CHAPTER – I

INTRODUCTION

1.1 Background of the Study

The term 'Investment' has primary significance in 'Financial Sector' which refers to the process of determining the proper area in order to lodge a firm's fund to procure expected gain or profit known as a favorable return by its maximum utility at minimize risks.

According to the investors view, there must be a compulsory return on their investment but there may be unfavorable situations so that investor may insure losses. However so, investment is the act of proper utilization of a fund to be mobilized so that achievement of a high return could be ensured. It also implies all such expenditure of fund into capital nature assets. It is one of the decisions of financial management. Which involves the decision of capital investment, or commitment of funds to long-term assets that would provide benefits in future.

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 carried to every corner of the country. It has been well established that the economic activities of any country can hardly be carried forward without the assistance and support of financial institutions. Financial institutions have catalytic role in the process of economic development. 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 determining the investment objectives and the amount of one's investable wealth. 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 wealth, tax consideration etc. (Bhattarai, 2004: 3)

Investment is a very risky job for a purposeful safe, profitable investment. Bank must follow sound investment policy. The fundamental principals 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 but there seems no profitable place to invest. 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.

1.1. 1 Evaluation of Bank

The evaluation of bank is not a non-phenomenon. There was crude firm of banking evening an ancient Vedic era. The terms banking such as deposits, pledge, policy of loan, interest rates etc can be found in the “Manusmiriti”

The Roman Empire collapses in the last of 15th century and beginning of 16th century. Consequently, commercial banking transaction was received 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.

I. The merchant trader

II. The goldsmith

III. The money lenders

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

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

Finally, moneylender in the early ago contributed in the growth of banking to a lager extent. He advances the coins on load by charging interest. As a safe guard he use to keep some money in the reserve. Therefore goldsmith, moneylender became a banker who started performing the two function of and advancing loans. “The bank of Venice” of Italy was established in 1157 A. D. as 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 the citizens and for the foreigner. During 1407 A.D. The Bank of Genon 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.

1.1.2 Commercial Banks and Investment Policy

Commercial Bank is a corporation. Which accepts demand deposits subject to check and make 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 other 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 keen adequate cash for this purpose. Cash is an idle asset and hence the banker cannot afford to deep a long 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. (.Radhaswamy and Vasudevan, 110055: 510)

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 banks 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., 963) So they must invest their funds where they gain maximum profit.

Commercial banks must fallow the rules and regulations as well as different directions issued by central bank, ministry of finance, and ministry of law and other 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' state 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.

1.1.3 Investment Pattern of Nepalese Commercial Banks

However, the development of banking 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 institututional banker, which can act more widely to enhance the trade and commerce and to touch the remote non-banking sector in the economy. Reviewing this situation, the “Udyog Parishad” was constituted in 1936 A.D. One year after its formulation, 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 10 million authorized capital.

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 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) Rastra Banijaya Bank 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 & 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) 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, JVBs, Domestic Commercial Banks, Development Banks, Finance Companies, Co-operative Banks credit Guarantee corporation, Employee provident funds, 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 governments highlight the agenda of economic liberalization policies were announced and emphasized to invite foreign direct investment (FDI) in the banking sector of Nepal. Therefore the development of CB's in Nepal is categorized in three phases on the basis of financial institutions policies adopted by the country from time to time. They are:

- CB's prior to 1980's
- CB's of 1980's
- CB's post 1990's

There are only two banks prior to 1980's they are NBL and RBB .All the three CBs of 1980's were established as joint venture bank. 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, Lumbini Bank Ltd, Machapuchhre Bank Ltd, Kumari Bank Ltd, Laxmi Bank Ltd, Siddharth Bank Ltd, were established by the private sector of Nepal consequently the name of the banks are also changed. Nepal Arab Bank Ltd. Is now known as Nabil BankLtd, similarly Nepal Grindlays Bank Ltd, Nepal Indosueze Bank Ltd, and Nepal Bank of Ceylon Ltd, are 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 25 CBs, 29 Development Bank, 5 Rural Development banks, 59 Finance companies, 20 co- operative firm, 46 non- government finance firm licensed by NRB.

List of Licensed Commercial Banks in Nepal

1. Nepal Bank Limited
2. Rastriya Banijya Bank
3. Nabil Bank Limited
4. Standard Chartered Bank Ltd.
5. Nepal Investment Bank Ltd.
6. Himalayan Bank Limited
7. Nepal SBI Bank Limited
8. Nepal Bnagladesh Bank Ltd.
9. Everest Bank Ltd.
10. Bank of Kathmandu Ltd.
11. Kumari Bank Limited
12. Siddhartha Bank Limited
13. NCC Bank Limited
14. Lumbini Bank Limited
15. NIC Bank Limited
16. Laxmi Bank Limited
17. Machhapuchhre Bank Ltd.
18. Agricultural Development Bank

19 Sunrise Bank Limited

20 Global Bank Ltd

21 Citizen Bank International Ltd

22 Bank of Asia Nepal

23 Prime Commercial Bank Nepal

24 DCBL Bank Ltd.

25 NMB Bank

After the announcement of liberal and free market economic based policy, Nepalese banks and financial Sectors and having greater network and access to national and international markets. They have to go with their portfolio management very seriously and superiority. Fighting various challenges 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 banks and financial institution has to play a determing role by widening various opportunities for the shake 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 of nation.

