CHAPTER - I
INTRODUCTION

1.1 Background of the Study

Nepal is a land-locked country situated between two Asian giants China and India, both having well developed economic condition. The development of a country is measured by its economic indices. Nepal, like any other country has been laying emphasis on the uplifting of its economy. The process of economic development depends upon various factors. Financial institutions are viewed as catalyst in the process of economic growth. The mobilization of domestic resources, capital formation and its proper utilization plays an important role in the economic development of a country. Every financial institution, big or small, be it a commercial bank or a finance company or a cooperative bank, play an important role in the development of a country.

Commercial banks are major financial institutions, which occupy an important place in the economy because through the deposits they collect, they provide much needed capital for the development of industry, trade and business and other deficit sectors, thereby contributing to the economic growth of the nation.

Investment in the actual sense refers to the sacrifice of current dollars for future dollars (Sharpe, 1986). Investment involves two attributes, time and risk. The sacrifice takes place in the present and is certain. The reward comes later, and the magnitude of which is uncertain. In some cases the element of time predominates (for example, government bonds). In other case, risk is more dominant (for example call option on common stock). In yet others, both time and risk play a dominant role (for example share of common stock).

Investment is the use of money to earn profit. It can be said that investment is concerned with the proper management of the investor's wealth, which are the sum of the current income and the present value of all future income. Fund to

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be invested come from assets already owned, borrowed money and saving or foregone consumption. By foregoing today and investing the saving, investors expect to enhance their future consumption possibilities i.e. the fund is invested to increase wealth. Investors also seek to manage their wealth effectively obtaining the most from it, while protecting it from inflation, taxes and other possible harms.

Investment policy involves determining the investor's objectives and the amount of his or her invest-able wealth. It is not appropriate for an investor to say that his objective is to make a lot of money (Clarke, 1989). What is appropriate for an investor in this situation is to state that the objective to earn a profit while recognizing that there exist some chances of incurring large losses. Investment objectives should be stated in terms of both risk and return.

Investment promotes economic growth and contributes to a nation's wealth. When people deposit money in the bank, the bank may invest by lending the funds to various businesses. These firms in return may invest in new factories and equipment to increase their production and efficiency. In addition to borrowing from banks, most companies issue stocks and bonds, which they sell to investors to raise capital needed for business expansion. Government also issues bonds to invest in various projects. Nepal Rastra Bank on behalf of Nepal Government issues bonds, treasury bills to finance the long term and short-term needs of the government. All such investment by individuals, business, government and government entities involve a present sacrifice of income to get an expected future benefit.

Since from past few years, the situation of country is deteriorating day by day. Uncertainty and fear have bounded every sectors of the economy. Every year the government is assigning fewer funds for development purpose. This has seriously hit not only the economic growth of the country but also the investment environment in the country. So being active members of the

country, commercial banks of Nepal are also affected by this situation. On this ground, management of banks should have to think precisely before making any investment. Therefore, all these events have raised the necessity for formulating sound investment policy. With this connection, by this study having topic INVESTMENT PRACTICES OF COMMERCIAL BANKS IN NEPAL, it is tried to find out the investment policies of the commercial joint venture banks. Further, this study tries to explore, whether the policies they have formulated are sufficient or not, whether they have managed their investable fund in proper place or not and so on. Since sound investment policy ensures minimum risk and maximum profit from lending, by this study it is tried to find out the policy and act regarding investment of sample banks.

1.2 Commercial Bank and its Investment Policy

"A commercial bank means the bank which deals in exchanging currency, accepting deposit, granting loans and doing commercial transaction" (Commercial Bank Act, 2031 B.S.).

The history of banking in Nepal is not so long. It begins with the establishment of Nepal Bank Limited in 1937 and having felt the need of a central bank, Nepal Rastra Bank (NRB) was set up in 1956. Rastriya Banijya Bank was established in 1966 is fully government owned commercial bank to spread banking services to both the rural and urban areas. In the early 1980's when the government permitted establishment of foreign joint venture banks, three JVB"S namely Nepal Grindlays Bank ltd and Nepal Indosuez bank Ltd and NABIL were established. After the democratically elected government adopted the liberal and market oriented economic policy, the number of JVBs has increased dramatically. In comparison with other developing or developed countries, the institutional development in banking system of Nepal is far behind. Nepal had to wait for a long time to come to this present banking position. Lending in productive sector, it reduces the idle saving of a country. Commercial banks, if succeeded, in increasing the banking habit of people,

would have great power in multiplying the deposit by way of credit creation and this would multiply the investment more than the limit granted by the nation saving.

The primary objective of these commercial banks is always to earn profit by investing or granting loan and advances to people associated with trade, business, industry etc.

1.3 Features of a Sound Lending and Investment Policy

The income and profit of a financial institution depends upon to its lending procedure, lending policy and investment of its fund in different securities. A sound lending and investment policy is not only pre-requisite for bank's profitability but also of utmost significance for the promotion of commercial savings of an under developed and backward country like Nepal.

The factors that banks must consider for sound lending and investment policies are explained as under:

1.3.1 Safety and Security

Banks should buy investment rated securities only. It should minimize investing its fund in those securities, which are subject to greater depreciation and fluctuation for example common stock, since a little difference may result in a great loss. It must not advance its funds to speculative business, which may earn millions in a minute or may become bankrupt the next minute. Since risk is overpriced during recession and under priced during boom banks should invest in medium grade and high-grade securities during recession and boom respectively. Banks should buy securities, which are commercially durable, marketable and have high market price. In this regard, "MAST" should be followed while investing,

Where,

  M = Marketability

  A = Ascertain ability

  S = Stability

  T = Transferability

1.3.2 Liquidity

Liquidity is defined as bank's capacity to pay cash in exchange of deposits. People deposit their money in banks because they believe that the bank will repay their money on demand. In order to retain good credit standing and trust and confidence of its customers every banks must maintain enough liquidity to meet its various obligations.

