

# CHAPTER – I

## INTRODUCTION

### 1.1 Background of the Study

Overall national development of any country depends upon the economic development of that country and economic development largely depends upon the financial infrastructure of that country. Therefore, the primary goal of any nation including Nepal is rapid economic development to promote the welfare of the people and the nation as well. Nepal being one of the least developed countries has been trying to embark upon the path of economic development by economic growth rate and developing all sectors of economy.

The proper mobilization and utilization of domestic resources is one of the key factors in the economic development of a country. Similarly, integrated and speedy development of the country is only possible when competitive and reliable banking services are reached and operated to every corner of the country. It has been well established that the economic activities of any country can hardly be carried without the assistance and support of financial institutions. Financial institutions have catalytic role in the process of economic development. The investment policy of financial institutions, especially banks has long term impact not only on their growth and sustainability but also on the economic development of the country. Successful formulation and effective implementation of investment policy is the prime requisite for the successful performance of banks and other financial institutions. Good investment policy has a positive impact on economic development of the country and vice-versa.

The initial step an investing policy involves is determining the investment objectives and the amount of one's investable fund. Investment is always related with risks and returns. Making money alone cannot be an appropriate objective. It is appropriate to state that the objective is to make a lot of money by recognizing the possible losses. Therefore, investment objective should be stated in terms of both risks and returns. Setting a clear investment policy also involves the identification of the potential categories of financial assets for consideration in the ultimate portfolio. The identification of assets depends upon many things, such as investment objectives, investable fund, tax consideration etc. (Bhattarai Rabindra, 2004; 3)

Investment is a very risky job for a purposeful, safe and profitable investment. Bank must 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 days. 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.

### **1.1. a) Evolution of Bank**

The evolution of bank is not a non-phenomenon. There was crude form of banking even in an ancient Vedic era. The terms banking such as deposits, pledge, policy of loan, interest rates etc can be found in the "Manusmriti."

The Roman Empire collapses in the last of 15<sup>th</sup> century and consequently, commercial banking transactions were started because of revival of commercial and other trading activities in European countries. According to the opinion of great economist Geoffrey Crowther, following community groups are the ancestors of modern banking:

- The Merchant Trader
- The Goldsmith
- The Money Lenders

History tells us that it was the merchant banker who first evolved the system of banking by trading in commodities then money. Their trading activities required the remittance of money from one place to another for which they issued different documents as the near substitutes of money, called draft or hundis in modern days.

The next stage in the growth of banking was the goldsmiths; the business of goldsmiths was such that they had to take deposits such as bullion, money and ornaments for the security from theft. This makes possible to the goldsmiths to charge something for taking care of the money, bullion and jewellery. On the other hand, as the evidence of receiving valuables, they used to issue a receipt to the depositors. As those receipts are good for payment equivalent to the amount mentioned, it become like the modern cheques, as a medium of exchange and a means of payments.

Finally, moneylenders in the early age had contributed in the growth of banking to a larger extent. They used to advance the coins on loan by charging interest. As a safe guard they used to keep some money in the reserve. Therefore goldsmiths and moneylenders became bankers who started performing the two functions of bank i.e. accepting deposit and providing loans and advances. "The bank of Venice" of Italy was established in 1157 A.D. as the first banking institution in the world. The second banking institution namely "The bank of Barcelona" of Spain was established in 1401 A.D. Its function is to exchange money, receive deposits and discount bill of exchange, both for their own citizens and for the foreigner. During 1407 A.D. "The Bank of Genoa" was established in 1609 A.D. "The Bank of England" was incorporated in 1694 A.D. as a joint stock bank and later on the 1844 A.D. it becomes a first central bank in the world.

### **1.1.b) Commercial Banks 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 deals with people's money. They have to find ways of keeping their assets liquid so that they could meet the demand of their customers. In their anxiety to make profit, the banks can't afford to lock up their funds in assets that are not easily realizable. The depositor's confidence could be secured only if the bank is able to meet the demand for cash promptly and fully. The banker has to keep adequate cash for this purpose. Cash is an idle asset and hence the banker cannot afford to keep a large portion of his assets in the bank. Therefore the banker has to distribute his assets in such a way that he can have adequate profits without sacrificing liquidity.

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 and 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 banks 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. Emphasizing upon this, H.D. Crosse stated, "The investment policy should be carefully analyzed." (Crosse H.D., 1963) So they must invest their funds where they gain maximum profit.

Commercial banks must follow the rules and regulations 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 McNaughton in her research paper 'Banking Institutions in Developing Markets' states that, investment policy should incorporate several elements such as regulatory environment, the availability of funds, the selection of risk, loan portfolio balance and term structure of the liabilities. (McNaughton, Diana, 1994). 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.

### 1.1. c) Investment Pattern of Nepalese Commercial Banks

The development of banking sector in Nepal is relatively recent. The establishment of “Tejarath Adda” during the year 1877 A.D. was the first step in institutional development of banking sector in Nepal. Tejarath Adda did not collect deposit from public but granted loans to public against the collateral of bullions. Consequently the major parts of the country remain untouched from these limited-banking activities. The development of trade with India and other countries increase the necessity of the institutional banker, which can act more widely to enhance the trade and commerce and to touch the remote non-banking sector in the economy. Considering this situation, the “Udyog Parishad” was constituted in 1936 A.D. One year after its establishment, it formulated the “Company Act” and “Nepal Bank Act” in 1937 A.D. Nepal Bank limited was established under Nepal Bank Act in 1937 A.D. as a first commercial bank of Nepal with authorized capital of Rs. 10 million.

Modern banking practices emerged with the establishment of Nepal Bank Limited in 1934 A.D. However the stand of Nepal Bank limited alone in total monetary and financial sector was not sufficient and satisfactory. Thus Nepal Rastra Bank was set up on 1956 A.D.(2013.01.14) as a Central Bank under Nepal Rastra Bank Act 1956 A.D. (2012 B.S.). Similarly, on 1966 A.D. (2022.10.10) Rastriya Banijaya Bank (RBB) was established as a fully government owned commercial bank. With the emergence of RBB, banking service spread to both the urban and rural areas but customers failed to have taste of quality and competitive service because of excessive political and bureaucratic interference. For industrial development, Industrial Development Center was set up in 1956 A.D. (2013 B.S.) which was converted to Nepal Industrial Development Corporation (NIDC) in 1959 A.D. (2016 B.S.). Similarly, Agriculture Development Bank (ADB/N) was established in 1976 AD (2024.10.07) with an objective to provide agricultural products so that agricultural productivity could be enhanced through introduction of modern agricultural techniques. As the country moved towards economic liberalization in 1980 A.D., foreign Banks were invited to operate in Nepal. The financial scenario has changed with the introduction of joint venture banks in 1984.The number of commercial banks has been increasing. Since then, various financial institution like, Joint Venture Banks, Domestic Commercial Banks, Development Banks, Finance Companies, Micro Finance Companies, Credit Guarantee Corporation, Employee Provident Funds, Citizen Investment Trust, National Insurance Corporation, Nepal stock Exchange have come into existence to cater the financial needs of the country thereby assisting financial development of the country.

In 1990 A.D. after the restoration of democracy in Nepal, the government highlights the agenda of economic liberalization and emphasized to invite foreign direct investment (FDI) in the banking sector of Nepal. Therefore the development of Commercial Banks in Nepal is categorized in three phases on the basis of financial institutions policies adopted by the country from time to time. They are:

- ) Commercial Banks prior to 1980's
- ) Commercial Banks of 1980's
- ) Commercial Banks post 1990's

There were only two banks prior to 1980's they are NBL and RBB. All the three Commercial Banks of 1980's were established as joint venture banks. Similarly six commercial banks of past 1990's were also come into operation as joint venture banks. Latest six banks including Nepal Industrial and Commercial Bank Ltd, Lumbini Bank Ltd, Machhapuchhre Bank Ltd, Kumari Bank Ltd, Laxmi Bank Ltd, Siddharth Bank Ltd were established by the private sector entrepreneurs of Nepal. Some of the joint venture banks have changed their name after the foreign investor disinvest their stake to Nepali entrepreneurs. Nepal Arab Bank Ltd. is now known as Nabil Bank Ltd., similarly Nepal Grindlays Bank Ltd, Nepal Indosueze Bank Ltd, and Nepal Bank of Ceylon Ltd, are now known as Standard Chartered Bank Nepal Ltd, Nepal Investment Bank Ltd, Nepal Credit and Commerce Bank Ltd. respectively.

Taking an overview of financial institutions providing banking facility in Nepal, there are 17 Commercial Banks, 29 Development Banks, 5 Rural Development Banks, 59 Finance Companies, 20 Co- operative Societies (licensed by NRB for limited transaction).

**Table No. – 1.1**

**List of Licensed commercial Banks in Nepal**

<b>S.N</b>	<b>Commercial Banks</b>	<b>Established date (B.S.)</b>	<b>Head Office</b>
1	Nepal Bank Ltd.	1994-07-30	Kathmandu
2	Rastraya Banijaya Bank	2022-10-10	Kathmandu
3	Nabil Bank Ltd.	2041-03-29	Kathmandu
4	Nepal Investment bank Ltd.	2042-11-26	Kathmandu
5	Standard –Chartered Bank Nepal Ltd.	2043-10-16	Kathmandu
6	Himalayan Bank Ltd.	2049-10-05	Kathmandu
7	Nepal SBI Bank Ltd.	2050-03-23	Kathmandu
8	Nepal Bangladesh Bank Ltd.	2050-02-23	Kathmandu
9	Everest Bank Ltd.	2051-07-01	Kathmandu
10	Bank of Kathmandu Ltd.	2051-11-28	Kathmandu
11	Nepal credit and commerce Bank Ltd.	2053-06-28	Siddharthanagar
12	Lumbini bank Ltd.	2055-04-01	Narayangadh
13	Nepal Industrial and Commercial Bank Ltd.	2055-04-05	Biratnagar
14	Machhapuchhre Bank Ltd.	2057-06-17	Pokhara

15	Kumari Bank Ltd.	2057-12-21	Kathmandu
16	Laxmi Bank Ltd.	2058-06-11	Birgunj
17	Siddharth Bank Ltd.	2059-09-09	Kathmandu
18	Global Bank Ltd.	2063-09-18	Kathmandu
19	Sunrise Bank Ltd.	2064-06-25	Kathmandu
20	Prime Bank Ltd.	2051-03-11	Kathmandu
21	Citizen International Bank Ltd.	2064-01-05	Kathmandu

Source: Gorkhapatra –2065-1-31, and Banking Financial Statistics, NRB

After the announcement of liberal and free market economic based policy, Nepalese banks and financial sectors are having greater network and access to national and international markets. They have to go with their portfolio management very efficiently and seriously for coping with various challenge in order to increase their regular basis of income as well as to enrich the quality base of service for the attraction of good clients. In this competitive and market oriented open economy, each and every commercial bank and financial institution has to play a determining role by widening various opportunities for the sake of expanding provisions of best service to their customers and by making themselves as a strong and potential financial intermediaries as per country's need of present scenario to obtain the desired level of economic development.

Joint venture banks are the mode of trading to achieve mutual exchange of goods and services for sharing competitive advantage by performing joint investment scheme between Nepalese investors, financial and non financial institutions as well as private investors and their parent banks each supplying 50 percent of total investment. The parent banks, which have experiences in highly mechanized and efficient modern banking services in many parts of the world have come to Nepal with higher technology, advance management skills. Joint venture banks are established by joining different forces and with ability to achieve a common goal of each of the partners. They are more efficient and effective monetary institution in modern banking fields than other old type of banks in Nepalese context (Thapa Samiksha, 2001; 6)

In Nepal, Commercial banks play a vital role in the economic growth. Its investments range from small-scale cottage industries to all types of social and commercial loans and large industries. Generally the investment of the Commercial Banks include the investment on Government securities like Treasury bills, development bonds, national savings bonds, foreign government securities, shares of government owned companies and non- government companies and investment on debentures. Similarly the Commercial Banks use their major chunk of funds in loan and advances.

### 1.1.d) Profile of Concerned Banks

In this section general introduction of the banks under study is being attempted to furnish for the easy reference of the samples to the research.

#### (A) Nabil Bank Ltd.

“Nabil Bank Limited” the first commercial bank was incorporated in 1984. Dubai Bank Ltd. was the initial joint venture partner with 80% equity investment .The shares owned by Dubai bank Ltd. (DBI) were transferred to Emirates Bank International Ltd. (EBIL) Dubai. Later on EBIL sold its entire stock to National Bank Ltd, Bangladesh (NBLB). National Bank Ltd. Bangladesh is managing the bank in accordance with the technical services agreement signed between it (Nabil) and the bank on June 1995.

The present configuration consist of 50% share capital of National Bank limited, 10% of Nepal Industrial Development Corporation, 9.67% of Rastriya Bema Sansthan, 0.33% of Nepal stock exchange and 30% of Nepalese public. At present 17 branches of the bank are operating in different parts of the country. Authorized capital and paid up capital of Nabil bank limited are Rs.500 million and Rs. 491.6544 million.

The following Activities and services are provides by Nabil including normal functions;

- ) Tele Banking
- ) Credit card facilities
- ) SWIFT
- ) Deposit Locker
- ) Western Union money Transfer
- ) ATM
- ) International Trade and Bank Guarantee.

This Bank is awarded by “Bank of year 2004”.

#### (B) Nepal Investment Bank

Nepal Investment Bank Ltd. (Nepal Indosuez Bank Ltd) was established on 21<sup>ST</sup> January 1986 as a third joint venture bank under the company Act 1964. Initially, the Bank is managed by Banque Indosuez, Paris in accordance with joint venture and technical services. 50% of the shares of Nepal Investment Bank Ltd held by Credit Agricole Indosuez was sold to the Nepalese promoters on April 25, 2002 as per the transaction record of NEPSE. After this divestment of shares by Nepalese Owners, the name of the company was changed to Nepal Investment Bank Ltd. by its 15<sup>th</sup> AGM held on May 31, 2002.

Out of total equity shares of Nepal Investment Bank Ltd. 50% shares are held by a group of companies, 15% by commercial banks, another 15% by financial institutions and remaining 20% by general public. Authorized capital of NIBL is Rs.100 million and issued and paid up capital is Rs.801.3526 million.

The following Activities and services are provided by NIBL including normal functions;

- ) Tele Banking
- ) Credit card facilities
- ) SWIFT
- ) Deposit Locker
- ) NTC's Mobile bill payment
- ) ATM
- ) International Trade and Bank Guarantee.

This bank is awarded by "Bank of year 2003"

## 1.2 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 pro-rata 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 collections. They have always feared with high degree of risk and uncertainty.



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 lead the commercial bank to the position of liquidation.

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

As with everything in Nepal, every commercial bank has an investment in the same 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 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.

Many of Nepalese commercial banks have not formulated their investment policy in an organized manner. Majority of them mainly rely upon the instruction and guidelines of Nepal Rastra Bank. They don't have clear view towards investment policy. Furthermore, the implementation of policy is not in an effective way. Lack of farsightedness in policy formulation and absence of strong commitment towards its proper implementation has caused many problems to commercial banks.

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

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

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

- a) To examine the investment policy of the banks.
- b) To examine the utilization of available fund of Nabil Bank's in comparison to NIBL.
- c) To evaluate the liquidity, profitability and risk position of Nabil Bank in comparison to NIBL.
- d) To find out the empirical relationship between deposits loan and advances, investment, net profit and compare them between Nabil & NIBL.

- e) To provide the suggestion of improving the investment policy to Nabil & NIBL on the basis of the findings of the analysis.

## **1.4 Focus & 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.

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 on 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 Nepalese commercial banks with reference to Nabil & NIBL and point out the various weaknesses of defects inherent in it and provide package of suggestions for its improvement.

## **1.5 Limitations of the Study**

This study is simply a partial study for the fulfillment of MBS degree, which has to be finished within limited period. Hence, this study is not far from several limitations of its own kind, which weaken the scope of the study to some extent.

Some of such limitations are as follows.

- a. The study is mainly based on secondary data collected from different sources.
- b. The study period will be covered by only five fiscal year i.e.from 2002/2003 to 2006/2007.

- c. 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.
- d. Due to wide range of data deficiencies only simple technique have been used for the analysis of the data.
- e. The study deals with only two other commercial banks to compare with Nabil bank Ltd. and other commercial banks have not been accounted.

## **1.6 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 Nabil in comparison to the 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, acknowledgements, 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**

This chapter deals with the theoretical aspect of the topic on investment policy in more detail and descriptive manner. It provides the foundation for developing a comprehensive theoretical framework and knowledge of the status relevant to the field of research in order to explore the relevant and true facts for the reporting purpose. Hence, in this chapter, the focus has been made on the review of literature relevant to the investment policy of commercial banks. For this study, different books, journals, articles, annual reports and some research paper related with this topic has been reviewed. Therefore, this chapter is arranged in the following order:

1. Review of Supportive Text
2. Review of Previous Study
  - Review of Articles
  - Review of Research Papers
  - Review of Thesis
3. Review of Legislative Provisions

### **2.1 Review of Supportive Text**

Review of supportive text provides the fundamental theoretical framework and foundation to the present study. For this, various books, research paper, articles etc. dealing with theoretical aspects of investment policy analysis are taken into consideration.

#### **2.1.a) Definition of Investment**

Investment is nothing but deploying our savings in a manner that ensures safety of our money and provides a sustained return to supplement our regular income. (Delhi Stock Exchange, January 2002). The term investment covers a wide range of activities. It is commonly known fact that an investment is only possible where there are adequate savings. If all the incomes and savings are consumed to solve the problem of hand to mouth and to the other basic needs, then there is no existence of investment. Therefore, both savings and investment are interrelated.