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 institution as well private investors and their parent banks each supplying 50 percent of total investment. The parent banks, which have experiences in highly merchandised and efficient modern banking services in many parts of the world have come to Nepal with higher technology, advance management skills. Joint venture hanks are established by joining different forces and with ability to achieve a common goal and with 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, 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 CBs 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 CBs used their funds as loan and advances.

1.2 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. (DBl) 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, Bangladesh.10% of NIDC, 9.66% of Rastriya Bema Sansthan, 0.34% 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”.

A) Nepal Investment Bank

Nepal Investment Bank Ltd. (Nepal Indosuez Bank Ltd) was established on 21STjanuary 1986 as a third joint venture bank under the company Act 1964. Initially, the Bank is manages by Banque Indosuez, paris in accordance with joint venture and technical services. 50% of the shares of Nepal Indosuez 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 15th 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.590 million and issued and paid up capital is Rs.295.293 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”

B) Nepal SBI Bank Ltd. (SBI)

Nepal State Bank of India (SBI) Limited was established in 1993, under the company Act 1964. This is the joint venture of state Bank of India and

Nepalese promoters. The ownership structure of the shares of Nepal SBI Bank Ltd is as follows.

State Bank of India – 50.84%

Commercial Banks -5.08%

Organized Institutions – 15.25%

General Public –28.83%

The bank has 11 branches and 3 extension counter of Nepal SBI Bank Ltd in operation. The authorized capital and paid up capital of the bank is Rs.1000 million and Rs.426.8759 million respectively.

The following Activities and services are provided by SBI including normal functions.

- Tele Banking
- Credit card facilities
- SWIFT
- Deposit Locker
- International Trade and Bank Guarantee.

1.3 Statement of Problem

Mushrooming of joint venture banks is the present situation of Nepalese Financial system. The fast growth of such organization has made pro-rata increment in collecting deposits and their investment. They collected 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 shareholder's and clients in ascertaining profitability and ensuring their safe deposition. 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 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 directives, unsecured climate 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 will 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 i.e. treasury bills, development bonds and other securities. There is hesitation to invest on long-term projects they are much more safety minded. So, they 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 tourism, garments and in trading as well. 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 stabilize, then only commercial banks consider rationally as to where they should to invest and grow. Till then it is a question of moving into sectors as and when things develop. So, security problem is the big problem for every commercial bank to invest their funds in our any sectors.

Nepalese commercial banks have not formulated their investment policy in an organized manner. They 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 present briefly as under.

a) Is Nabil's investment policy more effective and efficient than the investment and SBI Bank?
b) Is Nabil's investment strategy successful to utilize its available fund in comparison to the Investment and SBI?
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?

1.4 Objectives of the study

Investment decision is one of the major decision functions of financial management.

a) To evaluate the liquidity, profitability and risk position of Nabil's in comparison to Investment and SBI
b) To examine the investment policy of the banks.
c) To examine the utilization of available fund of Nabil's in comparison to Investment and SBI.
d) To find out the empirical relationship between deposits loan and advances, investment, net profit and compare them between Nabil, Investment & SBI
e) To suggests and recommend on the basis of the major findings.

1.5 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 the great extent. CBs performance 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 and point out the various weaknesses of defects inherent in it and provide package of suggestions for its improvement.

1.6 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 heart of the study.

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 2060/61 to 2064/65.
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.

1.7 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 & SBI. 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

The review of literature consist of examination and review some of the related books, articles published in different economic journal, bulletin, dissertation papers, magazines newspapers and websites. In brief, this chapter including review of following

2.1 Theoretical Review

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.

2.1.1 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 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 facilitating 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 invalue (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)

2.1.2 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 asset 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 motivated commercial banks to invest his money more and more.

IV) Suitability

A banker should always know that why a customer is in need have loan. If a borrower misuse 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 and suitable borrowers and it should demand all the essential detailed information about the scheme of the project. Bank must keep in mind the overall development plans of the nation and the credit policy up 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 deprived, there may be appreciation in the securities of other companies. In this way, the loss can be recovered.

2.1.3 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. So far as that funds, it is only nominal source. So it can be used for the investment purpose. The capital fund consist of two elements like

i) Issuing shares

ii) General Reserves

i) 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.

ii) General Reserves

Reserves are kept by the bank separated from the profit. This reserve is also invested in the times 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 take up 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 sector agriculture, productive work, trade, irrigation and industry. The deposits will lead to increase the working capital of the bank.

d) External and internal borrowings

The funds can be collected by borrowings money through different banks or different institution. In a developing country like Nepal, those type of borrowings is very important. The commercial bank may not have sufficient fund to invest in different sector. In that case it has to borrow from other bank or other economic institution. 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 Nepal Rastrya Bank. So the commercial bank cannot provide loan or investment without the funds. From the above different source of fund the commercial bank grants loan.