1.3.3 Profitability

Commercial banks can maximize its volume of wealth through maximization of return on their investments and lending. They must invest their fund in viable sectors where they can earn maximum profit. Their return depends upon the interest rate, volume of loan, duration of the loan and nature of investment in different securities.

1.3.4 Purpose of Loan

It is very important to be reminded that most of the bank failures in the world are due to shrinkage in the value of loan and advances. The first substantive question a banker must examine is how loan proceeds will be used. If the loan purpose conflicts with commercial policy, such as loan for some speculative purpose not acceptable to the banker such loans should not be processed. If customers misuse their borrowings, there is risk involved in repayment and the bank will incur heavy bad debts. Detailed information about the plan and scheme of project should be collected and examined before borrowing.

1.3.5 Diversification

Investment and credit concentrated on same geographical region, same sector of business and few customers increase the risk. Hence the policy should fix a cap on all these aspect. As the saying goes " A bank should not put all its eggs in the same basket", therefore, in order to minimize the risk, a bank should diversify its investment in different securities. This diversification or portfolio investment helps to earn good return and at the same time minimize the risks and uncertainty.

1.3.6 Legality

A commercial bank must follow the rules and regulations and statuary directives issued by Nepal Rastra Bank, Ministry of Finance and others while issuing securities and mobilizing their funds. In Nepal, NRB restricts financial institution licensed by it to invest in securities of each other.

1.4 Statement of the Problem

Commercial banks have huge collection from depositors. Effective utilization of collected fund is possible only through sound investment policy. Most Nepalese commercial banks have not formulated their investment policies in organized manner. They mainly rely upon the instructions and guidelines issued by NRB. They are unable to estimate the future; they hardly have any clear view towards investment policy. Furthermore, the implementation of policy is not much effective way. The main reason attributed to unsound investment policy are lack of proper analysis on financial risk, interest rate risk, liquidity risk, business risk etc. Joint Venture Banks have become a role model in the improvement of fund mobilization.

The problem that still persists for a bank even today is to find a proper and viable project to ensure healthy profit. They have always feared high degree of risk and uncertainty owing to lack of profitable sectors for their investment. Still, some emerging and existing commercial banks are tempted to invest,

without proper credit analysis and on personal guarantee. Some have even sanctioned loan to customers beyond customer's real requirement. The high liquidity position of banks has resulted in a decrease in investment in productive sectors. Thus, the present study will make a modest attempt to analyze investment policy of two joint venture banks viz. NABIL and SCBNL with the following questions:

1. Are the JVB's properly utilizing their available funds?
2. How effective are the JVB's funds mobilization and investment policies?
3. Is there any relationship between investment and total deposits as well as loans and advances with net profit of JVB's?

1.5 Objectives of the Study

The main objective of the study is to analyze the investment policy of two joint venture banks NABIL and SCBNL. The specific objectives are as follow:

1. To explore the investment policies of sampled JVB's .
2. To evaluate the different financial ratios regarding investment policies like liquidity, asset management, profitability, risk position, liquidity and growth ratios.
3. To identify the effectiveness of sampled organization regarding formulation and implementation of investment policies.
4. To forecast the trend of deposits, investment, net profit and loan & advances, for next five years for SCBNL and NABIL.

1.6 Significance of the Study

Investment activity is the life-blood of any financial institution, since only accumulating deposits has no meaning. Better return can be ensured only when deposits are properly mobilized through sound investment policy.

This study "Comparative Analysis of Investment policy" of two major JVB's will provide a useful feedback to academic institutions, bank employees,

trainees, investors, policy making bodies and those concerned with banks in the formulation of appropriate strategies for improving the performance of banks.

1.7 Limitations of the Study

Like every research study, this study also has some limitations viz-inadequate coverage of commercial banks, time period taken and other variables. The following factors are the basic limitations.

This study is based on secondary data collected from the banks, particularly based on data gathered from the published annual report of the two banks along with NRB directives issued from time to time.

This study is limited to only a period of five years of the concerned banks and hence the conclusion drawn only confines to the above period (F.Y. 2002/2003 to 2006/2007).

This study deals with only two JVB's i.e. NABIL and SCBNL. Other commercial banks have not been considered in this study.

The samples have been drawn at random for convenience, so there may exit some sampling error. And the sample size may not be sufficient to generalize the findings.

1.8 Organization of the Study

This study includes five chapters namely Introduction, Review of Literature, Research Methodology, Data Presentation and Summary, Conclusion and Recommendation.

Chapter – I   Introduction

It includes background of the study, statement of the problem, objective of the study, limitation of the study and organization of the study.

Chapter – Review of Literature

It is about review of literature, which deals with the study of related articles, journals, reports and past thesis writing.

Chapter – III   **Research Methodology**

It concentrates on research methodologies, techniques that are applied to collect and analyze the data.

Chapter – IV   **Data Presentation and Analysis**

It is presentation and analysis of data, where financial tools and statistical tools are used in the analysis of data. Financial tool mainly consists of ratio analysis, which involves-liquidity ratio, asset management ratio, profitability ratio, risk ratio and growth ratio. Statistical tools used in the analysis of data involve co-relation analysis, trend analysis and test of hypothesis. This chapter also provides major findings of the study.

