucially important for the promotion of commercial savings of backward country like Nepal. Many authors as under have given some necessities for sound lending and investment policies, which most of the bank must consider:

- Safety and Security

The bank should never invest its funds in those securities, which are subject to too much depreciation and fluctuation because a little difference may cause a great loss. It must not invest its funds into speculative businessman who may be bankrupt at once and who may earn million in a minute also. The bank should accept that type of securities, which are commercial, durable and marketable and have high market prices. In this case, “Mast” should be applied for the investment. Where,

M=Marketability.

A=Ascertainity.

S=Stability.

T=Transferability

- Profitability

A commercial bank can maximize its volume of wealth through maximization of return on their investment and lending. So, they must invest their funds where they gain maximum profit. The profit of commercial bank mainly depends on the interest rate, volume of loan, its time period and nature of investment in different securities.

- Liquidity

People deposit money at the bank in different account with confidence that the bank will repay their money when they need. To maintain such confidence of depositors, the bank must keep this point in mind while investing its excess funds in different securities or at the same time of lending. So that it can meet current or short-term obligations when they become due for payment.

-Purpose of Loan

Why is customer in need of loan? This is very important question for any banker. If borrower misuses the loan granted by the bank, they can never repay and the bank will possess heavy bad debts. Detailed information about the scheme of the project or activities would be examined before lending.

- Diversification

“A bank should not lay all its eggs on the same basket.” This saying is very important to the bank and it should be always careful not to grant loan in only one sector. To minimize risk, a bank must diversify its investment on different sectors. Diversification of loan helps to sustain loss according to the law of average

because if securities of a company deprived, there may be appreciation in the securities of other companies. In this way, the loss can be recovered.

-Tangibility

Though it may be considered that tangible property doesn't yield an income apart from satisfaction of possession of property, many times, intangible securities have lost their value due to price level inflation. A commercial bank should prefer tangible security to intangible one.

-Legality

Illegal securities will bring out many problems for the investor. A development bank must follow the rules and regulation as well as different directions issued by Nepal Rastra Bank, Ministry of Law and other mobilizing its funds.

Other factors affecting the investment policies

Beside above mentioned basic principles, some basic factors really affect the investment policies and composition of the components. However, their degree of affecting power may vary. These other factors that have significant affecting power are given as follows:

- Regulatory Provision

Regulatory Provision has the maximum impact upon the investment policies and the composition of portfolio. Usually, in every state there will be the legal restrictions for the investors to invest their funds in various components. Such restrictions might be in the form of the limitation of invest able amount on particular securities or the allowed sectors of the investment.

- Management Perception

Another factor affecting the investment policy and component will be the management's attitude as well as the self imposed limitation from their side. If management wishes to increase the yield, investment policy will be to divert the fund to the high yielding portfolios, rather than the more safe but low yielding components or vice-versa. Beside this, the management may impose self – limitation of investment components according to the condition of the business and it also capable of changing the investment portfolio.

- Present composition of the investment portfolio

Investment policy and the composition are also affected by the size, maturity stage, and interest or return rate on the capital etc. if it already holds the component having mid- term maturity, then the consideration of upcoming investments will be on the long or short term maturing components. Thus the composition of the investment in hand also affects the investment policy.

- Availability and accessibility of the investment components

When best-suited investment components are not available or accessible, then also the investment policy can be affected. When best-suited investment sector will not be available, then a strong search for the investment area should be made. We can take the example of present condition of our Nepal in which the investment horizon has gone to minimum the situation is because of the political condition in the country.

1.4 Objectives of the study

The main objectives of this study are to evaluate the investment policy of Nepal Investment Bank Ltd. (NIBL) and Nabil Bank Ltd. and to recommend corrective measures, if any, in order to improve its performance. Besides, these may be other objectives too.

- i) To determine the growth rate of bank in terms of deposits, loans and advances, investment and profitability of the bank.
- ii) To determine the proportion of investment in risky and risk free assets and to evaluate the off balance sheet operating of the bank.
- iii) To evaluate the liquidity, assets management, profitability and risk position of NIBL and NABIL.
- iv) To analyze the investment policy of NABIL & NIBL.

1.5 Need of the study

In the context of Nepal there are less availability of research work, journals and articles in investment policy of commercial banks as well as other financial institutions. As it is being well known fact that the commercial banks can affect the economic conditions of the whole country the effort is made to highlight the investment policy of joint venture banks expecting that the study can be bridge to the gap between deposits and investment.

1.6 Limitations of the study

Significance and scope of the study can be observed through the importance of the study also. It has been tried to make this study more comprehensive and clear by collecting tabulating, compiling and presenting recent information as far as possible. Till now, very little work has been done in this subject matter. The other limitations of the study are as under:

- i.** Study was for the period of five year starting from fiscal year 2005/06 to 2009/10
- ii.** This study is mainly based on annual reports and other publication of NIBL and Nabil Bank, publication of NEPSE, and publication of other authorities regarding the investment and other aspect of the bank.

iii. Out of the numerous affecting factors, this study concentrates only on those factors, which are related with investment policy, and available in the form required for analyzing the different issues.

iv. Data used in the study are secondary nature.

v. The study was carried out on the financial statement and records of official data.

Therefore the decision methods of the bank are not analyzed.

vi. Although efforts were made focus on the activities and investment policy of the Nepal Investment Bank Ltd and Nabil Bank Ltd. it may not cover all important and pertinent investment procedure of the corporation. **vii.** Due to wide range of data deficiencies only simple technique have been used for the analysis of the data.

1.7 Statement of Problem

Mushrooming of private sector banks is the present situation of Nepalese financial sector. The fast growth of such organization has contributed the prorate increment in collecting deposits and their investment. They collect adequate amount from the mass, however they could not find or locate new investment sectors required to mobilize their funds on the changing context of Nepal. Only few commercial banks are getting regular profits. Most of them are unable to satisfy their shareholders and customers in earning profit and ensuring their safe deposit. Some banks are incurring losses in early establishment years. It is not that they do not have potential clients or adequate deposits but they cannot find profitable sectors or opportunities to invest the deposit collection. They have always feared with high degree of risk and uncertainty.

In the dawn of new millennium, towards the end of 2005 A.D., there are 17 commercial banks. All these banks have created a cutthroat competition in the

financial sector. Fluctuating and low interest rates on deposits, poor deposit mobilization etc. has affected on the return of fund, total assets, total deposits and shareholders' wealth position. Since liberalization policy of the government, various banks and financial institutions have been established with a view to reinforce the economic growth of the country. They have played an indispensable role by accepting deposits and granting loans. Investment of the collected funds is the most important factor for both shareholders and the bank as they are the source of earning. Credit extended by these banks is directly related to the national interest. Therefore, the banks should have a sound investment policy.

There are various problems in resources mobilization by financial institution in Nepal. The most important problem is poor investment climate prevailing in Nepal due to heavy regulatory procedure, uncertain government policy, NRB's stringent directives, unsecured social environment etc. Lack of sound investment policy is another reason for a commercial bank not to properly utilizing its deposits that is making loan and advances or lending for a profitable project. This condition may the commercial bank to the position of liquidation. Commercial banks are more interested in providing loans on short-term basis against movable collaterals. They are reluctant to invest in huge and long term projects due to safety and security of their loans. Thus, they are following conservative loan policy based on strong security. Similarly, these banks do not have a well-organized investment policy. They rely much on the instructions and guidelines of Nepal Rastrya Bank. Even if they have formulated some guidelines, they fail to implement it due to poor supervision and lack of professionalism. Project appraisal method followed by commercial banks is not scientific and appropriate.

Granting loan against insufficient deposits, overvaluation of goods pledged, land and building mortgaged, risk-averting decision regarding loan recovery and

negligence in recovery of overdue loans are some of the drawbacks of unsound investment policy. Similarly, loan supervision and follow-up mechanism is lacking in many commercial banks. Due to this, the portion of non-performing assets on total loans and advances has been increasing rapidly.

As with everything in Nepal, every commercial bank has an investment in the same sectors. They are in consumer lending, 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 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 our any sectors.

Nepal being an agricultural country needs more investment in this sector. Nevertheless, commercial banks are rather concerned in industrial and foreign projects. As a result, the credit extended to this sector is unsatisfactory. Besides, they are not even fulfilling the NRB's regulation of 12% investment of their total loans to the priority sectors like agriculture, cottage and small industries and services. Similarly, the banks are not following the diversification principle i.e. they are not considering the investment portfolio position. A good portfolio theory indicates diversification of investable funds to reduce risks. Hence, the principle “do not put all the eggs in one basket” really does not apply in context of Nepalese commercial banks. As a result, many banks today could not recover their loan because, in the past, a major portion of their investment were made in garment, carpets and hotel sectors that has now come to brink of extinction.

Thus, the study mainly focuses on analyzing the different aspects of the bank and finding the answers to questions such as;

- Is the bank able to utilize the available funds effectively?
- How aggressively is the bank lending?
- What is the proportion of risk free and risky investment on total investment made by the Bank?
- What is the proportion of Non- performing assets on total loans and advances of the bank?
- What is the relationship of total deposit on total investment and total investment on total net profit of the bank?
- What steps should be taken to improve the investment policy of the bank?
- Is the bank maintaining sufficient liquidity, profitability and risk position?
- Does the investment decision affect the total earning of the commercial bank?

1.8 Focus and Significance of the Study

The main focus of the study is to highlight the investment policies of commercial banks expecting that the study can be bridge the gap between deposits and investment policies. On the other hand, the study would provide information to management of the bank that would help them to take collective action. Further from the study, the shareholders would get information to make decision while making investment on shares of various banks.

Having completed the basic analysis required for the study, the researcher must point out the mistakes and errors and also correct them by giving suitable suggestions for further improvement. Since researcher has the banking experience of about four years which also includes working in the “Assets Liability Management Committee (ALCO)” of commercial banks, the recommendations prescribed herewith will have more practical touch. Therefore, this summarized and recommended tasks of the researcher of the study would be meaningful to the top management of the bank to initiate the action and achieve the desired result.

In the context of Nepal there is less availability of research work, Journal and Articles in investment policy of commercial banks as well as other financial institution. As it is a well known fact that the success and prosperity of the bank relies heavily upon the successful investment of collected resource to the important sectors of economy. Successful formulation and effective implementation of investment policy is the prime requisite for the successful performance of commercial banks. There are various problems in effective investment of commercial banks of Nepal, which affect their performance to a greater extent. Performance of commercial banks does not seem so satisfactory in terms of utilizing its resource efficiently in productive sectors. Hence the main significance of this study of investment portfolio analysis of Nepalese commercial banks is to help how to minimize risk of investment and maximize return through portfolio analysis. Similarly, the study of commercial banks investment trend, risk return pattern, portfolio management, credit management and effect on investment decision on earning will strive to disclose the internal weakness of the banks and furnish the ideas for improvement. Therefore, the researcher has undertaken this study to analyze the existing investment portfolio of Nepal Investment Bank and point out the various weaknesses of defects inherent in it and provide package of suggestions for its improvement.

1.9 Organization of the Study

The whole study has been divided into six chapters. First is introduction chapter, which includes general background, statement of the problem, focus & signification of the study, objectives of the study and limitations of the study and chapter plan. Second chapter deals with the review of available literatures in the field of the study being conducted. This includes review of the theories of the concerned topic, review of supportive text, review of books, review of bulletins and annual reports published by bank, review of related articles and review of previous thesis. Third chapter explains the research methodology employed to

conduct the study and tools and techniques used in analysis of the data as well. This chapter includes, research design, sources of data, population and samples, method of data analysis, various financial and statistical tools. Fourth chapter is devoted to the presentation and analysis of data through definite course of research methodology. The main working of this chapter is to analyze different financial ratios related to the investment and fund mobilization of NIBL. Major findings of the study are also included in this chapter. Fifth is the last chapter of the study, which provides summary and conclusion, suggestions and recommendations for improving the future performance of the sample banks. Besides these, bibliography and appendices will also present at the end of the thesis. Similarly, acknowledgement, table of contents, list of tables, list of figures, abbreviations are included in the front part of the thesis report.

Chapter II

REVIEW OF LITERATURE

The word literature refers to writings on specific subject or printed information. It is an analytical expression on the concerned topic. Review of Literature refers to the analyzing, assessing, reevaluating and reexamining the previously written works. It is a stocktaking of available literature in the field of research. Thus, in the preparation of this thesis various books, articles, thesis etc. has been consulted and reviewed which are discussed below. This chapter is further divided into conceptual framework and review of related studied.

2.1 Conceptual Framework Review

“The business of banking is collection of funds from the community and extension of credit to people for useful purposes. Banks have played a pivotal role in making money from lenders to borrowers. Banking is a profit seeking business, not a community to carry profit seeker, expected to pay dividend and otherwise, add to wealth of shareholders.”

(Ronald Grywinshki, The New Fashioned Banking (Harvard Business Review: May-June 1993,p.87)

“Banking institutions are inevitable for the resource mobilization and all-round developing of the country. It is resource for economic development; it maintains economic confidence of various segments and extends credit to people.”

(Robert O.Edimister, “Financial Institution” (New York: Mc Graw Hill, 1980)

“A commercial bank is a business organization that receives and holds deposits of funds from others, makes loans and extends credits and transfers funds by written order of deposits.”

“American Institute of Banking has defined commercial banks as a corporation which accepts demand deposits subject to repeated or short term loans to business enterprises, regardless of the scope of its other services.”

(American Institute of Banking, Principles of Banking Operation, 1972 A.D., p.76.)

Commercial banks are the vital aspects in accelerating the pace of the economic development of a country. “They are organized on a joint stock company system, primarily for the purpose of earning profit. They can be either of the branch banking type, as we see in most of the countries, with a large network of branches, or of a unit banking type, as seen in the USA, where a banks. Operations are confined to a single office or to a few branches within a strictly limited area.”

Commercial bank Act 2031 BS of Nepal has defined that, “A commercial bank is one which exchanges money, deposits money, accepts deposits, grant loans and performs commercial banking functions and which is not a bank meant for co-operative, agriculture, industries or for such specific purpose.

(Commercial Bank Act 2031 BS)

As mentioned in former chapter (introduction) it is cleared that optimal investment decision plays vital role in each and every organization. But especially for the commercial banks and other financial institutions the sound knowledge of investment is the must because this subject is relevant for all surrounding that mobilize funds in different sectors in view of return.

As it is concerned to the commercial banks and other financial institutions, they must mobilize (i.e. investment on different sectors) their collections (deposits) and other funds towards the profitable, secured and marketable sectors so that they will be in profit.

For this purpose these banks and financial institutions should gather the sufficient information about the firm (client) to which supposed to be invested. This information include as financial background, nature of business as well as its ability to repay the loan back. These all information should be gathered for the viewpoint of the security.

The income and profit of the bank depend upon the lending procedure applied by the bank. As well as lending policy and investment in different securities also affect the income and profit. In the investment procedures and policies it is always taken in mind that “greater the credit created by the bank, higher will be the profitability.” Sound lending and investment policies helps commercial banks maximize both the quality and quantity of investments and thereby achieve their objective of profit maximization and social welfare. Commercial banks should be careful while performing the credit creation function. Investment policy should ensure minimum risk and maximum profit from lending.

J.H.Clemens (1963) has said, “Commercial banks should consider the national interest followed by borrower’s interest and the interest of the bank itself before investing to borrowers.” To clarify this, bank’s lending must be for such purposes of the borrowers that are keeping with the national policy and bank’s overall investment policy. A bank’s overall investment

- Should be short term oriented
- Should be well spread
- Should be repayable on demand
- Must be profitable
- Should have adequate security

Functions of Commercial Bank

Generally, commercial banks have the two most essential functions i.e. borrowing and lending of money. They borrow money on various kinds of deposits: current, saving and fixed. Under current deposits, the banker incurs the obligations of paying legal tender on demand, while on fixed deposits the banker incurs the obligation of paying legal tender after the expiry of a fixed period or to pay the customer an agreed rate of interest on it in return for the right to demand from him on agreed period of notice for withdrawal.

“The American Institute of Banking has laid down four major functions of commercial banks such as receiving and handling of deposits, handling payments of its clients, making loans and investments and creating money by extension of credit.”

Thus, a commercial bank mobilizes the savings of the society through current or fixed deposit account. It then provides this money to those who are in need of it by granting overdrafts or fixed loans or by discounting bills of exchange or promissory notes. Hence, the primary function of commercial bank is that of a broker and a dealer in money. Apart from this, it performs a profusion of function, which is grouped under two distinct categories namely, the agency services and the general utility services.

A. Agency Services

Commercial banks provide a wide range of investment services. Customers can arrange for dividends to be sent to their bank and paid directly to their bank accounts. The banks' Brokers will also purchase or sell stocks on behalf of their customers and provides opinions on securities or list of securities. Similarly, the bank will also send application for allotments of shares and obtain share certificates and other documents.

The bank also provides services like payments of rent, electricity, telephone charges, subscriptions collection of cheques, bills, promissory notes etc. It infacts acts as a correspondent or representative of its customers, business organization, financial companies and other banks. Most of these banks have an executor and trustee department with which various companies may have affiliation. Thus, they provide a complete range of trustee, executor or advisory service for a small charge.

B. General Utility Services

Under this, the banker does not act as an agent for his customers; rather they provide services like issue of credit instruments like L.C. and travelers' cheques, acceptance of bills of exchange, safe custody of valuables and documents, transaction of foreign exchange business. It also acts as a referee as to the respectability and financial standings of customers and provide specialized advisory services to its clients. Some banks even have budget accounts for credit worthy customers. The bank guarantees, for a specific charge, a certain type of annual bills (e.g. Fuel bills, rates etc.) promptly as they become due, whilst repayments are spread over a 12 monthly period from the customer's current account.

C. Overseas Trading Services

Due to growing trend of international trade, commercial banks have set up branches specializing in the finance of foreign trade in different countries. These banks provide a comprehensive network of services for foreign banking services through its subsidiary. They help in the settlement of debts between traders both at home and abroad for the goods they buy and sell. They also provide credit and enable the company to release the capital, which would otherwise be tied up in the goods exported.

D. Information and Other Services.

In present scenario, information plays a crucial role in the upliftment of the economy. Banks, one of the major sources of information on overseas trade, assists by providing regular bulletin on trade and economic conditions, special reports on commodities and markets, price and interest level fluctuation, rate of poverty and economic growth etc. On request, banks obtain confidential opinions on financial aspects of the firm, companies or individuals for its clients. They also provide legal information for the formation of company, tax requirements, exchange control, insurance and help to establish contact with local banking organization.

For this reason, it is not worthwhile to state that the services rendered by modern commercial banks are of inestimable value. It is the very essence of advanced economic society. In the word of Walter Leaf, “The banker is the universal arbiter of the world’s economy.”

2.1.1 Rules of mobilizing funds as per NRB Directives.

In order to mobilize the collected fund of different commercial banks towards different sectors and part of the country, Nepal Rastra Bank has formulated and issued directives in the sense of fund mobilization. Every commercial bank should follow the norms of the directive while mobilizing the funds. In this heading the effort has been made to present some glimpses in terms of provision for maintaining minimum liquidity, provision for investment towards deprived sector and provision for credit towards priority sector.

❖ Provision for maintaining minimum liquidity

Commercial banks should maintain minimum level of liquidity as given below at any cost.

- Commercial banks should deposit 8% of total of current and saving deposits and 6% total fixed deposit at Nepal Rastra Bank as minimum liquidity. Expect these banks should keep 3% of total deposit in the own vault of the bank.
- In case of failure to meet the level of minimum liquidity, banks are liable to pay the penalty as per the sub-clause (2) of clause 32 of Nepal Rastra Bank Act 2012.

❖ Provision for investment towards Priority and Deprived Sector.

In NRB Directive it is clearly mentioned and directed that all the commercial banks (under NRB) should invest 12% of its total investment to the priority sectors. Out of this 12% they should invest 3% to the deprived sectors throughout the kingdom. Limitations of loan towards deprived sectors for the commercial banks are given as follows: Loans limits towards deprived sectors:

SN	Name of Bank	Total Loan	Remaining
1.	Nepal Bank Ltd.	3%	
2.	Rastriya Banijya Bank	3%	
3.	Nepal Arab Bank Limited	3%	
4.	Nepal Indoseuz Bank Limited	3%	
5.	Nepal Grindlays Bank Limited	3%	
6.	Himalayan Bank Limited	2%	
7.	Nepal SBI Bank Limited	2%	
8.	Nepal Bangladesh Bank Limited	2%	
9.	Everest Bank Limited	2%	

10.	Bank of Kathmandu Limited	1.75%
11.	Nepal Bank of Ceylon Limited	0.75%
12..	Other New Banks	0.253%

(Source: NRB, Annual Report 2066/2067)

In case of unable to meet the requirement of NRB as mentioned in above table these banks are liable to pay the penalty as per sub-clause 2(KA) of clause 32 of NRB Act 2012.