2.2 Review of Previous Studies

Every scientific research is based on past knowledge. The previous studies cannot be ignored because they provided the foundation to the preset 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.

2.2.1) Review of Articles

Under this heading, effort has 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,(1980) 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(2055) 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 i.e. there has been positive impact by the lending of commercial banks in various sectors of economy, except service sector investment. (Dr. Sherestha, 2055; 23-27).

Shree Prasad Poudel,(2059) 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 statistic's 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 2000.

According to Mr. Poudel, Government debt Consist treasury bills (TBS), 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 MKT 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(1990) 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 investor's in different aspects of the economy.(Bajracharya,1990;93-97)

2.2.2) Review of Research Papers

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

Dr. Govinda Bahadur Thapa,(1994) 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 there 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 Rastra Banajya bank are operating with a nominal profit, the later turning towards negative from time to time. Because of non-recovery of accrued interest, the margin between interest income and interest expenses is declining. Because of these two local banks, in traditional off-balance sheet operations, these banks have not been able to increase their income from commission and discount. On the contrary, they have got heavy burden of personal and administrative overheads. Similarly, due to accumulated overdue and defaulting loans, profit position of these banks has been seriously affected.

On the other hand, the foreign venture banks have been functioning in an efficient way. They are making 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, the 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(2003) 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)

2.2.3) Review Thesis

Several thesis works have been conducted by various students regarding the various aspects of commercial bank 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,(1978) 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 utilities 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(1993) has conducted a study on "Investment planning of commercial banks in Nepal" with the objectives of:

- 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 bank 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,(2002) 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 limited and NABIL .He has conducted that liquidity position of EBL is comparatively better than NABIL's. 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(2002) 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,(2002) in her thesis paper entitled, "Investment of CBs 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,(2003) “A study on the investment policy analysis of S.C.Bank Nepal Limited in comparison to Nabil and Nepal Bangaledesh Bank” has mainly found that S.C’s loan & advances to total deposits ratios are significantly lower than that of Nabil and Nepal Bangaledesh Bank, S.C. 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, S.C. 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(2000) 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)

Mr. Shiba Raj Loudari(2001) conducted a study on “A study on investment policy of Nepal Indosuez Bank Ltd. In comparison to Nepal SBI Bank Ltd.” With the objective of:

- To examine the liquidity, asset management and profitability position and investment policy of NIBL in comparison to Nepal SBI Bank Ltd.
- To study the growth ratios of loans and advances and investment to total deposit and net profit of NIBL in comparison to Nepal SBI bank ltd.
- To analyses relationship between deposit and investment, deposits and loan & advances, net profit and outside assets of Nepal Indosuez Bank Ltd. In comparison to Nepal SBI Bank Ltd.

The research findings of the study are as follows:

- Current ratios for both the banks are satisfactory.
- Although Cash reserve ratio is managed by both banks as per Nepal Rastrya Bank directives, both banks have not paid sufficient insight towards cash management. Their cash reserves have fluctuated in a high degree.
- Nepal SBI Bank ltd. has increased investment in government securities where as Nepal Indosuez Bank has decreased.
- Nepal Indosuez Bank Ltd. has maintained both current ratio and cash reserve ratio better than Nepal SBI Bank Ltd. But its cash and bank balance, investment in government securities and loan and advances in comparison to current assets are lower than that of Nepal SBI Bank Ltd.
- Deposit utilization of Nepal Indosuez Bank Ltd. is less effective than that of Nepal SBI Bank Ltd. Further Nepal Indosuez Bank Ltd. has invested lesser amount on government securities and shares and debenture than that of Nepal SBI Bank.

- Nepal Indosuez Bank Ltd. did a better performance in return on total assets and loan and advances and interest earning, but it paid lower interest amount to working fund.
- The analysis of growth ratios shows that growth ratios of total deposit, loan and advances, total investment and net profit of Nepal Indosuez Bank are less than that of Nepal SBI Bank.
- The trend value of loan and advances to total deposits ratio is decreasing in case of both banks. The trend value of total investment to total deposits ratio is also decreasing in case of both banks. (Mr.Loudari, 2001)

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 bank's establishment, their mobilization and utilization of resources. All the commercial banks have to conform to the legislative provisions specified in the commercial Bank Act. 2031 and the 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 by 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."(Directives to commercial Banks, directive 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 2062/63. 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 3rd 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 out-standing 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.

2.4 Research Gaps

The purpose of the research work is quite different from the studies made by the above persons (related to Joint Venture Banks). The author focuses this study in effectiveness on investment policy analysis of Nabil Bank (as comparative study with Nepal Investment Bank & SBI Bank) in comprehensive manner considering the major items. The method of analysis is fully different. Financial tools and statistical tools are used in this study as ratio analysis, trend analysis, correlation and hypothesis.

This study is a little bit different than previous studies. It may be the first research study in the field of investment policy taking the comparative study of Nabil Bank with Investment and SBI Bank. This study has tried to indicate the effectiveness of investment policy of concerned banks.