Chapter – V   **Summary, Conclusion and Recommendations**

It presents with summary, conclusion and recommendation to formally close the thesis report.

CHAPTER - II
REVIEW OF LITERATURE

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

2.1 Theoretical Review

Theoretical perspectives provide the fundamental theoretical framework and foundation to the present study. For this, various books dealing with theoretical aspects of investment policy analysis are taken into consideration.

2.1.1 Investment

"Investment refers to deploying the savings in a manner that ensures safety of our money and provides a sustained return to supplement our regular income" (www.bseindia.com, January 23, 2002). The term investment covers a wide range of activities. It is commonly known fact that an investment is only possible where there are adequate savings. If all the incomes and savings are consumed to solve the problem of hand to mouth and to the other basic needs, then there is no existence of investment. Therefore, both savings and investment are interrelated.

Investment is defined as employing the fund at present in anticipation of generating more funds in the future. In other word investment is the sacrifices

of current fund (consumption) for having the better consumption in the future. Further more when the value of initial investment increases after certain period by means of investment, it is called generation of positive return (profit). However if the situation turns out to be unfavorable, the value of initial investment may decline on passage of time, which is known as negative return (loss). There is high importance of investment for the better economic situation. An investment can bring the multiplier impact in an economy.

Commercial banks fulfill the credit needs of various sectors of the economy including agricultural, commercial, Social service sectors whether it is small or medium or long term projects as well as the investment on the securities, whether it be government or non government. The investment of the commercial bank in the securities include the investment on the treasury bills, development bonds, national saving bonds, shares on government owned companies and non government companies and investment on debentures.

The banks are such types of institutions, which deal in money and substitute for money. They deal with deposit, credit, and credit instruments. Good circulation of credit is very much important for financial institutions and banks. Unsteady and unevenly flow of credit harms the economy and the profitability commercial banks. Thus, to collect fund and utilize it in good investments is the prime objective of commercial banks. Diverse and safe investment of fund is the question of stability and existence of the bans. Investment and profitability of different authors of books and papers are summarized in the section below;

"Investment constitutes a fourth line of defense, after cash, money at call and short notice and Bills discounted. They yield a higher return than that obtained from liquid assets. But the return is not as high as the return from loan and advances. Bank invests a large proportion of their funds in government securities and other gilt-edged securities. When the demand from the loan and

advances falls it buys gilt edged securities and when the demand from the loan and advances increases the bank properly sells the securities. These securities can be converted into cash easily and without much loss of value. Some securities mature after a long time say 5 or 10 years. If they are sold before maturity, the bank incurs a capital loss. The bank also stands to lose, if the bank interest rate rises. If the banker can wait till the due date the investment yields a fairly high rate of return".

The banker does not prefer to invest his fund in company shares and debentures. The shares and debentures may be very easily sold on the stock exchange. But the bank will incur a loss if the market value of the securities falls. Unlike the Government securities there is no maturity date for shares. The income from shares depends upon the prosperity of the company issuing the shares. If the company becomes insolvent the banker loses heavily. If a bank has certain amount of funds, which can be left undisturbed for a number of years, investment in long-term Government securities becomes profitable proposition" (Radhaswamy, 1979:549).

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

Investment is the allocation of monetary resources to assets that are expected to yield some gain or positive return over a given period of time. These assets may range from safe investment to risky investments. Investment in this form is called Financial Investment. From the point of view of people who invest their funds, they are the suppliers of 'Capital' and in their view; investment is a commitment of a person's funds to derive future income in the form of interest, dividends, rent, premiums, pension benefit or the appreciation of ht value of their principal capital. To the economist, Investment means the net addition to the economy's capital stock, which consists of goods, and services that are used

in the production of other goods and services. In this context, the term investment therefore implies the formation of new and productive capital in the form of new construction, new producers' durable equipment such a plant and equipment.

Inventories and human capital are included in the economist definition of investment (Singh, 1985:2).

"An investment may be defined as current commitment of funds for a period of time to derive a future flow of funds that will compensate the investing unit for the time the funds are committed, for the expected ate of inflation and also for the uncertainty involved in the future flow of the funds" (Reilly, 1991:20).

"Investment is the employment of funds with the aim of achieving additional income or growth in value. The essential quality of an investment is that it involves waiting for a reward." The investment is the key to achieve addition income for the growth of banks (Singh, 1985:24).

"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, 1990:47).

"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" (Clarke, 1991:205).

"An investment may be defined as the current commitment of funds for the period of time of derives a future flow of funds that will compensate the investing unit for the time the funds are committed, for the expected rate of inflation and also for the uncertainty involved in the future flow of the funds" (Reilly; 1991:94).

Another contemporary scholar has defined investment in this way; "Investment is the employment of funds with the aim of achieving additional income or growth in value" (Singh, 1985:67).

"Investment, in its broadest sense, means the sacrifice of certain present value for (possible uncertain) future value." In the view of them investment is venture that the return is uncertain. So they have presented their view that bank should look for the sage and riskier investment (Sharpe, Alexander and Bailey, 1998:1).

"Investment, in broadest sense, means the sacrifice of certain present value for (possible uncertain) future value" (Sharpe, 1998:1)

Bank Assets
) Cash
) Money at call and short notice
) Bills discounted and purchased
) Investments
) Loans, Advances, Cash Credit and Overdrafts

"Expenditures and benefits of an investment should be measured in cash. In the investment analysis; it is cash flow, which is important, not the accounting profit. It may also be pointed out that investment decisions affect the firm's value. The firm's value will increase if investments are profitable and add to the shareholders' wealth." Investment decision requires special attention because of the following reasons.