❖ 2.1.2 Some Important Terms

In this section of the study, efforts have been made to clarify the meaning of some important terms frequently used in this study. They are given as:

a. Loan & advances

Loan, advances and overdrafts are the main source of income for a bank. Bank deposits can be crossed beyond a desired level but the level of loans, advances and overdrafts will never cross it. The facilities of granting loan, advances, and overdrafts are the main services in which customers of the bank can enjoy.

Funds borrowed from banks are much cheaper than those borrowed from unorganized moneylenders. The demand for loan has excessively increased due to cheaper interest rate. Further, an increase in economic and business activities always increase the demand or funds. Due to limited resources and increasing for loans, there is some fear that commercial banks and other financial institution too may take more preferential collateral while granting loans causing unnecessary botheration to the general customers. Such loans from these institutions would be available on special request only and there is a chance of utilization of resources in

economically less productive fields. These are the undesirable effects to too low interest rate.

In addition to this, some portion of loan, advances and overdraft includes that amount which is given to staff of the bank as house loan, vehicle loan, personal loan and other. In mobilization of commercial bank's fund, loan, advances and overdrafts have occupied a large portion.

b. Investment on government securities, shares and debenture

Though a commercial bank can earn same interest and dividend from the investment on government securities, shares and debentures, it is not the major portion of income. But it is treated as a second source of banking business. A commercial bank may extend credit by treated as a second source of banking business. A commercial bank may extend credit by purchasing government securities bond and shares for several reasons; some of them are given as:

- It may want to space it maturates so that the inflow of cash coincide with expected withdrawals by depositors or large loan demands of its customers.
- It may wish to have high-grade marketable securities to liquidate if its primary of reserves become inadequate.
- It may also be forced to invest because the demands for loans has decreased or is not sufficient to absorb its excess reserves.

However, investment portfolio of commercial bank is established and maintained primarily with a view to nature of banks. Liabilities i.e. since depositors may demand funds in great volume without previous notice to banks; the investment must be of a type that can be marked quickly with little or no shrinkage in value.

c. Investment on other company's shares and debentures

Due to excess fund but least opportunity to invest those funds in much more profitable sector and to meet the requirement of Nepal Rastra Bank's directives many commercial banks have to utilize their funds to purchase shares and debentures of many other financial and non-financial companies. Nowadays most of the commercial banks have purchased regional development bank's, NIDC's and other development bank's shares.

d. Other use of funds.

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

e. Off- balance sheet activities

Off-balance sheet activities involve contracts for future purchase or sale of assets and all these activities are contingent obligations. These are not recognized as assets or liabilities on balance sheet. Some good examples of these items are letter of credit (L.C), letter of guarantee, bills for collections etc. Nowadays such activities are stressfully highlighted by some economists and finance specialists to expand the modern transaction of a bank.

f. Deposits

For a commercial bank, deposit is the most important source of the liquidity. For bank's financial strength, it is treated as a barometer. In the word of Eugene, "A bank's deposits are the amount that it owes to its customer." Deposits are the lifeblood of the commercial banks. Though they constitute the great bulk of bank liabilities the success of a bank greatly depends upon the extend to which it may

attract more and more deposits. For accounting and analyzing purpose, deposits are categorized in three headings. They are:

-) Current Deposits
-) Saving Deposits
-) Fixed Deposits

2.2 Review of Books (Conceptual Review)

Banks are those institutions whose primary chore is to deal in money and substitute for money. They deal with cash, credit and credit instruments. Effective circulation and transaction of credit is the essence for those institutions. Unstable, unsteady and unevenly flow of credit with ad-hoc decision may harm the economy as well as the bank. As a result, banks should properly utilize its funds in various investment avenues with a view to sustain and earn profit.

Investing involves making a current commitment of funds in order to obtain an uncertain future return. It is a risky business that demands information. To process information effectively and select the best investments requires goals that are clear cut and realistic.

Investment in its broadest sense means the sacrifice of current dollars for future dollars. Two different attributes are generally involved time and risk. The sacrifice takes in the present and is certain. The reward comes later, if at all and the magnitude is generally uncertain. In some cases the element of time predominates (for example, government bonds). In other cases risk is the dominant attribute (for example, call option of common stocks). In yet others, both time and risk are important (for example, shares of common stock)

An investment may be defined as the current commitment of funds for a period of time to derive future flow of funds that will compensate the investing unit for the time the funds are committed for the expected rate of inflation and also for the funds.

Investment is the employment of funds with the aim of achieving additional income or growth in value. The essential quality of an investment is that it involves “waiting” for a reward. It involves the commitment of resources, which have been saved or put away from current consumption in the hope that some benefits will accrue in future.

There are basically three concepts of investment:

- a. Economic investment – that is, an economist’s definitions of investment
- b. Investment in a more general or extended sense which is used by “the man of the street” and
- c. The sense in which we are going to be very much interested, namely financial investment.

In this way, going through the above definitions and ideas given by different authors it is cleared that an investment of a known rupee today, produces some additional amount in the future, in the form of profit. But sometimes that investor has to face loss too, due to unfavorable circumstances and lacking of sound knowledge of investment opportunities.

2.2.1 Review of Research Papers and Articles

This part of the study deals with the examination and reviewing of some related research papers, articles and journals published in different magazines, newspapers, World Bank discussion papers and economic journals and other related books and publications. There are not sufficient articles related to

investment management published in Nepalese perspective. However, some personalities have given short glimpse of investment management. Some of them are as follows:

Shrestha (1998) has presented a short scenario of investment management from his article, "Portfolio management in commercial banks; theory and practice." He has stressed in the following issues. The portfolio management is essential both for individuals and for institutional investors. Investors would like to select a best mix of investment assets subject to following aspects:

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

In the view of these aspects, investors are expected to develop following strategy

-) Do not hold any single security. Try to have a portfolio of different securities.
-) Do not pull all the eggs in the one basket i.e. to have a diversified investment.
-) Choose such a portfolio of securities which ensures maximum return with minimum risk or lower of return but with added objective wealth maximization.

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

-) To find out the risk of the securities depending upon the attitude of investor towards risk.
-) To identify securities for investment to reduce volatility of return and risk.
-) To find out the invisible assets (generally securities) having scope for better returns depending upon individual characteristics like age, health, need, liquidity, tax liability, disposition.
-) To develop an alternative investment strategy for selecting a better portfolio that will ensure a trade-off between risk and return with a view to attach the primary objective of wealth maximization at lower risk.

In the light of analysis used in portfolio management Mr. Shrestha added that investment analysis for the selection of equity shares could be done with the help of either Fundamental Analysis or Technical Analysis. He has suggested that the banks having international network can also offer access to global financial markets. He has noted that the requirements of skilled manpower, research and development department or team, which could be able to conduct intensive, fundamental and proprietary research on both macro and micro economic trends. Moreover, a strong and effective backroom operations including proper Management Information System (MIS) is required to provide and collect appropriate information about check and balances to communicate the statements or results of clients and maintain accounts of the portfolio's performance is required for successful portfolio management.

As so, in favor of Portfolio Management in Nepalese banks Mr. Shrestha expressed that "Nepalese Commercial Banks at present, the portfolio management activities are in nascent stage. However, on the other hand, most

of the banks are not doing such activities so far because of the following reasons:

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

At last Mr. Shrestha has concluded that “in this competitive and market oriented economy each and every bank has to play vital role in the development of the country. But the survival of the banks depends upon its’ own financial health, and its’ various activity. If we look at the present banking scenario the capital adequacy requirement will increase if the banks concentrate more on on-balance sheet activities, which obviously carries costs. On the other hand, banks also have to maintain loan loss reserve, which relatively curtails the net profit of the bank. Thus, the off-balance sheet activities have been exercised predominantly in world’s most of the commercial banks. Out of them the portfolio management activity is picking up day by day. Thus, in order to develop and expand the portfolio management methodology, portfolio manager should reflect high standards and give their benefits of global strengths, local disciplined and systematic approval to the selection of appropriate countries. As well as financial assets and the management of various risks, the portfolio manager could enhance the opportunity for each investor (client) to earn superior returns over time.

Thus, the Nepalese banks having greater network and access to go for portfolio management of their fee-based income as well as to enrich the client base and to contribute in national economy.

Pradhan (1996) has presented a glimpse on investment in different sectors, its problems and prospects through his article, “Deposit mobilization, its problem and prospects.” On his article, he has expressed that, “Deposit is the lifeblood of any financial institution, and be it commercial bank, finance company, co-operative or non-government organization.” He also added, in consideration of 10 commercial banks and nearly three dozens of finance companies, that latest figure does produce a strong feeling that a serious review must be made of problems and prospects of deposit sector. Except few joint venture banks, other organization rely heavily on the business deposit receiving and credit disbursement.

In the light of this, Mr. Pradhan 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 lesser office hours of banking system people prefer 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 transactions 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. By spreading co-operative to the rural areas mini banking services are to be launched.
6. 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.

At last Mr. Pradhan mentioned. “Deposit mobilization carried out effectively is in the interest of depositors, society, financial sector and the nation. Lower level of deposit rising allows squeezed level of loan delivery leaving more room to informal sector. That is why higher priority to deposit mobilization has all the relevance.

Bhattarai (2003) has presented an article about the “Non-Performing Assets (NPA) Management”. According to him, a loan is a very easy term for a borrower when he has already taken and for a lender not availed. It is equally difficult for a borrower to avail and for lender to recover. From a banker’s view, it is just like a stone to roll down from the top of the hill while sanctioning, but too difficult to roll back the same stone to the top of the hill while recovering. A loan not recovered within the given timeframe either in the form of interest servicing or principal repayment is called nonperforming loan. There are other parameters as

well to quantify a NPL. Security not to the extent of loan amount with specified safety margin, value of security not realizable, possession not as per the requirement of bank, conflict of charges are some of the reasons which causes difficulties while recovering the loan.

According to him, NPL of a bank is like a cancer in a human body, which will collapse the entire bank if not taken care in time. This is an important discipline in banking to prevent the entire NPL or avoid situation for a loan to turn into NPL. Loan for banks is very essential to generate revenue for operational expenses as well as to provide return to the shareholders.

When a loan advanced from good money turns into a bad loan, the chances of when loan advanced from good money turns into a bad loan, the chances of shareholders return as well as the survival of the bank is at stake. Ailing banks cannot portray a better image in public. When a public loses the confidence on a bank and does not deposit, the bank will be in the verge of extinction. Therefore, deposits are the essence for a bank. A loan disbursed as good loan does not turn into bad overnight. It has certain course to turn into bad. An efficient bank management can recover the loan before turning it into bad and can save itself from the unwanted catastrophe. A general survey reveals following reasons why a good loan turns into a bad one:

Situational Problems

- Poor analysis of project and its capital requirement leading to a situation of over/under capitalized.
- Problem in managing the unit.
- Faulty evaluation of loan and security.
- Mismatch in demand and supply leading over inventory or under inventory.

- Actual modus operandi is very different from the projection and unit unable to cope with the situation.
- Sudden change in internal and external environment and project not being able to run according to its plan.
- Collection of receivables unnecessarily delayed resulting delay in re-order and chances of
- Business penetration by other competitors.

Intentional Problems

- Intention to flee without settling the loan.
- Intention to cheat the bank.
- Intention to auction the property.
- To relieve from other debts.
- Malicious acts of both the bank staffs and the borrower.
- To show other creditors of his bankruptcy, which is unmanageable.
- To waive interest/penal interest or avail discount on loan if paid in later stage when bank offers such facilities.

In conclusion, a borrowing may reflect one or all the above signals that may cause harm to the bank. There are few ways to protect bank from intentional defaulter but for those default caused by situations we can reschedule or restructure their facilities and help them to meet their debt obligation as per the cash flow they having. Even an authentic loan that has been sanctioned with a good intention may turn into bad due to lack of proper management and carelessness. The bank will have to face heavy consequences in such a case. When a good loan, with all effort to protect it, turns into bad and the borrower's ability is not sufficient to repay it, he then tries to hide it from the bank and wants to be relieved temporarily. Such situations give some signals to the bank and these signals are called danger signals.

A bank must be one-step further than its customers must. It must collect all the relevant information that are required by the borrower for the establishment of a business and be rigid to give loan than to give his own money without any security. When a borrowing unit is not able to serve the debt from the source explored, the documentations are merely a decree to enforce legal action against him. Nevertheless, what gets realized when everything is lost. A jail and punishment does not satisfy the interest of bank. Therefore, he is of the view that the bank should always keep in mind the formula “Know your customers” (KYC) before giving loans. The security given by a borrower may be ample for the exposure. However, the borrower from other source of business may not be able to generate substantial earning to service the debt. Bank has the right to auction the property and liquidate the loan but in doing so realization form the auction of the property is always less than the value of the assets. This will serve neither the purpose of bank nor the borrower instead cause loss to both.

2.2.2 Review of Thesis Work

In the light of this dissertation, several thesis works (as are supposed to be relevant) have been conducted by previous students have also been considered. Main themes of some of these dissertations are given as:

Poudyal in his research, “Investment in priority sector with special reference to Nepal Bank Ltd.” has put forward following objectives:

1. To analyze the repayment position of the priority sectors.
2. To find trends of priority sectors loan.
3. To analyze how far Nepal Bank Ltd. has been able to grant credit to priority sectors.
4. To examine the impact of loan on priority sectors.

5. To analyze the impact of probable cause of misuse of the loan by the borrowers.

Similarly, the major findings of the study were as follows:

- a) The procedure of loan sanctioning is rather slow and clumsy.
- b) Bank was not able to fulfill the purposed target of corresponding loan to the priority sector.
- c) Banking procedures are so complicated that a layman is not able to understand it completely.
- d) Loan repayment was more satisfactory from agriculture sector than the cottage industries and service sector.
- e) Short-term credit was important for rural people.
- f) Loan repayment was mainly due to the miss utilization of loan, other important causes are linked with social expenses like expenses in marriage ceremony, medical treatment, cremation etc.
- g) Loan in priority sector has significantly generated the employment opportunity.
- h) Loan in priority sector has increased the rural banking system in the rural areas bank branch expansion.
- i) The investment amount and percentage of priority sector investment on total deposits have up-going trend.
- j) A sort of pressure groups like local people, politicians, administrators etc affect in loan granting process.

Khatri, in his research, has found that NIDC has supposed to be invested the highest percentage of loan as direct loan and the least percentage as guarantee loan. NIDC has given high priority towards Central Development Region and least to Far Western Development Region. During his study period he also found that NIDC has allocated highest percentage of financial assistance to hotel, lodge and tourism based industrial sector and the nominal amount has been allocated to cottage, health, education and other industrial sector. In the recommendation

column he has recommended that NIDC has to finance all development region and other prior sectors giving equal priority to minimize industrial imbalance among the different regions.

Manandhar has conducted a thesis research on, “A comparative study in investment policies of finance companies in the context of Nepal.”

He has pointed out the following objectives:

- a) To evaluate the trends of deposit utilization and its projection for the next five years in case of these companies.
- b) To evaluate the liquidity, assets management efficiency and profitability position in relation to fund mobilization of above listed companies.
- c) To evaluate the growth ratio of loans and advance and total investment with respective growth rate of total deposits and net profits of the companies.
- d) To find out relationship between deposits and total investment, deposit and loans and advance and net profit and outside assets of the listed companies.
- e) To discuss the fund mobilization and investment policy of these companies in respect to its fee based off-balance sheet transactions and fund based on balance sheet transactions.
- f) To suggest and recommend some measures on the banks of comparative fund mobilization and investment policy of these companies for the improvement of financial performance in future.

The findings of the research were as follows:

- a) The liquidity position of National Finance and NEFINSCO are comparatively better than of other companies. Nevertheless, that of Goodwill finance and Union finance seems to be quite weaker.
- b) Most of the finance companies are successful in on-balance sheet utilization as well as off-balance sheet operation. Among them, NEFINSCO and Goodwill comes ahead of all.

- c) Profitability position of most of the companies is comparatively not better.
- d) Most of the finance companies are able to maintain the growth ratios among them. Nepal share markets seem to be more successful to increase their source of funds and mobilization as well as net profit.
- e) There is significant relationship between deposits and loans advances of all finance companies. Similarly, there is no significant relationship between deposits and total investment of all companies except NEFINSCO and Goodwill Finance Co. Ltd. There is also no significant relationship between outside assets and net profit of all companies except Union Finance Co. and National Finance Co. Ltd. The trend value of total investment to total deposit ratio and loans and advances to total deposits ratio in increasing trend.

Khanal in his thesis entitled, “Investment in priority sector by commercial banks (a study of commercial banks of Kathmandu valley)” has put forward following objectives.”

- a) To analyze the trend of investment in priority sector.
- b) To find out extent of profitability affected in this sector.
- c) To measure the efficiency of the program in the rural and urban sectors.
- d) To evaluate the banking procedures and services in disbursing loans.
- e) To explore the reasons for low investment.

The main findings of the research were as follows:

- a) The investment in priority sector has an increasing trend.
- b) Banks are giving due consideration to increase investment in the priority sector.
- c) Due to low interest rate, overhead cost increased in administration and showed low profitability.
- d) The regression analysis had shown a negative relationship between profit and investment.

- e) The chi-square test has shown that the investment program in rural and semi-urban areas is more effective than in urban areas.
- f) Banking procedure regarding loan disbursement in priority sector is much more complicated.
- g) There is wide gap between demand and supply of loan.
- h) Due to security and lack of proper legal documents most loan requesters have been rejected and even cancelled some of the projects in different sectors.

Ojha has concluded in her thesis that the banks are unable to meet the requirement of 12 % lending in priority sectors as per NRB Directives. As she has analyzed the trend of five years period, she has further found that low interest rate in priority sector but increasing trend of overdue and its miss utilization. So, she has recommended for the improvement of sound supervision, evaluation of borrower's paying capability and reduction of overdue through integrated program of priority sector loan.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

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.

3.2 Research Methodology

Research Methodology describes the methods and process applied in the entire subject of the related study. Every research should follow the systematic research methodology to solve the research problem. The research methodology is wider concept. The research methodology considers the logic behind the methods used in the context of research study and explains why particular method or technique is used. Research Methodology is a way to solve systematically about the research problems, which includes many tool, if it is necessary in each and every steps of this study. The main objectives of the study are to analyze, examine, highlight and interpret the investment situation of the banks. Research methodology refers to the various sequential steps to be followed and adopted by a researcher in studying a problem with certain objectives in view.

3.2.1 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.

3.2.2 Population and Sample

Number of Commercial Banks in Nepal

SN.	Commercial Banks	Established Date	Head office
1	Nepal Bank Ltd	1937/11/15	Kathmandu
2	Rastriya Baniya Bank	1966/01/23	Kathmandu
3	Agriculture Development Bank Ltd.	1968/01/02	Kathmandu
4	Nabil Bank Ltd.	1984/7/16	Kathmandu
5	Nepal Investment Bank Ltd.	1986/02/27	Kathmandu
6	Standard chartered Bank Nepal Ltd.	1987/01/30	Kathmandu
7	Himalayan Bank Ltd.	1993/01/18	Kathmandu
8	Nepal SBI Bank Ltd	1993/7/07	Kathmandu
9	Nepal Bangladesh Bank Ltd.	1994//6/05	Kathmandu
10	Everest Bank Ltd.	1994/10/18	Kathmandu
11	Bank Of Kathmandu Limited	1995/3/12	Kathmandu
12	Nepal Credit and Commerce Bank Ltd.	1996/10/14	Siddharthanagar, Rupandehi
13	Lumbini Bank Limited	1998/7/17	Narayangahd, Chitawan
14	Nepal Industrial & Commercial Bank Limited	1998/7/21	Biratnagar, Morang
15	Machhapuchhre Bank Limited	2000/10/03	Pokhara, Kaski
16	Kumari Bank Limited	2001/04/03	Kathmandu
17	Laxmi Bank Ltd	2002/04/03	Birjgunj, Parsa
18	Siddhartrha Bank Ltd	2002/12/24	Kathmandu
19	Global Bank Ltd	2007/01/02	Birgunj, Parsa
20	Citizen Bank Ltd	2007/06/21	Kathmandu
21	Prime Bank Ltd	2007/09/24	Kathmandu
22	Sunrise Bank Ltd	2007/10/12	Kathmandu
23	Bank of Asia Nepal Ltd	2007/10/12	Kathmandu
24	Nepal Development and Credit Bank Ltd	2008/05/25	Kamaladi, Kathmandu
25	NMB Bank	2008/06/05	BabarMahal, Kathmandu

26	Kist Bank Ltd.	2009/05/07	Anamnagar, Kathmandu
27	Janta Bank Ltd.	2010/04/05	New Baneshwor, Kathmandu
28	Mega Bank Ltd.	2010/07/23	Kantipath, Kathmandu
29	Commerz & Trust Bank Nepal Ltd.	2010/09/20	Kamaladi, Kathmandu

Source: www.nrb.org.np

From these samples two banks i.e. NABIL and NIBL has been selected and its data related to investment policy are comparatively studied.