CHAPTER –III

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a systematic way to solve the research problem. In other words, research methodology describes the methods and process applied in the entire aspect of the study. Research methodology refers to the various sequential steps (along with a rational of each steps) to be adopted by a researcher in studying a problem with certain objectives in view (Kothari,1994:9) .Thus the overall approach to the research is presented in this chapter. This chapter consists of research design, sample size and selection process, data collection procedure and data processing techniques and tools.

3.2 Research Design

This study is analytical in nature. A true research design is basically concerned with various steps to collect the data for analysis and draw a relevant conclusion. The research design allows the researchers to take an appropriate measure and direction towards the predetermined goals and objectives.

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 CBs. 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 with negligible information and data collected from primary sources. 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 24 commercial banks functioning all over the kingdom and most of their stocks are traded actively in the stock market. In this study, NABIL's investment policies have been compared with that average of CBs, which are selected from population.

The population is as follows:

Nepal Bank Limited
Rastriya Banijya Bank
Nabil Bank Limited
Standard Chartered Bank Ltd.
Nepal Investment Bank Ltd.
Himalayan Bank Limited
Nepal SBI Bank Limited
Nepal Bnagladesh Bank Ltd.
Everest Bank Ltd.
Bank of Kathmandu Ltd.
Kumari Bank Limited
Siddhartha Bank Limited
NCC Bank Limited
Lumbini Bank Limited
NIC Bank Limited
Laxmi Bank Limited
Machhapuchhre Bank Ltd.

Agricultural Development Bank
Sunrise Bank Limited
Global Bank Ltd
Citizen Bank International Ltd
Bank of Asia Nepal
Prime Commercial Bank Nepal
DCBL Bank Ltd.
NMB Bank

From these above the following commercial Bank are selected as a sample Bank..

i) NABIL Bank Ltd.
ii) Nepal Investment Bank Ltd.
iii) Nepal SBI Bank ltd.

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 person's coefficient of correlation, regression, the method of least square and test of hypothesis are used in this study. Similarly some accounting tools such as ratio analysis and trend analysis have also been used for financial analysis.

The various tools applied in this study have been briefly presented as under.

3.5.1 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 mathmatically. 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:

$$\textbf{Current ratio} = \frac{\textit{Total Current Assets}}{\textit{Total Current Liabilities}}$$

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,

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

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.

iv) 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,

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

v) 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

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

vi) 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,

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

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,

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

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,

$$\textbf{Total Investment to Total Deposit Ratio} = \frac{\textit{Total Investment}}{\textit{Total Deposit}}$$

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,

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

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,

Investment on Govt. Securities to Total Working Fund Ratio

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

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

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

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,

$$\text{Return on Total Working Fund Ratio} = \frac{Net\ \mathrm{Pr}ofit}{Working\ Fund\ Ratio}$$

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,

$$\text{Return on Loan \& Advances Ratio} = \frac{Net\ \mathrm{Pr}ofit}{Loan\ and\ Advances}$$

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,

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

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,

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

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

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

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,

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

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,

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

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,

$$\text{Capital Risk Ratio} = \frac{Capital\ (Paid\ up\ \Gamma\ \mathrm{Re}\,serves)}{Risk\ Weighted\ Assets}$$

E) Growth Ratios

Growth ratios measure how well the firm is maintaing 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:

a) 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, NIBL AND SBI from 2060/61 to 2064/65 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.

B) 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. 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.

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Appendix – 1

Liquidity Ratio

A. Current Ratio

Calculation of Current Ratio of NABIL, Investment and SBI Bank

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Total Current Assets	14788.91	13161.68	13313.40	13868.30	14244.04
Total Current Liabilities	13977.29	17226.21	16384.73	15135.42	15153.13
Ratio (Times)	1.06	0.76	0.81	0.92	0.94
Investment Bank					
Total Current Assets	3744.09	3423.11	3340.25	7517.89	11144.33
Total Current Liabilities	3362.44	4629.02	4410.21	8359.46	12506.94
Ratio (Times)	1.11	0.74	0.76	0.90	0.89
SBI Bank					
Total Current Assets	4992.66	7166.11	6787.45	7404.57	8345.34
Total Current Liabilities	4880.51	7043.64	5459.41	6992.43	7808.29
Ratio (Times)	1.02	1.02	1.05	1.06	1.07

B. Cash and Bank Balance to Total Deposit Ratio

Calculation of Cash and Bank Balance to Total Deposit Ratio of NABIL, Investment and SBI Bank

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Cash & Bank Balance	1088.75	812.90	1051.82	1144.77	970.49
Total Deposits	12779.51	15839.01	15506.44	13447.65	14119.03
Ratio (Times)	8.52	5.13	6.78	8.51	6.87
Investment Bank					
Cash & Bank Balance	362.92	522.86	338.92	926.53	1226.92
Total Deposits	2983.28	4256.21	4174.76	7922.75	11524.67
Ratio (Times)	12.17	12.28	8.12	11.69	10.65
SBI Bank					
Cash & Bank Balance	890.02	1945.14	1619.96	1333.54	864.42
Total Deposits	4535.73	6612.29	5572.47	6522.82	7198.32
Ratio (Times)	19.62	29.42	29.07	20.44	12.01