Investments are made in assets. Assets in all are of two types, real assets (land, buildings, factories etc) and financial assets (stocks, bond, T-bill etc.). These two investments are not competitive but complementary. Highly –developed institutions for financial investment greatly facilitate real investment. (Bhattarai Rabindra, 2004; 3)

Mrs. Preeti Singh has defined investment in this way; investment is the employment of funds with the aim of achieving additional income or growth in value (Singh, 1992; 1)

In the words of Gitman and Joehank, investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generate positive returns. (Gitman and Joehank, 1990; 1)

Charles P. Jones has defined that, investment as the commitment of funds to one or more assets that will be held over some future time period. Investment is concerned with the management of an investor’s wealth, which is the sum of current income and present value of all income. (Charles, 1991; 2)

### **2.1.b) Features of Sound Lending and Investing Policy**

Some of the main characteristics of sound lending and investment policies which most of the banks must consider have been given by many authors are as under:

#### **I) Safety and Security**

While selecting the sectors for investing the funds, a bank should be very much conscious. It should never invest its funds in those securities, which are too volatile because a little difference may cause a great loss. Similarly, the businessman who is bankrupt at once or earns a million in a minute should not be financed at all. The banks invest its funds in legal securities only. The bank should accept that type of securities, which have marketability; ascertainability, stability & transferability and it also accept those securities, which are commercial, durable and high market prices. For the safety and security in investing funds the bank can use the investment portfolio tools also.

#### **II) Liquidity**

Liquidity generally refers to the cash or any assets that can be converted into cash immediately. Generally, people deposit money at the bank in different account with confidence that the bank will repay their money whenever it is needed. In order to maintain the confidence to the depositors, the bank must always be ready to meet current or short-term obligations when they become due for repayment Liquidity is the capacity of bank to pay cash against deposits. Hence the liquidity position of a bank is such an important factor.

### **III) Profitability**

Commercial banks invest on those sectors from where more and more return can flow because through maximizing the returns on its investment, bank can maximize its volume of wealth. Hence the investment or granting of loan & advances by them are highly influenced by the profit margin. Generally, the profit of commercial bank depends upon the interest rate of the bank, volume of loan provided, time period of loan and nature of investment on different securities. Profitability is only the term, which always motivates commercial banks to invest their money more and more.

### **IV) Suitability**

A banker should always know why a customer is in need of loan. If a borrower misuses the loan granted by the bank, he will never be able to repay the loan and bank will possess heavy bad debts. Therefore, in order to avoid such circumstances, advances should be allowed to select suitable borrowers and it should demand all the essential detailed information about the scheme of the project. Bank should also keep in mind the overall development plans of the nation and the credit policy guidelines of the central bank.

### **V) Diversification**

The bank should be careful that while granting loan, it should not be always in one sector. To minimize risk and maximize the profit, 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 depreciated, there may be appreciation in the securities of other companies. In this way, the loss can be recovered.

#### **2.1.c) Sources of Funds for the Investment**

There are different sources of funds for the investment of the bank.

##### **a) Capital**

Capital is the lifeblood of the trade and commerce. Therefore, capital is needed for the operation of the bank as in other business. The capital fund consist of two elements like

- i) Issuing Shares
- ii) General Reserves
- iii) Issuing Shares

Bank issues its share for the collections of capital. So this is one of the sources of fund to invest. By increasing in the issue of share, the bank can increase its capital.

i) **General Reserves**

Reserves are kept by the bank separated from the profit. This reserve is also invested at the time of contingency and to cover the loss in future.

**b) Accumulated profit**

If the capital is not sufficient and there is need of more money to invest in that case the bank uses the accumulated profit to invest. In the time of contingency also, the bank invests its accumulated profit for recovering its future loss.

**c) Deposits**

Deposits are the main source of funds. By providing certain rate of interest, commercial bank calls for the deposit from the customer. Mainly, three types of deposits are accepted by the bank like current deposit, fixed deposit, saving deposits. These different types of deposits are used for lending the money to different sectors like agriculture, production, trade, service sector and other industry. The deposits will lead to increase in the working capital of the bank.

**d) External and Internal Borrowings**

The funds can be collected by borrowing money through different banks or different institution. In a developing country like Nepal, those types of borrowings are very important. The commercial banks may not have sufficient fund to invest in different sector. In that case it has to borrow from other bank or other financial institutions. Generally the commercial bank borrows from two sources i.e. external and internal. Generally external borrowing means the borrowing from foreign banks, and foreign government. Internally, the commercial banks



borrow mainly from inter bank and Nepal Rastra Bank. So the commercial bank cannot provide loan or investment without the funds. From the fund collected from above different source, the commercial bank grants loan.

## **2.2 Review of Previous Study**

Every scientific research is based on past knowledge. The previous studies cannot be ignored because they provided the foundation to the present study. Therefore, in the light of this dissertation in this section review of articles, review of research papers & review of thesis of previous study are taken into consideration.

### **2.2.a) Review of Articles**

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

**F. Morris**, in his discussion paper on “Latin America’s Banking system in the 1980’s”, has concluded that most of the banks concentrated on compliance with central bank rules on reserve requirements, credit allocation (investment decision) and interest rates. While analyzing loan portfolio quality, operating efficiency and soundness of bank investment management has largely been overlooked.

He further adds that mismanagement in financial institutions has involved inadequate and overoptimistic loan appraisal, high risk diversification of loan portfolio and investments, high risk concentration, related parties lending, etc, are major cause of investment and loan that has gone bad (Morris, 1990;pp81)

**Sunity Shrestha** in her article, “Lending operation of commercial Banks of Nepal and its impact on GDP” has presented with the objectives to make an analysis of contribution of commercial banks’ lending to the gross domestic product (GDP) of Nepal. She has set hypothesis that there has been positive impact of lending of commercial banks to the GDP. In research methodology, she has considered GDP as the dependent variable and various sectors of lending viz. agriculture, industrial, commercial service and general multiple regression technique has been applied to analyze the contribution.

The multiple analyses have shown that all the variables except service sector lending have positive impact on GDP. Thus, in conclusion she has accepted the hypothesis that there has been positive impact by the lending of commercial banks in various sectors of economy, except service sector investment. (Dr. Shrestha, 2055; 23-27).

**Shree Prasad Poudel**, Deputy Director, NRB in his article “Government Security Markets Rational and Development in Nepal” has concluded that the Security markets are center of the financial system. Debt securities market in the Nepal is highly dominated by government debt securities. Debt statistics evidenced that Nepal remained debt free nation till 1950’s. From the beginning of 1960’s foreign loans and domestic bonds have been alternative means of debt financing in Nepal as a result total debt as a percentage of GDP widened from 1% in 1960’s to 65.3% in the year 2000.

According to Mr. Poudel, Government debt consists of Treasury bills (T-Bills), National Savings Certificates (NSCs), Development Bonds (DBs), Special Bonds (SBs), and Citizen Saving Certificates (CSCs).

He further added that NRB and commercial Banks are the main holders of government bonds. In his article he suggested following improving area in debt securities market in Nepal:

- ) To make government securities active instruments of open market operation, coupon rate on government securities has to be fixed closely to the market rate of interest.
- ) Exchange of government securities at market price has to be encouraged.
- ) Products of government debt securities need to be diversified to meet investor demands.
- ) Like equity shares the marketable government securities need to be exchanged in the floor of Nepal Stock Exchange at competitive price. (Poudel, 2059; 45-51)

**Bodhi B. Bajracharya** has mentioned in his article, “Monetary Policy and Deposit Mobilization in Nepal” has concluded that the mobilization of domestic savings is one of the monetary policies in Nepal. For this purpose commercial banks stood as the vital and active financial intermediary for generating resources in the form of deposit of the private sector so far providing credit to the investors in different aspects of the economy. (Bajracharya, 1990; 93-97)

## **2.2.b) Review of Research Papers**

Under this heading, reviews of research papers of researchers are analyzed to find out the investment policies of commercial banks.

**Dr. Govinda Bahadur Thapa**, expresses his views in his research paper “Financial System of Nepal” that the commercial banks including foreign joint venture banks seem to be doing pretty well in mobilizing deposits. Likewise, loans and advances of these banks are also increasing. But compared to high credit needs particularly by newly emerging industries, the bank still seems to lack adequate funds. The banks are increasing their lending to non –traditional sectors along with the traditional sectors.

Out of all commercial banks (excluding two recently opened regional commercial banks), Nepal Bank Ltd. and Rastriya Banijya Bank are operating with a nominal profit, the later turning towards negative from time to time. Because of growing competition and limitation of investment sectors, the spread between interest income and interest expenses is declining. These banks have not been able to increase their income from commission and discount. On the contrary, they have got heavy burden of personal and administrative overheads. Similarly, due to accumulated overdue and defaulting loans, profit position of these banks has been seriously affected.

On the other hand, the foreign joint venture banks have been functioning in an efficient way. They are making profit year after year and have been distributing bonus to their employees and dividends to their shareholders.

He concludes that by its very nature of the public sector, these two domestic banks couldn't compete with the private sector banks, so only remedy to the problems of these banks, as the government decided, is to hand over the ownership as well as the management of these banks to the private hands (Dr. Thapa, 1994,PP29-37).

**Dr. Radhe S. Pradhan** in his research paper "Role of Saving, Investment and Capital formation in Economic Development. A case of Nepal," has studied about the strong role and impact of saving, investment and capital formation on economic development of Nepal. This study is based on secondary data only. The necessary data on saving, investment, capital formation and gross domestic product has been collected for the period of 1974/75 to 2000/01. The role and impact of saving, investment and capital formation on economic development were analyzed by using various regression models. The regression equations used in this study have been estimated at current prices as well as in real terms with the entire study period divided into different sub periods.

The results presented in this paper suggest that in all cases, GDP is significantly associated with saving, investment and capital formation both at current prices and in real terms. The results of the empirical analysis led to three important conclusions: First, saving, investment and capital formation have positive impact on economic development. Second, the current values and past values of saving, investment and capital formation have positive impact on economic development but the current values have the largest impact. Third, there is a strong role played by saving and capital formation on economic development while weak role-played by investment. (Dr. Pradhan, 2003;pp 123-133)

### **2.2.c) Review of Thesis**

Several thesis works have been conducted by various students regarding the various aspects of commercial banks such as lending policy, investment policy, investment planning, liquidity and investment position, trends of saving investment and capital formation, investment on priority sectors etc. Some of them as supposed to be relevant for the study are presented below.

**Mrs. Ramala Bhattarai**, in her thesis, “Lending Policy of Commercial Banks in Nepal,” has made an effort to examine the lending policy of commercial banks. She has concluded that efficient utilization of resources are more important than collection of the same. Lower investment means lower capital formation that hampers economic development of the people and the country. So, she recommended that banks give emphasis on efficient utilization of resources (Bhattarai, 1978)

**Sunity Shrestha** has conducted a study on “Investment Planning of Commercial Banks in Nepal” with the objectives:

- ) To evaluate the financial performance of commercial banks in Nepal.
- ) To examine the investment of commercial banks of Nepal with reference to securities, loans & advances.
- ) To establish the relationship of banks’ portfolio variables with the national income and interest rates.

The research findings of the study are summarized as:

- ) The general trend of commercial banks asset holding is growing. Deposits have been a major source of funds. The excess reserve level of the banks allows idle money and loss of opportunity. Debt equity ratios are very high, greater than 100%.
- ) The return ratios are on the average higher for foreign joint venture banks than for the Nepalese bank but return of asset found to be statistically some. Risk taking attitude is higher in foreign joint venture banks. The total management achievement index is higher in case of foreign banks in comparison to the Nepalese banks.
- ) The hypothesis that the commercial banks have non –professional style of decision making in investment has been accepted. The investment of commercial banks in shares and securities is normal and not found to have strategic decision towards investment in shares and securities. Yield from the security has been found to be satisfactory.
- ) Investment in various economic sectors shows industrial and commercial sector taking higher shares of loan till 1990.
- ) Investment in various sectors has a positive impact on the national income from their respective sectors.
- ) Lending in priority sector showed cottage and small industry sector sharing higher loans.
- ) Priority sector lending showed positive impact on the national income.

The secured loan analysis showed commercial loan as being very important followed by social and industrial loans. The loan loss ratio has been found to be increase with low recovery of loan. Demand of bank credit has been found to be affected by the national income and lending and Treasury bill rate. The investment of commercial banks on government securities has been observed to be affected by total deposit,

cash reserve requirements and Treasury bill and lending rates. Interest rates, lending rate, deposit rate were found to constitute a set of significant variables affecting the bank portfolio composition. (Dr.Sherestha, 1993)

**Kishor Poudel's**, in his thesis paper "Liquidity and Investment Position of Joint Venture Commercial Bank in Nepal" had made an attempt to evaluate liquidity and investment of joint venture Banks, special reference to Everest Bank Ltd. and Nabil Bank Ltd. He has concluded that liquidity position of EBL is comparatively better than Nabil. Growth rate of investment is higher in EBL than Nabil. He further found the banks do not have constant and consistent liquidity and investment policy. There is no standard and uniform rate or ratio for maintaining liquid assets by the commercial banks. A commercial bank at its own judgment may decide to maintain an appropriate level of liquid assets. So he has recommended exploring such investment and to increase its investment on share and debenture and the bank should have laid down policy for timely review of portfolio and to maintain risk and return.( Poudel,2002)

**Sharad Wagle's** Study; in his thesis paper "A study on trends of savings, investment and capital formation in Nepal", he concluded that in Nepal there is large gap between investment and saving rate. The low savings rate implies that majorities of people are poor. Low rate of saving and investment has been the continuing characteristic of the Nepalese economy as compared to some selected Asian countries. The need for the improving internal savings and investment performance in the country has been high in the agenda of Nepalese policy declarations but the performance in has remained rather poor. The rate of investment and capital formation is low in Nepal because of low saving. He has recommended that the government should review existing restriction on foreign direct investment. (Wagle, 2000)

**Mrs. Rabina Bajracharya**, in her thesis paper entitled, "Investment of Commercial Banks in Priority Sector" has made an effort to examine the banking procedures and services in disbursing loan in priority sector. She has found that:-

- )The target of 12% investment of total outstanding liabilities in priority sector and 3% out of which has been invested in deprived sector has been met by Rastriya Banijya Bank.
- )The trend of investment are continued to increase in the following years.
- )The regression analysis of the investment and relationship between investment and repayment.
- )Investment on agriculture is higher than investment on industry and service sector because investment on agriculture benefited a higher number of households. (Bajracharya, 2000)

**Kul Chandra Pandit in his thesis**, "A study on the investment policy analysis of Standard Chartered Bank Nepal Limited in comparison to Nabil and Nepal Banglades Bank" has mainly found that SCB's loan & advances to total deposits ratios are significantly lower than that of Nabil and Nepal Bangladesh Bank, SCB is recommended to follow a liberal lending policy, invest more portion of deposition loan & advances. He has further stated that besides giving priority of investing on government securities, SCB is recommended to invest its fund in

the purchase of shares and debentures of other financial, non-financials companies, hotels and government companies. This also helps in the maintenance of a sound portfolio of the banks. (Pandit, 2003)

**Mukunda Prasad Lamichhane** in his thesis, “Investment policy of the Joint Venture Banks in Nepal” had analyzed between investment policy and different variables like deposits, commission and discount, net profit, interest on loan and investment. He applied correlation, ratio analysis, t- test, and standard deviations.

He concluded that there is significant relationship between deposit and loan and advances as well as outside assets and net profit but not deposits and total investment in case of Nabil and other joint venture banks. Most of the joint venture banks have focused their banking services especially to big clients such as to purchase shares and debentures of other financial and non-financial companies. (Lamichhane, 2000)

## **2.3 Review of Legislative Provisions**

In this section review of legislative framework under which the commercial banks are operating has been discussed. This legislative environment has significant impact on the commercial banks’ establishment, their mobilization and utilization of resources. All the commercial banks have to conform to the legislative provisions specified in the Bank and Financial Institutions Ordinance and Companies Ordinance, NRB Directives and other rules and regulations formulated to facilitate the smooth running of commercial banks.

### **Investment Management Regulation**

“A commercial bank formulating a written policy may decide to invest in shares and securities of an organized institution. However, such investment is restricted to 10% of paid up capital of the organization. However, the cumulative amount of such investment in all the companies in which the bank has financial interest shall be limited to 20% of the paid up capital of the bank. But the total amount of investment in share and securities of organized institution is restricted to 30% of the paid up capital of the bank.”(Unified Directives No.8, NRB Banking operation department 81-82)

Likewise, commercial banks are not allowed to invest in any shares, securities, and hybrid capital instruments issued by any banks and financial institutions, licensed by NRB. Where such investment exists prior to issuance of this directive, such investment should be brought within the restrictive limitations by the fiscal year 2060/61. But investment on rural micro finance development banks’ shares are not comes under such restriction. A commercial bank is directly related to the fact that how much fund must be collected as paid up capital while being established at a certain place of the nation, how much fund is needed to expand the branch and counters, how much flexible and helpful the

NRB rules are also important. But we discuss only those, which are related to investment function of commercial banks. The main provisions, established by NRB in the form of prudential norms in above relevant area are briefly discussed here under.

**i) Provisions for investment in the deprived sector**

Some rules, which are formulated by NRB, affect the areas of credit and investment extension to the deprived sector by the commercial bank.

According to the new provision, with effect from the 3<sup>rd</sup> quarter of FY 1995/96, investment in shares of the rural development bank by CBs, which used to be counted for the priority sector lending, only is now to be included under the deprived sector lending.

According to the new provisions effective from FY 1997/98, NBL, RBB, NABIL, NGBL, NIBL are required to invest 3 percent, HBL, NSBL, NBBL, EBL, are required to invest 2 percent, Bank of Kathmandu is required to invest 1.75 percent, NBCL is required to invest 0.75 percent while new commercial banks are required to invest 0.25 percent of their total loans and advances to the deprived sector.

**ii) Provision for credit to the priority sector**

NRB requires commercial banks to extend loan and advances, amounting at least to 12 p.c. of their total outstanding credit to the priority sector. Commercial banks credit to the deprived sector is also a part of priority sector. Under priority sector, credit to agriculture, credit to the cottage and small industries and credit to service are counted commercial bank's loan to the co-operatives licensed by the NRB is also to be computed as the priority sector credit from the fiscal year 1995/96 onwards.

**iii) Provision for the investment in productive sector**

Nepal, being a developing country needs to develop infrastructure and other primary productive sectors like agriculture, industry etc. For this, NRB has directed commercial banks to extend at least 40 p.c. of their total credit to the productive sectors. Loans to priority sector, agriculture sector, industrial sector have to be included in productive sector investment.