3.2.3 Nature and Source of data

The study is 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 data is an important step in the collection of data. Basically this study is conduct on the basis of secondary and analyzed data. 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 of Finance, Budget Speech of different fiscal years, T.U. Central Library, SDC library, various articles published in the newspaper, websites, magazines, journals, reports etc.

3.2.4 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.

3.3 Financial Tools

Financial tools, like ratio analysis have been used to examine the financial strength & weakness of banks in this study. From the help of ratio analysis the quantitative judgment can be done. 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.

3.3.1 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.

$$\text{Current Ratio} \times \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

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:

$$\text{Cash \& Bank Balance to Current Assets Ratio} \times \frac{\text{Cash \& Bank Balance}}{\text{Current Assets}}$$

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,

$$\text{Cash \& Bank Balance to Total Deposit Ratio} \times \frac{\text{Cash \& Bank Balance}}{\text{Total Deposit}}$$

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,

$$\text{Investment in Government Securities to current Asset Ratio} \times \frac{\text{Total Investment in Government Securities}}{\text{Current Assets}}$$

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,

$$\text{Loan and Advances to Current Asset Ratio} \quad \times \quad \frac{\text{Total Loan and Advances}}{\text{Current Assets}}$$

3.3.2 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,

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

b) Total Investment to Total Deposit Ratio

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,

$$\text{Loan and Advance to Total Deposits Ratio} = \frac{\text{Loan and Advance}}{\text{Total Deposits}}$$

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,

$$\text{Loan and Advance to Total Working Fund Ratio} = \frac{\text{Total Loan and Advance}}{\text{Total Working Fund}}$$

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,

$$\text{Investment in Government Securities} \times \frac{\text{Investment in Govt. Securities}}{\text{Total Working Fund}}$$

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,

$$\begin{array}{l} \text{Investment on} \\ \text{Shares \& Debentures to} \\ \text{Total Working Fund Ratio} \end{array} \times \frac{\text{Investment in Shares \& Debentures}}{\text{Total Working Fund}}$$

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

3.3.3 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,

$$\text{Return on Loan \& Advances Ratio} \times \frac{\text{Net Profit / Loss}}{\text{Total Loan and Advances}}$$

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,

$$\text{Return On Equity} \times \frac{\text{Net Profit}}{\text{Total Equity Capital}}$$

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,

$$\text{Total Interest Earned to Outsides Assets} = \frac{\text{Total Interest Earned}}{\text{Total Outside Assets}}$$

3.3.4 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,

$$\text{Liquidity Risk Ratio} \times \frac{\text{Total Cash \& Bank Balance}}{\text{Total Deposits}}$$

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,

$$\text{Credit Risk Ratio} \times \frac{\text{Total Loan and Advances}}{\text{Total Assets}}$$

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.

3.4 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 σ (sigma). In this study standard deviation of different ratios are calculated.

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

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,

$$\text{Coefficient of Variation (C.V.)} = \frac{s}{\bar{X}} \times 100 \%$$

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 one variable may affect another correlated variable. This study tries to find out relationship between the following variables.

$$\text{C.V.} = \frac{\text{S.D.} \times 100\%}{\text{Mean}}$$

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

This tool analyzes the relationship between these variables and helps the bank to make appropriate policy regarding deposit collection, fund utilization and maximization of profit.

d) Trend Analysis

These analyses 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, $Y = a+bx$

d) 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.

CHAPTR-IV

DATA PRESENTATION AND ANALYSIS

4.1 Financial Analysis

This is an analytical chapter, where the researcher has analyzed and evaluated those major financial items, which are mainly related to the investment management and fund mobilization of NABIL Bank limited in comparison to that of other commercial Bank namely Nepal Investment Bank Limited. From the point of view of the fund mobilization and investment policy only those ratios are calculated and analyzed which are relevant and important for this study. The ratios are designed and calculated to highlight the relationship between financial items and figures. It is a kind of mathematical relationship and procedure dividing one item by another. All these calculations are based on financial statements of concerned banks. The important and required financial ratios, which are to be calculated for the purpose of this study, are computed and analyzed in the following paragraphs.

4.1.1 Liquidity Ratio

Liquidity ratio measures the ability of the firm to meet its current obligations. A commercial bank must maintain its satisfactory liquidity position to meet the credit need of the community, to meet demands for deposits, withdrawals, pay maturity obligation in time and convert non-cash assets into cash to satisfy immediate needs without loss to bank and consequent impact in long run profit. In fact, analysis of liquidity needs is helpful to the preparation of cash budget and funds flow statement.

The following ratios are evaluated and interpreted under liquidity ratio: -

(i) Current Ratio

Current ratio indicates the ability of a bank to meet its current obligation. This is the broad measure of liquidity position of the financial institution. The widely accepted standard of current ration is 2:1 but accurate standard depends on circumstances in case of banking and seasonal business ratio such as 1:1 etc.

We have,

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

Where,

Current assets consist of cash and bank balance, money at call and short notice, investment in government securities and other interest receivable and other miscellaneous current assets where as current liabilities consist of deposits, loan and advances, bills payable, tax provision, staff bonus payable, dividend payable and miscellaneous current liabilities.

Table No: 4.1
Current Ratio (times)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	0.96	0.94
2	2005/2006	0.89	0.92
3	2006/2007	0.91	0.95
4	2007/2008	0.91	0.97
5	2008/2009	0.89	0.98
Total		4.56	4.76
Mean		0.912	0.952
S.D.		0.0256	0.0213
C.V		0.0281	0.0224

Source: Appendix 1 'A' and 5 'A'

The above table no.4.1 shows that the current ratio of two commercial banks. It is calculated as per total mean, Standard deviation and coefficient of variation. In the case of NABIL and NIBL, the current ratio shows fluctuating trend. NABIL has the highest current ratio in F/Y 2004/2005 i.e., 0.96 and the lowest in F/Y 2005/2006 and 2008/2009 i.e., 0.89. Similarly NIBL has a high current ratio of 0.98 in F/Y 2008/2009 and a low of 0.92 in F/Y 2005/2006. The averages mean ratio of NIBL is slightly higher than NABIL; i.e. 0.952 >0.912. This shows that NIBL's liquidity position is slightly better than that of NABIL. The lower degree of standard deviation and coefficient of variation suggest that both the banks have maintained consistency in their ratios. Though as per the conventional rule current ratio should be 2:1 but for banks and other financial institutions any current ratio above 1 also considered healthy and sound. In order to bring about consistency in this research, checks subject to clearing have been excluded from cash and bank balance and included in other assets.

(ii) Cash and Bank Balance to Current Asset Ratio

This ratio shows the banks' liquidity capacity on the basis of cash and bank balance that is the most liquid asset. So this ratio visualizes higher liquidity position than current ratio.

We have,

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

Where,

Cash and bank balance represents total of local and foreign currencies in hand, cheque in hand and various bank balances in local as well as foreign banks where as the current assets consists of cash and bank balance, money at call, short notice,

loan and advances, investment in government securities and other interest receivable and others miscellaneous current assets.

Table No. 4.2

Cash and Bank Balance to Current Assets Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	3.74	9.60
2	2005/2006	3.47	13.05
3	2006/2007	6.13	10.35
4	2007/2008	8.55	10.98
5	2008/2009	9.35	16.82
Total		31.24	60.8
Mean		6.248	12.16
S.D.		2.4059	2.5973
C.V		0.3851	0.2136

Source: Appendix 1 'B' 5 'B'

There above table shows that the cash and bank balance to current assets of both NABIL & NIBL are in a fluctuating trend. NABIL has maintained a high ratio of 9.35% in F/Y 2008/2009, and a low ratio of 3.47% in 2005/2006. It has decreasing trend (in FY 2004/2005 to 2005/2006) i.e. 3.74 to 3.47. But then after it has increasing trend .Similarly, NIBL has a high of 16.82% in F/Y 2008/09 anticipating higher cash requirement depositors in this F/Y. It has a low ratio of 9.60% in F/Y 2004/2005. IT has fluctuating trend.

The average mean ratio of NIBL is higher than NABIL. The C.V. of NABIL is greater than that of NIBL i.e., 38.51%>21.36%. It shows NABIL ratios are less consistent than that of NIBL.

(iii) Cash and Bank Balance to Total Deposit Ratio (CRR)

Cash and bank balance are the most liquid assets. The ratio between cash and bank balance, and total deposit, measures the ability of the bank to meet the unanticipated cash demand or cash withdrawals from all types of deposits.

We have,

$$\text{Cash and bank balance to total deposit ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

Where,

Cash and bank balance includes cash on hand (local and foreign currency), cheques and other cash items, balance with domestic and foreign banks where as the total deposits include current deposits, saving deposits, call deposits, fixed deposits, money at call and short notice and other deposits.

Table No.4.3

Cash and Bank Balance to Total Deposit Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	3.83	9.40
2	2005/2006	3.26	12.34
3	2006/2007	6	9.97
4	2007/2008	8.37	10.90
5	2008/2009	9.03	16.95
Total		30.49	59.56
Mean		6.098	11.912
S.D.		2.3223	2.7081
C.V		0.3808	0.2273

Source: Appendix 1 'C' and 5 'C'

The above table shows that the cash and bank balance to total deposit of both NABIL and NIBL are in fluctuating trend. NABIL had a high ratio of 9.03% in F/Y 2008/2009 and a low ratio of 3.26% in F/Y 2005/2006. Similarly, NIBL has a high of 16.95% in F/Y 2008/2009 and a low of 9.40% in F/Y 2004/2005. The averages mean ratio of NIBL is higher than NABIL i.e., 11.912% > 6.098%. This shows, NIBL readiness to meet customer requirement better than NABIL. The C.V. of NIBL is lower than that of NABIL i.e., 22.73 % < 38.08%. On its basis, it can be concluded that NIBL's ratios are more consistent than that of NABIL.

Although the above ratios implies a slightly better liquidity position of NIBL, a high ratio of non-earning cash and bank balance indicates the banks unavailability to invest its fund in income generation areas that might have helped it to improve its profitability.

(iv) Investment on Government Securities to Current Assets Ratio

The government securities are not so much liquid as cash and bank balance. But they can easily be sold in the market or they can be converted into cash in other ways. Investment on government securities includes treasury bills and development bonds etc.

We have,

Investment on Government Securities to Current Assets Ratio

$$= \frac{\text{Investment on government securities}}{\text{Current Assets}}$$

Table No. 4.4

Investment on Government Securities to Current Assets Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	16.12	13.95
2	2005/2006	12.69	14.09
3	2006/2007	21.06	13.81
4	2007/2008	14.87	9.23
5	2008/2009	10.27	5.38
Total		75.01	56.46
Mean		15.002	11.292
S.D.		3.6250	3.4767
C.V		0.2416	0.3079

Source: Appendix 1 'D' and 5 'D'

The above table clearly depicts that the investment on Government securities to current assets of both the sample banks have a fluctuating trend. Figures in the table show that investment on government securities to current assets ratio of NABIL has fluctuating trend. NIBL has increasing trend in first two FY i.e. 13.95 to 14.09 (FY 2004/2005) to (FY 2005/2006) but then after it follows decreasing trend

From the above five year picture, it is evident that the average mean ratio of NABIL is higher than that of NIBL i.e. 15.005% > 11.292%. This shows that a greater portion of current assets of NABIL comprises of government securities. From the point of view of C.V. NABIL ratios have been more consistent. From the above analysis it is clear that NIBL has made lesser investment in government securities as it has injected more funds on other productive sectors. The reason

behind NABIL higher ratio could be attributed to more deposit collection and unavailability of other secured and profitable investment sectors.

(v) Loan and Advances to Current Assets Ratio

To make a high profit and for mobilizing its fund in the best way, a commercial bank should not keep its all collected funds as cash and bank balance but they should be invested as loan and advances to the customers. In the present study loan & advances represent to local and foreign bills discounted and purchased and loans, cash credit and overdraft in local currency as well as inconvertible foreign currency.

We have,

$$\text{Loan and advances to current assets ratio} = \frac{\text{Loan and Advances}}{\text{Current Assets}}$$

Table No. 4.5

Loan & Advances to Current Assets Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	70.71	72.50
2	2005/2006	71.26	71.35
3	2006/2007	68.09	73.31
4	2007/2008	68.39	78.98
5	2008/2009	76.46	76.98
Total		354.91	373.12
Mean		70.982	74.624
S.D.		3.0080	2.8804
C.V		0.0424	0.0386

Source: Appendix 1 'E and 5 'E'

The average mean ratio of NIBL is higher compared to NABIL i.e. 74.624 > 70.982. NABIL had had a high ratio of 76.46% in 2008/2009 and a low ratio of 68.09% in F/Y 2006/2007. Similarly NIBL has experienced a high ratio of 78.98% in F/Y 2007/2008 and a low of 71.35% in F/Y 2005/2006. The above analysis reveals that NABIL has been more successful in identifying profitable investment sectors and increasing its earning. Mean value of this ratio of NABIL bank is 70.982%, which is less than that of NIBL 70.982 % < 74.624% .coefficient of variation is also greater than NIBL. This analysis shows that NABIL use to provide less loan & advances in comparison of NIBL. Its trend of providing loan & advances has less consistency than NIBL.

4.1.2 Asset Management Ratios (Activity Ratio)

Asset management ratios measure the efficiency of the bank to manage its asset in profitable and satisfactory manner. They indicate the speed with which assets are being converted into cash. Thus these ratios are used to measure the banks' ability to utilize their available resources.

Under this asset management ratio following ratios are studied:

i) Loan & Advances to Total Deposit Ratio

It shows the relationship between loans & advances to total deposit. The ratio measures the extent to which the banks are successful to mobilize their total deposit on loan & advances.

We have,

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

Where,

Loan & advances include loans, advances, cash credit, local and foreign bill purchased and discounted. Total deposits include saving, fixed current, current and call deposit.

Table No. 4.6
Loan & Advances to Total Deposit Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	72.57	71.04
2	2005/2006	66.79	67.50
3	2006/2007	66.60	70.59
4	2007/2008	66.94	58.36
5	2008/2009	73.87	77.61
Total		346.74	345.1
Mean		69.348	69.02
S.D.		3.3131	6.2654
C.V		0.0478	0.0908

Source: Appendix 2 'A' and 5 'F'

NABIL had a high ratio of 73.87% in F/Y 2008/2009 and a low ratio of 66.60% in F/Y 2006/2007. Accordingly, NIBL had a high of 77.61% in F/Y 2008/2009 and a low of 58.36% in F/Y 2007/2008. NABIL's loan and advances to total deposit has had a increasing trend over the years and NIBL has fluctuating trend. The mean value of NABIL is slightly higher than that of NIBL. Coefficient of variation of NABIL is also lower than that of NIBL. NABIL seems to be strong in terms of mobilization of its total deposits as loan and advances when compared to NIBL. On the contrary, a high ratio should not be perceived as a better state of affairs from the point of view of liquidity, as loan and advance are not as liquid as cash and bank balance and other investment. In portfolio management of bank

various factors such as availability of funds, liquidity requirements, central bank norms etc. needs to be taken into account.

ii) Total Investment to Total Deposit Ratio

A commercial bank mobilizes its deposit by investing its fund in different securities issued by government and other financial or non-financial companies. This ratio measures the extent to which the banks are able to mobilize their deposit on investment in various securities.

We have,

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

Where,

Total investment consist investment on government securities, investment on debenture and bonds, share in subsidiary companies, shares in other companies and other investment.

Table No. 4.7

Total Investment to Total Deposit Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	29.25	27.60
2	2005/2006	31.93	29.60
3	2006/2007	38.32	26.56
4	2007/2008	31.14	19.95
5	2008/2009	28.99	15.85
Total		159.63	119.56
Mean		31.926	23.912
S.D.		3.3847	5.1703
C.V		0.1060	0.2162

Source: Appendix 2 'B' and 5 'G'

NABIL has a high ratio of 38.32% and a low ratio of 28.99% in F/Y 2006/2007 and 2008/2009 respectively. NIBL, on the other hand had a high ratio of 29.60% and a low ratio of 15.85% in F/Y2005/2006 and 2008/2009 respectively. NABIL has a high mean ratio than NIBL i.e., 31.926%>23.912%. From mean ratio perspective, NABIL has been more successful in mobilization of deposits on various forms of investment. From C.V.'s viewpoint, both the sample banks have been inconsistent, with NABIL being little better in terms of consistency than NIBL.

Form the analysis of above table it is clear that NABIL has become successful for better utilization of deposit to investment than NIBL and also NABIL has higher consistency to investment in securities. Its investment policy is better.

iii) Loan and Advances to Total Working Fund Ratio

The commercial bank must be very careful in mobilizing its total asset as loan & advances in appropriate level to generate profit. This ratio reflects the extent to which the commercial banks are successful in mobilizing their assets on loan & advances for the purpose of income generation. A high ratio indicates better in mobilization of funds as loan and advances and vice versa.

We have,

$$\text{Loan and Advances to Working Fund Ratio} = \frac{\text{Loan and Advances}}{\text{Working Fund Ratio}}$$

Where,

Total working fund consists of current assets, net fixed assets, loan for development banks and other miscellaneous assets.

Table No. 4.8

Loan and Advances to Total Working Fund Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	61.60	62.22
2	2005/2006	57.87	59.90
3	2006/2007	57.04	62.65
4	2007/2008	57.54	69.45
5	2008/2009	62.89	68.37
Total		296.94	322.59
Mean		59.388	64.518
S.D.		2.3828	3.7218
C.V		0.0401	0.0577

Source: Appendix 2 'C' and 5 'H'

The above table shows a fluctuating trend of loan and advances total working fund of NABIL and NIBL. NABIL has maintained highest ratio of 62.89% in F/Y 2008/2029 and a low ratio of 57.04% in F/Y 2006/2007. Similarly, NIBL has maintained a high ratio of 68.37% in F/Y 2008/2009 and a low ratio of 59.90% in F/Y 2005/2006.

NIBL has a high average ratio of loan and advances to total working fund than NABIL i.e. 64.518% > 59.388%. It reveals the strength of NIBL in mobilizing its total assets as loan and advances. NABIL has mobilized its fund lesser but it has higher consistency than that of NIBL.

iv) Investment on Government Securities to Total Working Fund Ratio

To some extent commercial banks seem to utilize their fund by purchasing government securities. Government securities are a safe medium of investment

though it is not as liquid as cash and bank balance. This ratio is very important to know the extent to which the banks are successful in mobilizing their total fund on different type of government securities to maximize its income and to minimize its risk assets.

We have,

Investment on Govt. Securities to Total Working Fund Ratio

$$= \frac{\text{Interest on Govt. Securities}}{\text{Working Fund Ratio}}$$

Where,

Investment on government securities includes investment made on treasury bills and development bonds etc.