) They influence the firms' growth rate in the long term.
) They affect the risk of the firm.
) They involve the commitment of large amount of funds.
) They are irreversible or reversible at substantial loss.
) They are among the most difficult decision to make.

It is very important because it influences the firm's growth in the long run, affects the risk of the firm, and requires the large amount of funds.

Growth

The effects of investment decision extend into the future and have to be endured for a longer period than the consequences of the current operating expenditure. A firm's decision to invest in long-term assets has a decisive influence on the rate and directions of its growth. A wrong decision can prove disastrous for the continued survival of the firm; unwanted or unprofitable expansion of asset will result in heavy operating cost to the firm. On the other hand, inadequate investment in assets would make it difficult for the firm to complete successfully and maintain its market share.

Risk

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

Funding

Investment decisions generally involve large amount of funds, which make it imperative for the firm to plan its investment programs very carefully and make an advance arrangement for procuring finances internally or externally.

Irreversibility

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

Complexity

Investment decisions are among the firm's most difficult decisions. They are an assessment of future events, which are difficult to predict. It is really a complex

problem to correctly estimate the future cash flow of an investment. The uncertainty in cash flow is caused by economic, political, social and technical forces (Pandey, 1998:407).

"Investments are made in assets. Assets in all are of two types, real assets (land, buildings, factories etc) and financial assets (stocks, bond, T-bill etc.). These two investments are not competitive but complementary. Highly developed institutions for financial investment greatly facilitate real investment" (Bhattarai, 2004:2).

From the above definitions, it is clear that an investment means to trade current funds some expected future stream of payments of benefits, which will exceed the current outlay by an amount of return or interest that will compensate the investor. The return interest is expected because of uncertainty involved in expected future cash flows. An investment (credit or other investment) is the most important function of commercial banks. It is the long-term commitment of bank in the uncertain and risky environment. It is a very challenging task of commercial banks. So a bank has to be very cautious while investing their funds in various sectors. The success of a bank heavily depends upon the proper management of its invest able funds. Investment management of a bank is guided by the investment policy adopted by the bank.

Investment policies can be varied bank to bank. Few banks accept higher risk investment and other are more conservative for their investment decision. The investment policy of the bank helps the investment function of the bank to efficient and profitable by inherent risk.

The investment (credit) policies of banks are conditioned, to great extent by the national policy framework; every banker has to apply his own judgment for arriving at credit decision, keeping, of course, his bank's credit policy also in

mind. Government and central bank have to make a sound policy about the investment policies of commercial banks.

The field of investment is more challenging as it offers relatively greater scope to banker for judgment and discretion in selecting their loan portfolio. But this higher degree of freedom in the field of credit management is also accompanied by greater risk. Particularly during recent years, the credit function has become more complex.

"Lending is the essence of commercial banking, and consequently the formulation and implementation of sound policies are among the most important responsibilities of bank directors and management. Well conceived lending policies and careful lending practice are essential in a bank to perform its credit creating functions effectively and minimize the risk inherent in any extension of credit"(Cross, 1963:1).

He further adds, the formulation of sound lending policies for all banks should have adequate and careful consideration over community needs, size of loan portfolio, character of loan, credit worthiness of borrower and assets pledged to security borrowing interest rate policy.

A commercial bank must mobilize its deposits and other funds to profitable, secured and marketable sector so that it can earn a generous profit as well as it should be secured and can be converted in to cash whenever needed. Obviously, a firm that is being considered for commercial loans must be analyzed to find out why the firm needs money, how much money the firm needs and when and how it will be able to repay the loan. Project or business proposal must be carefully scrutinized. Investment policy provides the bank several inputs through which they can handle their investment operation efficiently ensuring the maximum exposure to risk, which ultimately leads the bank to provide secured loans and investment.

2.1.2 Principles on Investment Policies of JVBs

Some of the main characteristics of sound lending and investment policies are Safety and security, liquidity, suitability, profitability and diversification (Singh, 1985:10 and Bhalla, 1983:9).

2.1.2.1 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; ascertain ability, stability and 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.

2.1.2.2. 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. The concept of liquidity must be distinguished from solvency. A bank is said to be solvent if the value of its assets exceeds the value of its liabilities. It is said to be liquidity only if it is in a position to readily convert its assets into cash, with a view to meet the demand of the customers. A bank may be solvent but may not be liquid. The bank may be having assets far exceeding its liabilities in value. If the assets are in such forms that they cannot be readily sold, the bank is not liquid. Liquidity is the capacity of bank to pay cash against deposits. Hence the liquidity position of a bank is such an important factor.

2.1.2.3 Profitability

The most important objective of a commercial bank is to make as much profit as possible. It is a business institution. Hence it aims at securing maximum profits. 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 and advances by them are highly influenced by the profit margin. The bank must earn sufficient income from its assets so as to meet all its expanses and pay a fair percentage of dividends to the shareholders. The income will be greater if the yield from the assets is greater. Therefore the bank will try to arrange its assets in such a way that it s able to derive maximum income, in order to make profits, the bank must invest the funds left with it by the depositors in different forms of earning asset. Generally, the profit of commercial bank depends upon the interest rate of the bank, volume of loan provided, time period of loan and nature of investment on different securities. Profitability is only the term, which always motivates commercial banks to invest their money more and more.

2.1.2.4 Suitability

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

2.1.2.5 Diversification

The bank should be careful that while granting loan, it should not be always in one sector. To minimize risk and maximize the profit, a bank must diversify its investment on different sectors. Diversification of loan helps to sustain loss

according to the law of average because if securities of a company depreciated, there may be appreciation in the securities of other companies. In this way, the loss can be recovered.