**iv) Provision for the single borrower credit limit**

With the objectives of lowering the risk of over concentration of bank loans to a few big borrowers and also to increase the access of small and middle size borrower to the bank loans, NRB directed CBs to set an upper limit on the amount of loan financed to an individual, firm, company or group of companies. According to this, CBs are required not to exceed the single borrower limit of 35 percent in the case of

fund- based credit and 50 percent, in the case of non- fund based credit such as the letter of credit, guarantee, acceptance letter, commitment has been fixed is a proportion of capital funds of bank.

Similarly, NRB has graded six foreign joint venture banks now as the prestigious class “A” bank, which is NABIL, NGBL, NIBL, HBL, SBI, and NBBL. These banks have been kept outside the purview of the single borrower credit limit.

Likewise, in the case of consortium financing, commercial banks are permitted to extend an additional 10 percent credit above the limit fixed by the NRB as before.

In addition, Nepal Oil- Corporation, Agriculture-inputs Corporation and Nepal Food Corporation for their imports of petrol, diesel, kerosene, fertilizer and foodstuff respectively have been removed from the restrictions of single borrower credit limit.

#### **v) Provision for minimize liquidity risk**

Commercial banks are required monitor their liquidity risk. This is to minimize risk inherent in the activities and portfolio of the banks. According to the regulation a gap found between maturing assets and maturing liabilities is the liquidity risk. They are monitoring their assets and liabilities on the basis of maturity period. Maturity periods such as 0-90, 91-180,181-270, 271-365 days and above 1 year are classified for the purpose of checking.

#### **vi) Cash reserve requirements (CRR)**

To ensure adequate liquidity in the commercial banks, to meet the depositors’ demand for cash at anytime and to inject the confidence in depositors regarding the safety of their deposited funds, commercial banks are required to have maximum CRR. In this regard, NRB has directed commercial banks to deposit minimum 8 percent of current and saving and 6 percent of fixed deposits in the NRB as primary cash reserve the commercial banks are further required to have 3 percent cash of total deposits in their own bank as secondary reserve.

#### **vii) Loan classification and loss provision**

With a view to improving the quality of assets of commercial banks NRB has directed commercial banks to classify their outstanding loan and advances, investment and other assets into six categories. The classification is done in two ways. The loans of more than one lakh are to be classified as debt service charge ratio, repayment situation, financial condition of borrower, management efficiency, quality of collateral. The loans of less than one lakh have to be classified as per maturity period.



### **viii) Directives regarding interest rate spread**

The interest rate spread, the difference between interest charged on loan and advances and the interest paid to the depositors, has widened significantly in the aftermath of deregulation in interest rates. This has caused lower financial intermediation. Therefore, NRB has required commercial banks to limit interest rate spread between deposit and lending rates to a maximum extent of 5 percent. NRB has also provided commercial banks with new calculation method of interest rate spread for a certain period recently.

# **CHAPTER –III**

## **RESEARCH METHODOLOGY**

### **3.1 Introduction**

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

The prime objectives of this study are to evaluate analysis and assess the effectiveness on investment policy of Nabil Bank and compare it with Nepal Investment Bank. This chapter attempts to have an insight into the investment policy adopted by Nabil. This will help to evaluate and analyze investment performance of Nabil in comparison to the Investment Bank. After the analysis, a package of suggestion will be offered if need to be improving the performance of banks. To accomplish the goal, the study follows the research methodology described in this chapter.

### **3.2 Research Design**

Research design indicates a plan of action to be carried out in connection with proposed research work. The research design is descriptive and core prescriptive in this study because the historical secondary data have been mainly deployed for analysis.

Some financial and statistical tools have been applied to examine facts and descriptive techniques have been adopted to evaluate investment performance of Nabil and compare it with NIBL. Besides very simple questions asked to the concerned personnel's in the course of visiting the bank, this report contains no other primary data. This report is mainly based on secondary data, which include annual reports published by the concerned bank and other publications related to the concerned topic.

### **3.3 Sources of Data**

The report is mainly based on secondary data. The data required for the analysis are directly obtained from the balance sheet and P/L account of concerned bank's annual reports. Supplementary data and information are collected from number of institutions and regulating authorities like NRB, SEBON, NEPSE, Ministry of Finance, budget speech of different fiscal years and economic survey.

All the secondary data are compiled, processed and tabulated in the time series as per the need and objectives. Likewise various data and information are collected from the economic journals, periodicals, bulletins, magazines and other published and unpublished reports and documents from various sources. Formal and informal talks with the concerned authorities of the bank were also helpful to obtain the additional information of the related problem.

### **3.4 Population and Sample**

There are altogether 21 commercial banks functioning all over the kingdom and most of their stocks are traded actively in the stock market. The population is as follows:

1. Nepal Bank Ltd.
2. Raistrya Baniyja Bank Ltd.
3. Nabil Bank Ltd.
4. Nepal Investment Bank Ltd.
5. Standard Chartered Bank Ltd.
6. Himalayan Bank Ltd.
7. Nepal SBI Bank Ltd.
8. Nepal Bangladesh Bank Ltd.
9. Everest Bank Ltd.
10. Bank of Kathmandu Ltd.
11. Nepal Credit and Commercial Bank Ltd.
12. Lumbini Bank Ltd.
13. Nepal Industrial and Commercial Bank Ltd.
14. Machhapuchhre Bank Ltd.
15. Kumari Bank Ltd.
16. Laxmi Bank Ltd.
17. Siddharth Bank Ltd.
18. Global Bank Ltd.
19. Sunrise Bank Ltd.
20. Prime Bank Ltd.
21. Citizen International Bank Ltd.

From these populations Nabil Bank Ltd. and Nepal Investment Bank Ltd. has been selected and its data related to investment policy are comparatively studied.

### **3.5) Methods of Analysis**

As mentioned above for the purpose of data analysis, various financial, accounting and statistical tools are used to make the analysis more effective, convenience, reliable and authentic. The analysis of data will be done according to the pattern of data available because of limited time and resources. Simple analytical statistical tools such as percentage, Karl Pearson's coefficient of correlation, regression, trend analysis standard deviation, mean/average, coefficient of variation and test of hypothesis are used in this study. Similarly some financial tools have also been used for financial analysis. The various tools applied in this study have been briefly presented as under.

#### **1.5.1 Financial Tools**

Financial tools are used to examine the financial strength and weakness of bank in this study. Financial tool like ratio analysis has been used.

##### **Ratio Analysis**

Ratio analysis is a tool of scanning the financial statement of the firm. "Ratio means the numerical or quantitative relationship between two items or variables. It can be expressed as percentage fraction or a stated comparison between numbers." (I.M.Panday, 1992; 104) Ratio analysis is the relationship between two accounting figures expressed in mathematically. It is computed by dividing one item of relationship with the other. Management itself can use these parameters to improve the organization's performance in future. Because, truly know-how of the strengths and weakness for exploiting maximum benefits and to repair the weaknesses to meet the challenges.

Even though there are many ratios, only those financial ratios are calculated and analyzed which are related in this study. They are as follows:

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

Liquidity ratios measure the firm's ability to current obligations. It reflects the short – term financial strength of the business. It is the measurement of speed with which a bank's assets can be converted into cash to meet deposit withdrawal and other current obligations. A

bank should ensure that it does not suffer from lack of liquidity and also it does not have excess liquidity. Both condition of liquidity are not in favour the viewpoint of banks.

The following ratios are evaluated under liquidity ratios.

### **i) Current Ratio**

A ratio between current assets and current liabilities is known as current ratio. It shows the relationship between current assets and current liabilities. Current assets are those assets which can be converted into cash within short period of time, normally not exceeding one year current liabilities are those obligations which are payable within a short period, normally not exceeding one year.

Mathematically it is represented as:

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

Higher the current ratio better is the liquidity position. The widely accepted standard of current ratio is 2:1 but accurate standard depends on circumstances in case of seasonal business ratio.

This ratio measures the bank short-term solvency i.e. its ability to meet short-term obligations. As a measure of creditors versus current assets, it indicates each rupee of current assets available for each rupees of current liability.

### **ii) Cash and Bank Balance to Total Deposit Ratio (Cash Reserve Ratio)**

Cash and bank balances are the most liquid current assets. This ratio measures the percentage of most liquid fund with the bank to make immediate payment to the depositor. This ratio is calculated by dividing the cash and bank balance by the amount of total deposits. Mathematically it is expressed as,

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

Hence, cash and bank balance includes cash on hand, foreign cash on hand, cheques and other cash items, balance with domestic and abroad banks where as the total deposits include current deposits, saving deposits, fixed deposits, money at call and short term notice and other deposits.

### **iii) Cash and Bank Balance to Current Assets Ratio**

This ratio measures the proportion of most liquid assets i.e. cash and balance among the total current assets of the bank. Higher ratio shows the banks ability to meet its demand for cash.

This ratio is calculated by dividing cash and bank balance by current assets.

Mathematically it is expressed as,

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

### **iv) Investment on Government Securities to Current Assets Ratio**

Investment on government securities includes treasury bills and development bonds etc. This ratio is calculated to find out the percentage of current assets invested in government securities.

This ratio is calculated by dividing investment made on government securities by current assets,

Mathematically it is expressed as,

Investment on govt. securities to current assets ratio

$$= \frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

### **v) Loan and Advances to Current Assets Ratio**

Loan and advances to current asset ratio shows the percentage of loan and advances in the total current assets. Where loan & advances include loans, advances, cash credit, local and foreign bill purchased and discounted etc.

This ratio can be calculated by dividing loans and advances by current assets.

Mathematically it is expressed as,

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

## **B) Assets Management Ratios (Activity Ratios)**

Activity ratios are employed to evaluate the efficiency with which the firm manages and utilizes its assets. These ratios are also called turnover ratios because they indicate the speed with which assets are being converted turnover into sales. Asset management ratio measures how efficiently the bank manages the resources at its command.

The following ratios are used under this asset management ratio.

### **i) Loan and Advances to Total Deposit Ratio**

This ratio is calculated to find out that which banks are able to utilizing their total deposits on loan and advances for profit generating purpose. This ratio can be obtained by dividing loan and advances by total deposits, which can be states as,

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

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

This ratio implies the utilization of firm's deposit on investment in government securities and share debentures of other companies and bank.

This ratio can be calculated by dividing total investment by total deposit. Which can be states as,



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

Hence, total investment consist investment on government securities, investment on debenture and bonds, share in subsidiary companies, share in other companies and other investment.

### iii) Loan and Advances to Working Fund Ratio

Loan and advances indicates the ability of any bank to canalize its deposits in the form of loan and advances to earn high return. This ratio is computed by dividing loan and advances by total working fund, which can be states as,

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

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

### iv) Investment on Government Securities to Total Working Fund Ratio

This ratio shows that 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, which can be states as,

$$\begin{aligned} \text{Investment on Govt. Securities to Total Working Fund Ratio} \\ = \frac{\text{Interest on Govt. Securities}}{\text{Working Fund Ratio}} \end{aligned}$$

Hence, Investment on government securities includes treasury bills and development bonds etc.

#### v) 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 computed by dividing investment on shares and debentures by total working fund, which can be states as,

Investment on Shares & Debentures to Total Working Fund Ratio

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

Where, Numerator includes investment on debentures bonds and shares of the other companies.

### C) Profitability ratios

Profit is the difference between revenues and expenses over a period of time. A company should earn profit to survive and grow over a long period of time, and it will have no future if it fails to make sufficient profits. Therefore, the financial manager should continuously evaluate the efficiency of its company in terms of profits. The profitability ratios are calculated to measure the operating efficiency of a company. It is the indicator of the financial performance of any institution. This implies that higher the profitability ratio, better the financial performance of the bank and vice versa.

The following ratios are taken into account under this heading.

#### i) Return on Total Working Fund Ratio

This ratio measures the overall profitability of all working funds i.e. total assets. A firm has to earn satisfactory return on assets or working fund for its survival. This ratio is calculated by dividing net profit by total working fund.

This can be express,

$$\text{Return on Total Working Fund Ratio} = \frac{\text{Net Profit}}{\text{Working Fund Ratio}}$$

## ii) Return on Loan & Advances Ratio

This ratio indicates how efficiently the bank has employed its resources in the form of loan and advances. This ratio is computed by dividing net profit by loan & advances.

This can be expressed as,

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

## iii) Total Interest Earned to Total Outside Assets 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 expressed as,

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

## iv) Total Interest Earned to Total Working Fund Ratio

This ratio is calculated to find out the percentage of interest earned to total assets (working fund). Higher ratio implies better performance of the bank its terms of interest earning on its total working fund. This ratio is calculated by dividing total interest earned by total working fund.

This can be expressed as,

$$\text{Total Interest Earned to Total Working Fund Ratio} = \frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$

Where, total interest earned includes, interest on loan, advances and overdrafts, government securities investment debentures and other inter bank loans.

#### v) **Total Interest Paid to Total Working Fund Ratio**

This ratio is calculated to find out the percentage of interest paid on liabilities with respect to total working fund. This ratio is calculated by dividing total interest paid by total working fund.

Which, can be expressed as

$$\text{Total Interest Paid to Total Working Fund Ratio} = \frac{\text{Total Interest Paid}}{\text{Total Working Fund}}$$

Where, total interest paid includes total expenses on deposits, loan and advances, borrowings and other deposits.

### **D) Risk Ratios**

Risk taking is the prime business of bank's investment management. It increases effectiveness and profitability of the bank. These, ratio indicate the amount of risk associated with the various banking operations, which ultimately influences the bank investment policy.

The following ratios are taken into account under this heading.

#### **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 depositor's demand for cash. Higher the ratio, lower is the liquid risk. Dividing cash & bank balance calculate this ratio by total deposits. This can be mentioned as,

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

## ii)Credit Risk Ratio

Credit risk ratios 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. This ratio is calculated by dividing total loan and advances by total assets.

This can be mentioned as,

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

## iii)Capital Risk Ratio

The capital risk ratios of a bank indicate how much asset values may decline before the position of depositors and other creditors jeopardize. The capital risk is directly related to the return on equity (ROE). Higher the ratio, low is the capital risk. This ratio is computed by dividing capital (Paid up Capital + Reserves) by risk- weighted assets as computed under BASLE committee's formula.

This can be mentioned as,

$$\text{Capital Risk Ratio} = \frac{\text{Capital (Paid up } \Gamma \text{ Reserves)}}{\text{Risk Weighted Assets}}$$

## E) Growth Ratios

Growth ratios measure how well the firm is maintaining its economic position in its industry. It is directly related to the fund mobilization an investment management of a commercial bank.

The following growth ratios are calculated in this study.

- i. Growth ratio of total deposit
- ii. Growth ratio of loan & advances
- iii. Growth ratio of total investment

iv. Growth ratio of net profit

### 3.5.2 Statistical Tools

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

#### i) Average/Mean

An average is a single value related from a group of values to represent them in some way, a value, which is supposed to stand for whole group of which it is a part, as typical of all the values in the group.<sup>2</sup> There are various types of averages. Arithmetic mean (AM, Simple & Weighted), median, mode, geometric mean, harmonic mean are the major types of averages. The most popular and widely used measure representing the entire data by one value is the AM. The value of the AM is obtained by adding together all the items and by dividing this total by the number of items.

Mathematically:

Arithmetic Mean (AM) is given by,

$$\bar{X} = \frac{\sum X}{n} \dots\dots\dots(3.1)$$

- Where,  $\bar{X}$  = Arithmetic mean
- $\sum x$  = Sum of all the values of the variable X
- n = Number of observations

#### ii) Standard Deviation

The standard deviation ( $\sigma$ ) measures the absolute dispersion. The greater the standard deviation, the greater will be the magnitude of the deviations of the values from their mean. A small standard deviation means a high degree of uniformity of the observations as well as homogeneity of a series and vice versa.

Mathematically:

$$\sigma = \sqrt{\frac{1}{n} \sum (X - \bar{X})^2} \dots\dots\dots (3.2)$$

### iii) Coefficient of Variation

The standard deviation is absolute measures of dispersion; where as the coefficient of variation (CV) is a relative measure. To compare the variability between two or more series, CV is more appropriate statistical tool.

$$CV = \frac{\sum X^2}{X} \text{ Mathematically,} \dots\dots\dots (3.3)$$

#### iv) Trend Analysis

This topic analyzes the trend of loan and advances to total deposit ratio and trend of total investment to total deposit ratio of Nabil and NIBL from 2002/2003 to 2006/2007 and makes the forecast for the next five years. Under this topic following sub-topic have been presented.

- i) Trend analysis of loan and advances to total deposits ratio.
- ii) Trend analysis of total investment to total deposit ratio.

#### v) Co-efficient of Correlation Analysis

This analysis identifies and interprets the relationship between the two or more variables. In the case of highly correlated variables, the effect on one variable may have effect on other correlated variable under this topic, Karl Pearson's co-efficient of correlation has been used to find out the relationship between the following variables.

- i. i.Co-efficient of correlation between deposit and loan & advances.
- ii.Co-efficient of correlation between deposit and total investment.
- iii.Co-efficient of correlation between total outside assets and net profits.

These tools analyze the relationship between these variables and help the banks to make appropriate policy regarding deposit collection, fund utilization (loan & advances and investments) and maximization of profit.

#### vi) Test of Hypothesis

The objective of this test is to test the significance regarding the parameters of the population on the basis of sample drawn from the population. This test has been conducted on the various ratios related with the banking business.



\* Test of hypothesis on loan and advances to total deposit ratios between Nabil & NIBL.

Research methodology and the various financial and statistical tools discussed above have been used in the next chapter to analyze and interpret the data regarding the Nabil & NIBL for the study period from Fiscal year 2002/2003 to 2006/2007

# CHAPTR-IV

## DATA PRESENTATION AND ANALYSIS

### 4.1 Financial Analysis

This is 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 i.e. Investment Bank Limited. From the point of view of the fund mobilization and investment policy only those ratios are calculated and analyzed which are very important. The rations 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 needed financial ratios, which are to be calculated for the purpose of this study, are as fallows respectively.