Table No. 4.9

Investment on Government Securities to Total Working Fund Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	14.04	11.97
2	2005/2006	10.31	11.82
3	2006/2007	17.64	11.80
4	2007/2008	12.51	8.12
5	2008/2009	8.45	4.77
Total		62.95	48.48
Mean		12.59	9.48
S.D.		3.1607	2.8586
C.V		0.2510	0.3015

Source: Appendix 2 'D' and 5 'T'

The above table reveals that NIBL has had a decreasing trend of Investment of Government securities to total working fund over the study period while NABIL has had more of a fluctuating trend. NABIL has a higher ratio 17.64% in F/Y 2006/2007 and a low ratio of 8.45% in F/Y 2008/2009. Similarly, NIBL has had a high ratio of 11.97% in F/Y 2004/2005 and low ratio of 4.77% in 2008/2009. When mean ratio is considered, NIBL seems to be weaker than NABIL in mobilizing of total assets as Investment in Government securities i.e. (9.48 % < 12.59%). Also, when we compare C.V. of both, it reflects that ratios of NIBL are less consistent than NABIL. From the above analysis, we can conclude that NABIL has invested larger portion of working fund in government securities than NABIL. The ratios also indicates that both the banks have no concrete or certain investment policy with regards to what percentage of working fund to be invested in purchasing government securities.

v) Investment on Shares and Debenture to Total Working Fund Ratio

There has been two types of investments i.e., investment on government securities and investment on shares & debenture. Investment on shares and debentures to total working fund ratio reflects the extent to which the banks are successful to mobilize their total assets on purchase of shares and debentures of other companies to generate incomes and utilize their excess fund.

We have,

Investment on Shares & Debentures to Total Working Fund Ratio

$$= \frac{\textit{Investment on Shares and Debentures}}{\textit{Working Fund Ratio}}$$

Where,

Investment on shares and debentures includes investment on debentures bonds and share of the other companies.

Table no. 4.10

Investment on Shares and Debentures to Total Working Fund Ratio

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	2.58	0.11
2	2005/2006	0.46	0.08
3	2006/2007	0.77	0.13
4	2007/2008	0.87	0.15
5	2008/2009	0.81	0.12
Total		5.49	0.59
Mean		1.098	0.118
S.D.		0.7544	0.0231
C.V		0.6871	0.1958

Source: Appendix 2 'E' and 5 'J'

The above table clearly reveals that both the banks have invested miniscule percentage of total working fund in purchasing share and debentures of other companies. the investment on shares and debentures to total working fund ratio of NABIL has decreased in FY 2005/2006 i.e. 0.46 but it has increased in FY 2006/2007 and 2007/2008 i.e. 0.77 and 0.87, then after it has decreased to 0.81 in 2008/2009. Similarly NIBL's ratio has decreased in F/Y 2005/2006 from 2004/2005 i.e. 0.08 from 0.11 then it has increased in next two year i.e. 0.13 to 0.15 and then it has decreased to 0.12. NABIL has a mean ratio higher than NIBL. It indicates that NABIL has been more successful in mobilizing its funds as investment in shares and debenture than NIBL, though the fund invested is marginal.

4.1.3 Profitability Ratios

Profitability ratios are very helpful to measure the overall efficiency of operation of financial institutions. Here, profitability ratios are calculated and evaluated in terms of the relationship between net profit and assets. Higher the profitability ratio, higher the efficiency of a bank.

The following profitability ratios are taken into account under this heading.

i) Return on Loan & Advances Ratio

It measures the earning capacity of a commercial bank on its deposits mobilization, loan & advances. Higher the ratio greater will be the return and vice versa.

We have,

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

Where,

Loan & Advances includes loans, cash credit, and overdraft and bills purchased and discounted.

Table No.4.11

Return on Loans & Advances Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	4.91	2.29
2	2005/2006	4.91	2.74
3	2006/2007	4.33	2.90

4	2007/2008	3.49	2.58
5	2008/2009	3.74	2.49
Total		21.38	13
Mean		4.276	2.6
S.D.		0.5851	0.2089
C.V		0.1368	0.0803

Source: Appendix 3 'A' and 5 'M'

The above table shows that the ratio of return on loan and advances of NABIL are better than NIBL in all F/Y, through they have a fluctuating trend. NABIL's ratios is same in first two year ie.4.91 then it decreased in F/y 2006/2007 and then after they have witnessed a increasing trend. NABIL has recorded a high ratio of 4.91% in F/Y 2004/2005 and 2005/2006, and a low ratio of 3.49% in F/Y 2007/2008. Similarly, NIBL recorded a high of 2.90% in F/Y 2006/2007 and a low of 2.29% in F/Y 2004/2005.The comparison of mean ratio reveals that NABIL has a higher ratio than NIBL. This shows that NABIL has been more successful in maintaining its higher return on loan and advances than NIBL. C.V. of NIBL is significantly lower than NABIL i.e. It proves that NABIL has higher variability of ratio than NIBL.

ii) 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 thereby, 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.

We have,

$$\text{Return on Equity (ROE)} = \frac{\text{Net Profit after Tax}}{\text{Equity Capital}}$$

This ratio has been shown in the following table.

Table No. 4.12
Return On Equity (ROE) Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	31.38	19.67
2	2005/2006	27.50	24.77
3	2006/2007	26.26	26.70
4	2007/2008	25.97	25.93
5	2008/2009	29.53	23.05
Total		140.64	120.12
Mean		28.13	24.02
S.D.		2.05	2.50
C.V		7.28	10.40

Source: Appendix 3 'C' and 5 'K'

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. 31.38% in F/Y 2004/05 and the lowest ratio i.e. 25.97% in F/Y 2007/08. Similarly, NIBL has highest ratio i.e. 26.70% in F/Y 2006/07 and lowest ratio i.e. 19.67% in F/Y 2004/05. On the basis of mean ratio, it can be said that NABIL

hasn't been weaker to earn high profit to its shareholders in comparison to NIBL which can be viewed by the higher mean ratio i.e. 28.13>24.02. The coefficient of variation of NIBL is higher than NABIL i.e. 10.40%>7.28% 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.

iii) Total Interest Earned to Total outside Assets Ratio

It reflects that the extent to which the bank is successful to earn interest as major income on all the outside assets. Higher the ratio higher will be the earning power of total outside assets. This is very important ratio, as the main asset is the outside asset of a commercial bank and major income is the interest income in total income.

We have,

$$\text{Total Interest Earned to Total Outside Assets Ratio} = \frac{\text{Total Interest Earned}}{\text{Total Outside Assets}}$$

Where,

Total outside assets includes loan & advances, investment on government securities, share and debentures and other all types of investment.

Table No. 4.13

Total Interest Earned to Total outside Assets Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	7.19	6.31
2	2005/2006	6.86	6.38
3	2006/2007	6.48	6.66
4	2007/2008	6.32	6.48
5	2008/2009	7.28	7.49
Total		34.13	33.32
Mean		6.826	6.664
S.D.		0.3783	0.4294
C.V		0.0554	0.0644

Source: Appendix 3 'B' and 5 'L'

The above table reflects a fluctuating trend in Interest earned to total outside assets in case of NIBL, where as NABIL ratios have a decreasing trend but in F/Y 2008/2009 it increases. NABIL has recorded a high ratio of 7.28% in F/Y 2008/2009 and a low ratio of 6.32% in F/Y 2007/2008. NIBL has had a high ratio of 7.49% in FY 2008/2009 and a low ratio of 6.31% in F/Y 2004/2005. In case of mean ratio, NABIL has a slightly higher ratio than NIBL i.e. 6.826%>6.664%. It is clear that NABIL has earned higher amount of interest on its outside assets in comparison to NIBL. The C.V. of NABIL is quite lower than NIBL. This indicates that NABIL ratios are more stable than NIBL. From the above analysis, it can be concluded that NABIL seems to be more successful in earning high interest on its outside assets than NIBL.

4.1.4 Risk Ratios

The possibility of risk makes banks' investment as a challenging task. Bank has to take risk to get return on investment. It increases effectiveness and profitability of the bank. If a bank expects high return on its investment it has to accept the risk and manage it efficiently.

Through following ratios, effort has been made to measure the level of risk.

i) Liquidity Risk Ratio

The liquidity risk 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 depositors' demand for cash. Higher the ratio, lower the liquidity risks.

We have,

$$\text{Liquidity Risk Ratio} = \frac{\text{Total Cash \& Bank Balance}}{\text{Total Deposit}}$$

Table No. 4.14

Liquidity Risk Ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	3.83	9.40
2	2005/2006	3.26	12.34
3	2006/2007	6	9.97
4	2007/2008	8.37	10.90
5	2008/2009	9.03	16.95
Total		30.49	59.56
Mean		6.098	11.912
S.D.		2.3223	2.7081
C.V		0.3808	0.2273

Source: Appendix 4 'A' and 5 'N'

The above table shows that the liquidity risk ratios of both the banks have fluctuating trend. NABIL has recorded a high ratio of 9.03% and a low ratio of 3.26%. Similarly, NIBL has recorded a high of 16.95% and a low of 9.40%.

When mean ratio are taken it is found that NIBL's liquidity risk is lower than that of NABIL i.e. 11.912>6.098. NIBL has more cash & bank balance than NABIL to meet its current obligations. On the other hand, too much idle cash might have an adverse impact on profitability. A trade off between liquidity and profitability must be maintained at all times.

On comparison of C.V.'s of both the banks, NIBL ratio's seems to be more stable and consistent than NABIL.

ii) Credit Risk Ratio

Credit risk ratio 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. Actually credit risk ratio shows the proportion of non-performing assets in total loan and advances of a bank.

We have,

$$\text{Credit Risk Ratio} = \frac{\text{Total Loan and Advances}}{\text{Total Assets}}$$

Table No. 4.15
Credit risk ratio (%)

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	61.60	62.22
2	2005/2006	57.87	59.90
3	2006/2007	57.04	62.65
4	2007/2008	57.54	69.45
5	2008/2009	62.89	68.37
Total		296.94	322.59
Mean		59.388	64.518
S.D.		2.3828	3.7218
C.V		0.0401	0.0577

Source: Appendix 4 'B' and 5 'O'

The above table shows that NABIL ratios are in a decreasing trend till F/Y 2006/2007. There after they have an increasing trend. The ratios of NIBL have a fluctuating trend. NABIL has witnessed a high ratio of 62.89% in F/Y 2008/2009 and a low ratio of 57.04% F/Y 2006/2007. Similarly, NIBL has had a high ratio of 69.45% in F/Y 2007/2008 and a low ratio of 59.90% in F/Y 2005/2006.

The mean ratio of NABIL is lower than that of NIBL ie. $59.388 \% < 64.518\%$. This indicates that NIBL has more exposure to credit risk than its counterpart. From the point of view of C.V., NABIL seem to have had consistent ratios during the study period.

4.1.5 Growth Ratio

Growth ratios are directly related to the fund mobilization and investment management of the commercial bank. It represents how well the commercial banks are maintaining the economic and financial position. Higher the ratio, better the performance of the bank and vice-versa.

Mathematically it is calculated as:

$$\text{Factor} = \frac{\text{Last Year Figure}}{\text{First Year Figure}}$$

$$\text{Factor} = (1+g)^{n-1}$$

Where,

g = growth ratio

n = number of period

Again, growth ratio is measured in percentage.

Under this section growth ratio of total deposit, loan & advances, total investment and net profit are calculated.

i) Growth Ratio to Total Deposit

Table No. 4.16

Growth Ratio of Total Deposit (%)

S.N.	Fiscal year	NABIL	NIBL
1	2004/2005	14586.61	14254.57
2	2005/2006	19347.40	18927.30
3	2006/2007	23342.28	24488.85
4	2007/2008	31915.05	34451.73
5	2008/2009	37348.26	46698.10
	Growth ratio (%)	26.50	34.53

Source: Appendix '9'

The above table no.4.19 shows that the growth ratio of NABIL bank is less than NIBL. We can see growth rate of NABIL i.e. 26.50% is less than that of NIBL ie.34.53%. The above position of growth rate indicates that NIBL used to increase its deposit collection very aggressively than NABIL.

ii) Growth Ratio of Loan & Advances

Table No. 4.17

Growth Ratio of Loan & Advances

S.N.	Fiscal year	NABIL	NIBL
1	2004/2005	10586.17	13967.78
2	2005/2006	12922.54	17906.12
3	2006/2007	15545.78	23580.98
4	2007/2008	21365.05	34183.44
5	2008/2009	27589.93	47081.16
	Growth ratio (%)	27.06	35.50

Source: Appendix '9'

The above table no.20 shows the growth ratio of loan & advances. The growth ratio of NIBL bank is very high i.e. 35.50% where as NABIL bank's growth rate is low i.e. 27.06%. This position of growth ratio indicates that the performance of NIBL to grant loan and advances in comparison to NABIL is better.

iii) Growth Ratio of Total Investment

Table no.4.18

Growth Ratio of Total Investment

S.N.	Fiscal year	NABIL	NIBL
1	2004/2005	4267.23	3934.19
2	2005/2006	6178.53	5602.87
3	2006/2007	8945.31	6505.68
4	2007/2008	9939.77	6874.02
5	2008/2009	10826.38	7399.81
	Growth ratio (%)	26.21	17.11

Source: Appendix '9'

The above table no. 21 shows the growth ratio of total investment of NABIL and NIBL. Those are 26.21% and 17.11% respectively. It seems that growth ratio of NABIL is higher than NIBL.

4.2 Statistical Tools

Some important statistical tools are used to achieve the objective of this study. In this study, statistical tools such as trend analysis, co-efficient of correlation analysis between different variables, test of hypothesis are used.

4.2.1 Coefficient of Correlation Analysis

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

i) Co-efficient of Correlation between Deposits and Loan & Advances

Coefficient of correlation (r) between deposits and loans and advances measures the degree of relationship between these two variables. The purpose of correlation analysis between deposit and loan and advances is to find out whether deposit is significantly used as loan and advances. In this analysis deposit is independent variable (x) and loan & advances are dependent variables (y).

The following table shows the value of 'r' r^2 , PEr and 6PEr between total deposits and loan and advances of NABIL and NIBL during the study period

Table No. 4.19

Coefficient of Correlation between Deposit and Loan & Advances

Evaluation Criteria	NABIL	NIBL
R	0.99	1
R^2	0.98	1
P.E.r	0.01	0
6P.E.r	0.06	0

Source: Appendix 7 'A'

In the above table the coefficient of correlation between deposit and loan and advances in case of NABIL is 0.99. This indicates that there is a positive relationship between deposit and loan and advances. The calculated value of (r^2) or coefficient of determination is 0.98. This means 98% of variation of the dependent variable (loan and advances) has been explained by the independent variable (deposit). When the value of 'r' i.e., 0.99 is compared with six times the probably error or 6PEr. i.e., 0.04, we can say that there is significant relationship between deposits and loan advances because 'r' is Greater than six times PE.r i.e. $0.99 > 0.04$. The coefficient of correlation 'r' between deposits and loan and advances incase of NIBL is 1, which gives us an indication of perfectly positive correlation between them. This further shows that the value of 'r' is significant. In other words, there is

significant relationship between deposit and loan and advances. From the above analysis, we can conclude that both the banks show positive relationship between deposits and loan and advance. The relationship is highly significant in case of both bank and the value of (r^2) shows higher percentage of dependency. It indicates NIBL has been more successful in utilizing its deposits in a proper manner than NABIL. Further, the increase in loan and advance is due to effective mobilization of deposits, and other factors have marginal role in increase in loan and advances.

ii) Coefficient of Correlation between Deposit and Total Investment.

Coefficient 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. In this analysis deposit is independent variable (x) and total investment is independent variable (y).

Table No. 4.20

Coefficient of Correlation between Deposit and Total Investment

Evaluation criteria	NABIL	NIBL
R	0.96	0.99
r^2	0.92	0.98
P.E.r	0.02	0.01
6P.E.R	0.12	0.06

Source: Appendix 7 'B'

The coefficient of correlation 'r' between deposits and total investment in case of NABIL is 0.96, which indicates a positive correlation between deposits and total investment. Coefficient of determination (r^2) is 0.92. This means 92% of variation of the dependent variable has been explained by independent variable.

The value of 'r' i.e. 0.96 is also greater than six times PEr. This states that there exists a significant relationship between deposits and total investment.

The coefficient of correlation 'r' between deposits and total investment in case of NIBL is 0.99, which indicates almost perfectly positive relationship between the two variables. The coefficient of determination (r^2) is 0.98. This indicates that 98% of the variation of the dependent variable has been explained by independent variable. Moreover 'r' is greater than six times P.E.r, which further states that there is a significant relationship between deposits and total investment.

In conclusion, it can be said that both the banks show significant relationship between total deposits and total investment.

iii) Coefficient of Correlation between outside Assets and Net Profit

Coefficient of correlation between outside asset and net profit measures the degree of relationship between these two variables. The purpose of computing these analysis is to find out whether net profit is significantly correlated with respect to total assets or not. In this analysis outside asset is independent variable (x) and net profit is independent variable (y).

Table No. 4.21

Coefficient of Correlation between outside Assets and Net Profit

Evaluation criteria	NABIL	NIBL
R	0.95	1
r^2	0.90	1
P.E.r.	0.03	0
6 P.E.r.	0.18	0

Source: Appendix 7 'C'

The coefficient of correlation 'r' between outside assets and net profit in case of NABIL is 0.95, which indicates a highly positive relationship between these two variables. The coefficient of determination (r^2) is 0.90, which indicates that 90% of the variation of the dependent variable, has been explained by independent variable. The value of 6pEr i.e.0.18 is lower than the value of 'r' i.e.0.95. This states that there exists a significant relationship between outside assets and net profit of NABIL.

The coefficient of correlation between outside assets and net profit in case of NIBL is 1, which indicates a perfectly positive relationship between the two variables. The value of (r^2) is 1 which highlights that 100% of the variation of the dependent variable has been explained by the independent variable. Likewise when we compare 6PEr with the value of 'r' we can say that there exists a significant relationship between outside assets and net profit because 'r' is higher than six times PE.r. Thus NIBL has a significant correlation between mobilization of outside assets and net profit.

Thus, in view of above we can conclude that the relationship between outside assets and net profit incase of both the banks are significant.

4.2.2 Trend Analysis

This is known as time series analysis. Under this topic, analysis of trend of loan & advances to total deposit ratio as well as trend of total investment to total deposit ratios of NABIL and NIBL are calculated and forecasted for next five years. The forecast is based on the following assumptions.

- Other things will remain unchanged.
- The bank will run in present position.
- The economy will remain in the present stage

- The forecast will be true only when the limitation of least square method is carried out Nepal Rastra Bank will not change its guidelines to commercial banks.

i) Analysis of Trend value of Total Deposit

Under this topic, based on the trend values of deposit from F/Y 2004/2005 to 2008/2009, an attempt has been made to forecast the projection for next five years, i.e. up to F/Y 2014/2015.

The following table shows the trend value of deposits from F/Y 2004/2005 to 2008/2009.

Table No. 4.22

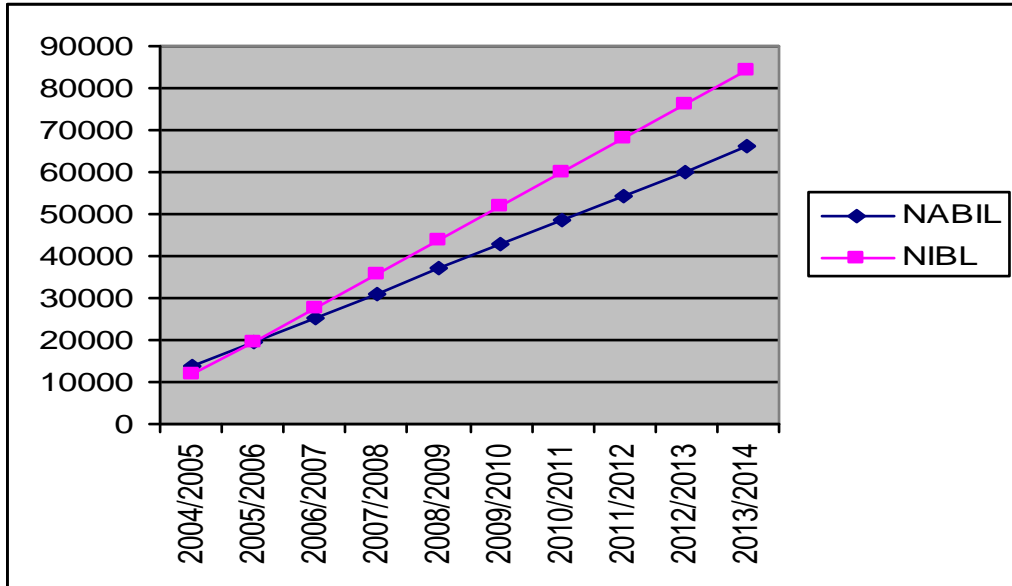
Trend Values of Total Deposit of NABIL and NIBL

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	13689.73	11681.812
2	2005/2006	19498.825	19722.961
3	2006/2007	25307.92	27764.11
4	2007/2008	31117.015	35805.259
5	2008/2009	36926.11	43846.408
6	2009/2010	42735.205	51887.557
7	2010/2011	48544.3	59928.706
8	2011/2012	54353.395	67969.855
9	2012/2013	60162.49	76011.004
10	2013/2014	65971.585	84052.153

Source: Appendix 6 'A'

Figure 4.1

Trend Values of Total Deposit of NABIL and NIBL



From the above comparative table it is clear that trend values of NIBL are in an increasing trend. If other things remain unchanged the total deposit of NABIL is predicted to be RS. 65971.585 million and that of NIBL to be more than the deposit of NABIL by the end of F/Y 2013/2014 i.e. Rs. 84052.153 million.