C. Cash and Bank Balance to Current Assets Ratio

Calculation of Cash and Bank Balance to Current Assets Ratio of NABIL, Investment and SBI Bank

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Cash & Bank Balance	1088.75	812.90	1051.82	1144.77	970.49
Current Assets	14788.91	13161.68	13313.40	13868.30	14244.04
Ratio (Times)	7.36	6.18	7.90	8.25	6.81
Investment Bank					
Cash & Bank Balance	362.92	522.86	338.92	926.53	1226.92
Current Assets	3744.09	3423.11	3340.25	7517.89	11144.33
Ratio (Times)	9.69	15.27	10.15	12.32	11.01
SBI Bank					
Cash & Bank Balance	890.02	1945.14	1619.96	1333.54	864.42
Current Assets	4992.66	7166.11	6787.45	7404.57	8345.34
Ratio (Times)	17.83	27.14	23.87	18.01	10.36

D. Investment on Government Securities to Current Assets Ratio

Calculation of Investment on Government Securities to Current Assets Ratio of NABIL, Investment and SBI Bank

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Investment on Govt. Securities	1233.82	2732.96	4120.29	3588.77	3672.63
Current Assets	14788.91	13161.68	13313.40	13868.30	14244.04
Ratio (Times)	8.34	20.76	30.95	25.88	25.78
Investment Bank					
Investment on Govt. Securities	0.00	300.00	224.00	400.00	2001.10
Current Assets	3744.09	3423.11	3340.25	7517.89	11144.33
Ratio (Times)	0.00	8.76	6.72	5.32	17.96
SBI Bank					
Investment on Govt. Securities	192.85	364.69	503.17	1189.39	1871.46
Current Assets	4992.66	7166.11	6787.45	7404.57	8345.34
Ratio (Times)	3.86	5.09	7.41	16.06	22.43

E. Loan & Advances to Current Assets Ratio

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

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Loan & Advances	7334.76	8324.44	7437.90	7755.95	8189.99
Current Assets	14788.91	13161.68	13313.40	13868.30	14244.04
Ratio (Times)	49.60	63.25	55.87	55.93	57.50
Investment Bank					
Loan & Advances	2070.68	2429.03	2546.43	2572.14	7130.13
Current Assets	3744.09	3423.11	3340.25	7517.89	11144.33
Ratio (Times)	55.31	70.96	76.77	76.78	63.98
SBI Bank					
Loan & Advances	3559.41	4188.41	4299.25	4468.72	5143.66
Current Assets	4992.66	7166.11	6787.45	7404.57	8345.34
Ratio (Times)	71.29	58.45	63.34	60.35	61.64

Appendix – 2

Asset Management Ratio (Activity Ratio)

A. Loan & Advances to Total Deposit Ratio
Calculation of Loan & Advances to Current Assets Ratio of NABIL, Investment and SBI Bank

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Loan & Advances	7334.76	8324.44	7437.90	7755.95	8189.99
Total Deposit	12779.51	15839.01	15506.44	13447.65	14119.03
Ratio (Times)	57	53	48	58	58
Investment Bank					
Loan & Advances	2070.68	2429.03	2546.43	2572.14	7130.13
Total Deposit	2983.28	4256.21	4174.76	7922.75	11524.67
Ratio (Times)	69	57	61	73	62
SBI Bank					
Loan & Advances	3559.41	4188.41	4299.25	4468.72	5143.66
Total Deposit	4535.73	6612.29	5572.47	6522.82	7198.32
Ratio (Times)	78	63	77	69	71

B. Total Investment to Total Deposit Ratio
Calculation of Total Investment to Current Assets Ratio of NABIL, Investment and SBI Bank

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Total Investment	1250.94	7704.31	8199.51	6031.17	5836.07
Total Deposit	12779.51	15839.01	15506.44	13447.65	14119.03
Ratio (Times)	9.79	48.64	52.88	44.85	41.33
Investment Bank					
Total Investment	12.69	1970.27	1822.16	1705.24	3864.48
Total Deposit	2983.28	4256.21	4174.76	7922.75	11524.67
Ratio (Times)	0.43	46.29	43.65	21.52	33.51
SBI Bank					
Total Investment	201.79	373.63	599.06	1207.28	1907.52
Total Deposit	4535.73	6612.29	5572.47	6522.82	7198.32
Ratio (Times)	4.45	5.65	10.75	18.51	26.50

C. Loan & Advances to Working Fund Ratio
Calculation of Loan & Advances to Working Fund Ratio of NABIL, Investment and SBI Bank

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Loan & Advances	7334.76	8324.44	7437.90	7755.95	8189.99
Total Working Fund	15024.20	18367.15	17629.25	16562.61	16745.61
Ratio (Times)	48.82	45.32	42.19	46.83	48.91
Investment Bank					
Loan & Advances	2070.68	2429.03	2546.43	2572.14	7130.13
Total Working Fund	3796.70	5127.37	4973.90	9014.24	13255.50
Ratio (Times)	54.54	47.37	51.56	64.03	53.79
SBI Bank					
Loan & Advances	3559.41	4188.41	4299.25	4468.72	5143.66
Total Working Fund	5106.57	7284.79	7021.14	7566.33	8440.40
Ratio (Times)	69.70	57.50	61.23	59.06	60.94