#### 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, withdraws, 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 analyses of liquidity needs are 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 or short-term notice, investment in government securities and other interest receivable, non banking assets, loan advances and bills purchase and other miscellaneous current assets where as current liabilities consist of deposits, borrowings, loan and advances, bills payable, tax provision, Staff bonus, dividend payable and miscellaneous current liabilities.

**Table No: 4.1**  
**Current Ratio (times)**

<b>S.N.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	0.9200	0.9000
2	2003/2004	0.9400	0.8900
3	2004/2005	0.9641	0.9254
4	2005/2006	0.8338	0.9247
5	2006/2007	0.8774	0.9466
<b>Total</b>		<b>4.5353</b>	<b>4.5867</b>
<b>Mean</b>		<b>0.9060</b>	<b>0.9180</b>
<b>S.D.</b>		<b>0.0519</b>	<b>0.0200</b>
<b>C.V</b>		<b>0.0573</b>	<b>0.0218</b>

Source: Appendix 1 '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 an average, NIBL has maintained higher current ratio than Nabil, which states that liquidity position of NIBL is fair. The coefficient of variation between the current ratio of Nabil is 0.0573 which is comparatively higher than 0.0218 of NIBL, it shows that current ratio of Nabil is less consistent than NIBL.

**(ii) Cash and Bank Balance to Total Deposit Ratio (CBR Ratio)**

Cash and bank balance is the most liquid asset. The ratio between the cash and bank balance and total deposit measure the ability of the bank to meet the unanticipated cash and 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, foreign cash on hand, cheques and other cash items, balance with domestic and abroad banks whereas the total deposits include current deposits, saving deposits, fixed deposits, money at call and short term notice and other deposits.

**Table No: 4.2**

**Cash and bank balance to total deposit ratio**

<b>S.N.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	0.0851	0.1169
2	2003/2004	0.0687	0.1065
3	2004/2005	0.0383	0.0940
4	2005/2006	0.0326	0.1234
5	2006/2007	0.0600	0.0997
<b>Total</b>		<b>0.2848</b>	<b>0.5406</b>
<b>Mean</b>		<b>0.0570</b>	<b>0.1081</b>
<b>S.D.</b>		<b>0.0224</b>	<b>0.0100</b>
<b>C.V</b>		<b>0.3930</b>	<b>0.0925</b>

Source: Appendix 1 'B'

The Table No.:4.2 shows that the total mean, standard deviation and coefficient of variation of cash and bank balance to total deposit ratio of two commercial banks.

Figure in the table shows that the ratio (CBR) of Nabil is decreasing trend from FY 2002/03 to 2005/06. But trend is increasing scale in the F.Y. 2006/07. NIBL has also decreasing trend from 11.69 (in 2002/03) to .0940 (in 2004/05). And after that in F.Y.2005/06 it has been increased and decreased in F.Y. 2006/07.

Mean and standard deviation ratio of Nabil are less than that of NIBL. C.V. of Nabil and NIBL are 0.3930 and 0.0925 respectively. From the above analysis it can be concluded that Nabil bank has better maintenance of its tight liquidity than that of NIBL. Because more liquidity indicate the inability of the bank. Nabil bank is more riskier than NIBL because the C.V. of Nabil is greater than NIBL.

**(iii) 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 represent total of local currency, foreign currencies, cheques 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 term notice, loan and advances, investment in government securities and other interest receivable and others miscellaneous current assets.

**Table No.: 4.3**  
**Cash and bank balance to current asset ratio**

<b>S. No.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	0.0825	0.1232
2	2003/2004	0.0681	0.1101
3	2004/2005	0.0374	0.0960
4	2005/2006	0.0370	0.1305
5	2006/2007	0.0633	0.1035
	<b>Total</b>	<b>0.2883</b>	<b>0.5633</b>
	<b>Mean</b>	<b>0.0577</b>	<b>0.1127</b>
	<b>S.D.</b>	<b>0.0200</b>	<b>0.0141</b>
	<b>C.V.</b>	<b>0.3467</b>	<b>0.1251</b>

Source: Appendix 1 'C'

Table No.: 4.3 shows the total mean, standard deviation and C.V. of cash and bank balance to current assets ratio of commercial banks. Current asset ratio of two banks is better as they show the ability to manage the deposit withdrawals from the customers.

The above table shows that cash and bank balance to current assets ratio of Nabil bank decreasing trend. It has range from 0.0825 (in FY 2002/03) to 0.0370 (in FY 2005/06) and increased in F.Y. 2006/07. NIBL has fluctuating trend, it has range from 0.1305 (in FY 2005/06) to 0.0960 (in FY 2004/05).

From the above analysis we can conclude that liquidity position (only cash and bank balance) of Nabil bank is lesser than NIBL. But NIBL has higher consistency. Liquidity position of NIBL is less riskier than Nabil, because the C.V. of NIBL is less than Nabil.

#### **(iv) Investment on Government Security to Current Assets Ratio**

The government securities are not so much liquid as cash and bank balance. But they can easily sell 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 current assets ratio

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

**Table No.: 4.4**  
**Investment on government securities to current assets ratio**

<b>S.N.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	0.2588	0.0532
2	2003/2004	0.2578	0.1796
3	2004/2005	0.1612	0.1395
4	2005/2006	0.0717	0.1409
5	2006/2007	0.1848	0.1381
	<b>Total</b>	<b>0.9343</b>	<b>0.6512</b>
	<b>Mean</b>	<b>0.1869</b>	<b>0.1302</b>
	<b>S.D.</b>	<b>0.0775</b>	<b>0.0469</b>
	<b>C.V.</b>	<b>0.4147</b>	<b>0.3601</b>

Source: Appendix 1 'D'

Table No.: 4.4 shows the total mean, standard deviation and coefficient of variation of investment on government securities to current assets ratio of commercial banks.

Figure in the table shows that investment on government securities to current assets ratio of both Nabil and NIBL has in fluctuating trend and there is no consistency.

In overall, the mean ratio of investment on government securities to current assets of Nabil is higher than that of NIBL i.e.  $0.1869 > 0.1302$ . On the other hand coefficient of variation of Nabil is also higher than other NIBL i.e.  $0.4147 > 0.3601$ .

It can be concluded that Nabil uses to invest its current asset in government securities more than NIBL and the investment is quite stable too than that of NIBL bank.

**(v) Loan and Advances to Current Assets Ratio**



To make a high profit 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**

<b>S.N.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	0.5593	0.3421
2	2003/2004	0.5750	0.6398
3	2004/2005	0.7071	0.7250
4	2005/2006	0.7577	0.7135
5	2006/2007	0.7032	0.7330
	<b>Total</b>	<b>3.3022</b>	<b>3.1534</b>
	<b>Mean</b>	<b>0.6604</b>	<b>0.6307</b>
	<b>S.D.</b>	<b>0.0883</b>	<b>0.1655</b>
	<b>C.V.</b>	<b>0.1337</b>	<b>0.2624</b>

Source: Appendix 1 'E'

Table No.: 4.5 shows the total mean, standard deviation and coefficient of variation of loan & advances to current assets ratio of commercial banks. Through this table loan & advances to current assets ratios of the sample CBS are analyzed.

In case of Nabil loans and advances to current asset ratios are in increasing trend upto F.Y.2005/06 and in F.Y.2006/07 it has been decreased. Similarly NIBL ratios is also in increasing trend but in F.Y.2005/06 it has been decreased.

Mean value of this ratio of Nabil bank is 66.04%, which is higher than that of NIBL (i.e. 66.04% > 63.07%). But coefficient of variation is less than NIBL.

This analysis shows that Nabil use to provide high loan & advances in comparison of NIBL. Its trend of providing loan & advances is higher consistency than NIBL.

#### **4.1.2 Asset Management Ratios (Activity Ratio)**

Asset management ratio measures the efficiency of the bank to manage its asset in profitable and satisfactory manner. They indicate the speed with which assets are being converted. 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 discount. Total deposits include saving, fixed current call at short deposit and others.

**Table No.:4.6**

**Loan & advances to total deposit ratio**

<b>S.N.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	0.5768	0.3247
2	2003/2004	0.5801	0.6187
3	2004/2005	0.7257	0.7104

4	2005/2006	0.6679	0.6750
5	2006/2007	0.6660	0.7059
	<b>Total</b>	<b>3.2165</b>	<b>3.0346</b>
	<b>Mean</b>	<b>0.6433</b>	<b>0.6069</b>
	<b>S.D.</b>	<b>0.0640</b>	<b>0.1619</b>
	<b>C.V.</b>	<b>0.0995</b>	<b>0.2668</b>

Source: Appendix 2 'A'

Table No.:4.6 shows the total mean, S.D. and C.V. of loan & advances to total deposit ratio of commercial banks. Contents of the table show the percentage of loan & advances to total deposit ratio position of Nabil and NIBL.

The above table exhibits that the ratio of Nabil has increasing trend in up to FY 2004/2005 and in decreasing trend. NIBL has fluctuating trend i.e. highest in the FY 2004/2005 and lowest in FY 2002/2003.

The mean value of Nabil is highest than that of NIBL. Mean ratio of Nabil and NIBL is 0.6433 & 0.6069. Coefficient of variation of Nabil is lower than that of NIBL i.e.  $0.0995 < 0.2668$ .

From the above table it shows that Nabil has strong position regarding the mobilization of total deposit on loans and advances and acquiring high profit in comparison. But only higher ratio is not better from the point of view of liquidity as the loans and advances are not as liquid as cash and bank balance. On the other hand Nabil has less C.V. than NIBL, which indicate that loans and advances of Nabil are stable and consistent than that of NIBL.

## (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 consists 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**

<b>S.No.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	0.4485	0.2152
2	2003/2004	0.4133	0.3351
3	2004/2005	0.2925	0.2760
4	2005/2006	0.3193	0.2960
5	2006/2007	0.3832	0.2657
	<b>Total</b>	<b>1.8569</b>	<b>1.3861</b>
	<b>Mean</b>	<b>0.3714</b>	<b>0.2776</b>
	<b>S.D.</b>	<b>0.0648</b>	<b>0.0436</b>
	<b>C.V.</b>	<b>0.1745</b>	<b>0.1571</b>

Source: Appendix 2 'B'

Table No.: 4.7 shows the total mean, standard deviation & coefficient of variation of total investment to total deposit ratio of commercial banks.

The above total reveals that Nabil has decreasing trend in F.Y 2002/2003 to 2004/2005 and in FY 2005/2006 it has follows increasing trend. NIBL has fluctuating trend i.e. 0.2152 (in FY 2002/2003), 0.3351 (in FY 2003/2004), 0.2760 (in FY2004/2005), 0.2960 (in FY 2005/2006), and 0.2657 (in FY 2006/2007).

The mean value of Nabil is higher than that of NIBL i.e. Nabil =0.3714>NIBL=0.2776. Coefficient of variation of Nabil is also higher than that of NIBL i.e. 0.1745>0.1571.

From the analysis of above table it is clear that Nabil has success to better utilization of deposit to investment than NIBL and also NIBL has higher consistency to investment in securities than other bank. 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 success in mobilizing their assets on loan & advances for the purpose of income generating. 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 consist 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	2002/2003	0.4683	0.2853
2	2003/2004	0.4891	0.5379
3	2004/2005	0.6160	0.6222
4	2005/2006	0.5787	0.5990

5	2006/2007	0.5704	0.6265
	<b>Total</b>	<b>2.7225</b>	<b>2.6710</b>
	<b>Mean</b>	<b>0.5445</b>	<b>0.5342</b>
	<b>S.D.</b>	<b>0.0632</b>	<b>0.1435</b>
	<b>C.V</b>	<b>0.1161</b>	<b>0.2686</b>

Source: Appendix 2 'C'

Table No.: 4.8 shows the total mean, standard deviation and coefficient of variation of loan and advances to total working fund ratio of commercial banks.

The above table shows that the loan and advances to total working fund ratio of Nabil has increasing trend up to FY 2004/2005 decreasing trend after that. NIBL has fluctuating trend i.e. highest in the FY 2004/2005 (0.6222) and lowest in F.Y. 2002/2003 (0.2853).

Mean value of Nabil is higher than that of NIBL (i.e.  $0.5445 > 0.5342$ ). And coefficient of variation of Nabil is also lower than that of NIBL.

From the above analysis it can be conclude that Nabil has success to better mobilization of funds as loan & advances for the purpose of income generation. Nabil has mobilizing its fund is higher and it has higher consistency than that of NIBL.

#### **(iv) Investment on Government Securities to Total Working Fund Ratio**

To some extend commercial bank seems to utilize its fund by purchasing government securities. Government securities are a safe medium of investment though it is not 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.

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 treasury bills and development bonds etc.

**Table No.: 4.9**

**Investment on government securities to total working fund ratio**

<b>S.N.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	0.2167	0.0444
2	2003/2004	0.2193	0.1510
3	2001/2002	0.1405	0.1197
4	2002/2003	0.0547	0.1183
5	2003/2004	0.1499	0.1180
	<b>Total</b>	<b>0.7811</b>	<b>0.5513</b>
	<b>Mean</b>	<b>0.1562</b>	<b>0.1103</b>
	<b>S.D.</b>	<b>0.0678</b>	<b>0.0400</b>
	<b>C.V.</b>	<b>0.4340</b>	<b>0.3628</b>

Source: Appendix 2 'D'

Table No.:4.9 shows the total mean, standard deviation and coefficient of variation of Investment on government securities to total working fund ratio of commercial banks.



In the above table it shows that investment of government securities to working fund ratio of Nabil has fluctuating trend. Nabil has range from 0.0547 (in FY 2002/2003) to 0.2193 (in FY 2003/2004). In case of NIBL there is decreasing trend from FY 2003/2004

Mean ratio of Nabil has higher than that of NIBL i.e. 0.1562>0.1103. Similarly coefficients of variation of Nabil and NIB are 0.4340 & 0.3628.

From the above table we found that Nabil has higher mean ratio of investment on government securities. It indicates that Nabil has success to better mobilizing of funds as investment on government securities. Nabil’s investment policy is also consistency than NIBL. But in the case of NIBL ,it has least investment on government securities and investment policy is high consistency.

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

There has been two types of investment i.e., investment on government securities and investment on shares & debenture. Investment on shares and debentures to total working fund ratio reflects the extent on 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

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

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	2002/2003	0.0013	0.0015
2	2003/2004	0.0080	0.0010

3	2004/2005	0.0256	0.0011
4	2005/2006	0.0047	0.0008
5	2006/2007	0.0105	0.0013
	<b>Total</b>	<b>0.0501</b>	<b>0.0058</b>
	<b>Mean</b>	<b>0.0100</b>	<b>0.0012</b>
	<b>S.D.</b>	<b>0.0100</b>	<b>-</b>
	<b>C.V.</b>	<b>0.9975</b>	<b>-</b>

Source: Appendix 2 'E'

Table No.:4.10 shows the total mean, standard deviation and coefficient of variation of investment on shares and debentures to total working fund ratio.

The above table shows that the investment on shares and debentures to total working fund ratio of Nabil has fluctuating trend. NIBL has also same trend. It has highest in the FY 2002/2003 (0.15) and lowest ration in FY 2005/2006 (0.08).

The mean value of Nabil and NIBL are 0.0100 & 0.0012. The S.D. of Nabil and Investment are 0.0100 and 0.00 and C.V. 0.9975 and 0.00.

The above analysis shows that Nabil has invested its funds in shares and a debenture in comparison of working fund is lesser than NIBL. We conclude that its investment in share and debentures seems to be not consistence.

### 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 profit ratio shows that higher the efficiency of a bank. The following profitability ratios are taken into account under this heading.

**(i) Return on Total Working Fund Ratio**

This ratio measures the profit earning capacity by utilizing available resources i.e. total asset. Return will be higher if the banks working fund is well managed and efficiently utilized. Maximizing taxes within the legal options available will also improve the return.

We have,

$$\text{Return on Total Working Fund Ratio} = \frac{\text{Net Profit}}{\text{Working Fund Ratio}}$$

Where,

Net profit includes the profit that is left to the internal equities after all costs, charge and expenses.

**Table No.: 4.11**  
**Return on total working fund ratio**

S.N.	Fiscal Year	Nabil	NIBL
1	2002/2003	2.51	1.30
2	2003/2004	2.72	1.15
3	2001/2002	3.02	1.43
4	2002/2003	2.84	1.64
5	2003/2004	2.47	1.82
	<b>Total</b>	<b>13.57</b>	<b>7.33</b>
	<b>Mean</b>	<b>2.7136</b>	<b>1.4670</b>
	<b>S.D.</b>	<b>0.2280</b>	<b>0.2665</b>
	<b>C.V.</b>	<b>0.0840</b>	<b>0.1817</b>

Source: Appendix 3 'A'

The above Table No.:4.11 shows the total mean, standard deviation and coefficient of variation of return on total working fund ratio of commercial banks.

In above table return on total working fund ratio of Nabil has increasing trend. In case of NIBL it has also in increasing trend. Mean ratio of Nabil is higher than that of NIBL (i.e. 2.7136>1.4670). Similarly, C.V. and S.D of both banks has no positive and no negative value.

From the mean ratio analysis it is fund that Nabil bank has success to maintain the higher ratio in return on total working fund. The C.V. of Nabil is less than NIBL so; Nabil has higher consistency than NIBL.

**(ii) Return on Loan & Advances Ratio**

It measures the earning capacity of a commercial banks on its deposits mobilized on 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 loan cash credit, overdraft bills purchased and discounted.

**Table No.:4.12**  
**Return on loan & advances ratio**

S.N.	Fiscal year	Nabil	NIBL
1	2002/2003	5.37	2.02
2	2003/2004	5.56	2.14

3	2004/2005	4.90	2.29
4	2005/2006	4.92	2.74
5	2006/2007	4.34	2.90
	<b>Total</b>	<b>25.08</b>	<b>12.10</b>
	<b>Mean</b>	<b>5.0154</b>	<b>2.4204</b>
	<b>S.D.</b>	<b>0.4758</b>	<b>0.3829</b>
	<b>C.V.</b>	<b>0.0949</b>	<b>0.1582</b>

Source: Appendix 3 'B'

The above Table No.: 4.12 shows the total mean, standard deviation and coefficient of variation of return on loan & advances ratio of commercial banks.