From the above trend analysis, it is quite obvious that NIBL's deposit collection is proportionately much better than NABIL from F/Y 2004/2005 onwards. The trend values of total deposit of both NABIL and NIBL are fitted in the trend lines given in figure.

ii) Analysis of Trend Values of Loan and Advances

Here, the trend values of loan and advances of NABIL and NIBL have been calculated for five years from F/Y 2004/2005 to 2008/2009 and the forecast for next five years i.e. from F/Y 2009/2010 to F/Y 2013/2014 has been made

Table No. 4.23

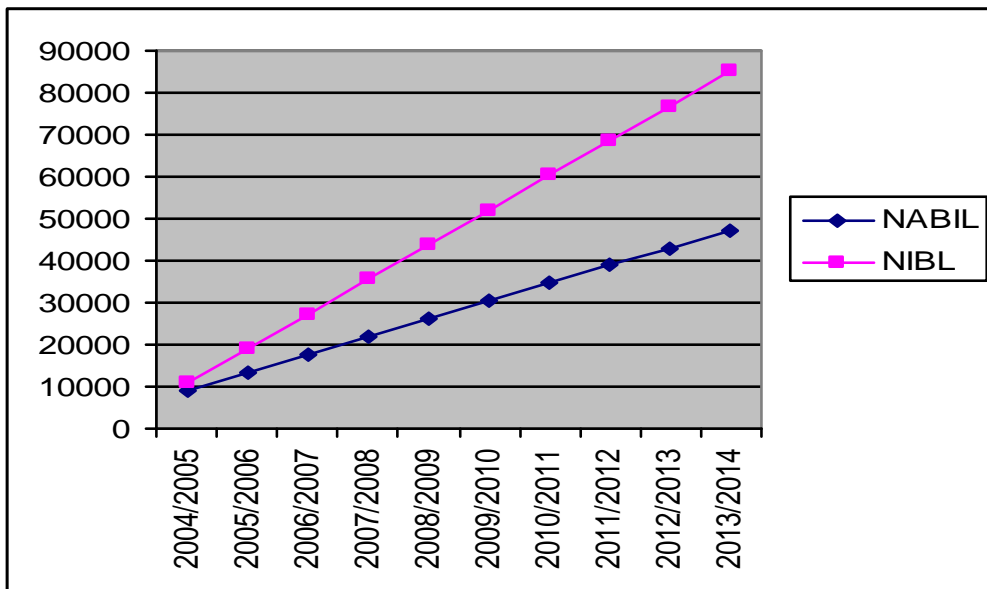
Trend Values of Loan and Advances of NABIL and NIBL

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	9111.888	10843.08
2	2005/2006	13356.891	19093.488
3	2006/2007	17601.894	27343.896
4	2007/2008	21846.897	35594.304
5	2008/2009	26091.9	43844.712
6	2009/2010	30336.903	52095.12
7	2010/2011	34581.906	60345.528
8	2011/2012	38826.909	68595.936
9	2012/2013	43071.912	76846.344
10	2013/2014	47316.915	85096.752

Source: Appendix 6 'B'

Figure 4.2

Trend Values of Loan and Advances of NABIL and NIBL



The above table clearly shows that the loan and advance of both the banks are in an increasing trend. Assuming that other things will remain constant, the loan and advances of NABIL at the end of F/Y 2013/2014 is predicted to be Rs. 47316.915 million. Similarly, the projection for NIBL at the end of F/Y 2013/2014 is Rs 85096.752 million.

From the above trend analysis, it is quite clear that NIBL's loan and advances in relation to NABIL is comparatively higher through out the trend projection period. The above trend values of loan and advances of NABIL and NIBL are fitted in the trend line given in Figure.

iii) Analysis of Trend Values of Total Investment

Under this topic, based on the trend values of Investment from F/Y 2004/2005 to 2008/2009, an attempt has been made to forecast the projections for next five years i.e. up to F/Y 2013/2014.

The following table shows the trend value investment from F/Y 2004/2005 to F/Y 2013/2014.

Table No. 4.24

Trend Values of Total Investment of NABIL and NIBL

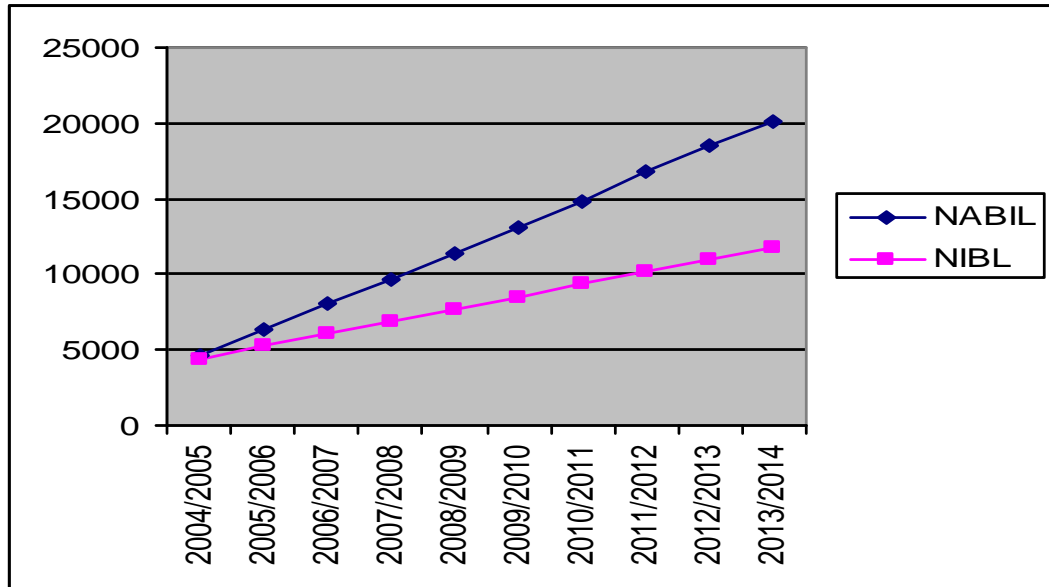
S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	4655.536	4422.836
2	2005/2006	6343.49	5243.075
3	2006/2007	8031.444	6063.314
4	2007/2008	9719.398	6883.553
5	2008/2009	11407.352	7703.792
6	2009/2010	13095.306	8524.031

7	2010/2011	14783.26	9344.27
8	2011/2012	16771.214	10164.509
9	2012/2013	18459.168	10984.748
10	2013/2014	20147.122	11804.987

Source: Appendix 6 'C'

Figure 4.3

Trend Values of Total Investment of NABIL and
NIBL



From the above table it is clear that the trend value of both the banks are in an increasing trend. If other things remain unchanged total investment of NABIL is predicted to be Rs. 20147.122 in F/Y 2013/2014 and that of NIBL to be Rs. 11804.987million. These values are highest under the review period.

The above table reveals that NABIL's total investment is higher than that of NIBL through out the trend projection period. It can be said that both NABIL has

followed the policy of maximizing their investment. The above calculated trend values of NABIL and NIBL are fitted in the trend line given in Fig

iv) Analysis Trend Values of Net Profit

Under this topic, based on the trend values of net profit from F/Y2004/2005 to 2008/2009, an attempt has been made to forecast the projections for next five years i.e. up to F/Y 2013/2014.

The following table shows the trend value of net profit from F/Y 2004/2005 to F/Y 2013/2014.

Table No. 4.25

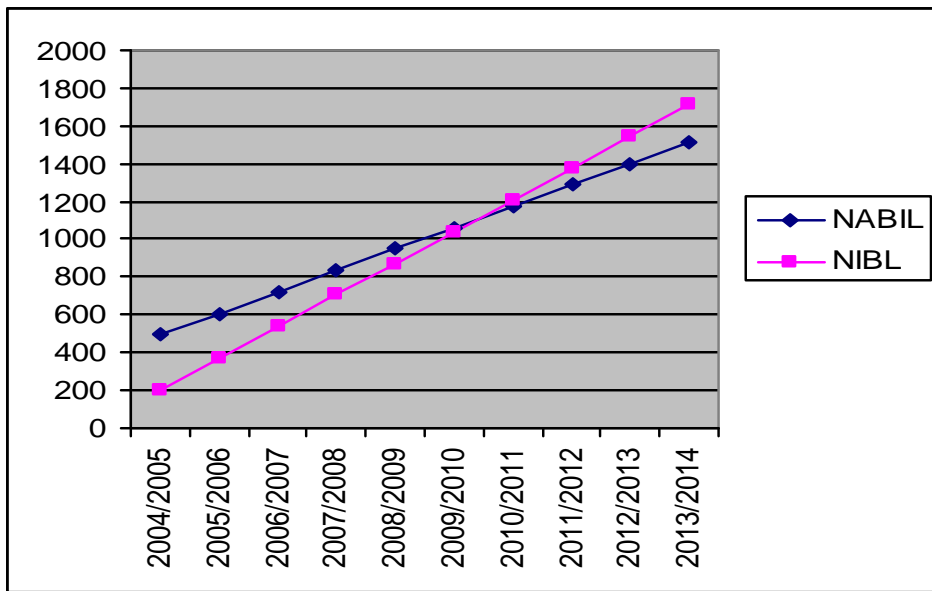
Trend Values of Net Profit of NABIL and NIBL

S.N.	Fiscal Year	NABIL	NIBL
1	2004/2005	494.752	199.662
2	2005/2006	608.061	367.975
3	2006/2007	721.37	536.288
4	2007/2008	834.679	704.601
5	2008/2009	947.988	872.914
6	2009/2010	1061.297	1041.227
7	2010/2011	1174.606	1209.54
8	2011/2012	1287.915	1377.853
9	2012/2013	1401.224	1546.166
10	2013/2014	1514.533	1714.479

Source: Appendix 6 'D'

Figure 4.4

Trend Values of Net Profit of NABIL and NIBL



From the above comparative table it is clear that the trend value of both the banks are in increasing trend. Other things remaining the same the trend value of both the banks are in increasing trend. The trend value of NABIL will be highest in F/Y 2013/2014 i.e. Rs.1514.533 million. In case of NIBL net profit will be Rs 1714.479 million in F/Y 2013/2014, which is the highest under the review period.

NIBL's net profit is higher than that of NABIL through the review period. It can be said that both the banks have followed the policy of maximizing their net profit.

However, we can draw a conclusion that NIBL has utilized its fund better than NABIL to earn higher amounts of profit. The above calculated trend values of net profit of NABIL and NIBL are fitted in the trend line given in figure.

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 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.

Types of Hypothesis: -

Null hypothesis

Alternative hypothesis

Null Hypothesis (H_0): $\bar{X}_1 = \bar{X}_2$: - It always rejected the difference & accepts them (assumption value & actual value) are same i.e. there is no significant difference between mean ratios of loan & advances to total deposits of NABIL and NIBL.

Alternative Hypothesis (H_0): $\bar{X}_1 \neq \bar{X}_2$: - Complementary of null is called alternative hypothesis i.e. there is significant difference between mean ratios of loan & advances to total deposits of NABIL and NIBL..

Generally, following steps are followed for the test of hypothesis.

Formulating hypothesis

Null hypothesis

Alternative hypothesis

Computing the test statistics

Fixing the level of significance

Finding critical region

Deciding two-tailed or one tailed test

Making decision

In this topic t statistic is used to find out the test of significance regarding the parameter of the population on the basis of sample drawn from the population.

t-test

In this research study the sample is small i.e., $n = 5$. Hence, to deal with small sample 't' test is used. Suppose we want to test if two independent samples have been drawn from two normal populations having the same means, the population variances being equal.

We set up the Null hypothesis $H_0: \mu = \mu_y$ i.e., the samples have been drawn from the normal population, or the sample means \bar{x} and \bar{y} do not differ significantly. Under the assumption that $\sigma^2 = \sigma_y^2$ i.e., population variances are equal but unknown, the test statistic under H_0 is:

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad \text{... w.d.f. } n_1 + n_2 - 2$$

Where $\bar{x} = \frac{\sum x}{n_1}$ $\bar{y} = \frac{\sum y}{n_2}$

And $S^2 = \frac{1}{n_1 + n_2 - 2} [\sum (x - \bar{x})^2 + \sum (y - \bar{y})^2]$

is an unbiased estimate the common population variance σ^2 based on both the samples. By comparing the tabulated value of 't' for $n_1 + n_2 - 2$ d.f. at the desired level of significance. Usually 5% we reject or retain the null hypothesis H_0 .

Assumption made for using t-test in this case is that: -

The parent populations from which samples are drawn are normally distributed.

The two samples are random and independent of each other.

The population variances are equal and unknown.

i) Test of Hypothesis on Loan and Advances to Total Deposit Ratio of NABIL and NIBL.

Let loan and advances to total deposit of NABIL and NIBL be denoted by X and Y respectively.

Calculated $S^2 = 30.875$ (for detail see Appendix 8 'A')

Solution:

Null Hypothesis (H_0): $\hat{\mu}_1 = \hat{\mu}_2$ i.e., there is no significant difference between mean ratio of loan and advances to total deposit of NABIL and NIBL.

Alternative Hypothesis (H_1): $\hat{\mu}_1 \neq \hat{\mu}_2$ i.e., there is significant difference between mean ratio of loan and advances to total deposit of NABIL and NIBL.

Test Statistic

Under H_0 , the test statistic is

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad (\text{with } \dots\dots\dots \text{ d.f.} = n_1 + n_2 - 2)$$

$$t = 0.0939$$

Decision:

The tabulated value of t for 8 d.f. at 5% level of significance is 2.306. Since calculated 't' is lower than tabulated 't', $H_0: \hat{\mu}_1 = \hat{\mu}_2$ is accepted and we can

conclude that there is no significant difference between mean ratios of loan and advances to total deposit of NABIL and NIBL.

ii) Test of Hypothesis on total Investment to Total Deposits Ratio NABIL and NIBL.

Let, the total investment to total deposit ratio of NABIL and NIBL be denoted by X and Y.

$$\text{Calculated } S^2 = 23.87 \text{ (for detail see Appendix 8'B')}$$

Solution:

Null Hypothesis (H_0): $\hat{\mu}_1 = \hat{\mu}_2$ i.e., There is no significant difference between the mean ratios of total investment to total deposit of NABIL and NIBL.

Alternative Hypothesis (H_1): $\hat{\mu}_1 \neq \hat{\mu}_2$ i.e., There is significant difference between the mean ratio of total investment to total deposit of NABIL and NIBL.

Test Statistic

Under H_0 , the test statistic is

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad (\text{with d.f.} = n_1 + n_2 - 2)$$

$$t = 2.59$$

Decision:

The tabulated value of t for 8 d. of at 5% level of significance is 2.306. Since calculated is greater than tabulated value of 't' it is significant. Hence $H_0: \hat{\mu}_1 = \hat{\mu}_2$ is rejected at 5% level of significance and we may conclude that there is significant difference between mean ratios of total investment to total deposit of NABIL and NIBL

4.3 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:

4.4.1 Findings from the Liquidity Ratios Analysis

-) From the analysis of current ratio it is found that the mean ratio of NABIL is slightly lower than NIBL. The ratios of both the banks are highly consistent. The mean current ratio of both the banks is lower than 1.

-) The mean ratio of cash and bank balance to current assets of NIBL is higher than NABIL. This shows NIBL's greater capacity to meet its customer's daily cash requirement than NABIL. The ratios of NIBL are less variable and more consistent than NABIL

-) The mean ratio of cash and bank balance to total deposits of NIBL is higher than NABIL. NIBL has better liquidity position than NABIL because of high percentage of liquid assets. This shows NIBL readiness to meet its customer requirement. On the contrary, a high liquidity also indicates the inability of the bank to mobilize its current assets. Also the ratios of NIBL are more consistent than NABIL.

-) The mean ratio of investment in Government securities to current assets of NABIL is higher than NIBL. This shows that NABIL has invested more of its fund in Government securities than NIBL. The ratios of NABIL are less variable and more consistent than NIBL.

-) The mean ratio of loan and advances to current assets of NIBL is comparatively higher than NABIL. The variability of ratios of NABIL is slightly greater than NIBL.

-) From the above findings, we can conclude that the liquidity position of NIBL is comparatively better than NABIL. It has the highest cash and bank balance to total deposit, cash and bank balance to current assets. NIBL is in a better position to meet its daily cash requirement. NABIL's mean investment in Government securities is better than NIBL.

4.4.2 Finding from the Asset Management Ratio

The asset management ratios of NABIL and NIBL reveal that:

-) The mean ratio of loan and advances to total deposit ratio of NABIL is slightly higher than NIBL. In terms of consistency, NABIL has less CV than that of NIBL so it is more stable and consistent.
-) The mean ratio of total investment to total deposits of NABIL is higher than NIBL. And also the ratios of NABIL are more consistent and less variable than NIBL. It can be concluded that NABIL is success to better utilization of deposit to investment than NIBL
-) The mean ratio of loan and advances to total working fund of NIBL is higher than NABIL. The ratios of NABIL are less variable and more consistent than NIBL. It can be concluded that NABIL has mobilizing its fund is lesser but it has more consistency than NIBL.
-) The mean ratio of Investment in Government securities to total working fund ratio of NABIL is higher than NIBL. The ratios of NABIL are less variable and more consistent than NIBL.
-) The mean ratio of Investment in shares and debentures to total working fund ratio of NABIL is higher than NIBL. NABIL ratios are more variable than that of NIBL.

From the above analysis, it can be conclude that NABIL has highest investment policy towards investment to total deposits, shares and debentures to total working funds and government securities to total working fund but lower into loan and advances to total working fund. And NABIL has stable and consistent than that of

NIBL. NABIL has fared better in purchasing shares and debentures of other companies, but both have invested marginal amount under this heading. Both the banks have successfully managed their assets towards different income generation activities.

4.4.3 Finding from the Profitability Ratios

The profitability ratio of NABIL and NIBL reveals that:

-) The mean ratio of return on total loan and advances of NABIL has been found to be significantly greater than NIBL. The ratios of NIBL are less variable and more consistent than NABIL.
-) The mean ratio of return on equity of NABIL has been found greater than that of NIBL

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.

4.4.4 Finding from the Risk Ratios

-) The mean liquidity risk ratio of NABIL is lower than NIBL. On the contrary, NIBL's ratios are more uniform than NABIL.
-) The mean credit risk ratio of NABIL is lower than NIBL. Both the banks have been fairly consistent in their ratios.

-) NABIL has maintained higher mean ratio of capital risk than NIBL. The ratio of NABIL is more consistent than NIBL.

Based on above findings we can conclude that NABIL has lower liquidity risk and credit risk than NIBL. NIBL has greater exposure to risk in its financial operations than NIBL and NABIL has greater capital risk.

4.4.5 Finding from the Growth Ratios

The growth ratio of NABIL and NIBL shows that;

-) The mean growth rate of deposits of NIBL is significantly higher than NABIL. It indicated that the performance of NIBL to collect deposit is better than NABIL.
-) The mean growth rate of total loan and advances of NIBL is higher than NABIL. It indicates that the performance of NABIL to grant loan & advances is not satisfactory.
-) The mean growth rate of total investment of NABIL is significantly higher than NIBL.

Based on the above findings, we can conclude that, NIBL has been more successful in increasing its deposits, loan and advances and net profit during the study period, whereas, NABIL has been more efficient in terms of increasing its investment. While other banks have initiated a host of measures and schemes to

attract customer deposits, NABIL's strategy of shedding deposits seems to be off the tune. NABIL needs to seriously rethink its strategy.