D. Investment on Government to Working Fund Ratio

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

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Investment on Govt. Securities	1233.82	2732.96	4120.29	3588.77	3672.63
Total Working Fund	15024.20	18367.15	17629.25	16562.61	16745.61
Ratio (Times)	8.21	14.88	23.37	21.67	21.93
Investment Bank					
Investment on Govt. Securities	0.00	300.00	224.40	400.00	2001.10
Total Working Fund	3796.70	5127.37	4973.90	9014.24	13255.50
Ratio (Times)	0.00	5.85	4.50	4.44	15.10
SBI Bank					
Investment on Govt. Securities	192.85	364.69	503.17	1189.39	1871.46
Total Working Fund	5106.57	7284.79	7021.14	7566.33	8440.40
Ratio (Times)	3.78	5.01	7.17	15.72	22.17

E. Investment on Shares and Debentures to Working Fund Ratio

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

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Investment on Shares & Debentures	16.12	18.82	22.22	22.22	22.22
Total Working Fund	15024.20	18367.15	17629.25	16562.61	16745.61
Ratio (Times)	0.11	0.10	0.13	0.13	0.13
Investment Bank					
Investment on Shares & Debentures	12.69	12.69	13.89	13.89	13.89
Total Working Fund	3796.70	5127.37	4973.90	9014.24	13255.50
Ratio (Times)	0.33	0.25	0.28	0.15	0.10
SBI Bank					
Investment on Shares & Debentures	8.94	8.94	17.89	17.89	17.89
Total Working Fund	5106.57	7284.79	7021.14	7566.33	8440.40
Ratio (Times)	0.18	0.12	0.25	0.24	0.21

Appendix – 3

Profitability Ratio

A. Return on Total Working Fund Ratio

Calculation of Return on Working Fund Ratio of NABIL, Investment and SBI Bank

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Net Profit	329.12	291.37	271.63	416.25	455.32
Total Working Fund	15024.20	18367.15	17629.25	16562.61	16745.61
Ratio (Times)	2.19	1.59	1.54	2.51	2.72
Investment Bank					
Net Profit	72.66	56.39	57.09	116.82	152.67
Total Working Fund	3796.70	5127.37	4973.90	9014.24	13255.50
Ratio (Times)	1.91	1.10	1.15	1.30	1.15
SBI Bank					
Net Profit	50.07	12.51	40.85	48.75	60.86
Total Working Fund	5106.57	7284.79	7021.14	7566.33	8440.40
Ratio (Times)	0.98	0.17	0.58	0.64	0.72

B. Return on Loan & Advances Ratio

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

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Net Profit	329.12	291.37	271.63	416.25	455.32
Loan & Advances	7334.76	8324.44	7437.90	7755.90	8189.99
Ratio (Times)	4.49	3.50	3.65	5.37	5.56
Investment Bank					
Net Profit	72.66	56.39	57.09	116.82	152.67
Loan & Advances	2070.68	2429.03	2564.43	5772.14	7130.13
Ratio (Times)	3.51	2.32	2.23	2.02	2.14
SBI Bank					
Net Profit	50.07	12.51	40.85	48.75	60.86
Loan & Advances	3559.41	4188.41	4299.25	4468.72	5143.66
Ratio (Times)	1.41	0.30	0.95	1.09	1.18

C. Total Interest Earned to Total Outside Assets Ratio

Calculation of Total Interest earned to Total Outside Assets Ratio of NABIL, Investment & SBI Bank.

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Total Interest Earned	1047.03	1266.70	1120.18	1017.87	1001.62
Total Outside Assets	8585.70	16028.75	15637.41	13787.12	14026.06
Ratio (Times)	12.20	7.90	7.16	7.38	7.14
Investment Bank					
Total Interest Earned	279.86	349.75	326.22	459.51	331.40
Total Outside Assets	2083.37	4399.30	4386.59	7477.38	10992.61
Ratio (Times)	13.43	7.95	7.44	6.15	6.65
SBI Bank					
Total Interest Earned	437.32	444.56	399.63	469.74	493.60
Total Outside Assets	3761.20	4562.04	4898.31	5676.00	7051.18
Ratio (Times)	11.63	9.74	8.16	8.28	7.00

D. Total Interest Earned to Total Working Fund Ratio

Calculation of Total Interest earned to Total Working Fund Ratio of NABIL, Investment & SBI Bank.