In the above table return on loan & advances ratio of Nabil bank has fluctuating trend. In case of NIBL it has increasing trend. Mean ratio of Nabil is greater than that of NIBL i.e.  $5.0154 > 2.4204$ . Similarly, coefficient of variation of Nabil is lesser than NIBL i.e.  $0.0949 < 0.1582$ .

From above analysis it is found that Nabil bank has the comparatively higher return on loan than NIBL. It concludes that Nabil has success to earn high return on its loan & advances. It indicates that investment policy of Nabil has effective than NIBL. The C.V. ratio of Nabil is also lower; it shows that Nabil has consistency in return than NIBL.

### (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.

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**

<b>S.N.</b>	<b>Fiscal year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	7.38	6.15
2	2003/2004	7.14	6.65
3	2004/2005	7.20	6.31
4	2005/2006	6.86	6.38
5	2006/2007	6.48	6.66
	<b>Total</b>	<b>35.06</b>	<b>32.15</b>
	<b>Mean</b>	<b>7.0121</b>	<b>6.4297</b>
	<b>S.D.</b>	<b>0.3504</b>	<b>0.2249</b>
	<b>C.V.</b>	<b>0.0500</b>	<b>0.0350</b>

Source: Appendix 3 ‘C’

The above Table No.:4.13 shows the total mean, standard deviation & coefficient of variation of total interest earned to total outside assets ratio of commercial banks.

The above table shows the ratio of total interest earned to total outside assets of Nabil and NIBL all have fluctuating trend. It has highest ratio i.e. 7.38(in FY 2002/2003) & 6.66(in FY 2006/2007) and lowest ratio 6.48(in FY 2003/2004), 6.15(in FY 2002/2003). Mean ratio of Nabil is higher than NIBL i.e. 7.0121>6.4297. Similarly, C.V. of Nabil is higher than NIBL i.e. 0.0500<0.0350.

This shows that Nabil has better position with respect to the income earned from the total outside asset in comparison to NIBL.

**(iv) Total Interest Earned to Total Working Fund Ratio**

It reflects the extent to which the banks are successful in mobilizing their total assets to generate high income as interest. This ratio actually reveals the earning capacity of a commercial bank by mobilizing its working fund: A high ratio is indicator of high earning power of the bank on its total working fund and vice versa.

We have,

$$\text{Total Interest Earned to Total Working Fund Ratio} = \frac{\textit{Total Interest Earned}}{\textit{Total Working Fund}}$$

**Table No.:4.14**  
**Total interest earned to total working fund ratio**

S.N.	Fiscal Year	Nabil	NIBL
1	2002/2003	6.15	5.10
2	2003/2004	5.98	2.50
3	2004/2005	6.22	5.45
4	2005/2006	5.87	5.50
5	2006/2007	5.83	5.74
	<b>Total</b>	<b>30.04</b>	<b>24.29</b>
	<b>Mean</b>	<b>6.0076</b>	<b>4.8579</b>
	<b>S.D.</b>	<b>0.1712</b>	<b>1.3381</b>
	<b>C.V.</b>	<b>0.0285</b>	<b>0.2754</b>

Source: Appendix 3 'D'

Table No.:4.14 shows the total mean, standard deviation & coefficient of variation of total interest earned to total working fund ratio of Nabil and NIBL.

The above table shows that the ratio of total interest earned to total working fund ratio of Nabil has fluctuating trend. It has highest ratio in F.Y.2004/05 (6.22) and lowest in F.Y.2006/07 (5.83). NIBL has in increasing trend. Mean ratio of Nabil bank has higher than NIBL (i.e.  $6.0076 > 4.8579$ ). Coefficient of variance of Nabil has lower than that of NIBL (i.e.  $0.0285 < 0.2754$ ).

From above analysis we can concluded that the ratio of total interest earned to total working fund ratio of Nabil bank is satisfactory in compared to NIBL. It means the total interest earned to total working fund ratio of the Nabil is stable and consistency in comparison to NIBL.

**(v) Total Interest Paid to Total Working Fund Ratio**

Total interest paid to total working fund ratio measure the percentage of total interest paid against the total working fund. A high ratio indicates the higher interest expenses on total working fund and vice-versa.



We have,

$$\text{Total Interest Paid to Total Working Fund Ratio} = \frac{\text{Total Interest Paid}}{\text{Total Working Fund}}$$

Where,

Total interest paid includes total expenses on deposit liabilities, loan & advances (borrowing) and other deposits.

**Table No.:4.15**  
**Total interest paid to total working fund ratio**

<b>S.N.</b>	<b>Fiscal year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	1.92	2.10
2	2003/2004	1.69	2.46
3	2004/2005	1.42	2.18
4	2005/2006	1.60	2.30
5	2006/2007	2.04	2.48
	<b>Total</b>	<b>8.66</b>	<b>11.52</b>
	<b>Mean</b>	<b>1.7327</b>	<b>2.3050</b>
	<b>S.D.</b>	<b>0.2484</b>	<b>0.1694</b>
	<b>C.V.</b>	<b>0.1434</b>	<b>0.0735</b>

Source: Appendix 3 ‘E’

The Table No.: 4.15 shows that the total mean, standard deviation and coefficient of variance of total interest paid to total working fund ratio.

The above table shows that the total interest paid to total working fund ratio of Nabil has increase from FY 2004/2005 but it has decreasing trend before that. NIBL has fluctuating trend. It has highest in FY 2006/2007(2.48) and lowest in FY 2002/2003(2.10). If the mean ratios are observed, it is found that the Nabil bank has the lowest. The mean ratios of Nabil and NIBL has 1.7327 and 2.3050. It means Nabil has paid lower interest in comparison to NIBL. But the coefficient of variation of Nabil is higher than that of NIBL (i.e.  $0.1434 > 0.0735$ ). It indicates that the total interest paid to total working fund ratio of Nabil is less consistent than NIBL. It can be concluded that the position of Nabil is better than NIBL is as its ratio is always lower than NIBL. That means it is paying less interest against its working fund.

#### **4.1.4 Risk Ratio**

The possibility of risk makes banks investment 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 depositor’s demand for cash. Higher the ratio, lower the liquidity risks.

We have,

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

**Table No.: 4.16**  
**Liquidity risk ratio**

<b>S.N.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	8.51	11.69
2	2003/2004	6.87	10.65
3	2004/2005	3.83	9.40
4	2005/2006	3.26	12.34
5	2006/2007	6.00	9.97
<b>Total</b>		<b>28.48</b>	<b>54.06</b>
<b>Mean</b>		<b>5.6952</b>	<b>10.8118</b>
<b>S.D.</b>		<b>2.1692</b>	<b>1.2091</b>
<b>C.V</b>		<b>0.3809</b>	<b>0.1118</b>

Source: Appendix 4 ‘A’

The Table No.: 4.16 shows the mean, standard deviation and coefficient of variation of liquidity risk ratio of commercial banks. Figure in the table shows the percentage of liquidity risk ratio of Nabil and NIBL.

In above table liquidity ratios of these two commercial banks are in fluctuating trend. Nabil has maintained a highest ratio of 8.51 in the FY 2002/2003. Similarly, NIBL has maintained a highest ratio of 12.34 in the FY i.e. 2050/2006.

If the mean ratios are observed Nabil has lesser than that of NIBL, i.e.  $5.6952 < 10.8118$ . Which indicate that Nabil liquidity risk is higher than the NIBL But according to the coefficient of variation Nabil's ratio is higher than NIBL. It indicates that Nabil's liquidity is less consistency than NIBL.

## **(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.: 4.17**

**Credit risk ratio**

<b>S.N.</b>	<b>Fiscal year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	46.83	64.03
2	2003/2004	48.91	53.79
3	2004/2005	61.60	62.22
4	2005/2006	57.87	59.90
5	2006/2007	57.04	62.50
	<b>Total</b>	<b>272.25</b>	<b>267.10</b>
	<b>Mean</b>	<b>54.4491</b>	<b>53.4193</b>
	<b>S.D.</b>	<b>6.2908</b>	<b>14.3537</b>
	<b>C.V.</b>	<b>0.1155</b>	<b>0.2687</b>

Source: Appendix 4 'B'

The above Table No.: 4.17 shows that the total mean, standard deviation & coefficient of variation of credit risk ratio of commercial banks.

The above table shows that the credit risk ratios of these two commercial banks are fluctuating trend. Nabil has maintained a highest ratio of 61.60 in FY 2004/2005. Similarly, NIBL has maintained a highest ratio of 64.03 in FY 2002/2003.

Mean ratio of Nabil is higher than NIBL (i.e.  $54.4491 > 53.4193$ ). And C.V of Nabil is lower than that of NIBL. It indicates that Nabil has more consistency than NIBL.

**(iii) Capital Risk Ratio**

Capital ratio measures bank ability to attract deposits and inter bank funds. It also determine the level of profit, a bank can earn if a bank chooses to take high capital risk. The capital risk is directly related to return on equity.

We have,

$$\text{Capital Risk Ratio} = \frac{\text{Capital (Paid up capital \& Reserves)}}{\text{Risk Weighted Assets}}$$

(Only loan and advances is taken as risk weighted assets)

**Table No.: 4.18**

**Capital risk ratio**

<b>S.N.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/2003	16.94	24.82
2	2003/2004	18.09	10.22
3	2004/2009	15.66	11.65
4	2005/2008	14.51	11.08
5	2006/2007	13.23	10.86
	<b>Total</b>	<b>78.43</b>	<b>68.65</b>
	<b>Mean</b>	<b>15.6858</b>	<b>13.7296</b>
	<b>S.D.</b>	<b>1.9240</b>	<b>6.2235</b>
	<b>C.V.</b>	<b>0.1227</b>	<b>0.4533</b>

Source: Appendix 4 ‘C’

The Table No.: 4.18 shows the mean, standard deviation & coefficient of variance of capital risk ratio of commercial banks.

In the above table capital risk ratio of Nabil has increased in FY 2003/2004(18.09) but then after it has been in decreasing trend up to FY 2006/2007. NIBL has fluctuating trend. It has highest range 24.82 (in 2002/2003) and lowest range 10.22 in FY 2003/2004.

If the mean ratios are observed Nabil’s ratio is lesser than NIBL but. Similarly, coefficient of variation is lower than that of NIBL i.e.  $0.1227 < 0.4533$ . It is concluded that the Nabil bank is more stable than the NIBL and it is also more consistency than NIBL.

## **4.2 Statistical Tools**

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

### **4.2.1 Trend Analysis**

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

- a. The first assumption is that other things will remain unchanged.
- b. The bank will run in present position.
- c. The economy will remain in the present stage
- d. The forecast will be true only when the limitation of least square method is carried out
- e. Nepal Rastra Bank will not change its guidelines to commercial banks.



**(i) Trend analysis of loan and advances to total deposits ratio of Nabil And NIBL.**

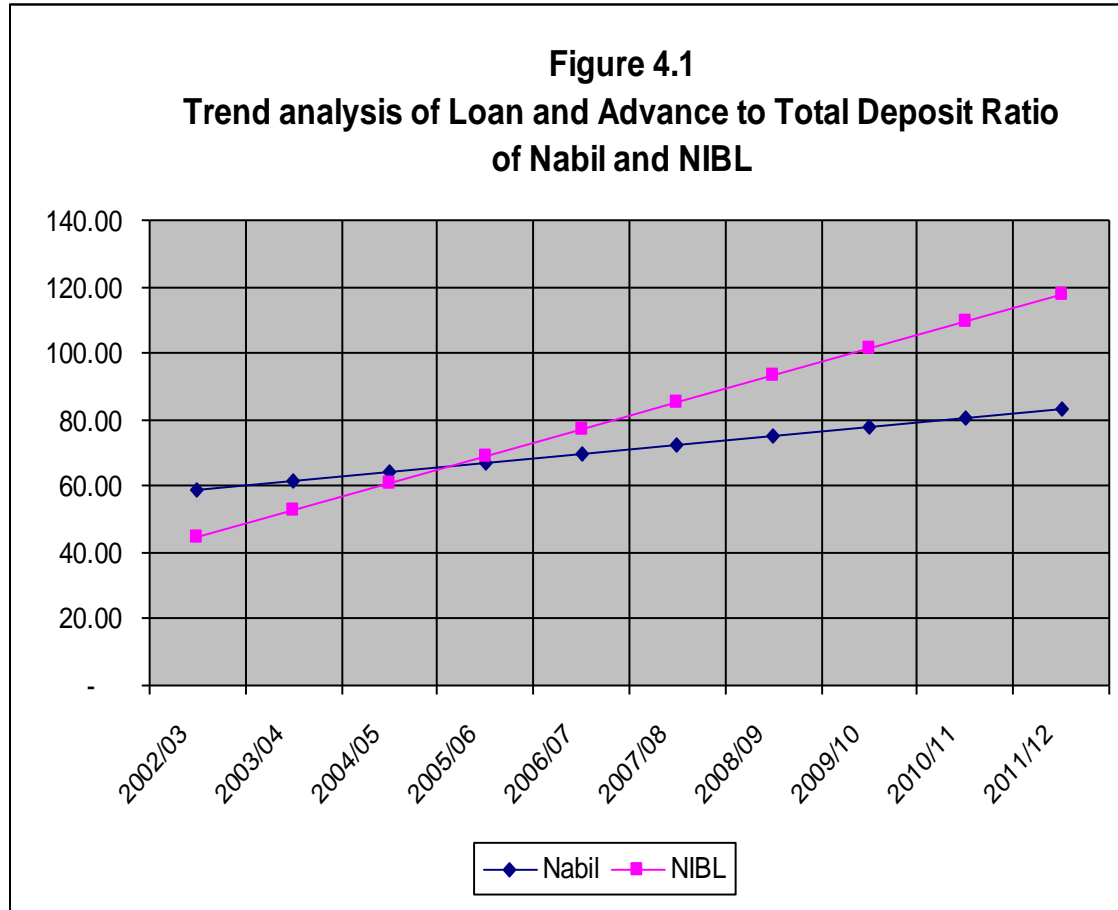
Calculation of the trend values of loan and advances to total deposits ratio of Nabil and NIBL for 5 years from 2002/2003 to 2006/2007 and forecast for next 5 years from 2007/2008 to 2011/2012. The following Table No.: 4.19.

**Table No.:4.19**  
**Trend analysis of loan and advances to total deposits ratio of**  
**Nabil and NIBL**

<b>S.N.</b>	<b>Fiscal Year</b>	<b>Nabil</b>	<b>NIBL</b>
1	2002/03	59.01	44.32
2	2003/04	61.67	52.50
3	2004/05	64.33	60.69
4	2005/06	66.99	68.88
5	2006/07	69.65	77.07
6	2007/08	72.31	85.26
7	2008/09	74.97	93.44
8	2009/10	77.63	101.63
9	2010/11	80.29	109.82
10	2011/12	82.95	118.01

Source: Appendix 6 "A" & "B"

The calculated and projected trend values of loan and advances of Nabil and NIBL is fitted in the following trend line.



From the above Table No.: 4.19 it has been shown that the ratio of loan & advances to total deposits of Nabil and NIBL bank are in increasing trend. If our assumption are applied the ratio of loan & advances to total deposits of Nabil in 2011/2012 will be 82.95% which is the lowest than NIBL (i.e.118.01%).

From above trend analysis it is quite obvious that Nabil deposit utilization position in relation to loan & advances to total deposit ratio is lower than NIBL but it has increasing trend. NIBL has increasing trend ratio and reached to 118.01% at the end of the projected year. These increasing trend means NIBL may use relatively large portion of their deposit by providing loan. It is also found that the loan and advances position of NIBL will be in better position in future.

**(ii) Trend analysis of total investment to total deposit ratio of Nabil and NIBL**

The calculation of the trend values of total investment to total deposits ratio of Nabil and NIBL for 5 years from 2002/2003 to 2006/2007 and forecast for next 5 years from 2007/2008 to 2011/2012 in the following Table No.: 4.20.

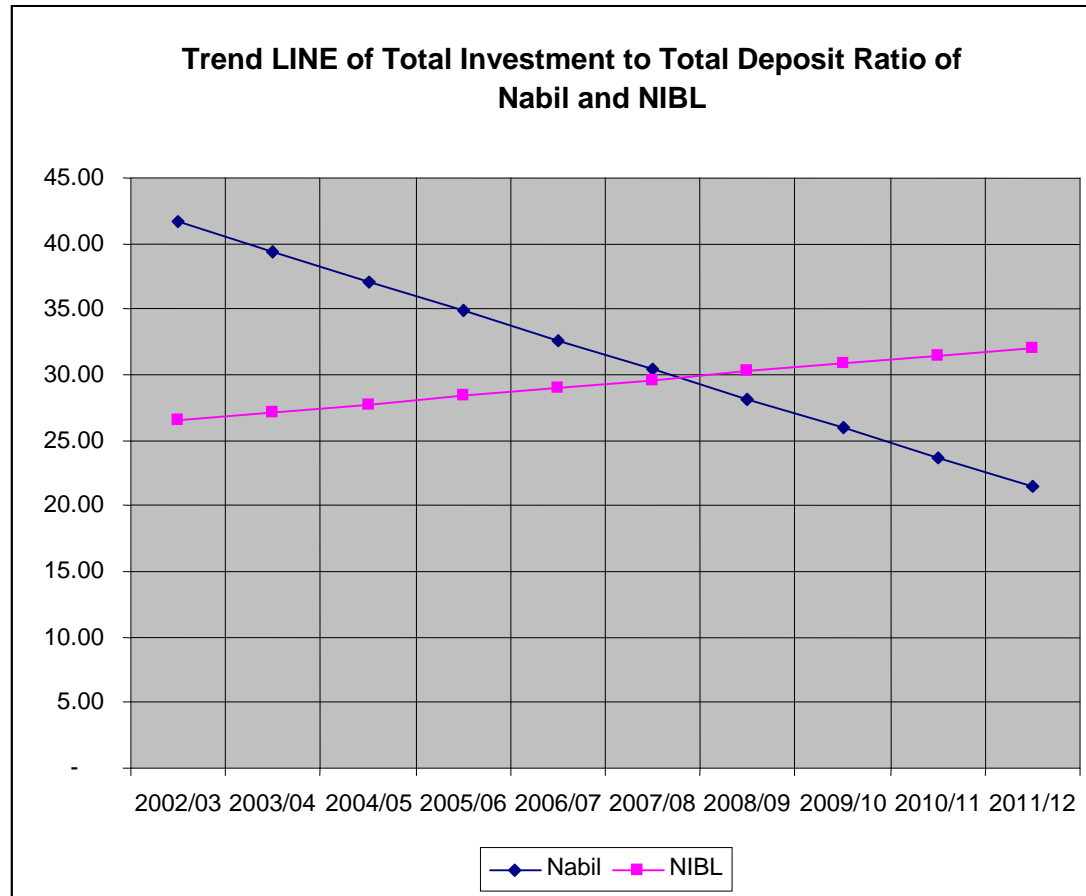
**Table No.: 4.20**  
**Trend analysis of total investment to total deposit ratio of**  
**Nabil and NIBL**

S.N.	Fiscal Year	Nabil	NIBL
1	2002/03	41.63	26.53
2	2003/04	39.38	27.14
3	2004/05	37.14	27.76
4	2005/06	34.89	28.38
5	2006/07	32.65	29.00
6	2007/08	30.40	29.61
7	2008/09	28.16	30.23
8	2009/10	25.91	30.85
9	2010/11	23.67	31.46
10	2011/12	21.42	32.08

Source: Appendix 6 "C" & "D"

The calculated and projected trend values of total investment to total deposits of Nabil and NIBL is fitted in the following trend line.