4.4.6 Finding from the Co-efficient of correlation analysis

Co-efficient of correlation analysis between different variables of NABIL and NIBL reveals that:

-) NIBL has a higher value of coefficient of correlation between deposits and loan and advances than NABIL.

-) The co-efficient of correlation between deposits and total investment of NIBL is slightly higher than NABIL. It shows the positive relationship between these two variables. It indicates that the total deposit in mobilizing as on investment of NABIL.

-) The co-efficient of correlation between outside assets and net profit in case of both banks has positive relationship. Co-efficient of NIBL is higher than NABIL.

From above findings, it can be concluded that there is significant relationship between all calculations.

4.4.7 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 deposits of both the banks have an increasing trend. The total deposit of NABIL is predicted to be 65971.585 million and that of NIBL to be

84052.153 million at the end of F/Y 2013/2014. The deposit collection trend of NIBL is much better than NABIL.

-)] The loan and advance of both the banks have an increasing trend. The total loan and advance of NABIL is predicted to be 47316.915 million and that of NIBL to be 85096.752 million at the end of F/Y 2013/2014. The loan and advances of NIBL is much better compared to NABIL.
-)] The total investments of both the bank have an increasing trend. The total investment of NABIL is projected at 20147.122 million and that of NIBL at 11804.987 million by the end of F/Y 2013/2014. NABIL seems to have a much-focused policy with regards to total investment than NIBL.
-)] The net profits of both the banks are in an increasing trend. The net profit of NABIL and NIBL is predicted at 1514.533 million and 1714.479 million respectively by the end of F/Y 2013/2014.

4.4.8 Finding from the Test of Hypothesis

The test of significance regarding the parameter of the population, on the basis of sample drawn from the population reveals that:

-)] There is no significant difference between mean ratios of loan and advances to total deposit of NABIL and NIBL.
-)] There is significant difference between mean ratios of total investment to total deposit of 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 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 improving the investment policy of the bank.

The study is based on the secondary data from F/Y 2003/2004 to 2007/2008. 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.

In this study, for the analysis and interpretation of the data different financial & statistical tools are used. In the financial tools liquidity ratios, assets management ratios, profitability ratios, risk ratios and growth ratio have been used. Where as in statistical tools mean, standard deviation, coefficient of variation, trend analysis, coefficient of correlation and test of hypothesis have been used. Only the

secondary data have been used for the analysis in this research. The data are obtained from annual reports of concerned banks, likewise, the financial statement of five years i.e. 2004/2005 to 2008/2009 was selected for the purpose evaluation.

This study reveals that the current ratio of both the banks is lower than 1, which should not be considered satisfactory. The liquidity position of NABIL is comparatively lower than NIBL but it has the highest investment on government securities to current assts ratio.

Through the assts management ratio, NABIL has highest investment policy towards investment to total deposits , shares and debentures to total working funds and government securities to total working fund but lower into loan and advances to total working fund.

In analysis of profitability NABIL has been more successful in maintaining its higher return.

From the viewpoint of risk ratio, liquidity risk and credit risk of NABIL is lower than NIBL in case of capital risk NABIL has greater ratio than NIBL.

From the analysis of growth ratio, NIBL has been more successful in increasing its deposits, loan and advances and net profit during the study period, whereas, NABIL has been more efficient in terms of increasing its investment.

Through the both trend analysis, It shows the NIBL's position will be better in future. NABIL seems to have a much-focused policy with regards to total investment than NIBL.

From the co-efficient of correlation between deposit and loan & advances, deposit & total investment, outside assets and net profit, deposit and net profit, deposit and interest earned, loan and advances and interest paid and total working fund and net profit, there is a significant relationship in case of both banks.

Through the analysis and findings we can summarize that NABIL's investment policy is better and profitability ratio is also good. However, liquidity position and growth rate is not good but it has lower risk ratio than NIBL. NABIL has been more successful to better utilization of its assets. NIBL has very good growth rate than NABIL and it has good liquidity position and lower capital risk ratio.

5.2 Conclusions

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 we can be concluded that 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 & net profit of both 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 to total deposit of NABIL and NIBL.

5.3 Recommendations

On the basis of analysis and findings of the two banks in previous section, NABIL and NIBL is recommended to go through following suggestion, which may overcome the weakness and less effectiveness of the existing fund mobilization and investment policy.

- ❖ A commercial bank must maintain its satisfactory liquidity position to meet the credit need of the customers; however, external as well as internal factors affect the liquidity position of banks. Current ratio of both the banks is lower than 1, which should not be considered satisfactory. Thus it is recommended to increase cash and bank balance to make the immediate payment to the depositor and to meet the demand of loan & advances.
- ❖ To get success in competitive banking environment and maximize return, depositors' money must be utilized as loan and advances. If the largest item of asset side is loan and advances it has negative implication over liquidity because loans and advance are less liquid than the investment in T-bills and development bonds but it will jeopardizes the profitability. Nabil's loan & advances to total deposit ratio is slightly higher and loan & advances to total working fund ratio is lower than NIBL. Nabil is strongly recommended to follow liberal lending policy and invest more and more percentage of total deposit and total working fund in loan & advances.

- ❖ Besides investing on government securities, Nabil is recommended to invest its fund in purchase of shares and debentures of other financial and non-financial companies. Government securities such as treasury bills have very lower yield than other companies' securities. This also helps to maintain the sound portfolio of the bank.
- ❖ Profitability is the main indicator of the financial performance of every business organization. In this study, profitability ratio is good from the angle of return but it seems that NIBL cannot earn higher interest through the outside assets and working fund. So NIBL is recommended to increase its interest earned in outside assets and working fund by investing more & more funds in loan & advances and different types of securities. Because higher interest earning capacity of the bank implies better performance of the bank.
- ❖ If a bank expects high return on its investment it has to accept the risk, it increases effectiveness and profitability of the bank. The risk taken by NABIL, from the angle of capital risk is an higher whereas liquidity risk and credit risk is lower than that of NIBL and its consistency are highly volatile which may result higher loss. The bank should not take high risk, NIBL should carefully analyze in above risk to achieve higher returns.
- ❖ The growth ratios represent how well the commercial banks are maintaining their economic and financial position; it is directly

related to the fund mobilization and investment. NABIL's growth ratio is not good than that of NIBL. NABIL is recommended that it should increase its growth ratio into deposits, loan and advances, investment & net profit.

- ❖ In order to collection much funds, NABIL is suggested 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. Through different kind of scheme such as easy saving scheme, cumulative deposit scheme, house building deposit scheme, deposit linked life insurance scheme, recurring deposit scheme and many other the bank can collect a large fund from lower level people of the kingdom.

- ❖ 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 such as SWIFT, ATM cards, visa electron debit card, international credit card, locker services, lending against gold and silver services, 24 hours services, holiday banking etc. The bank should involve in different kind of social and community development activities. The bank has 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.

- ❖ Integrated and speedy development of the country is possible only when competitive banking services reaches nooks and corners of the country. NABIL and NIBL have shown no interest to open branches

in rural areas. Both the banks are recommended to expand their branches and banking services and facilities in rural areas and communities to accelerate their economic development. NRB should implement policies to encourage banks, which provide extensive services while distinct entailing those who are not responsive to the banking needs of the community, including the underprivileged.

- ❖ The fee-based activities include commission, discount and fees. They yield high return to the bank. NABIL is not in a better position with regard to income from off-balance sheet activities. It is recommended to enhance the off-balance sheet operations as well.

- ❖ Portfolio management refers to the allocation of funds into different components of its assets, having different degree of risk and varying rate of return in such a manner that the conflicting goals of maximum yield and minimum risk can be achieved. The portfolio condition of the banks should be regularly revised from time to time. Appointing an investment specialist as a portfolio manager or assigning the task of portfolio management to Manager Finance and Planning could prove beneficial.

- ❖ Both the banks have invested nominal percentage of its funds in shares and debentures of other companies. They are recommended to invest more in shares and debentures of financial and non-financial companies across different sectors including government corporations. This will encourage overall economic development of the country.

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A. Current Ratio

Calculation of Current Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL					
Total Current Assets	14971.80	18133.81	22829.54	31241.83	36086.13
Total Current Liabilities	15528.69	20454.98	25196.34	34455.56	40437.16
Ratio (Times)	0.96	0.89	0.91	0.91	0.89
NIBL					
Total Current Assets	13967.78	17906.12	23580.98	34183.44	47081.16
Total Current Liabilities	14778.89	19364.70	24912.72	35136.52	48052.96
Ratio (Times)	0.94	0.92	0.95	0.97	0.98

B. Cash and Bank Balance to Current Assets Ratio

Calculation of Cash and Bank Balance to Current Assets Ratio of NABI and NIBL

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Cash & Bank Balance	559.38	630.24	1399.82	2671.14	3372.51
Current Assets	14971.80	18133.81	22829.54	31241.83	36086.13
Ratio (Percentage)	3.74	3.47	6.13	8.55	9.35
NIBL					
Cash & Bank Balance	1340.48	2336.52	2441.51	3754.94	7918.00
Current Assets	13967.78	17906.12	23580.98	34183.44	47081.16
Ratio (Percentage)	9.60	13.05	10.35	10.98	16.82

C. Cash and Bank Balance to Total Deposit Ratio

Calculation of Cash and Bank Balance to Total Deposit Ratio of NABIL and NIBL

Particular	Fiscal Year
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	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Cash & Bank Balance	559.38	630.24	1399.82	2671.14	3372.51
Total Deposits	14586.61	19347.40	23342.28	31915.05	37348.26
Ratio (Percentage)	3.83	3.26	6	8.37	9.03
NIBL					
Cash & Bank Balance	1340.48	2336.52	2441.51	3754.94	7918.00
Total Deposits	14254.57	18927.30	24488.85	34451.73	46698.10
Ratio (Percentage)	9.40	12.34	9.97	10.90	16.95

D. Investment on Government Securities to Current Assets Ratio

Calculation of Investment on Government Securities to Current Assets Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Investment on Govt.	2413.94	2301.46	4808.35	4646.88	3706.10
Current Assets	14971.80	18133.81	22829.54	31241.83	36086.13
Ratio (Percentage)	16.12	12.69	21.06	14.87	10.27
NIBL					
Investment on Govt.	1948.5	2522.3	3256.4	3155	2531.3
Current Assets	13967.78	17906.12	23580.98	34183.44	47081.16
Ratio (Percentage)	13.95	14.09	13.81	9.23	5.38

E. Loan & Advances to Current Assets Ratio

Calculation of Loan & Advances to Current Assets Ratio of NABIL and Investment Bank

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Loan & Advances	10586.17	12922.54	15545.78	21365.05	27589.93
Current Assets	14971.80	18133.81	22829.54	31241.83	36086.13
Ratio (Percentage)	70.71	71.26	68.09	68.39	76.46
NIBL					
Loan & Advances	10126.06	12776.21	17286.43	26996.65	36241.21
Current Assets	13967.78	17906.12	23580.98	34183.44	47081.16
Ratio (Percentage)	72.50	71.35	73.31	78.98	76.98

Source: Appendix '9'

Appendix – 2

Asset Management Ratio (Activity Ratio)

A. Loan & Advances to Total Deposit Ratio

Calculation of Loan & Advances to Total Deposits Ratio of NABIL and Investment Bank

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Loan & Advances	10586.17	12922.54	15545.78	21365.05	27589.93
Total Deposits	14586.61	19347.40	23342.28	31915.05	37348.26
Ratio (Percentage)	72.57	66.79	66.60	66.94	73.87
NIBL					
Loan & Advances	10126.06	12776.21	17286.43	26996.65	36241.21
Total Deposits	14254.57	18927.30	24488.85	34451.73	46698.10
Ratio (Percentage)	71.04	67.50	70.59	58.36	77.61

B. Total Investment to Total Deposit Ratio

Calculation of Total Investment to Current Assets Ratio of NABIL and Investment Bank

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Total Investment	4267.23	6178.53	8945.31	9939.77	10826.38
Total Deposit	14586.61	19347.40	23342.28	31915.05	37348.26
Ratio (Percentage)	29.25	31.93	38.32	31.14	28.99
NIBL					
Total Investment	3934.19	5602.87	6505.68	6874.02	7399.81
Total Deposit	14254.57	18927.30	24488.85	34451.73	46698.10
Ratio (Percentage)	27.60	29.60	26.56	19.95	15.85

C. Loan & Advances to Working Fund Ratio

Calculation of Loan & Advances to Working Fund Ratio of NABIL and Investment Bank

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Loan & Advances	10586.17	12922.54	15545.78	21365.05	27589.93
Total Working Fund	17186.33	22329.97	27253.39	37132.76	43867.40
Ratio (Percentage)	61.60	57.87	57.04	57.54	62.89
NIBL					
Loan & Advances	10126.05	12776.21	17286.43	26996.65	36241.21
Total Working Fund	16274.06	21330.14	27590.84	38873.31	53010.80
Ratio (Percentage)	62.22	59.90	62.65	69.45	68.37

D. Investment on Government to Working Fund Ratio

Calculation of Investment on Government to Working Fund Ratio of NABIL and Investment Bank

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Investment on Govt.	2413.94	2301.46	4808.35	4646.88	3706.10
Total Working Fund	17186.33	22329.97	27253.39	37132.76	43867.40
Ratio (Percentage)	14.04	10.31	17.64	12.51	8.45
NIBL					
Investment on Govt.	1948.5	2522.3	3256.4	3155	2531.3
Total Working Fund	16274.06	21330.14	27590.84	38873.31	53010.80
Ratio (Percentage)	11.97	11.82	11.80	8.12	4.77

E. Investment on Shares and Debentures to Working Fund Ratio

Calculation of Investment on Shares and Debentures to Working Fund Ratio of NABIL and Investment Bank

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
Investment on Shares	443.09	104.19	286.96	323.24	354.93
Total Working Fund	17186.33	22329.97	27253.39	37132.76	43867.40

Ratio (Percentage)	2.58	0.46	0.77	0.87	0.81
NIBL					
Investment on Shares	17.74	17.74	35.25	59.94	64.27
Total Working Fund	16274.06	21330.14	27590.84	38873.31	53010.80
Ratio (Percentage)	0.11	0.08	0.13	0.15	0.12

Source: Appendix '9'

Appendix – 3

Profitability Ratio

A. Return on Loan & Advances Ratio

Calculation of Return on Loan & Advances Ratio of NABIL and Investment Bank

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Net Profit	520.11	635.26	673.96	746.47	1031.05
Loan & Advances	10586.17	12922.54	15545.78	21365.05	27589.93
Ratio (Percentage)	4.91	4.91	4.33	3.49	3.74
NIBL					
Net Profit	232.15	350.54	501.40	696.73	900.62
Loan & Advances	10126.05	12776.21	17286.43	26996.65	36241.21
Ratio (Percentage)	2.29	2.74	2.90	2.58	2.49

B. Total Interest Earned to Total outside Assets Ratio

Calculation of Total Interest earned to Total Outside Assets Ratio of NABIL and Investment Bank.

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Total Interest Earned	1068.75	1310.00	1587.76	1978.70	2798.49
Total Outside Assets	14853.40	19101.08	24491.10	31304.82	38416.31
Ratio (Percentage)	7.19	6.86	6.48	6.32	7.28
Investment Bank					
Total Interest Earned	886.78	1172.74	1584.99	2194.27	3267.94
Total Outside Assets	14060.24	18379.08	23792.11	33870.67	43641.02

Ratio (Percentage)	6.31	6.38	6.66	6.48	7.49
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C. Return On Equity Ratio (ROE)

Calculation of Total Return On Equity Ratio (ROE) of NABIL and Investment Bank.

Particular					
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL					
Net Profit	520.11	635.26	673.95	746.47	1,031.05
Total Equity	1657.64	2310.08	2566.47	2874.57	3491.57
Ratio(%)	31.38	27.50	26.26	25.97	29.53
NIBL					
Net Profit	232.15	350.54	501.40	696.73	900.62
Total Equity	1180.17	1415.44	1878.12	2686.79	3907.84
Ratio(%)	19.67	24.77	26.70	25.93	23.05

Source: Appendix '9'

Appendix – 4

Risk Ratio

A. Liquidity Risk Ratio

Calculation of Liquidity Risk Ratio of NABIL and Investment Banks

Particular	<i>Fiscal Year</i>				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Cash & Bank Balance	559.38	630.24	1399.82	2671.14	3372.51
Total Deposits	14586.61	19347.40	23342.28	31915.05	37348.26
Ratio (Percentage)	3.83	3.26	6	8.37	9.03
NIBL					
Cash & Bank Balance	1340.48	2336.52	2441.51	3754.94	7918.00
Total Deposits	14254.57	18927.30	24488.85	34451.73	46698.10
Ratio (Percentage)	9.40	12.34	9.97	10.90	16.95

B. Credit Risk Ratio

Calculation of Credit Risk Ratio of NABIL and Investment Banks

Particular	Fiscal Year				
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
NABIL Bank					
Total Loan & Advances	10586.17	12922.54	15545.78	21365.05	27589.93
Total Assets	17186.33	22329.97	27253.39	37132.76	43867.40
Ratio (Percentage)	61.60	57.87	57.04	57.54	62.89
NIBL					

Total Loan & Advances	10126.05	12776.21	17286.43	26996.65	36241.21
Total Assets	16274.06	21330.14	27590.84	38873.31	53010.80
Ratio (Percentage)	62.22	59.90	62.65	69.45	68.37

Source: Appendix '9'

Appendix – 5

A. Calculation of Mean, Standard Deviation and Co-efficient of Variation of current ratio of NABIL and NIBL

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	0.96	0.9216	0.94	0.8836
2005/2006	0.89	0.7921	0.92	0.8464
2006/2007	0.91	0.8281	0.95	0.9025
2007/2008	0.91	0.8281	0.97	0.9409
2008/2009	0.89	0.7921	0.98	0.9604
	$X_1 =$ 4.56	$X_1^2 =$ 4.162	$X_2 =$ 4.76	$X_2^2 =$ 4.5338
Mean	0.912		0.952	
S.D.	0.0256		0.0213	
C.V.	0.0281		0.0224	

Where,

X_1 = Total Current ratio of NABIL Bank

X_2 = Total Current ratio of Investment Bank

$$\text{Mean} = \frac{X_1}{N}$$

$$\text{Standard Deviation (S.D.)} = \sqrt{\frac{(X_1)^2}{N} - \left(\frac{X_1}{N}\right)^2}$$

$$\text{Coefficient of Variation (C.V.)} = \frac{\text{S.D.}}{\text{Mean}} \times 100 \%$$

B. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Cash and Bank Balance to Current Assets Ratio of NABIL and NIBL

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	3.74	13.9876	9.60	92.16
2005/2006	3.47	12.0409	13.05	170.3025
2006/2007	6.13	37.5769	10.35	107.1225
2007/2008	8.55	73.1025	10.98	120.5604
2008/2009	9.35	87.4225	16.82	282.9124
	$X_1 =$ 31.24	$X_1^2 =$ 224.1304	$X_2 =$ 60.8	$X_2^2 =$ 773.0578
Mean	6.248		12.16	
S.D.	2.4059		2.5973	
C.V.	0.3851		0.2136	

C. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Cash and Bank Balance to Total Deposit Ratio of NABIL and NIBL

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	3.83	14.6689	9.40	88.36
2005/2006	3.26	10.6276	12.34	152.2756
2006/2007	6	36	9.97	99.4009
2007/2008	8.37	70.0569	10.90	118.81
2008/2009	9.03	81.5409	16.95	287.3025
	$X_1 =$ 30.49	$X_1^2 =$ 212.8943	$X_2 =$ 59.56	$X_2^2 =$ 746.149
Mean	6.098		11.912	
S.D.	2.3223		2.7081	
C.V.	0.3808		0.2273	

D. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Investment on Government Securities to Current Assets Ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	16.12	259.8544	13.95	194.6025

2005/2006	12.69	161.0361	14.09	198.5281
2006/2007	21.06	443.5236	13.81	190.7161
2007/2008	14.87	221.1169	9.23	85.1929
2008/2009	10.27	105.4729	5.38	28.9444
	$X_1 =$ 75.01	$X_1^2 =$ 1191.0039	$X_2 =$ 56.46	$X_2^2 =$ =697.984
Mean	15.002		11.292	
S.D.	3.6250		3.4767	
C.V.	0.2416		0.3079	

E. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Loan & Advances to Current Assets Ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	70.71	4999.9041	72.50	5256.25
2005/2006	71.26	5077.9876	71.35	5090.8225
2006/2007	68.09	4636.2481	73.31	5374.3561
2007/2008	68.39	4677.1921	78.98	6237.8404
2008/2009	76.46	5846.1316	76.98	5925.9204
	$X_1 =$ 354.91	$X_1^2 =$ 2 5237.4635	$X_2 =$ 373.12	$X_2^2 =$ 27 885.1894
Mean	70.982		74.624	
S.D.	3.0080		2.8804	
C.V.	0.0424		0.0386	

F. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Loan & Advances to Total Deposit Ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	72.57	5266.4049	71.04	5046.6816
2005/2006	66.79	4460.9041	67.50	4556.25
2006/2007	66.60	4435.56	70.59	4982.9481
2007/2008	66.94	4480.9636	58.36	3405.8896
2008/2009	73.87	5456.7769	77.61	6023.3121
	$X_1 =$	$X_1^2 =$ 2	$X_2 =$	$X_2^2 =$ 24

	346.74	4100.6095	345.1	015.0814
Mean	69.348		69.02	
S.D.	3.3131		6.2654	
C.V.	0.0478		0.0908	

G. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Total Investment to Total Deposit Ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	29.25	855.5625	27.60	761.76
2005/2006	31.93	1019.5249	29.60	876.16
2006/2007	38.32	1468.4224	26.56	705.4336
2007/2008	31.14	969.6996	19.95	398.0025
2008/2009	28.99	840.4201	15.85	251.2225
	$X_1 =$ 159.63	$X_1^2 =$ 5153.6295	$X_2 =$ 119.56	$X_2^2 =$ 2992.5786
Mean	31.926		23.912	
S.D.	3.3847		5.1703	
C.V.	0.1060		0.2162	

H. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Loan and Advances to Total Working Fund Ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	61.60	3794.56	62.22	3871.3284
2005/2006	57.87	3348.9369	59.90	3588.01
2006/2007	57.04	3253.5616	62.65	3925.0225
2007/2008	57.54	3310.8516	69.45	4823.3025
2008/2009	62.89	3955.1521	68.37	4674.4569
	$X_1 =$ 296.94	$X_1^2 =$ 17663.062 2	$X_2 =$ 322.59	$X_2^2 =$ 20882.1203
Mean	59.388		64.518	
S.D.	2.3828		3.7218	
C.V.	0.0401		0.0577	

I. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Investment on Government Securities to Total Working Fund Ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	14.04	197.1216	11.97	143.2809
2005/2006	10.31	106.2961	11.82	139.7124
2006/2007	17.64	311.1696	11.80	139.24
2007/2008	12.51	156.5001	8.12	65.9344
2008/2009	8.45	71.4025	4.77	22.7529
	$X_1 =$ 62.95	$X_1^2 =$ 842.4899	$X_2 =$ 48.48	$X_2^2 =$ 0.9206
Mean	12.59		9.48	
S.D.	3.1607		2.8586	
C.V.	0.2510		0.3015	

J. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Investment on Shares and Debentures to Total Working Fund Ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	2.58	6.6564	0.11	0.0121
2005/2006	0.46	0.2116	0.08	0.0064
2006/2007	0.77	0.5929	0.13	0.0169
2007/2008	0.87	0.7569	0.15	0.0225
2008/2009	0.81	0.6561	0.12	0.0144
	$X_1 =$ 5.49	$X_1^2 =$ 8.8739	$X_2 =$ 0.59	$X_2^2 =$ 0.0723
Mean	1.098		0.118	
S.D.	0.7544		0.0231	
C.V.	0.6871		0.1958	

K. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Return on Equity Ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2

2004/2005	31.38	984.70	19.67	386.91
2005/2006	27.50	756.25	24.77	613.55
2006/2007	26.26	689.59	26.70	712.89
2007/2008	25.97	674.44	25.93	672.36
2008/2009	29.53	872.02	23.05	531.30
	$X_1 =$ 140.64	$X_1^2 =$ 3977	$X_2 =$ 120.12	$X_2^2 =$ 2917.01
Mean	28.13		24.02	
S.D.	2.05		2.50	
C.V.(%)	7.28		10.41	

L. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Total Interest Earned to Total outside Assets Ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	7.19	51.6961	6.31	39.8161
2005/2006	6.86	47.0596	6.38	40.7044
2006/2007	6.48	41.9904	6.66	44.3556
2007/2008	6.32	39.9424	6.48	41.9904
2008/2009	7.28	52.9984	7.49	56.1001
	$X_1 =$ 34.13	$X_1^2 =$ 233.6869	$X_2 =$ 33.32	$X_2^2 =$ 222.9666
Mean	6.826		6.664	
S.D.	0.3783		0.4294	
C.V.	0.0554		0.0644	

M. Calculation of Mean, Standard Deviation and Co-efficient of Variation of Return on Loans & Advances Ratio

Fiscal Year	NABIL Bank	Investment Bank
-------------	------------	-----------------

	X_1	X_1^2	X_2	X_2^2
2004/2005	4.91	24.1081	2.29	5.2441
2005/2006	4.91	24.1081	2.74	7.5076
2006/2007	4.33	18.7489	2.90	8.41
2007/2008	3.49	12.1801	2.58	6.6564
2008/2009	3.74	13.9876	2.49	6.2001
	$X_1 =$ 21.38	$X_1^2 =$ 93.1328	$X_2 =$ 13	$X_2^2 =$ 34.0182
Mean	4.276		2.6	
S.D.	0.5851		0.2089	
C.V.	0.1368		0.0803	

N. Calculation of Mean, Standard Deviation and Co-efficient of Variation Liquidity Risk Ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	3.83	14.6689	9.40	88.36
2005/2006	3.26	10.6276	12.34	152.2756
2006/2007	6	36	9.97	99.4009
2007/2008	8.37	70.0569	10.90	118.81
2008/2009	9.03	81.5409	16.95	287.3025
	$X_1 =$ 30.49	$X_1^2 =$ 212.8943	$X_2 =$ 59.56	$X_2^2 =$ =746.149
Mean	6.098		11.912	
S.D.	2.3223		2.7081	

O. Calculation of Mean, Standard Deviation and Co-efficient of Credit risk ratio

Fiscal Year	NABIL Bank		Investment Bank	
	X_1	X_1^2	X_2	X_2^2
2004/2005	61.60	3794.56	62.22	3871.3284
2005/2006	57.87	3348.9369	59.90	3588.01
2006/2007	57.04	3253.5616	62.65	3925.0225
2007/2008	57.54	3310.8516	69.45	4823.3025
2008/2009	62.89	3955.1521	68.37	4674.4569

	$X_1 =$ 296.94	$X_1^2 =$ 17663.062 2	$X_2 =$ 322.59	$X_2^2 =$ 20882.1203
Mean	59.388		64.518	
S.D.	2.3828		3.7218	
C.V.	0.0401		0.0577	

Source: Appendix '9'

Appendix – 6

A.

1)

NABIL

The Trend value of Total Deposits of NABIL

(Rs. in million)

F/Y	Total Deposits (y)	$x = T -$ 2006/2007	x^2	xy	$y = a + bx$ Trend Values
2004/0 5	14586.61	-2	4	-29173.22	13689.73
2005/0 6	19347.40	-1	1	-19347.40	19498.825
2006/0 7	23342.28	0	0	0	25307.92
2007/0 8	31915.05	1	1	31915.05	31117.015
2008/0 9	37348.26	2	4	74696.52	36926.11
	$\phi y = 126539.6$	$\phi x = 0$	$\phi x^2 = 10$	$\phi xy = 58090.9$ 5	

Here, N = 5

$$a = \frac{y}{N} = 25307.92$$

$$b = \frac{xy}{x^2} = 5809.095$$

Let the trend line be,

$$y = a + bx \dots\dots\dots (i)$$

The two normal equation are

$$\phi y = na + b \phi x \dots\dots\dots (ii)$$

$$\phi xy = a \phi x + b \phi x^2 \dots\dots\dots (iii)$$

... From (ii) $a = \frac{y}{N} \dots\dots\dots (iv)$

From (iii) $b = \frac{xy}{x^2} \dots\dots\dots (v)$

... The straight line trend for total deposits is,

$$y = a + bx \mid 25307.92 + 5809.095 x$$

For year 2004/2005, $y = a + bx \mid 25307.92 + 5809.095 \mid 3$
 $x = 3$ $y = \text{Rs.}42735.205 \text{ million}$

Other trend values have been calculated accordingly.

(Rs. in Million)

Year (t)	x = t - 2001/2002	y (Projected deposit) = a+bx
2009/2010	3	42735.205
2010/2011	4	48544.3
2011/2012	5	54353.395
2012/2013	6	60162.49
2013/2014	7	65971.585

2)

NIBL

The Trend value of Total Deposits of NIBL

(Rs. in million)

F/Y	Total Deposits (y)	x=t-2006/2007	X²	xy	y = a + bx Trend Values
2004/05	14254.57	-2	4	-28509.14	11681.812
2005/06	18927.30	-1	1	-18927.30	19722.961
2006/07	24488.85	0	0	0	27764.11
2007/08	34451.73	1	1	34451.73	35805.259
2008/09	46698.10	2	4	93396.2	43846.408
	$\phi y = 138820.55$	$\phi x = 0$	$\phi x^2 = 10$	$\phi xy = 80411.49$	

Here, N = 5

$$a = \frac{y}{N} = 27764.11$$

$$b = \frac{xy}{x^2} = 8041.149$$

Let the trend line be,

$$y = a + bx \dots\dots\dots (i)$$

The two normal equation are

$$\phi y = na + b \phi x \dots\dots\dots (ii)$$

$$\phi xy = a \phi x + b \phi x^2 \dots\dots\dots (iii)$$

$$\dots \text{From (ii) } a = \frac{y}{N} \dots\dots\dots (iv)$$

$$\text{From (iii) } b = \frac{xy}{x^2} \dots\dots\dots (v)$$

... The straight line trend for total deposits is,

$$y = a + bx \mid 27764.11 + 8041.149X$$

For year 2009/2010, $y = a + bx \mid 27764.11 + 8041.149 \times 3$
 $x = 3$ $y = \text{Rs. } 51887.557 \text{ million}$

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t - 2001/2002	y (Projected deposit) = a+bx
2009/2010	3	51887.557
2010/2011	4	59928.706
2011/2012	5	67969.855
2012/2013	6	76011.004
2013/2014	7	84052.153

B.

NABIL

The Trend value of Loan and Advances of NABIL

(Rs. in million)

F/Y	Loan and Advances (y)	x=t-2006/2007	x²	xy	y = a + bx Trend Values
2004/05	10586.17	-2	4	-21172.34	9111.888
2005/06	12922.54	-1	1	-12922.54	13356.891
2006/07	15545.78	0	0	0	17601.894
2007/08	21365.05	1	1	21365.05	21846.897
2008/09	27589.93	2	4	55179.86	26091.9
	$\phi y = 88009.47$	$\phi x = 0$	$\phi x^2 = 10$	$\phi xy = 42450.03$	

Let the trend line be,

$$y = a + bx \dots\dots\dots (i)$$

The two normal equation are

$$\phi y = na + b \phi x \dots\dots\dots (ii)$$

$$\phi xy = a \phi x + b \phi x^2 \dots\dots\dots (iii)$$

$$\dots \text{From (ii) } a = \frac{y}{N} \dots\dots\dots (iv)$$

$$\text{From (iii) } b = \frac{xy}{x^2} \dots\dots\dots (v)$$

Here, N = 5

$$a = \frac{y}{N} = 17601.894$$

$$b = \frac{xy}{x^2} = 4245.003$$

... The straight line trend for total deposits is,

$$y = a + bx \mid 17601.894 + 4245.003 \mid 3$$

$$\text{For year 2009/2010, } \begin{array}{l} y = a + bx \mid 17601.894 + 4245.003 \mid 3 \\ x = 3 \qquad \qquad \qquad y = \text{Rs.}30336.903 \text{ million} \end{array}$$

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t - 2001/2002	y (Projected deposit) = a+bx
2009/2010	3	30336.903
2010/2011	4	34581.906
2011/2012	5	38826.909
2012/2013	6	43071.912
2013/2014	7	47316.915

NIBL

The Trend value of Loan and Advances of NIBL

(Rs. in million)

F/Y	Loan and Advances (y)	x=t-2006/2007	x²	xy	y = a + bx Trend Values
2004/05	13967.78	-2	4	-27935.56	10843.08
2005/06	17906.12	-1	1	-17906.12	19093.488
2006/07	23580.98	0	0	0	27343.896
2007/08	34183.44	1	1	34183.44	35594.304
2008/09	47081.16	2	4	94162.32	43844.712
	$\phi y = 136719.48$	$\phi x = 0$	$\phi x^2 = 10$	$\phi xy = 82504.08$	

Let the trend line be,

$$y = a + bx \dots\dots\dots (i)$$

The two normal equation are

$$\phi y = na + b \phi x \dots\dots\dots (ii)$$

$$\phi xy = a \phi x + b \phi x^2 \dots\dots\dots (iii)$$

$$\dots \text{From (ii) } a = \frac{\phi y}{N} \dots\dots\dots (iv)$$

$$\text{From (iii) } b = \frac{\phi xy}{\phi x^2} \dots\dots\dots (v)$$

Here, N = 5

$$a = \frac{\phi y}{N} = 27343.896$$

$$b = \frac{\phi xy}{\phi x^2} = 8250.408$$

... The straight line trend for total deposits is,

$$y = a + bx \mid 27343.896 + 8250.408 \mid x$$

For year 2004/2005, $y = a + bx \mid 27343.896 + 8250.408 \mid 3$
 $x = 3$ $y = \text{Rs. } 52095.12 \text{ million}$

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t - 2006/2007	y (Projected deposit) = a+bx
2009/2010	3	52095.12
2010/2011	4	60345.528
2011/2012	5	68595.936
2012/2013	6	76846.344
2013/2014	7	85096.752

C.

NABIL

The Trend value of Investment of NABIL

(Rs. in million)

F/Y	Investment (y)	x=t-2006/2007	x²	xy	y = a + bx Trend Values
2004/05	4267.23	-2	4	-8534.46	4655.536
2005/06	6178.53	-1	1	-6178.53	6343.49
2006/07	8945.31	0	0	0	8031.444
2007/08	9939.77	1	1	9939.77	9719.398
2008/09	10826.38	2	4	21652.76	11407.352
	$\phi y = 40157.22$	$\phi x = 0$	$\phi x^2 = 10$	$\phi xy = 16879.54$	

Let the trend line be,

$$y = a + bx \dots\dots\dots (i)$$

The two normal equation are

$$\phi y = na + b \phi x \dots\dots\dots (ii)$$

$$\phi xy = a \phi x + b \phi x^2 \dots\dots\dots (iii)$$

$$\dots \text{From (ii) } a = \frac{y}{N} \dots\dots\dots (iv)$$

$$\text{From (iii) } b = \frac{xy}{x^2} \dots\dots\dots (v)$$

Here, N = 5

$$a = \frac{y}{N} = 8031.444$$

$$b = \frac{xy}{x^2} = 1687.954$$

... The straight line trend for total deposits is,
 $y = a + bx \mid 8031.444 + 1687.954 x$

For year 2009/2010, $y = a + bx \mid 8031.444 + 1687.954 \mid 3$

$x = 3$ $y = \text{Rs. } 13095.306 \text{ million}$

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t - 2006/2007	y (Projected deposit) = a+bx
2009/2010	3	13095.306
2010/2011	4	14783.26
2011/2012	5	16771.214
2012/2013	6	18459.168
2013/2014	7	20147.122

NIBL

The Trend value of Investment of NIBL

(Rs. in million)

F/Y	Investment (y)	x=t-2006/2007	x²	xy	y = a + bx Trend Values
2004/0	3934.19	-2	4	-7868.38	4422.836

5					
2005/06	5602.87	-1	1	-5602.87	5243.075
2006/07	6505.68	0	0	0	6063.314
2007/08	6874.02	1	1	6874.02	6883.553
2008/09	7399.81	2	4	14799.62	7703.792
	$\phi y = 30316.57$	$\phi x = 0$	$\phi x^2 = 10$	$\phi xy = 8202.39$	

Let the trend line be,

$$y = a + bx \dots\dots\dots (i)$$

The two normal equation are

$$\phi y = na + b \phi x \dots\dots\dots (ii)$$

$$\phi xy = a \phi x + b \phi x^2 \dots\dots\dots (iii)$$

$$\dots \text{From (ii) } a = \frac{\phi y}{N} \dots\dots\dots (iv)$$

$$\text{From (iii) } b = \frac{\phi xy}{\phi x^2} \dots\dots\dots (v)$$

Here, N = 5

$$a = \frac{\phi y}{N} = 6063.314$$

$$b = \frac{\phi xy}{\phi x^2} = 820.239$$

... The straight line trend for total deposits is,

$$y = a + bx \mid 6063.314 + 820.239X$$

$$\text{For year 2009/2010, } y = a + bx \mid 6063.314 + 820.239 \mid 3$$

$$x = 3$$

$$y = \text{Rs. } 8524.031 \text{ million}$$

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t - 2006/2007	y (Projected deposit) = a+bx
2009/2010	3	8524.031
2010/2011	4	9344.27

2011/2012	5	10164.509
2012/2013	6	10984.748
2013/2014	7	11804.987

D.

NABIL

The Trend value of Net Profit of NABIL

(Rs. in million)

F/Y	Net profit (y)	x=t-2006/2007	x²	xy	y = a + bx Trend Values
2004/05	520.11	-2	4	-1040.22	494.752
2005/06	635.26	-1	1	-635.26	608.061
2006/07	673.96	0	0	0	721.37
2007/08	746.47	1	1	746.47	834.679
2008/09	1031.05	2	4	2062.1	947.988
	$\phi y = 3606.85$	$\phi x = 0$	$\phi x^2 = 10$	$\phi xy = 1133.09$	

Let the trend line be,

$$y = a + bx \dots\dots\dots (i)$$

The two normal equation are

$$\phi y = na + b \phi x \dots\dots\dots (ii)$$

$$\phi xy = a \phi x + b \phi x^2 \dots\dots\dots (iii)$$

$$\dots \text{From (ii) } a = \frac{\phi y}{N} \dots\dots\dots (iv)$$

$$\text{From (iii) } b = \frac{\phi xy}{\phi x^2} \dots\dots\dots (v)$$

Here, N = 5

$$a = \frac{\phi y}{N} = 721.37$$

$$b = \frac{xy}{x^2} = 113.309$$

... The straight line trend for total deposits is,
 $y = a + bx \mid 721.37 + 113.309X$

For year 2009/2010, $y = a + bx \mid 721.37 + 113.309 \mid 3$

$x = 3$ $y = \text{Rs.}1061.297 \text{ million}$

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t - 2006/2007	y (Projected deposit) = a+bx
2009/2010	3	1061.297
2010/2011	4	1174.606
2011/2012	5	1287.915
2012/2013	6	1401.224
2013/2014	7	1514.533

NIBL

The Trend value of Net Profit of NIBL

(Rs. in million)

F/Y	Net profit (y)	x=t-2006/2007	x²	xy	y = a + bx Trend Values
2004/05	232.15	-2	4	-464.3	199.662
2005/06	350.54	-1	1	-350.54	367.975
2006/07	501.40	0	0	0	536.288
2007/08	696.73	1	1	696.73	704.601
2008/09	900.62	2	4	1801.24	872.914

$\phi y = 2681.44$	$\phi x = 0$	$\phi x^2 = 10$	$\phi xy = 1683.13$
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Let the trend line be,

$$y = a + bx \dots\dots\dots (i)$$

The two normal equation are

$$\phi y = na + b \phi x \dots\dots\dots (ii)$$

$$\phi xy = a \phi x + b \phi x^2 \dots\dots\dots (iii)$$

$$\dots \text{From (ii)} \quad a = \frac{y}{N} \dots\dots\dots (iv)$$

$$\text{From (iii)} \quad b = \frac{xy}{x^2} \dots\dots\dots (v)$$

Here, $N = 5$

$$a = \frac{y}{N} = 536.288$$

$$b = \frac{xy}{x^2} = 168.313$$

... The straight line trend for total deposits is,

$$y = a + bx \mid 536.288 + 168.313 X$$

$$\text{For year 2009/2010, } y = a + bx \mid 536.288 + 168.313 \mid 3$$

$$x = 3 \qquad y = \text{Rs.}1041.227 \text{ million}$$

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t - 2001/2002	y (Projected deposit) = a+bx
2004/2005	3	1041.227
2005/2006	4	1209.54
2006/2007	5	1377.853
2007/2008	6	1546.166
2008/2009	7	1714.479

Appendix – 7

A.