2.1.3 Sources of funds for the Investment

2.1.3.1 Capital

Capital is the lifeblood of the trade and commerce. Therefore, capital is needed for the operation of the bank as in other business. The capital fund consists of two elements, viz. i. Issuing Shares, and ii. General Reserves.

2.1.3.1.1 Issuing Shares

Bank issues 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.

2.1.3.1.2 General Reserves

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

2.1.3.2 Accumulated Profit

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

2.1.3.3 Deposits

Deposits are the main source of funds. By providing certain rate of interest, commercial bank calls for the deposit from the customer. Mainly, four types of deposits are accepted by the bank like current deposit, fixed deposit, saving deposits and Call deposit. These different types of deposits are used for lending the money to different sectors like agriculture, production, trade,

service sector and other industry. The deposits will lead to increase in the working capital of the bank (Commercial Bank Act 2031, 1974).

2.1.3.3.1 External and Internal Borrowings

The funds can be collected by borrowing money through different banks or different institution. In a developing country like Nepal, those types of borrowings are very important. The commercial banks may not have sufficient fund to invest in different sector. In that case it has to borrow from other bank or other financial institutions. Generally the commercial bank borrows from two sources i.e. external and internal. Generally external borrowing means the borrowing from foreign banks, and foreign government. Internally, the commercial banks borrow mainly from inter bank and Nepal Rastra Bank. So the commercial bank cannot provide loan or investment without the funds. From the fund collected from above different source, the commercial bank grants loan.

2.2 Review of Legislative Provisions

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

With an objective to develop a healthy, competent and secured banking system for economic prosperity of the country and to safeguard the interest of depositors, NRB issued the directive no.1 regarding minimum capital fund to be maintained by commercial banks. The norms have prescribed the minimum capital fund requirement, on the basis of the risk –weighted assets.

The capital of the banks is divided into two components Core Capital and Supplementary Capital. Core capital, which is widely known as Tier –1 capital, consists of share capital, share premium, non-redeemable preference shares, general reserve fund and accumulated profit/loss. Supplementary capital, which is also known as Tier-2 capital consists of loan provision, exchange equalization reserve, assets revaluation reserve, hybrid capital instruments, unsecured subordinated term dept, interest rate fluctuation fund, and other free reserves. The sum of these two components is considered to be total capital fund (NRB Directive 1/061/062 clause no. 2).

2.2.1 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.

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

NRB in the form of prudential norms in above relevant area are briefly discussed here under (NRB Directive No. 8/061/62).

2.2.1.1. 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 mostly all the bank opened before 2001 are required to invest 3 percent, while new commercial banks are required to invest 0.25 percent of their total loans and advances to the deprived sector which will gradually increased to 3 percent (NRB Directive 1/061/062 clause No.1 and 8.1).

2.2.1.2 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.(NRB Directive 1/061/062 clause No.1 and 8.1).

2.2.1.3 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, and industrial sector have to be included in productive sector investment (NRB Directive 1/061/062 clause No.1 and 8.1).

2.2.1.4 Provision for the Single Obligor 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 25 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.

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 obligor credit limit (NRB Directive 1/061/062 clause No. 1 and 8.1).

2.2.1.5 Provision for Minimizes 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 (NRB Directive No. 1/061/62 clause 4.1).

2.2.1.6 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 5 percent of total deposit in the NRB.(Monetary Policy for FY 2004/05 clause 39).

2.2.1.7 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 (NRB Directive 1/061/062 clause No.1 and 8.1).

2.2.1.8 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. .(NRB Directive 1/061/062 clause No.1 and 8.1).

2.3 Review of Related 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 and Journals, research papers and review of thesis of previous study are taken into consideration.

2.3.1 Review of Journals and Articles

B. R. Bajracharya (1991) in his article, "*Monetary Policy and Deposit Mobilization in Nepal*" has concluded that the mobilization of domestic savings is one of the monetary policies in Nepal. For this purpose commercial banks stood as the vital and active financial intermediary for generating resources in the form of deposit of the private sector so far providing credit to the investors in different aspects of the economy.

Sunity Shrestha (1998) 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. The hypothesis set by the author cites that there has been positive impact of lending of commercial banks to the GDP. In research methodology, the author has considered GDP as the dependent variable and various sectors of lending viz. agriculture, industrial, commercial service and general multiple regression technique has been applied to analyze the contribution.

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

P. Ghimire (1999) has published an article " *Banijya Bank haru Prathmikta Chhetrama Lagani Garna Bhanda Harjana Trimna Tayar*" in which he has mentioned that most of the commercial banks of Nepal are ready to pay the penalty in spite of investing on rural priority sector, poverty sticking and

deprived areas. In the directives of Nepal Rastra Bank, it is clearly mentioned and directed that all commercial banks should invest 12% of its total investments to the priority sectors. Out of this 12% they should invest to the lower class of countrymen. However these banks are unable to meet the requirement of NRB.

In the light of above, joint venture banks use to justify that they don't have any network among these priority areas. So, if investment is made to these areas, operation cost will be very high, that exceeds the penalty if investment won't be made. That is why they are interested in paying penalty rather than investing in priority sectors.