**Figure 4.2**



The above Figure 4.2 shows that the ratio of total investment to total deposit ratio of Nabil is in decreasing and NIBL is in increasing trend. If our assumption is applied the ratio of total investment to total deposit of Nabil in 2011/2012 will be 21.42%, which is lower than NIBL. Similarly ratio of NIBL in 2011/2012 will be 32.08%.

From the above analysis it can be concluded that Nabil's decreasing trend ratio is 2.25. However, NIBL has increasing ratio i.e.0.62. It means Nabil may use relatively low portion of deposit towards investment in different sectors. Above analysis also reveals that Nabil and NIBL is uses the skill and attention towards the potential sector of the investment.

From above trend chart it is found that Nabil has unfavorable condition than and NIBL for utilizing the total deposit towards investment.

#### 4.2.2 Coefficient of Correlation Analysis

Under this topic, Karl person’s coefficient of correlation is used to find out the relationship between deposit and loan & advances.

##### 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 variables (x) and loan & advances are dependent variables (y).

Table No.: 4.21

Coefficient of correlation between deposit and loan & advances

Evaluation criteria	Nabil	NIBL
R	0.96	0.989
r <sup>2</sup>	0.92	0.978
P.E.(r)	0.02	0.007

Source: Appendix 7

From the above Table No.:4.21 shows that r, r<sup>2</sup>, P.Er. between deposit and loan and advances of Nabil and NIBL for the period of 2002/2003 to 2006/2007.

From the above table it is found that the co-efficient of correlation (r) between deposit and loan and advances of Nabil and NIBL is 0.96 & 0.989. It shows that there is very high positive relationship between these two variables for Nabil and NIBL. But the degree of relationship

between deposit and loan & advances of NIBL is greater than that of Nabil are 0.96 and 0.989 respectively. Therefore, only 92% and 98% dependent variable has been explained by the independent variable for Nabil and NIBL respectively.

From above analysis it can be conclude that the value of r is highly significant that means there is significant relationship between deposit and loan & advances of Nabil & NIBL. It also reveals that two banks are successful in mobilizing their deposits and loan & advances.

#### 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.

Test of hypothesis on loan and advances to total deposit ratios between Nabil and NIBL.

Here, mean ratio of loan and advances to total deposit of Nabil and NIBL are taken and carried out under t-test of significance difference.

**Table No.: 4.22**

**Test of hypothesis on loan and advances to total deposit ratios between Nabil and NIBL.**

S.N.	Nabil	NIBL
1	$X_1=321.65$	$X_2=303.46$
2	$\bar{X}_1=64.33$	$\bar{X}_2=60.69$
3	$X_1^2=163.46$	$X_2^2=1049.48$

Source: Appendix 8

> **Test of significance of difference between the mean ratio of loan & advavne to Nabil and NIBL.**

**Setting of hypothesis,**

Null hypothesis ( $H_0$ ):  $\bar{X}_1 = \bar{X}_2$

i.e., there is no significant difference between mean ratios of loan & advances to total deposit of Nabil and NIBL.

Alternative hypothesis ( $H_1$ ):  $\bar{X}_1 \neq \bar{X}_2$  (two tailed test)

i.e., there is significant difference between mean ratios of loans & advances to total deposit of Nabil & NIBL.

The test statistics under  $H_0$  is given by:

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

Where,

$$\begin{aligned} S^2 &= \frac{1}{n_1 + n_2 - 2} \left[ \sum X_1^2 - \frac{(\sum X_1)^2}{n_1} + \sum X_2^2 - \frac{(\sum X_2)^2}{n_2} \right] \\ &= \frac{1}{5 + 5 - 2} [63.46 - \frac{1049.48^2}{5} + 1049.48 - \frac{63.46^2}{5}] \\ &= 151.62 \end{aligned}$$

Now,

$$\begin{aligned} t &= \frac{64.33 - 60.69}{\sqrt{151.62 \left( \frac{1}{5} + \frac{1}{5} \right)}} \\ &= 0.47 \end{aligned}$$

The calculated value of 't' = 0.47

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

**Decision: -**

Since the calculated value of 't' (i.e. 0.47) is less than its tabulated value (i.e. 2.306). So, null hypothesis is accepted at 5% level of significance i.e. there is no significant difference between mean ratios of loan & advances to total deposit of Nabil & NIBL.



### 4.3 Major Findings of the Study

The main findings of the study are derived on the basis of analysis of financial data of Nabil and NIBL are given below.

#### 1. Liquidity ratio

The liquidity position of Nabil and NIBL reveals that:

- ) From the analysis of current ratio, it is found that the mean ratio of Nabil is lower than NIBL, it means Nabil has maintained lower current ratio in compared to NIBL. The ratio of Nabil is less variable than NIBL.
- ) The mean ratio of cash and bank balance to total deposits of Nabil is less than NIBL. It states that the liquidity position of Nabil is not better than that NIBL. Nabil bank has better to maintain of its liquidity position.
- ) The mean ratio of cash and bank balance to current assets ratio of Nabil is lesser than NIBL. But Nabil has higher consistency than that of NIBL. It states that the Nabil has utilized its funds more efficiently.
- ) The mean ratio of NIBL on government securities to current asset of Nabil is higher than NIBL. It states that the Nabil uses to invest its current asset in government securities more than NIBL.
- ) The mean ratio of loan & advances to current assets of Nabil is higher than NIBL. It reveals that Nabil use to provide high loan & advances in comparison to NIBL.

The above result shows that the liquidity position of Nabil is comparatively lower than NIBL. It has the lower cash and bank balance to total deposit and cash and bank balance to current assets ratio. It has the highest loan & advances to current assets and investment on government securities to current assets ratio.

## **2. Asset management ratio**

The assets management ratio of Nabil & NIBL shows that;

- ) The mean ratio of loan & advances to total deposit of Nabil is higher than NIBL. But Nabil has less C.V. than that NIBL, it indicates that loans and advances of Nabil is stable and consistent.
- ) The mean ratio of total investment to total deposit of Nabil is higher than NIBL. It can be concluded that Nabil is success to better utilization of deposit to investment.
- ) The mean ratio of loan & advances to working fund ratio of Nabil is higher than & NIBL. It can be concluded that Nabil has mobilizing its fund higher.
- ) In case of Investment on government securities to total working fund ratio, Nabil has higher mean ratio than NBIL. It concludes the Nabil's investment policy is more variable and consistency than NIBL.
- ) The mean ratio of investment on shares and debentures to total working fund of Nabil is higher than & NIBL. But its investment in shares and debentures seems to be consistent than NIBL.

From the above analysis, it can be conclude that Nabil has highest investment policy towards investment to total deposits, government securities to total working fund, shares and debentures to total working funds. And Nabil has stable and consistent than NIBL.

## **3. Profitability ratio**

From the analysis of profitability ratio of Nabil and NIBL it shows that;

- ) The mean ratio of return on total working fund ratio of Nabil is higher than NIBL and it is more consistent. It can be conclude that Nabil has success to maintain the high ratio in return on total working fund.
- ) The mean ratio of return and loan & advances is comparatively higher than NIBL. The variability of the ratio of Nabil is higher and it is also consistency in return.
- ) The mean ratio of total interest earned to total outside assets of Nabil is greater than NIBL. It indicated the Nabil has average position towards income earned from total outside asset in comparison NIBL.
- ) The mean ratio of total investment earned to total working fund of Nabil is also greater than NIBL.
- ) The mean ratio of total interest paid to total working fund of Nabil is lower than NIBL. It means Nabil has paid lower interest than NIBL.

From the above findings, it can be said that Nabil has higher profitable in comparison to NIBL. To earn high profit in future the bank must maintain its high profit margin.

#### **4. Risk ratio**

The risk ratios of Nabil and NIBL reveal that;

- ) The mean ratio of liquidity risk of Nabil is lower than NIBL. The ratio of Nabil is less consistent than Investment.
- ) The mean ratio of credit risk of Nabil is also higher than NIBL. The credit risk ratio of Nabil is more variable in comparison to NIBL.
- ) Nabil has maintained higher mean ratio of capital risk than NIBL. The ratio of Nabil is more consistent than NIBL.

From the above findings, it can be concluded that Nabil has average risk ratio. The bank should maintain risk against liquidity fund to earn high profit.

#### **5. Trend analysis and projection for next years.**

The trend analysis and projection for next five years of Nabil and NIBL reveals that;

- ) The trend analysis of loan and advances to total deposits ratio of Nabil & Investment bank have increasing trend. Nabil's increasing trend ratio is 2.66, which is lowest than NIBL's increasing trend ratio 8.19. The increasing trend of NIBL's reveals that it will be better position in future.
- ) The trend analysis of total investment of total deposit ratio of Nabil is in decreasing trend but NIBL has increasing trend ratio in 0.62. The increasing trend ratio of NIBL's reveals that it has better condition for utilizing the total deposit towards investment.

From the above findings, it can be concluded that Nabil may use relatively large portion of their deposit into providing loan and towards the potential sector of the investment. It shows the NIBL's position will be better in near future in comparison to Nabil.

#### **6. Co-efficient of correlation analysis**

Co-efficient of correlation analysis between different variables of Nabil and NIBL shows that;

- ) Co-efficient of correlation between deposit and loan & advances of Nabil & NIBL is positive relationship between these variables. Nabil has the lowest value of co-efficient of correlation between deposit and loan & advances than NIBL. This indicated Nabil position is not better in mobilization of deposit as loan & advances in compared to NIBL.

From above findings, it can be concluded that there is significant relationship between deposit and loan & advances of NIBL.

### **7. Test of hypothesis**

By analyzing the test of significance difference of regarding the parameter of the population, it has been found that;

- ) There is no significant difference between mean ratios of loan & advances to total deposits of Nabil & NIBL.

# **CHAPTER - V**

## **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

The last chapter of this study is summary; conclusion and recommendations which have discussed and explored the facts and matters required for various parts of the study. Through the analytical chapter by using some important financial as well as statistical tools, makes a comparative analysis of various aspects of the investment of concern commercial 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 bank, the recommendations prescribed here which 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.

### **5.1 Summary and Conclusion**

The economic development of a country depends upon the development of commerce and industry and there is no doubt that banking promotes the development of commerce because banking itself is the part of commerce. The process of economic development depends upon various factors, however economists are now convinced that capital formation and its proper utilization plays a paramount role for rapid economic development.

The economic growth was very slow in earlier years. It has caught its full swing with the restoration democracy in the country. At present, overall economic growth rate still decline year by year. Reasons behind this decline are insecure situation faced by industry, decrease in the tourist arrival, drop in the production and export of carpet, garment and pashmina industry and political situation.

The evolution of the organized financial system in Nepal has more recent history than in other countries of the world. In Nepalese context, the history of banking is not more than six decades. After the announcement of liberal and free market economic based policy, Nepalese banks and financial sectors have greater network and access to national and international markets. Commercial banks play a vital role which deals with other people's money and stimulate saving by mobilizing idle resources to those sectors having investment opportunities. Modern bank provides various services to their customers in view of facilitating their economic and social life.

The objective of the commercial banks is always to earn more profit by investing or granting loan and advances into profitable, secured and marketable sector. But commercial bank should be careful while performing the credit creation function; the banks should never invest its funds in those securities, which are too much fluctuating. Commercial banks must follow the rules 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.

There has been number of commercial banks established, the research has taken into consideration the following two commercial banks:

**‘Nabil Bank Ltd’** – Nabil Bank Limited was the first joint venture commercial bank incorporated in 1984 by joint investment of Dubai Bank Limited and Nepali promoters. This bank is awarded by “Bank of Year” of the year 2004 by the international banking magazine “The Banker”

**‘Nepal Investment Bank Ltd’** – Nepal Investment Bank Limited was the third joint venture bank established in 1986 under the Companies Act 1964 (now Companies Ordinance 2062) by joint investment of Banque Indosues of France and Nepali promoters. This bank is awarded by “Bank of Year” of the year 2003 and again in 2005 by the international banking magazine “The Banker”.

In the study, the word ‘investment’ covers a wide range of activities like investment of income, savings or other collected fund. If there is no savings, there is no existence of investment therefore, savings and investment are interrelated. Investment policy is a one facet of the overall spectrum of policies that guide banks’ investment operations and it ensures efficient allocation of funds to achieve the sustainable economic development of the nation. A sound and viable investment policy attracts both borrowers and lenders, which helps to increase the volumes and quality of deposits, loan and investment. Therefore, the investment policy should be carefully analyzed.

Some sources of funds for the investment of the bank are capital, general reserves, accumulated profit, deposits and external & internal borrowings. Similarly, some important banking terms, which are frequently used in this study, are loan and advances, investment on government securities, shares and debentures, deposits and other use of funds.

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 and risk ratios have been used, where as in statistical tools mean, standard deviation, coefficient of variation, trend analysis, coefficient of correlation and test of hypothesis (i.e. t-test) 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. 2002/2003 to 2006/2007 was selected for the purpose evaluation.

The liquidity position of Nabil is comparatively lower than NIB but it has the highest investment on government securities to current assts ratio.

Through the assets management ratio, Nabil has highest investment policy towards investment to total deposits and government securities to total working fund but lower into shares and development to total working fund.

In analysis of profitability, return on total working fund and return on loan & advances, total interest earned to total outside assets and total interest earned to total working fund of Nabil is higher but total interest paid to total working fund of Nabil is lower.

From the viewpoint of risk ratio, liquidity risk is lower than NIBL but credit risk and capital risk of Nabil is higher than NIBL.

Through the both trend analysis i.e. loan & advances to total deposits and total investment of total deposit ratios of NIBL is greater than that of Nabil. It shows the NIBL's position will be better in future.

From the co-efficient of correlation between deposit and loan & advances there is a significant relationship.

Through the analysis and findings we can summarize that Nabil's investment policy is better in every sector and profitability ratio is also good, similarly trend of loan & advances to total deposits shows that NIBL's position will be better. However, liquidity position is not good but it has average risk ratio.

## 5.2 Recommendations

On the basis of analysis and findings of the two banks in previous section, they are 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. As Nabil has maintained the ratio of cash and bank balance to total deposits and current assts considerably lower than NIBL, Nabil 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 and loan &

advances to total working fund ratio is higher than NIBL. To overcome this situation, NIBL 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 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 Nabil cannot earn higher interest through the outside assets and working fund. So Nabil 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 average whereas liquidity risk and credit risk is lower than NIBL and its consistency are highly volatile which may result higher loss. The bank should not take high risk, Nabil should carefully analyze in above risk to achieve higher returns.

) 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 country.

) 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.