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Total Interest Earned	1047.03	1266.70	1120.18	1017.87	1001.62
Total Working Fund	15024.20	18367.15	17629.25	16562.61	16745.61
Ratio (Times)	6.97	6.90	6.35	6.15	5.98
Investment Bank					
Total Interest Earned	279.86	349.75	326.22	459.51	331.40
Total Working Fund	3796.70	5127.37	4973.90	9014.24	13255.50
Ratio (Times)	7.37	6.82	6.56	5.10	5.52
SBI Bank					
Total Interest Earned	437.32	444.56	399.63	469.74	493.60
Total Working Fund	5106.57	7284.79	7021.14	7566.33	8440.40
Ratio (Times)	8.56	6.10	5.69	6.21	5.85

E. Total Interest Paid to Total Working Fund Ratio

Calculation of Total Interest Paid to Total Working Fund Ratio of NABIL, Investment & SBI Bank

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Total Interest Paid	432.96	578.36	462.08	317.35	282.94
Total Working Fund	15024.20	18367.15	17629.25	16562.61	16745.61
Ratio (Times)	2.88	3.15	2.62	1.92	1.69
Investment Bank					
Total Interest Paid	115.73	163.15	130.44	189.21	326.21
Total Working Fund	3796.70	5127.37	4973.90	9014.24	13255.50
Ratio (Times)	3.05	3.18	2.62	2.10	2.46
SBI Bank					
Total Interest Paid	281.66	271.79	288.58	291.82	255.92
Total Working Fund	5106.57	7284.79	7021.14	7566.33	8440.40
Ratio (Times)	5.52	3.73	4.11	3.86	3.03

Appendix – 4

Risk Ratio

A. Liquidity Risk Ratio

Calculation of Liquidity Risk Ratio of NABIL, Investment and SBI Banks

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Cash & Bank Balance	1088.75	812.90	1051.82	1144.77	970.49
Total Deposit	12779.51	15839.01	15506.44	13447.65	14119.03
Ratio (Times)	8.52	5.13	6.78	8.51	6.87
Investment Bank					
Cash & Bank Balance	362.92	522.86	338.92	926.53	1226.92
Total Deposit	2983.28	4256.21	4174.76	7922.75	11524.67
Ratio (Times)	12.17	12.28	8.12	11.69	10.65
SBI Bank					
Cash & Bank Balance	890.02	1945.14	1619.96	1333.54	864.42
Total Deposit	4535.73	6612.29	5572.47	6522.82	7198.32
Ratio (Times)	19.62	29.42	29.07	20.44	12.01

B. Credit Risk Ratio

Calculation of Credit Risk Ratio of NABIL, Investment and SBI Banks

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Total Loan & Advances	7334.76	8324.44	7437.90	7755.95	8189.99
Total Assets	15024.20	18367.15	17629.25	16562.61	16745.61
Ratio (Times)	48.82	45.32	42.1	46.83	48.91
Investment Bank					
Total Loan & Advances	2070.68	2429.03	2546.43	2572.14	7130.13
Total Assets	3796.70	5127.36	4973.90	9014.24	13255.50
Ratio (Times)	54.54	47.37	51.56	64.03	53.79
SBI Bank					
Total Loan & Advances	3559.41	4188.41	4299.25	4468.72	5143.66
Total Assets	5106.57	7284.79	7021.14	7566.33	8440.40
Ratio (Times)	69.70	57.50	61.23	59.06	60.94

C. Capital Risk Ratio

Calculation of Capital Risk Ratio of NABIL, Investment and SBI Banks

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NABIL Bank					
Capital	984.07	1062.83	1146.42	1314.18	1481.68
Risk Weighted Assets	7334.76	8324.44	7437.90	7755.95	8189.99
Ratio (Times)	13.42	12.77	15.41	16.95	18.09
Investment Bank					
Risk Weighted Assets	410.24	469.08	523.46	638.53	729.04
Ratio (Times)	2070.68	2429.03	2564.43	5772.14	7130.13
Ratio (Times)	19.81	19.31	20.41	11.06	10.22
SBI Bank					
Risk Weighted Assets	224.95	238.55	560.34	569.86	626.64
Ratio (Times)	3559.41	4188.41	4299.25	4468.72	5143.66
Ratio (Times)	6.32	5.60	13.03	12.75	12.18

Appendix – 5

Calculation of Mean, Standard Deviation and Co-efficient of Variation of current ratio of NABIL, Investment & SBI Bank

Fiscal Year	NABIL Bank		Investment Bank		SBI Bank	
	X_1	**X_1^2**	**X_2**	**X_2^2**	**X_3**	**X_3^2**
2060/61	1.06	1.1236	1.11	1.1231	1.02	1.0404
2061/62	0.76	0.5776	0.74	0.5476	1.02	1.0404
2062/63	0.81	0.6561	0.76	0.5776	1.05	1.1025
2063/64	0.92	0.8486	0.90	0.81	1.06	1.1236
2064/65	0.94	0.8836	0.89	0.7921	1.07	1.1449
	$X_1 =$ 4.49	$X_1^2 =$ 4.0873	$X_2 =$ 4.40	X_2^2 = 3.9594	X_3 = 5.22	X_3^2 = 5.4818

Where,

X_1 = Total Current ratio of NABIL Bank

X_2 = Total Current ratio of Investment Bank

X_3 = Total Current ratio of SBI Bank

Calculation of Mean Ratio of NABIL Bank Current Ratio

$$\text{Mean} = \frac{X_1}{N} = \frac{4.49}{5} = 0.898$$

Calculation of Standard Deviation of Current Ratio

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

$$= \sqrt{\frac{4.0873}{5} - \left(\frac{4.49}{5}\right)^2}$$

$$= \sqrt{0.81746 - 0.8064}$$

$$= 0.105$$

Calculation of Coefficient of Variation (C.V.)

$$\text{CV} = \frac{\sigma}{\bar{X}} \times 100\ \%$$

$$= \frac{0.105}{0.898} \times 100$$

$$= 11.69$$

Calculation of Mean, Std. Deviation and coefficient of variation of Investment and SBI banks are calculated accordingly.