R. Bhattarai (2003), has presented an article about the *"Non Performing Assets (NPA) Management"*. According to him, a loan is very easy term for borrower when he has already taken for a lender not availed. It is equally difficult for a borrower to avail and for lender to recover. From a banker's view, it is just like a stone to roll down from the top of the hill while sanctioning, but too difficult to roll back the same stone to the top of the hill while recovering. A loan not recovered within given time frame either in the form of interest servicing or principal repayment is called non-performing loan (NPL). There are other parameters as well to quantify an NPL. Security not to the extent of loan amount with specified safety margin, value of security not realizable, possession not as per the requirement of bank, conflict of charges are the other reasons which causes difficulties while recovering the loan.

According to him, an important discipline in banking to prevent whole NPL or avoid situations for a loan to turn into NPL. The loan for a bank is most important to generate revenue for operational expenses as well as to provide return to the shareholders.

When a loan advanced from good money turns into a bad loan the chance of shareholders return as well as survival of a bank stands a stake. Ailing bank cannot portray its better image in the public. And no bank can operate its business without the deposit from the public. When public start loosing their confidence on the bank and don't keep their deposit in the bank, that bank will counting its finger for collapse.

Dilip K.C. (2005) has presented an article about the *" Strategies for Reducing Non Performing loan in Nepal"*. According to him, rising amount of non-performing loan is generally considered a sign of inefficiently in the financial system. It shows that the financial system has failed to divert funds to productive uses. While it may not be possible to completely eliminate non performing loans from a financial system they should be controlled and put within an acceptable range, Of late, many countries have faced the problem of non-performing loans and some of them have taken drastic steps to control them.

The above articles focus in the various aspects of the bank's to reduce non-performing loan and such strategy may include the following

> Debt recovery tribunals
> Assets management company
> Bankruptcy Act
> Blacklisting and classification of defaulter
> Enforcement of rules and regulations

In conclusion, he said that non-performing loan is a big problem not only to the financial institution but also to the borrowers. While on one hand borrowers must understand that loans obtained from financial institutions are saving of some one else and need to be repaid, financial institutions should also realize on the other hand that performance of business depends on many vagaries of business climate which are beyond the control of borrower and not all

defaulters are willful. It is necessary to build up a climate to trust and a climate for sound financial discipline was wrong doers are severally penalized needs to be established. Maintaining financial disciple should go beyond loan defaulters and penalize any one who commits financial crime.

2.3.2 Review of Research Paper

S.B. Pradhan (2003) in his research paper, *"Role of Saving, Investment and Capital formation in Economic Development, A case of Nepal,"* has revealed 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 scholar has further revealed that in all cases, GDP was 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.

G. B. Thapa (1994), has expressed his views in research paper *"Financial System of Nepal"* that the commercial banks including foreign joint venture banks seemed 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 seemed lacking adequate funds. The banks were increasing their lending to non –traditional sectors along with the traditional sectors.

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

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

At last scholar concluded that by its very nature of the public sector, these two domestic banks couldn't compete with the private sector banks, so only remedy to the problems of these banks, as the government decided, is to hand over the ownership as well as the management of these banks to the private hands.

2.3.3 Review of Thesis

U. Tuladhar (2000) has conducted a thesis research on " *A Study of Investment Policy of Nepal Grindlays Bank Lid in Comparison to other JVB'S of Nepal*".

The basic objectives of this study were:
- ➢ To study the fund mobilization and investment policy with respect to fee based off-balance sheet transaction and fund based on balance sheet activities.

- To evaluate the liquidity, efficiency, assets management and profitability position.
- To evaluate the growth ratios of loan & advances and total investment with respective growth rate of total deposit and net profit.
- To evaluate the trends of deposit utilization towards total investment and loan advances and its projection for next five years.
- To perform an empirical study of the customer's views and ideas regarding the existing service and adopted investment policy of the joint venture banks.
- To provide suggestions and recommendation on the basis of this study.

His major findings were:
- NGBL has maintained adequate liquidity than other JOB'S. It is in a better position to meet current obligation.
- NGBL has successfully maintained and managed its assets towards different income generating activities.
- The profitability position of NGBL is higher than other JVB's.
- NGBL has invested higher portion to total working fund in government securities than other JVB'S . NGBL's loans and advance to total deposit ratio is less than other JVB's.
- NGBL has the largest profit margin in comparison with other JVB's.

S. Thapa (2001) has conducted a thesis research on *" A Comparative Study On Investment Policy of Nepal Bangladesh Bank And Other JVB's(NABIL Bank Ltd and Nepal Grindlays Bank Lid)"*.

The research study was based on the following specific objectives:
- To evaluate the liquidity, assets management efficiency, profitability and risk position of NBBL in comparison to NABIL and NGBL.

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- To analyze the relationship between loan and advances and total investment with other financial variables of NBBL and compare them with NABIL & NGBL.
- To examine the fund mobilization and investment policy of NBBL through off -balance sheet and on balance sheet activities in comparison to the other two banks.
- To study the various risks in Investment of NBBL in comparison to NABIL & NGBL.
- To analyze the deposit utilization trend and its projection for next five years of NB Bank and compare it with that of NABIL & NGBL.

The major findings of the study were as follows:
- NBBL has good deposit collection, enough liquidity, it has sanctioned enough loan and advances, but it has made negligible amount if investment in government securities.
- NBBL is in a weak position regarding its on balance as well as off balance sheet activities.
- Profitability position of NBBL is comparatively worse than that the NABIL & NGBL.
- The credit risk ration, interest risk ration, capital risk ration of NBBL is higher than NGBL & NABIL. It is exposed to more risk.
- NBBL has been successful in increasing its sources of funds and its mobilization. The growth ration of total investment of NBBL is comparatively worse than the other two JVB'S.
- There is significant relationship between deposit and loan and advance, outside assets and net profit of NBBL but there is no significant relationship between deposit and investment of NBBL.
- The position of NBBL in regard to utilization of fund to earn profit is not better in comparison to NABIL & NGBL.
- The cost of fund of NBBL is competitively higher than NABIL & NGBL.