Calculation of Co-efficient of Correlation between Deposits and Loan & Advance of NABIL Bank

FY	Deposits (X)	Loan & Advance(Y)	$x=X-\bar{X}$	x^2	$y=Y-\bar{Y}$	y^2	xy
2004/05	14586.61	10586.17	- 10601.31	112387773.7	- 7015.72	49220383.24	74375822.59

2005/06	19347.40	12922.54	-5840.52	34111673.87	- 4679.35	21896316.42	27329837.26	
2006/07	23342.28	15545.78	-1845.64	3406387.01	- 2056.11	4227588.33	3794838.86	
2007/08	31915.05	21365.05	6727.13	45254278.04	3763.16	14161373.19	25315266.53	
2008/09	37348.26	27589.93	12160.34	147873868.9	9988.03	99760943.04	121457962.3	
Total	X = 125939.6	Y = 88009.47		$x^2 =$ 343033981.50		$y^2 =$ 189266604.22	xy = 252273727.63	
Mean	25187.92	17601.89						
Co-efficient of Correlation (r) = $\frac{xy}{\sqrt{x^2} \sqrt{y^2}}$								0.99
r^2								0.98
Probable Error (P.F.r) = $0.6745 \frac{1Zr^2}{\sqrt{N}}$								0.01

Calculation of Co-efficient of Correlation between Deposits and Loan & Advance of NIBL Bank

FY	Deposits (X)	Loan & Advance(Y)	$x = X - \bar{X}$	x^2	$y = Y - \bar{Y}$	y^2	xy
2004/05	14254.57	13967.78	- 13509.54	182504671	- 13376.12	178920586.3	180705228.2
2005/06	18927.30	17906.12	-8836.81	78089210.98	-9437.78	89071691.33	83399868.68
2006/07	24488.85	23580.98	-3275.26	10727328.07	-- 3762.92	14159566.93	12324541.36
2007/08	34451.73	34183.44	6687.62	44724261.26	6839.54	46779307.41	45740244.49
2008/09	46698.10	47081.16	18933.99	358495977.3	19737.26	389559432.37	373705083.5
Total	X = 138820.55	Y = 136719.48		$x^2 =$ 674544448.60		$y^2 =$ 718490584.27	xy = 695874966.23

Mean	27764.11	27343.90					
Co-efficient of Correlation (r) = $\frac{xy}{\sqrt{x^2} \sqrt{y^2}}$						1	
r ²						1	
Probable Error (P.F.r) = $0.6745 \frac{1 Z r^2}{\sqrt{N}}$						0	

B.

NABIL

Correlation between Total Deposit and Total Investment.

FY	Deposits (X)	Total Investment(Y)	x=X- \bar{X}	x ²	y=Y- \bar{Y}	y ²	xy
2004/05	14586.61	4267.23	- 10601.31	112387773.7	- 3764.21	14169276.92	39905557.12
2005/06	19347.40	6178.53	-5840.52	34111673.87	- 1852.91	3433275.47	10821957.91
2006/07	23342.28	8945.31	-1845.64	3406387.01	913.87	835158.38	-1686675.03
2007/08	31915.05	9939.77	6727.13	45254278.04	1908.33	3641723.39	12837583.99
2008/09	37348.26	10826.38	12160.34	147873868.9	2794.94	7811689.60	33987420.68
Total	X = 125939.6	Y = 40157.22		x ² = 343033981.50		y ² = 29891123.76	xy = 97552519.73
Mean	25187.92	8031.44					
Co-efficient of Correlation (r) = $\frac{xy}{\sqrt{x^2} \sqrt{y^2}}$						0.96	

r^2	0.92
Probable Error (P.F.r) = $0.6745 \frac{1Zr^2}{\sqrt{N}}$	0.02

NIBL

Correlation between Total Deposit and Total Investment.

FY	Deposits (X)	Total investment(Y)	$x=X-\bar{X}$	x^2	$y=Y-\bar{Y}$	y^2	xy
2004/05	14254.57	3934.19	- 13509.54	182504671	- 2129.12	4533151.97	28763431.8
2005/06	18927.30	5602.87	-8836.81	78089210.98	-460.44	212004.99	4068820.80
2006/07	24488.85	6505.68	-3275.26	10727328.07	442.37	195691.22	-1448876.77
2007/08	34451.73	6874.02	6687.62	44724261.26	810.71	657250.70	5421720.41
2008/09	46698.10	7399.81	18933.99	358495977.3	1336.5	1786232.25	25305277.64
Total	X= 138820.55	Y= 30316.57		x^2 = 674544448.60		y^2 = 7384331.14	xy = 62110373.88
Mean	27764.11	6063.31					
Co-efficient of Correlation (r) = $\frac{xy}{\sqrt{x^2} \sqrt{y^2}}$						0.99	
r^2						0.98	
Probable Error (P.F.r) = $0.6745 \frac{1Zr^2}{\sqrt{N}}$						0.01	

C.

NABIL

Correlation between Outside Assets and Net Profit

FY	Outside Assets(X)	Net Profit(Y)	$x=X-\bar{X}$	x^2	$y=Y-\bar{Y}$	y^2	xy
2004/05	14835.40	520.11	-10794.34	116517776	-201.26	40505.59	2172468.87
2005/06	19101.08	635.26	-6528.66	42623401.4	-86.11	7414.93	562182.91
2006/07	24491.10	673.96	-1138.64	1296501.05	-47.41	2247.71	53982.92
2007/08	31304.82	746.47	5675.08	32206533.01	25.1	630.01	142444.51
2008/09	38416.31	1031.05	12786.57	163496372.40	309.68	9590.70	3959745
Total	X = 128148.71	Y = 3606.85		$x^2 =$ 356140583.86		$y^2 =$ 146699.94	xy = 6890824.21
Mean	25629.74	721.37					
Co-efficient of Correlation (r) = $\frac{xy}{\sqrt{x^2} \sqrt{y^2}}$						0.95	
r^2						0.90	
Probable Error (P.F.r) = $0.6745 \frac{1Zr^2}{\sqrt{N}}$						0.03	

NIBL

Correlation between Outside Assets and Net Profit

FY	Outside Assets (X)	Net Profit (Y)	$x=X-\bar{X}$	x^2	$y=Y-\bar{Y}$	y^2	xy
2004/05	14060.24	232.15	-12688.38	160994987	-304.14	92501.14	3859043.89
2005/06	18379.08	350.54	-8369.54	70049199.81	-185.75	34503.06	1554642.05
2006/07	23792.11	501.40	-2956.51	8740951.38	-34.89	1217.31	103152.63

2007/08	33870.67	696.73	7122.05	50723596.2	160.44	25740.99	1142661.70
2008/09	43641.02	900.62	16892.4	285353177.8	364.33	132736.35	6154408.09
Total	X = 133743.12	Y = 2681.44		$x^2 =$ 575861912.2		$y^2 =$ 286698.86	xy = 12813908.38
Mean	26748.62	536.29					
Co-efficient of Correlation (r) = $\frac{xy}{\sqrt{x^2} \sqrt{y^2}}$					1		
r^2					1		
Probable Error (P.F.r) = $0.6745 \frac{1 Z r^2}{\sqrt{N}}$					0		

Appendix – 8

A.

Test of Hypothesis on Loan and Advances to total deposit ratio of NABIL and NIBL

NABIL			NIBL		
X_1	$x_1 = (x_1 - \bar{x}_1)$	$X_1^2 = (x_1 - \bar{x}_1)^2$	X_2	$x_2 = (X_2 - \bar{x}_2)$	$X_2^2 = (X_2 - \bar{x}_2)^2$
72.57	3.22	10.37	71.04	2.02	4.08
66.79	-2.56	6.55	67.50	-1.52	2.31
66.60	-2.75	7.56	70.59	1.57	2.46
66.94	-2.41	5.81	58.36	-10.66	113.63
73.87	4.52	20.43	77.61	8.59	73.79
$\sum X_1 = 346.74$	$\sum (x_1 - \bar{x}_1) = 0.02$	$\sum (x_1 - \bar{x}_1)^2 = 50.72$	$\sum X_2 = 345.1$	$\sum (X_2 - \bar{x}_2) = 0$	$\sum (X_2 - \bar{x}_2)^2 = 196.28$
$\bar{X}_1 = \frac{\sum X_1}{n}$		69.35	$\bar{X}_2 = \frac{\sum X_2}{n}$		69.02
$s^2 = \frac{1}{n_1 + n_2} \left(\sum X_1^2 - \frac{(\sum X_1)^2}{n_1} + \sum X_2^2 - \frac{(\sum X_2)^2}{n_2} \right)$			30.87		
$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$			0.09		

B.

Test of Hypothesis Total Investment to Total Deposit Ratio of NABIL and NIBL.

NABIL			NIBL		
X_1	$x_1 = (x_1 - \bar{x}_1)$	$X_1^2 = (x_1 - \bar{x}_1)^2$	X_2	$x_2 = (x_2 - \bar{x}_2)$	$X_2^2 = (x_2 - \bar{x}_2)^2$
29.25	-2.68	7.18	27.60	3.69	13.62
31.93	0	0	29.60	5.69	32.38
38.32	6.39	40.83	26.56	2.65	7.02
31.14	-0.79	0.62	19.95	-3.96	15.68
28.99	-2.94	8.64	15.85	-8.06	64.96
$\Sigma X_1 = 159.63$		$\Sigma (x_1 - \bar{x}_1)^2 = 57.28$	$\Sigma X_2 = 119.56$		$\Sigma (x_2 - \bar{x}_2)^2 = 133.66$
$\bar{X}_1 = \frac{\Sigma X_1}{n}$		31.93	$\bar{X}_2 = \frac{\Sigma X_2}{n}$		23.91
$s^2 = \frac{1}{n_1 + n_2} \left[\Sigma X_1^2 - \frac{(\Sigma X_1)^2}{n_1} + \Sigma X_2^2 - \frac{(\Sigma X_2)^2}{n_2} \right]$			23.87		
$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$			2.59		

Assets	<u>2004/2005</u>	<u>2005/2006</u>	<u>2006/2007</u>	<u>2007/2008</u>	<u>2008/2009</u>
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Appendix – 9
Balance Sheet

(Nabil Bank Limited)

	146,352,555	237,818,512	270,406,987	511,426,584	674,395,434
	<u>2004/2005</u>	<u>2005/2006</u>	<u>2006/2007</u>	<u>2007/2008</u>	<u>2008/2009</u>
Cash Balance					
Balance Capital and liabilities					
Nepal Bank		318,358,771	1,113,415,436	1,829,470,769	2,648,596,348
Share Capital	491,654,400	491,654,400	491,654,400	689,216,000	965,747,000
Reserves and Surplus	413,028,059	1,165,983,908	1,383,240,017	1,747,982,985	2,164,493,637
Debtures & Bonds	868,428,307	1,734,901,943	563,532,632	240,000,000	300,000,000
Short Borrowings	17,062,680	173,201,710	882,572,500	1,952,360,700	552,888,297
Investment on government securities	2,413,939,370	2,301,463,338	4,808,348,503	1,360,000,000	1,681,305,000
Investment on Shares & Debentures	443,087,180	104,192,082	286,957,542	4,646,883,118	3,706,102,662
Other Investment	1,410,206,628	3,772,877,688	3,850,004,522	323,236,300	354,930,664
Loans, Advances and Bills Purchased	10,586,170,002	12,922,543,153	15,545,778,730	4,969,652,010	6,765,345,675
Fixed Assets	361,235,392	319,086,147	286,895,224	21,365,053,318	27,589,933,041
Non Banking Assets				598,038,998	660,988,986
Other Assets	543,883,323	544,668,139	512,050,004	-	864,695,708
Total	17,186,330,816	22,329,971,708	27,253,393,008	37,132,759,149	43,867,397,504

Deposits	14,586,608,707	19,347,399,440	23,342,285,327	31,915,047,467	37,348,255,840
Bills Payable	119,753,038	112,606,736	83,514,820	238,421,890	463,138,615
Proposed & Unclaimed Dividends		435,084,062	509,417,925	437,373,004	361,325,024
Income Tax Liabilities		34,604,855		38,776,869	80,232,454
Other Liabilities	805,268,083	352,079,858	378,552,721	465,940,930	502,899,934
Total	17,186,330,816	22,329,971,078	27,253,393,008	37,132,759,149	43,867,397,504

Source: Annual Report of Nabil Bank Limited (F/Y 2004 to 2009)

Profit and Loss Account **(Nabil Bank Limited)**

<u>PARTICULARS</u>	<u>2004/2005</u>	<u>2005/2006</u>	<u>2006/2007</u>	<u>2007/2008</u>	<u>2008/2009</u>
Interest Income	1,068,746,769	1,309,998,500	1,587,758,714	1,978,696,727	2,798,486,196
Interest Expense	243,544,611	357,161,304	555,710,109	758,436,212	1,153,280,052

Net Interest Income	825,202,158	952,837,196	1,032,048,605	1,220,260,515	1,645,206,144
Commission and Discount	128,376,50	138,293,913	150,608,550	156,234,754	179,693,027
Other Operating Income	56,440,760	82,897,862	87,574,553	97,444,578	144,164,143
Exchange Income	184,878,868	185,483,662	209,926,167	196,487,415	251,919,712
Total Operating Income	1,194,898,336	1,359,512,633	1,480,157,875	1,670,427,262	2,220,983,026
Staff Expense	199,516,217	219,780,853	240,161,275	262,907,576	339,897,913
Other Operating Expense	190,299,470	182,696,413	188,183,330	220,750,570	265,158,033
Exchange Loss					
Operating Profit before Provision for Possible Losses	805,082,649	957,035,367	1,051,813,270	1,186,769,116	1,615,927,080
Provision for Possible Losses	8,662,150	3,769,541	14,206,365	64,055,186	45,722,434
Operating Profit	796,420,499	953,265,826	1,037,606,905	1,122,713,930	1,570,204,646
Non Operating Income /(Expense)	(48,089)	735,324	5,280,641	24,083,737	2,190,102
Provision for Possible Losses Write Back	4,454,762	7,729,444	10,926,317	11,100,529	10,617,867
Profit from Regular Activities	800,827,172	961,730,594	1,053,813,863	1,157,898,196	1,583,012,615
Income/(Expense) from Extra-ordinary Activities	41,156,398	26,073,578	40,736,694	39,990,808	43,521,866
Profit from All Activities	841,983,570	987,804,172	1,094,550,557	1,197,889,004	1,626,534,481
Provision for Staff Bonus	84,198,357	89,800,379	99,504,596	108,899,000	147,866,771
Provision for Income Tax	237,671,128	262,741,444	321,086,263	342,521,610	447,614,612
This Year (Including Deferred Tax)	239,149,464	262,562,561	314,526,570	342,468,738	446,695,867
Prior Period Tax	(1,478,336)	178,883	6,559,693	52,872	918,745
Net Profit/(Loss)	520,114,085	635,262,349	673,959,698	746,468,394	1,031,053,098

Source: Annual Report of Nabil Bank Limited

Capital & Liabilities	<u>2004/2005</u>	<u>2005/2006</u>	<u>2006/2007</u>	<u>2007/2008</u>	<u>2008/2009</u>
			-156 -		

Share Capital	587,738,500	590,586,000	801,352,600	1,203,915,400	2,407,068,900
Reserve & Fund	592,434,502	824,853,715	1,076,770,938	1,482,870,648	1,500,770,808
Debentures and Bonds		550,000,000	800,000,000	1,050,000,000	1,050,000,000
Borrowings	350,000,000				38,800,000
Deposits	14,254,573,663	18,927,305,974	24,488,855,696	34,451,726,191	46,698,100,065
Liabilities					
Bills Payable	15,008,198	18,820,120	32,401,462	78,838,643	82,338,018
Proposed and Dividend Payable		121,626,997	43,650,251	93,468,245	485,453,507
Income Tax Liabilities		9,318,522	295,150	24,082,669	38,296,736
Other Liabilities	474,308,843	287,626,214	347,518,664	488,404,288	709,975,092
Total Liabilities	16,274,063,706	21,330,137,542	27,590,844,761	38,873,306,084	53,010,803,126

Balance Sheet

(Nepal Investment Bank Limited)

<u>Assets</u>	<u>2004/2005</u>	<u>2005/2006</u>	<u>2006/2007</u>	<u>2007/2008</u>	<u>2008/2009</u>
Cash Balance	374,265,663	562,560,620	763,984,320	1,464,482,719	1,833,462,494
Balance with NRB		1,526,066,660	1,381,351,556	1,820,006,035	4,411,133,083
Balance with Banks/ Financial Institution	966,215,182	247,894,116	296,178,324	470,452,814	1,673,408,313
Money at Call and Short Notice	140,000,000	70,000,000	362,970,000		

Investment on government securities	1,948,500,000	2,522,300,000	3,256,400,000	3155000000	2,531,300,000
Investment on Shares & Debentures	17,738,000	17,738,000	35,253,000	59,945,500	64,270,500
Other Investments	1,967,950,708	3,062,830,649	3,214,026,987	3,659,078,125	4,804,241,200
Loan, Advances & Bills Purchased	10,126,055,623	12,776,208,037	17,286,427,389	26,996,652,258	36,241,206,558
Fixed Assets	320,592,169	343,449,635	759,456,336	970,091,759	1,060,752,482
Non-Banking Assets			1,125,000	750,000	375,000
Other Assets	412,746,361	201,089,825	233,671,849	276,846,874	390,653,496
Total Assets	16,274,063,706	21,330,137,542	27,590,844,761	38,873,306,084	53,010,803,126

Source: Annual Report of Nepal Investment Bank Limited (F/Y 2004 to 2009)

Profit & Loss Account

(Nepal Investment Bank Limited)

<u>Particulars</u>	<u>2004/2005</u>	<u>2005/2006</u>	<u>2006/2007</u>	<u>2007/2008</u>	<u>2008/2009</u>
Interest Income	886,779,959	1,172,742,193	1,584,987,354	2,194,275,722	3,267,941,142
Interest Expenses	(354,549,207)	(490,946,961)	(685,530,264)	(992,158,398)	(1,686,973,130)
Net Interest Income	532,250,752	681,795,232	899,457,090	1,202,117,324	1,580,968,012
Commission and Discount	93,550,933	115,942,016	163,899,110	215,292,193	262,791,664
Other Operating Income	25,574,963	35,902,340	47,318,720	66,376,659	87,574,794
Exchange Profit	102,517,923	125,747,407	135,355,345	165,838,748	185,327,111
Total Operating Income	753,894,571	959,386,995	1,246,030,265	1,649,624,924	2,116,661,581
Staff Expenses	(97,004,160)	(120,663,710)	(145,370,601)	(187,149,985)	(225,721,490)
Other Operating Expenses	(182,915,061)	(190,605,132)	(243,430,632)	(313,153,795)	(413,883,755)
Exchange Loss					
Operating Profit Before Provision for Possible Loss	473,975,350	648,118,153	857,229,032	1,149,321,144	1,477,056,336
Provision for Possible Losses	(140,409,094)	(103,807,589)	(129,718,921)	(135,989,237)	(166,201,383)
Operating Profit	333,566,256	544,310,564	727,510,111	1,013,331,907	1,310,854,953

Non-operating Income/ Loss	6,192,496	390,742	1,426,134	7,047,735	2,953,012
Loan Loss Provision Written Back	30,992,179	10,704,164	66,776,784	101,576,771	114,653,009
Profit from Regular Operations	370,750,931	555,405,470	795,713,029	1,121,956,413	1,428,460,974
Profit/ Loss from extraordinary activities					
Net Profit after considering all activities	370,750,931	555,405,470	795,713,029	1,121,956,413	1,428,460,974
Provision for Staff Bonus	(37,075,093)	(50,491,407)	(72,337,548)	(101,996,038)	(129,860,089)
Income Tax Provision - Current Year	(101,528,740)	(154,377,650)	(221,976,628)	(323,228,859)	(389,580,266)
- Up to Previous Year					7,477,673
Net Profit/ Loss	232,147,098	350,536,413	501,398,852	696,731,516	900,619,072

Source: Annual Report of Nepal Investment Bank Limited (F/Y 2004 to 2009)