## Appendix – 1

### Liquidity Ratio

#### A. Current Ratio

##### Calculation of Current Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Total Current Assets	3,868.30	14,244.04	14,971.80	17,054.82	22,107.02
Total Current Liabilities	15,135.42	15,153.13	15,528.69	20,454.97	25,196.34
<b>Ratio (Times)</b>	<b>0.9163</b>	<b>0.9400</b>	<b>0.9641</b>	<b>0.8338</b>	<b>0.8774</b>
<b>NIB</b>					
Total Current Assets	7,517.89	11,144.33	13,967.78	17,906.11	23,582.11
Total Current Liabilities	8,359.46	12,506.94	15,093.89	19,364.70	24,912.72
<b>Ratio (Times)</b>	<b>0.8993</b>	<b>0.8911</b>	<b>0.9254</b>	<b>0.9247</b>	<b>0.9466</b>

B. 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				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Cash & Bank Balance	1,144.77	970.49	559.38	630.24	1,399.83
Total Deposits	3,447.65	14,119.03	4,586.61	19,347.40	23,342.29
<b>Ratio (Times)</b>	<b>0.0851</b>	<b>0.0687</b>	<b>0.0383</b>	<b>0.0326</b>	<b>0.0600</b>
<b>NIB</b>					
Cash & Bank Balance	926.53	1,226.92	1,340.49	2,336.52	2,441.51
Total Deposits	7,922.75	11,524.67	14,254.57	18,927.31	24,488.86
<b>Ratio (Times)</b>	<b>0.1169</b>	<b>0.1065</b>	<b>0.0940</b>	<b>0.1234</b>	<b>0.0997</b>

C. Cash and Bank Balance to Current Assets Ratio

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

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Cash & Bank Balance	1,144.77	970.49	559.38	630.24	1,399.83
Current Assets	13,868.30	14,244.04	14,971.80	17,054.82	22,107.02
<b>Ratio (Times)</b>	<b>0.0825</b>	<b>0.0681</b>	<b>0.0374</b>	<b>0.0370</b>	<b>0.0633</b>
<b>NIBL</b>					
Cash & Bank Balance	926.53	1,226.92	1,340.49	2,336.52	2,441.51
Current Assets	7,517.89	11,144.33	13,967.78	17,906.11	23,582.11
<b>Ratio (Times)</b>	<b>0.1232</b>	<b>0.1101</b>	<b>0.0960</b>	<b>0.1305</b>	<b>0.1035</b>

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				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Investment on Govt. Securities	3,588.77	3,672.63	2,413.94	1,222.47	4,085.84
Current Assets	13,868.30	14,244.04	14,971.80	17,054.82	22,107.02
<b>Ratio (Times)</b>	<b>0.2588</b>	<b>0.2578</b>	<b>0.1612</b>	<b>0.0717</b>	<b>0.1848</b>
<b>NIBL</b>					
Investment on Govt. Securities	400.00	2,001.10	1,948.50	2,522.30	3,256.40
Current Assets	7,517.89	11,144.33	13,967.78	17,906.11	23,582.11
<b>Ratio (Times)</b>	<b>0.0532</b>	<b>0.1796</b>	<b>0.1395</b>	<b>0.1409</b>	<b>0.1381</b>

E. Loan & Advances to Current Assets Ratio

Calculation of Loan & Advances to Current Assets Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Loan & Advances	7,755.95	8,189.99	10,586.17	12,922.54	15,545.78
Current Assets	13,868.30	14,244.04	14,971.80	17,054.82	22,107.02
<b>Ratio (Times)</b>	<b>0.5593</b>	<b>0.5750</b>	<b>0.7071</b>	<b>0.7577</b>	<b>0.7032</b>
<b>NIBL</b>					
Loan & Advances	2,572.14	7,130.13	10,126.06	12,776.21	17,286.43
Current Assets	7,517.89	11,144.33	13,967.78	17,906.11	23,582.11
<b>Ratio (Times)</b>	<b>0.3421</b>	<b>0.6398</b>	<b>0.7250</b>	<b>0.7135</b>	<b>0.7330</b>

Appendix – 2  
Asset Management Ratio (Activity Ratio)

A. Loan & Advances to Total Deposit Ratio

Calculation of Loan & Advances to Current Assets Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Loan & Advances	7,755.95	8,189.99	10,586.17	12,922.54	15,545.78
Total Deposit	13,447.65	14,119.03	14,586.61	19,347.40	23,342.29
<b>Ratio (Times)</b>	<b>0.5768</b>	<b>0.5801</b>	<b>0.7257</b>	<b>0.6679</b>	<b>0.6660</b>
<b>NIBL</b>					
Loan & Advances	2,572.14	7,130.13	10,126.06	12,776.21	17,286.43
Total Deposit	7,922.75	11,524.67	14,254.57	18,927.31	24,488.86
<b>Ratio (Times)</b>	<b>0.3247</b>	<b>0.6187</b>	<b>0.7104</b>	<b>0.6750</b>	<b>0.7059</b>

## B. Total Investment to Total Deposit Ratio

### Calculation of Total Investment to Current Assets Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Total Investment	6,031.17	5,836.07	4,267.23	6,178.43	8,945.31
Total Deposit	3,447.65	14,119.03	14,586.61	19,347.40	23,342.29
<b>Ratio (Times)</b>	<b>0.4485</b>	<b>0.4133</b>	<b>0.2925</b>	<b>0.3193</b>	<b>0.3832</b>
<b>NIBL</b>					
Total Investment	1,705.24	3,862.48	3,934.19	5,602.87	6,505.68
Total Deposit	7,922.75	11,524.67	14,254.57	18,927.31	24,488.86
<b>Ratio (Times)</b>	<b>0.2152</b>	<b>0.3351</b>	<b>0.2760</b>	<b>0.2960</b>	<b>0.2657</b>

C. Loan & Advances to Working Fund Ratio

Calculation of Loan & Advances to Working Fund Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Loan & Advances	7,755.95	8,189.99	10,586.17	12,922.54	15,545.78
Total Working Fund	16,562.61	16,745.61	17,186.33	22,329.97	27,253.39
<b>Ratio (Times)</b>	<b>0.4683</b>	<b>0.4891</b>	<b>0.6160</b>	<b>0.5787</b>	<b>0.5704</b>
<b>NBIL</b>					
Loan & Advances	2,572.14	7,130.13	10,126.06	12,776.21	17,286.43
Total Working Fund	9,014.24	13,255.50	16,274.06	21,330.14	27,590.84
<b>Ratio (Times)</b>	<b>0.2853</b>	<b>0.5379</b>	<b>0.6222</b>	<b>0.5990</b>	<b>0.6265</b>



**D. Investment on Government to Working Fund Ratio**

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

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Investment on Govt. Securities	3,588.77	3,672.63	2,413.94	1,222.47	4,085.84
Total Working Fund	16,562.61	16,745.61	17,186.33	22,329.97	27,253.39
<b>Ratio (Times)</b>	<b>0.2167</b>	<b>0.2193</b>	<b>0.1405</b>	<b>0.0547</b>	<b>0.1499</b>
<b>NIBL</b>					
Investment on Govt. Securities	400.00	2,001.10	1,948.50	2,522.30	3,256.40
Total Working Fund	9,014.24	13,255.50	16,274.06	21,330.14	27,590.84
<b>Ratio (Times)</b>	<b>0.0444</b>	<b>0.1510</b>	<b>0.1197</b>	<b>0.1183</b>	<b>0.1180</b>

### E. Investment on Shares and Debentures to Working Fund Ratio

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

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Investment on Shares & Debentures	22.22	133.44	440.28	104.20	286.96
Total Working Fund	16,562.61	16,745.61	17,186.33	22,329.97	27,253.39
<b>Ratio (Times)</b>	<b>0.0013</b>	<b>0.0080</b>	<b>0.0256</b>	<b>0.0047</b>	<b>0.0105</b>
<b>NIBL</b>					
Investment on Shares & Debentures	13.89	13.89	17.74	17.74	35.25
Total Working Fund	9,014.24	13,255.50	16,274.06	21,330.14	27,590.84
<b>Ratio (Times)</b>	<b>0.0015</b>	<b>0.0010</b>	<b>0.0011</b>	<b>0.0008</b>	<b>0.0013</b>

Appendix – 3

Profitability Ratio

A. Return on Total Working Fund Ratio

Calculation of Return on Working Fund Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Net Profit	416.25	455.32	518.64	635.26	673.96
Total Working Fund	16,562.61	16,745.61	17,186.33	22,329.97	27,253.39
<b>Ratio (Times)</b>	<b>2.51</b>	<b>2.72</b>	<b>3.02</b>	<b>2.84</b>	<b>2.47</b>
<b>NIBL</b>					
Net Profit	116.82	152.67	232.15	350.54	501.40
Total Working Fund	9,014.24	13,255.50	16,274.06	21,330.14	27,590.84
<b>Ratio (Times)</b>	<b>1.30</b>	<b>1.15</b>	<b>1.43</b>	<b>1.64</b>	<b>1.82</b>

## B. Return on Loan & Advances Ratio

### Calculation of Return on Loan & Advances Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Net Profit	416.25	455.32	518.64	635.26	673.96
Loan & Advances	7,755.90	8,189.99	10,586.17	12,922.54	15,545.78
<b>Ratio (Times)</b>	<b>5.37</b>	<b>5.56</b>	<b>4.90</b>	<b>4.92</b>	<b>4.34</b>
<b>NIBL</b>					
Net Profit	116.82	152.67	232.15	350.54	501.40
Loan & Advances	5,772.14	7,130.13	10,126.06	12,776.21	17,286.43
<b>Ratio (Times)</b>	<b>2.02</b>	<b>2.14</b>	<b>2.29</b>	<b>2.74</b>	<b>2.90</b>

### C. Total Interest Earned to Total Outside Assets Ratio

Calculation of Total Interest earned to Total Outside Assets Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Total Interest Earned	1,017.87	1,001.62	1,068.75	1,310.00	1,587.76
Total Outside Assets	13,787.12	14,026.06	14,853.40	19,101.07	24,490.89
<b>Ratio (Times)</b>	<b>7.38</b>	<b>7.14</b>	<b>7.20</b>	<b>6.86</b>	<b>6.48</b>
<b>NIBL</b>					
Total Interest Earned	459.51	731.40	886.80	1,172.74	1,584.99
Total Outside Assets	7,477.38	10,992.61	14,060.25	18,379.08	23,792.11
<b>Ratio (Times)</b>	<b>6.15</b>	<b>6.65</b>	<b>6.31</b>	<b>6.38</b>	<b>6.66</b>

D. Total Interest Earned to Total Working Fund Ratio

Calculation of Total Interest earned to Total Working Fund Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Total Interest Earned	1,017.87	1,001.62	1,068.75	1,310.00	1,587.76
Total Working Fund	16,562.61	16,745.61	17,186.33	22,329.97	27,253.39
<b>Ratio (Times)</b>	<b>6.15</b>	<b>5.98</b>	<b>6.22</b>	<b>5.87</b>	<b>5.83</b>
<b>NIBL</b>					
Total Interest Earned	459.51	331.40	886.80	1,172.74	1,584.99
Total Working Fund	9,014.24	13,255.50	16,274.06	21,330.14	27,590.84
<b>Ratio (Times)</b>	<b>5.10</b>	<b>2.50</b>	<b>5.45</b>	<b>5.50</b>	<b>5.74</b>

E. Total Interest Paid to Total Working Fund Ratio

Calculation of Total Interest Paid to Total Working Fund Ratio of NABIL & NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Total Interest Paid	317.35	282.94	243.54	357.15	555.71
Total Working Fund	16,562.61	16,745.61	17,186.33	22,329.97	27,253.39
<b>Ratio (Times)</b>	<b>1.92</b>	<b>1.69</b>	<b>1.42</b>	<b>1.60</b>	<b>2.04</b>
<b>NIBL</b>					
Total Interest Paid	189.21	326.21	354.55	490.95	685.53
Total Working Fund	9,014.24	13,255.50	16,274.06	21,330.14	27,590.84
<b>Ratio (Times)</b>	<b>2.10</b>	<b>2.46</b>	<b>2.18</b>	<b>2.30</b>	<b>2.48</b>

Appendix – 4

Risk Ratio

A. Liquidity Risk Ratio

Calculation of Liquidity Risk Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Cash & Bank Balance	1,144.77	970.49	559.38	630.24	1,399.83
Total Deposits	13,447.65	14,119.03	14,586.61	19,347.40	23,342.29
<b>Ratio (Times)</b>	<b>8.51</b>	<b>6.87</b>	<b>3.83</b>	<b>3.26</b>	<b>6.00</b>
<b>NIBL</b>					
Cash & Bank Balance	926.53	1,226.92	1,340.49	2,336.52	2,441.51
Total Deposits	7,922.75	11,524.67	14,254.57	18,927.31	24,488.86
<b>Ratio (Times)</b>	<b>11.69</b>	<b>10.65</b>	<b>9.40</b>	<b>12.34</b>	<b>9.97</b>



## B. Credit Risk Ratio

### Calculation of Credit Risk Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Total Loan & Advances	7,755.95	8,189.99	10,586.17	12,922.54	15,545.78
Total Assets	16,562.61	16,745.61	17,186.33	22,329.97	27,253.39
<b>Ratio (Times)</b>	<b>46.83</b>	<b>48.91</b>	<b>61.60</b>	<b>57.87</b>	<b>57.04</b>
<b>NIBL</b>					
Total Loan & Advances	2,572.14	7,130.13	10,126.06	12,776.21	17,286.43
Total Assets	9,014.24	13,255.50	16,274.06	21,330.14	27,590.84
<b>Ratio (Times)</b>	<b>28.53</b>	<b>53.79</b>	<b>62.22</b>	<b>59.90</b>	<b>62.65</b>

### C. Capital Risk Ratio

#### Calculation of Capital Risk Ratio of NABIL and NIBL

Particular	Fiscal Year				
	2059/60 2002/03	2060/61 2003/04	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07
<b>NABIL</b>					
Capital	1,314.18	1,481.68	1,657.63	1,874.99	2,056.05
Risk Weighted Assets	7,755.95	8,189.99	10,586.17	12,922.54	15,545.78
<b>Ratio (Times)</b>	<b>16.94</b>	<b>18.09</b>	<b>15.66</b>	<b>14.51</b>	<b>13.23</b>
<b>NIBL</b>					
Capital	638.53	729.04	1,180.17	1,415.44	1,878.12
Risk Weighted Assets	2,572.14	7,130.13	10,126.06	12,776.21	17,286.43
<b>Ratio (Times)</b>	<b>24.82</b>	<b>10.22</b>	<b>11.65</b>	<b>11.08</b>	<b>10.86</b>

### Appendix – 5

#### Calculation of Mean, Standard Deviation and Co-efficient of Variation of Current Ratio of NABIL and NIBL

Fiscal Year	NABIL		NIBL	
	$X_1$	$X_1^2$	$X_2$	$X_2^2$
2002/03	0.92	0.8396	0.90	0.8088
2003/04	0.94	0.8836	0.89	0.7940
2004/05	0.96	0.9296	0.93	0.8564
2005/06	0.83	0.6952	0.92	0.8550
2006/07	0.88	0.7698	0.95	0.8960
	$X_1 =$ 4.53	$X_1^2 =$ 4.1177	$X_2 =$ 4.59	$X_2^2 =$ 4.2102

Where,

$X_1$  = Total Current ratio of NABIL Bank

$X_2$  = Total Current ratio of Investment Bank

Calculation of Mean Ratio of NABIL Bank Current Ratio

$$\text{Mean} = \frac{X_1}{N} = \frac{4.53}{5}$$
$$= 0.906$$

Calculation of Standard Deviation of Current Ratio

$$\text{S.D} = \sqrt{\frac{(X_1 - X)^2}{N - 1}}$$
$$\text{S.D.} = \sqrt{\frac{(X_1)^2}{N} - \frac{X_1^2}{N}}$$
$$= \sqrt{\frac{4.1177}{5} - \frac{4.53^2}{5}}$$
$$= \sqrt{0.8235 - 0.8208}$$
$$= 0.0520$$

Calculation of Coefficient of Variation (C.V.)

$$\text{CV} = \frac{\dagger}{X} | 100 \%$$

$$= \frac{0.0520}{0.906} | 100$$

$$= 5.74$$

Calculation of Mean, Std. Deviation and coefficient of variation of NIBL calculated accordingly

### Appendix – 6

#### A) Calculation of trend values of loan & advances to total deposit ratio of NABIL

<b>Fiscal Year (t)</b>	<b>Ratio (Y)</b>	<b>X = t-2004/05</b>	<b>X<sup>2</sup></b>	<b>XY</b>	<b>Yc = a + bx</b>
2002/03	57.68	(2.00)	4.00	(115.35)	59.01
2003/04	58.01	(1.00)	1.00	(58.01)	61.67
2004/05	72.57	-	-	-	64.33
2005/06	66.79	1.00	1.00	66.79	66.99
2006/07	66.60	2.00	4.00	133.20	69.65
<b>Total</b>	<b>321.65</b>		<b>10.00</b>	<b>26.63</b>	

Here, let the straight line trend equation  $Y_c = a + bx$

Where, Y = Annual Ratio in Percentage

Now,

$$a = \frac{Y}{N} = \frac{321.65}{5} = 64.33$$

$$b = \frac{XY}{X^2} = \frac{26.63}{10} = 2.66$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of NABIL for Next Five Year

Fiscal Year (t)	X = t-2004/05	Yc = a + bx
2007/08	3.00	72.31
2008/09	4.00	74.97
2009/10	5.00	77.63
2010/11	6.00	80.29
2011/12	7.00	82.95

Calculation of Trend Value of NIBL is as follow.