I. B. Bohara (2002) has conducted a research entitled " *A Comparative Study On Investment Policy of Joint Venture Banks and Finance Companies of Nepal*".

The objectives of the study were as follows:

- ➢ To find out the liquidity position and profitability position of above-mentioned JVB'S in comparison with finance companies.
- ➢ To find out the relationship between profitability and assets structure.
- ➢ To analyze the deposit utilization trend and its future projections for next years for JVB's and finance companies.
- ➢ To study the various risks in investment of JVB's in comparison with finance companies.
- ➢ To analyze the relationship between deposits and investment, deposits and loan & advances, net profit and total assets of JVB's in comparison with finance companies.
- ➢ To provide suggestion and recommendation on the basis of findings.

The major findings of the study were as follows:

- ➢ Liquidity position of JVB's is comparatively better than that of finance companies. Finance companies have made nominal amount of investment in government securities.
- ➢ Finance companies have mobilized their deposits smoothly in comparison with JVB's. The average loan and advance to total deposit ratios of finance companies is higher than JVB's.
- ➢ Profitability position of JVB's except for BOKL is better than that of finance companies, but profitability position of finance companies in terms of return on total assets is better. Interest income in relation to proportion of total assets and operating income is higher in finance companies in comparison to JVB's.

- The growth ratios of deposits, net profit, loan and advances are higher than that of JVB's and are increasing every year, which indicated good performance of the finance companies.
- The risk ratios of finance companies are less variable than the JVB's. The interest risk ratios of finance companies is higher where as the capital risk ratios of JVB's are comparatively higher than that of finance companies.
- JVB's are in a better position in mobilizing deposits as loan and advances, but so far finance companies have been successful in utilizing their sources of funds and in their mobilization.

D. Shrestha (2003) has conducted a study on "*Investment Analysis of Commercial banks, a Comparative Study on HBL and Nepal SBI Bank*", to assess the role and impact of investment on economic development of the country. The major objectives of her study were;
- To analyze percentage of investment made by HBL and SBI bank in total investment made by commercial banks.
- To analyze investments trend, deposit trend and total income and their projection for next five years of HBL and compare them with that of SBI.
- To identify investment sectors of HBL and SBI bank.
- To evaluate the liquidity, assets management efficiency, profitability and risk position of HBL in comparison to that of Nepal SBI bank.
- To study the relationship between investment and deposit of the bank.

The major findings of the study were:
- Mean ratio of HBL investment to total commercial banks investment is higher than that of Nepal SBI bank investment to total commercial banks. The portion of HBL investment is increasing every in the total investment of commercial banks.

- Mean current ratio of HBL is higher than that of Nepal SBI bank. HBL is nearer to standardized current ratio but both banks hadn't been able to maintain standardized current ratio.
- The mean ratio of investment to total deposit of HBL is higher than that of Nepal SBI bank. The mean ratio of investment plus loan

S. Malla (2004) has conducted a thesis on "*Financial Performance of Commercial Banks With Special Reference to Himalayan Bank and Nabil Bank*" to examine the financial performance of HBL and Nabil Bank. The specific objectives of the study were:

- To examine the financial position of the banks under study.
- To evaluate the liquidity, efficiency of assets management and profitability position of the bank under study.
- To provide suggestion and recommendations on the basis of findings.

The main conclusions of the study were;
- The overall liquidity strength of HBL can be considered the better than that of Nabil. However, the liquidity risk is most likely in Nabil, arising from its interest rate. Since the market is highly sensitive towards the interest rate and Nabil has generally been offering low interest rate as compared to other banks. If Nabil cannot tie its saving deposits saving holders from its advances and personalized banking system, the failure in liquidity in Nabil is most likely than HBL in coming future.
- The analysis of strength of HBL in loan and advances is the best. The ratio of loan and advances to total assets, investment to loan and advances and loan and advances to shareholder's equity indicate the superior performance of HBL in its lending activities as compared to Nabil despite low volume of non interest bearing deposits in its capital mix. However the loan and advances and investment to total deposit ration have upgraded the performance of Nabil.

- The mean ratio of investment to loan and advances of Nabil is higher than the combined mean ratio and that of HBL is lower than combined mean. This indicates that investment of Nabil is higher than that of HBL.

- The ratio of loan and advances and investment to deposit ration of Nabil is higher than that of HBL. This indicates the Nabil has been able to mobilize its funds more significantly than of HBL.

- Comparing the net profit and total expenses of these two banks, Nabil has the highest total net profit throughout the year and also the highest total expenses. Nabil has adopted risk-avoiding concept and headed towards investment in Government securities where as HBL is heading towards increasing advances with the concept of risk taking.

- The mean ratio of interest income to total income ratio has concluded that the contribution of interest income in total income mix of HBL is the highest. This means that major portion of total income of HBL is highly dependent on loan and advances. The interest expenses to total deposit ration indicates that the total cost of funds in HBL is the highest than that of Nabil. This shows that HBL has been unable to collect low cost deposit.

K. R. Joshi (2005), has conducted her study entitled "*Investment Policy of Commercial bank in Nepal*". A comparative study of Everest Bank with, Nabil Bank and Bank of Kathmandu" with following objectives;

- To discuss fund mobilization and investment policy of EBL, Nabil and Bank of Kathmandu.