Appendix – 6

Calculation of trend values of loan & advances to total deposit ratio of NABIL, Investment & SBI

Fiscal Year	Ratio (Y)	X = t–2001/02	X^2	XY	Yc = a + bx
2060/61	57.00	(2.00)	4	(114.00)	53.40
2061/62	53.00	(1.00)	1	(53.00)	54.10
2062/63	48.00	0	0	0	54.80
2063/64	58.00	1.00	1	58	55.50
2064/65	58.00	2.00	4	116	56.20
Total					

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

Where, Y = Annual Ratio in Percentage

Now,

$$a = \frac{Y}{N} = \frac{274.00}{5} = 54.80$$

$$b = \frac{XY}{X^2} = \frac{7.00}{10.00} = 0.70$$

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

Fiscal Year (t)	**X = t – 2001/02**	**Yc = a + bx**
2065/66	3	56.90
2066/67	4	57.60
2067/68	5	85.30
2068/69	6	59.00
2069/70	7	59.70

Calculation of Trend Value of Investment and SBI are calculated accordingly.

Appendix – 7

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

FY	Deposits (X)	Loan & Advance(Y)	$x = X - \overline{X}$	x^2	$y = Y - \overline{Y}$	y^2	xy
2060/61	12779.51	7334.76	(1558.82)	2429913.56	(473.85)	224531.91	738642.79
2061/62	15839.01	8324.44	1500.68	2252046.46	515.83	266082.65	774099.80
2062/63	15506.44	7437.90	1168.11	1364485.64	(370.71)	137424.42	(433028.46)
2063/64	13447.65	7755.95	(890.68)	793307.30	(52.66)	2772.86	46901.32
2064/65	14119.03	8189.99	(219.30)	48091.61	381.38	145452.23	(83636.31)
Total	X = 71691.64	Y = 39043.04	x = 0.00	x^2 = 6887844.58	y = 0.00	y^2 = 776264.09	xy = 1042979.14
Mean	14338.33	7808.61					

Now,

Co-efficient of Correlation (r) = $\frac{N.\ xy - x.\ y}{\sqrt{N\ x^2 - (x)^2}\sqrt{N\ y^2 - (y)^2}}$

$= \frac{5 \times 1042979.138 - 0 \times 0}{\sqrt{5 \times 6887844.58 - (0)^2}\sqrt{5 \times 776264.094 - (0)^2}}$

= 0.45

r^2 = 0.02

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

= 0.6745 $\frac{1-0.20}{5}$

= 0.11

= 0.65

Coefficients of correlation of NABIL, Investment & SBI are calculated accordingly.

Appendix – 8

Calculation of hypothesis on loan & advance to total deposit ratios of NABIL, Investment & SBI Bank

FY	NABIL			Investment			SBI		
	X_1	$x_1 = (x_1 - \bar{X}_1)$	X_1^2	X_2	$x_2 = (X_2 - \bar{X}_2)$	X_2^2	X_3	$X_3 = (X_3 - \bar{X}_3)$	X_3^2
2060/61	57.00	2.20	4.84	69.00	4.60	21.16	78.00	6.40	40.96
2061/62	53.00	-1.80	3.24	57.00	-7.40	54.76	63.00	-8.60	73.96
2062/63	48.00	-6.80	46.24	61.00	-3.40	11.56	77.00	5.40	29.16
2063/64	58.00	3.20	10.24	73.00	8.60	73.96	69.00	-2.60	6.76
2064/65	58.00	3.20	10.24	62.00	-2.40	5.76	71.00	-0.60	0.36
Total	X_1= 274.00	x_1= 0.00	x_1^2= 74.80	X_2= 322.00	x_2= 0.00	x_2^2= 167.20	X_3= 358.00	x_3= 0.00	x_3^2= 151.20

Here,

$$\bar{X}_1 = \frac{X_1}{n} \qquad \bar{X}_2 = \frac{X_2}{n} \qquad \bar{X}_3 = \frac{X_3}{n}$$

$$\bar{X}_1 = \frac{274.00}{5} \qquad \bar{X}_2 = \frac{322.00}{5} \qquad \bar{X}_3 = \frac{358.00}{5}$$

$$= 54.80 \qquad = 64.40 \qquad = 71.60$$

Test of significance of difference between (other ratios) NABIL, Investment and SBI Bank are calculated accordingly.