B) Calculation of trend values of loan & advances to total deposit ratio of NIBL

Fiscal Year (t)	Ratio (Y)	X = t-2004/05	X <sup>2</sup>	XY	Yc = a + bx
2002/03	32.47	(2.00)	4.00	(64.93)	44.32
2003/04	61.87	(1.00)	1.00	(61.87)	52.50
2004/05	71.04	-	-	-	60.69
2005/06	67.50	1.00	1.00	67.50	68.88
2006/07	70.59	2.00	4.00	141.18	77.07
<b>Total</b>	<b>303.46</b>		<b>10.00</b>	<b>81.88</b>	

Here, let the straight line trend equation  $Yc = a + bx$

Where, Y = Annual Ratio in Percentage

Now,

$$\frac{303.46}{5}$$

$$a = \frac{Y}{N} = \quad = 60.69$$

$$b = \frac{XY}{X^2} = \frac{81.88}{10} = 8.19$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of NIBL for Next Five Year

Fiscal Year (t)	X = t-2004/05	Yc = a + bx
2007/08	3.00	85.26
2008/09	4.00	93.44
2009/10	5.00	101.63
2010/11	6.00	109.82
2011/12	7.00	118.01

C) Calculation of trend values of loan & advances to total deposit ratio  
of NABIL

Fiscal Year (t)	Ratio (Y)	X = t-2004/05	X <sup>2</sup>	XY	Yc = a + bx
2002/03	44.85	(2.00)	4.00	(89.70)	41.63
2003/04	41.33	(1.00)	1.00	(41.33)	39.38
2004/05	29.25	-	-	-	37.14
2005/06	31.93	1.00	1.00	31.93	34.89
2006/07	38.32	2.00	4.00	76.64	32.65
<b>Total</b>	<b>185.69</b>		<b>10.00</b>	<b>(22.45)</b>	

Here, let the straight line trend equation  $Yc = a + bx$

Where, Y = Annual Ratio in Percentage

Now,

$$a = \frac{Y}{N} = \frac{185.69}{5} = 37.14$$

$$b = \frac{XY}{X^2} = \frac{(22.45)}{10} = (2.25)$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of NABIL for Next Five Year

Fiscal Year (t)	X = t-2004/05	Yc = a + bx
2007/08	3.00	30.40
2008/09	4.00	28.16
2009/10	5.00	25.91
2010/11	6.00	23.67
2011/12	7.00	21.42

Calculation of Trend Value of NIBL is as follow

D)Calculation of trend values of loan & advances to total deposit ratio of NIBL

Fiscal Year (t)	Ratio (Y)	X = t-2004/05	X <sup>2</sup>	XY	Yc = a + bx
2002/03	21.52	(2.00)	4.00	(43.05)	26.53
2003/04	33.51	(1.00)	1.00	(33.51)	27.14
2004/05	27.60	-	-	-	27.76
2005/06	29.60	1.00	1.00	29.60	28.38
2006/07	26.57	2.00	4.00	53.13	29.00
<b>Total</b>	<b>138.81</b>		<b>10.00</b>	<b>6.17</b>	

Here, let the straight line trend equation Yc = a + bx

Where, Y = Annual Ratio in Percentage

Now,

$$a = \frac{Y}{N} = \frac{138.81}{5} = 27.76$$

$$b = \frac{XY}{X^2} = \frac{6.17}{10} = .62$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of NIBL for Next Five Year

Fiscal Year (t)	X = t-2004/05	Yc = a + bx
2007/08	3.00	29.61
2008/09	4.00	30.23
2009/10	5.00	30.85
2010/11	6.00	31.46
2011/12	7.00	32.08

### Appendix - 7

A) Calculation of Consultation and loan & Bank

Now, Co-efficient of

Fiscal Year	Deposit (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2002/03	13447.65	7755.95	180839290.5	60154760.4	104299301.02
2003/04	14119.09	8189.99	199347008.1	67075936.20	115634714.51
2004/05	1	1	191.3	112066995.3	154416333.18
2005/06	1	1	886.8	166992040.05	250017550.40
2006/07	2	2	502.4	241671275.81	362874105.04
Total	5	5	5 x 987242004.14	84842.98 x 55000.49	1 XY = 987242004.14

Co-efficient of between deposit advance if Nabil

Correlation (r) =

$$= \frac{5 \times 987242004.14 - 84842.98 \times 55000.49}{\sqrt{5 \times 1512139879 - (84842.98)^2} \sqrt{5 \times 647961007.7 - (55000.49)^2}}$$



$$= \frac{269809639}{278964716.32}$$

$$= 0.96$$

$$r^2 = 0.92$$

$$\text{Probable Error P.F. (r)} = 0.6745 \left( \frac{1-r^2}{n} \right)$$

$$= 0.6745 \left( \frac{1-0.92}{5} \right)$$

$$= 0.02$$

$$6P.E.(r) = 6 \times 0.02$$

$$= 0.12 < 0.96$$

∴ r is highly significant

### B) Calculation of Co-efficient of Correlation between deposit and loan & advance of NIBL Bank.

Fiscal Year	Deposit (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2002/03	7922.75	2572.14	62769967.56	6615904.18	20378422.19
2003/04	11524.67	7130.13	132818018.61	50838753.82	82172395.31
2004/05	14254.67	10126.06	203192765.88	102537091.12	144342631.09
2005/06	18927.31	12776.21	358253063.84	163231541.96	241819287.30
2006/07	24488.86	17286.43	599704264.10	298820662.14	423324964.17
Total	X = 77118.16	Y = 49890.97	X <sup>2</sup> = 1356728079.99	Y <sup>2</sup> = 622043953.23	XY = 912037700.05

Now,

Co-efficient of Correlation (r) =

$$\frac{N \sum XY - \sum X \cdot \sum Y}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}}$$

$$\begin{aligned}
&= \frac{5 \times 912037700.5 - 77118.16 \times 49890.97}{\frac{5 \times 1356728079.99 - (77118.16)^2}{5} - \frac{5 \times 22043953.23 - (49890.97)^2}{5}} \\
&= \frac{7126886.93}{720774330.94} \\
&= 0.989 \\
r^2 &= 0.989
\end{aligned}$$

$$\begin{aligned}
\text{Probable Error P.F. (r)} &= 0.675 \left( \frac{1-r^2}{n} \right) \\
&= 0.65 \left( \frac{1-0.989}{5} \right)
\end{aligned}$$

$$\begin{aligned}
&= 0.007 \\
6\text{P.E.}(r) &= 6 \times 0.007 \\
&= 0.042 < 0.989
\end{aligned}$$

$\therefore$  r is highly significant

## Appendix – 8

Calculation of hypothesis on loan & advance to total deposit ratios of NABIL and NIBL

Fiscal Year	NABIL			NIBL		
	$\bar{X}_1$	$x_1 = (x_1 - \bar{X}_1)$	$\bar{X}_1^2$	$\bar{X}_2$	$x_2 = (x_2 - \bar{X}_2)$	$\bar{X}_2^2$
2002/03	57.68	(6.65)	44.28	32.47	(28.23)	796.77
2003/04	58.01	(6.32)	39.98	61.87	1.18	1.38
2004/05	72.57	8.25	67.98	71.04	10.35	107.02
2005/06	66.79	2.46	6.06	67.50	6.81	46.37
2006/07	66.60	2.27	5.15	70.59	9.90	97.94
<b>Total</b>	$\bar{X}_1 = 64.33$	$\sum x_1 = 0.00$	$\sum \bar{X}_1^2 = 321.65$	$\bar{X}_2 = 60.69$	$\sum x_2 = 0.00$	$\sum \bar{X}_2^2 = 303.46$

Here,

$$\bar{X}_1 = \frac{\sum X_1}{n}$$

$$\bar{X}_1 = \frac{321.65}{5} = 64.33$$

$$\bar{X}_2 = \frac{\sum X_2}{n}$$

$$\bar{X}_2 = \frac{303.46}{5} = 60.69$$

APPENDIX - 9

NABIL Bank Ltd

Kamaladi, Kathmandu

Comparative Balance Sheet of 5 Years

(Rs. in Million)

As at Balance Sheet	7/15/03	7/15/04	7/15/05	7/16/06	7/16/07	As at Balance Sheet	7/15/03	7/15/04	7/15/05	7/16/06	7/16/07
A. Current Assets	13,868.30	14,244.04	14,971.80	17,054.82	22,107.02	A. Current Liabilities	15,135.42	15,153.13	15,528.69	20,454.97	25,196.34
1. Cash & Bank Balance	1,144.77	970.49	559.38	630.24	1,399.83	1. Deposits & Other A/c's	13,447.65	14,119.03	14,586.61	19,347.40	23,342.29
2. Money at Call & Short Notice	670.20	918.73	868.43	1,734.90	563.53	i. Saving	5,229.72	5,994.12	7,026.33	8,770.76	10,187.35
3. Loans & Advance for C.B.	7,755.95	8,189.99	10,586.17	12,922.54	15,545.78	ii. Fixed	2,252.54	2,310.57	2,078.54	3,449.09	5,435.19
i. Loans, Cash Cr. & Overdrafts	7,454.26	7,953.76	10,455.69	12,681.67	15,305.91	iii. Current	3,034.00	2,688.97	2,799.18	2,910.59	3,395.24
ii. Bill Discounted & Purchase	301.69	236.23	158.50	240.89	239.87	iv. Call & Short Deposit	2,540.70	2,801.41	2,341.33	3,851.16	3,961.63
4. Investment	3,588.77	3,672.63	2,413.94	1,222.47	4,085.84	v. Other	390.61	323.96	341.23	365.80	362.88
i. Govt. Security	3,588.77	3,672.63	2,413.94	1,222.47	4,085.84	2. Short term loan	961.46	229.96	17.06	173.20	882.57
ii. Other	-	-	-	-	-	3. Bills Payable	108.94	173.50	11.98	92.54	83.51
5. Interest Receivable	177.60	174.49	168.86	188.63	112.19	4. Tax Provision	-	-	-	34.60	-
6. Misc. Current Assets	531.01	317.71	375.02	356.04	399.86	5. Staff Bonus	66.36	71.94	84.20	89.80	99.50
B. Fixed Assets (NET)	251.91	338.13	327.08	319.09	286.90	6. Dividend Payables	94.14	36.88	-	435.08	509.42
7. Gross Block	433.12	550.17	611.27	616.61	604.22	7. Misc. Current Liabilities	456.87	522.12	613.19	179.93	178.00
8. Less Depreciation	181.21	212.04	284.19	297.52	317.32	B.8. Differed Liabilities	113.01	110.78	107.88	102.42	101.05
D.9. Investments	3,588.77	3,672.63	2,413.94	1,222.47	4,085.84	i. Long Term Loan	-	-	-	-	-
i. Shares	22.22	22.22	22.36	27.56	57.85	ii. Other differed liabilities	113.01	110.78	107.88	102.42	101.05
ii. Debentures	-	-	412.92	76.63	229.10	Net Worth	1,314.18	1,481.68	1,657.64	1,875.00	2,057.05
iii. Others	2,420.18	2,141.22	1,418.01	4,851.87	4,570.53	C.9. Share Capital	491.65	491.65	491.65	491.65	491.65
						i. Ordinary Share	50.00	50.00	50.00	50.00	50.00
						ii. Bonus Share	441.65	441.65	441.65	441.65	441.65
						iii. Preference Share	-	-	-	-	-
						D.10. Shareholder's Reserve	822.53	990.03	1,165.98	1,383.34	1,565.40
						i. General Reserve	652.08	743.20	847.00	975.00	983.50
						ii. Capital reserve	103.32	162.88	228.30	300.30	105.00
						iii. Exchange fluctuation reserve	30.01	33.90	37.80	44.20	55.70

						iv. Other reserve	7.33	20.26	22.90	30.40	307.82
						E.11. Unappropriate Profit (Loss)	29.79	29.79	29.98	33.44	113.38
<b>Balance Sheet Total</b>	<b>16,562.61</b>	<b>16,745.59</b>	<b>17,186.33</b>	<b>22,329.97</b>	<b>27,253.39</b>	<b>Balance Sheet Total</b>	<b>16,562.61</b>	<b>16,745.59</b>	<b>17,186.33</b>	<b>22,329.97</b>	<b>27,253.39</b>

APPENDIX - 10  
Nabil Bank Ltd.

Kamaladi, Kathmandu

Comparative Profit & Loss A/c of 5 Years

(Rs. In Million)

For the Period Ending	7/15/03	7/15/04	7/15/05	7/16/06	7/16/07
A. OPERATING INCOME	1,340.51	1,333.65	1,438.02	1,716.67	2,035.67
1. Interest (Earned)	1,017.87	1,001.62	1,068.74	1,310.00	1,587.56
2. Commission & Discount	144.41	135.96	128.88	138.29	150.61
3. Exchange Income	144.08	157.32	184.87	185.48	209.93
4. Dividend	-	-	-	-	-
5. Other	34.15	38.75	55.53	82.90	87.57
B. COST OF SERVICE	527.93	463.78	443.06	576.94	795.87
6. Interest Paid	317.35	282.94	243.54	357.16	555.71
i. On Borrowings	9.85	17.47	15.64	11.19	22.58
ii. On Deposit	307.50	265.47	227.90	346.00	533.13
7. Salaries, Allowances & P.F.	210.58	180.84	199.52	219.78	240.16
C. 8. Provision for Bonus	66.36	71.94	84.16	89.80	99.50
D. 9. Other General Expenses	182.73	187.36	131.59	124.98	135.36
E.10. GROSS PROFIT	563.49	610.57	779.21	924.95	1,004.94
F.11. Depreciation	35.04	46.27	58.71	57.72	52.82
G.12. OPERATING PROFIT	528.45	564.30	720.50	867.23	952.12
H.13. Income From Other Sources	86.95	92.78	37.51	30.77	42.93
I.14. PRE-TAX PROFIT	615.40	657.08	758.01	898.00	995.05
J.15. Provision For Taxes	199.15	201.76	239.15	262.74	321.09
K.16. NET PROFIT	416.25	455.32	518.86	635.26	673.96
L.17. TRANSFER FROM PREV. YEAR	2.11	61.55	29.79	29.98	33.44
M.18. PROFIT DISTRIBUTED	248.48	319.58	344.16	417.91	688.31
%	59.39	61.83	62.73	62.82	97.30
i. Equity Dividend	245.83	319.58	344.16	-	196.66
%	58.76	61.83	62.73	-	27.80
ii. Preference Dividend	-	-	-	-	-
%	-	-	-	-	-
iii. Other	2.65	-	-	-	-
%	0.63	-	-	-	-
N.19. PROFIT RETAINED	169.87	197.28	204.49	247.33	19.90
%	40.60	38.97	37.27	37.18	2.81

APPENDIX - 11  
Nepal Investment Bank Ltd

Durbar Marg, Kathmandu

Comparative Balance Sheet of 5 Years

(Rs. in Million)

As at Balance Sheet	7/15/03	7/15/04	7/15/05	7/16/06	7/16/07	As at Balance Sheet	7/15/07
A. Current Assets	7,517.89	11,144.33	13,967.78	17,906.11	23,582.11	A. Current Liabilities	8,359.4
1. Cash & Bank Balance	926.53	1,226.92	1,340.49	2,336.52	2,441.51	1. Deposits & Other A/c's	7,922.7
2. Money at Call & Short Notice	40.00	310.00	140.00	70.00	362.97	i. Saving	2,434.0
3. Loans & Advance for C.B.	5,772.14	7,130.13	10,126.06	12,776.21	17,286.43	ii. Fixed	1,672.8
i. Loans, Cash Cr. & Overdrafts	5,648.03	6,917.80	9,933.09	12,565.48	17,010.47	iii. Current	979.0
ii. Bill Discounted & Purchase	124.11	212.33	192.97	210.73	275.96	iv. Call & Short Deposit	2,610.4
4. Investment	400.00	2,001.10	1,948.50	2,522.30	3,256.40	v. Other	226.4
i. Govt. Security	400.00	2,001.10	1,948.50	2,522.30	3,256.40	2. Short term loan	6.8
ii. Other	-	-	-	-	-	3. Bills Payable	31.0
5. Interest Receivable	83.47	77.01	81.58	77.94	90.44	4. Tax Provision	
6. Misc. Current Assets	295.75	399.17				5. Staff Bonus	18.9
B. Fixed Assets (NET)	191.11	249.79	320.59	343.45	759.46	6. Dividend Payables	1.0
7. Gross Block	245.55	326.88	427.14	485.24	942.25	7. Misc. Current Liabilities	377.0
8. Less Depreciation	54.44	77.09	106.55	141.79	182.79	B.8. Differred Liabilities	16.2
D.9. Investments	400.00	2,001.10	1,948.50	2,522.30	3,256.40	i. Long Term Loan	
i. Shares	13.89	13.89	17.74	17.74	35.25	ii. Other differred liabilities	16.2
ii. Debentures	-	-	-	-	-	Net Worth	638.5
iii. Others	1,291.35	1,847.49	1,967.95	3,062.83	3,214.08	C.9. Share Capital	295.2
						i. Ordinary Share	295.2
						ii. Preference Share	
						D.10. Shareholder's Reserve	343.2
						i. General Reserve	268.7
						ii. Capital reserve	29.5
						iii. Exchange fluctuation reserve	16.5
						iv. Other reserve	0.0
						E.11. Unappropriate Profit (Loss)	28.4
<b>Balance Sheet Total</b>	<b>9,014.24</b>	<b>13,255.48</b>	<b>16,274.06</b>	<b>21,330.14</b>	<b>27,590.84</b>	<b>Balance Sheet Total</b>	<b>9,014.24</b>

**APPENDIX - 12**  
**Nepal Investment Bank Ltd.**

Durbar Marg, Kathmandu

**Comparative Profit & Loss A/c of 5 Years**

<b>For the Period Ending</b>	<b>7/15/03</b>	<b>7/15/04</b>	<b>7/15/05</b>	<b>7/16/06</b>	<b>7/16/07</b>
<b>A. OPERATING INCOME</b>	577.44	911.95	1,139.44	1,450.43	1,931.57
1. Interest (Earned)	459.51	731.40	886.80	1,172.74	1,584.99
2. Commission & Discount	40.81	55.75	93.55	115.94	163.90
3. Exchange Income	50.83	87.98	102.52	125.85	135.36
4. Dividend	-	-	-	-	-
5. Other	26.29	36.82	56.57	35.90	47.32
<b>B. COST OF SERVICE</b>	250.50	415.96	451.55	611.60	830.90
6. Interest Paid	189.21	326.21	354.55	490.94	685.53
i. On Borrowings	5.91	16.18	3.73	28.27	40.50
ii. On Deposit	183.30	310.03	328.32	462.67	645.03
7. Salaries, Allowances & P.F.	61.29	89.75	97.00	120.66	145.37
<b>C. 8. Provision for Bonus</b>	18.91	25.72	37.05	50.49	72.34
<b>D. 9. Other General Expenses &amp; Provision for Loss</b>	126.50	23.40	290.56	254.93	320.50
<b>E.10. GROSS PROFIT</b>	181.53	446.87	360.28	533.41	707.83
F.11. Depreciation	11.87	217.17	32.79	39.59	52.65
<b>G.12. OPERATING PROFIT</b>	169.66	229.70	327.49	493.82	655.18
H.13. Income From Other Sources	0.49	1.77	6.19	11.09	68.21
<b>I.14. PRE-TAX PROFIT</b>	170.15	231.47	333.68	504.91	723.39
J.15. Provision For Taxes	53.33	78.80	101.53	154.38	221.98
<b>K.16. NET PROFIT</b>	116.82	152.67	232.15	350.53	501.41
<b>L.17. TRANSFER FROM PREV. YEAR</b>	23.65	28.40	14.66	24.92	45.95
<b>M.18. PROFIT DISTRIBUTED</b>	59.06	62.16	73.47	327.53	240.41
%	42.04	34.33	29.77	87.24	43.92
i. Equity Dividend	59.06	44.29	-	209.41	200.34
%	42.04	24.46	-	55.78	36.60
ii. Preference Dividend	-	-	-	-	-
%	-	-	-	-	-
iii. Other	-	17.87	-	-	-
%	-	9.87	-	-	-
<b>N.19. PROFIT RETAINED</b>	81.41	118.91	173.34	47.92	306.95
%	57.96	65.67	70.23	12.76	56.08



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