- To evaluate the liquidity, efficiency and profitability and risk position, the growth ratios loan and advances and total investment with other variables.

- To analyze the trends of deposit utilization towards total investment and loan and advances.

➤ To conduct hypothetical test to find whether there is significant difference between the various important ration of EBL, Nabil and Bank of Kathmandu.

The research findings of the study were:

- The liquidity position of the EBL is comparatives better than Nabil and BOK . It has the highest cash and bank balance to total deposit, cash and bank balance to current assets ratio. EBL has good deposit collection and has made enough investment on Government securities but it has maintained moderate investment policy on loan & advances.

- From the analysis of assets management ratio or activity ratio, it can be concluded that EBL is comparatively average successful in its on balance operation in compared to NABIL and BOK . The mean ratio of loan and advances to total deposit of EBL is higher than Nabil and lower than BOK but total investment to total deposit of EBL is higher than BOK but lower than Nabil. The mean ration of investment on shares and debentures to total working fund of EBL is higher than Nabil and lower than BOK.

- In analysis of profitability, total interest earned to total outside assets of EBL is lowest at all. But overall analysis of profitability ratios, EBL is average profitable in comparison to other compared banks i.e., Nabil and BOK . From the viewpoint of risk ration, EBL has higher capital risk ration but average of credit risk ration in compared to Nabil and BOK.

- From the growth ratio analysis it can be concluded that EBL has maintained high growth ratios in total deposit, loan and advances and net profit but it has moderate position in investment. It means that the bank is successful in increasing its source of funds and its mobilization.

- The trends analysis of deposit, loan and advances, total investment and net profit and projection for next five years of EBL, Nabil and BOK reveals that the position of EBL in regarding to utilization of funds to earn is not better in comparison to Nabil but better than that of BOK.

P.R. Neupane (2007) has conducted a study on *"Investment Policy of Nepal SBI Bank Ltd"* to evaluate the investment policy of Nepal SBI bank with following objectives:

- ➢ To find out the Non Performing Assets position of the bank.
- ➢ To evaluate the Portfolio Management of the bank.
- ➢ To find out the bank investment on Priority sector.
- ➢ To analyze deposit utilization and its relationship with total investment and net profit of the bank.
- ➢ To suggest measure to improve the investment policy of the bank.

The main conclusions of the study were;
- ➢ The cash and bank balance position of NSBL with respect to deposit is better to serve its customers deposit withdrawal demands. It implies the satisfactory liquidity position of NSBL.
- ➢ The bank has not mobilized significant amount of fund on the Government securities and shares and debentures of other companies. But for the investment on shares and debentures of other companies, the security market of the country is not so developed. There are limited companies listed in the stock exchange.
- ➢ The study shows that about two third of the assets of the bank comprises loan and advance i.e. risky assets. Loans and advances is the most risky and most productive assets of the bank. High ratio suggests high risk and eventually high return of the bank. So, NSBL has taken optimum risk towards the mobilization of its fund to risky assets.
- ➢ The loan loss provision to total loans and advances ratios for the study has increasing trend.
- ➢ The lending portfolio of NSBL is not well managed and it is not properly diversified. Half of the fund is poured in a single sector i.e. industrial / production sector. If the industrial sector will be in slack, the bank will definitely suffer from it.

- The major source of fund of the bank is deposit from its customers and it is in increasing trend with reasonable growth rate.
- The earning assets of the bank loan and advances and investment are in increasing trend and the earning of the bank is also in increasing trend. This suggests that the quantity of the productive assets is also in increasing trend. Bank management not only should effort towards the increment of its total assets but also it should give due attention towards the increment of the quality of the assets for the better productivity.

2.4 Research Gap

Commercial banks have huge deposit collection. These deposit need to be properly utilized. Effective utilization of collected fund possible only through implementation of sound investment policy. NABIL and SCBNL are the best examples of commercial bank in Nepal, that have been able to mobilize the funds in an effective manner and achieved phenomenal growth and profit year after year by formulating and implementing sound investment policy.

Hence this study attempts to fulfill the prevailing research gap about the strength and weaknesses of the sample bank and serve as a valuable input in decision –making process of the concerned banks and other emerging banks in formulating appropriate investment practice. Similarly, 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 with SCBNL. This study has tried to indicate the effectiveness of investment practice of concerned banks.

CHAPTER - III
RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a way to systematically solve the research problem. It refers to the various sequential steps that are to be adopted by a researcher during the course of studying the problem with certain objectives. This chapter refers to the overall research method from the theoretical aspects to the collection and analysis of data. This study covers quantitative methodology in a greater extent and also uses the descriptive part based on both technical aspects and logical aspect.

This research tries to perform a well-designed, quantitative, and qualitative research in a very clear and direct way by using both financial and statistical tools.

3.2 Research Design

This study depends on the secondary data. It includes all the process of collecting, verifying and evaluating of past evidence systematically and objectively to reach final conclusion. Some statistical and accounting tools have been adopted to examine factors in this study. In this study descriptive and analytical research design has been done

3.3 Population and Samples

There are all together 15 commercial banks listed in Nepal Stock Exchange. For this research, those listed banks serve as population.

Among them, only two joint venture banks, viz. NABIL, SCBNL have been taken into account for research proposes as samples in this research study to compare their investment policies. They are two of the best performing JVB's in Nepal. Their profit per share, percentage of dividend paid per equity capital,

net profits are among the highest in commercial banks. They are equipped with research and analysis team, proper MIS, sufficient capital and skilled manpower. They also have access to Global financial markets. These factors put them in the best position, i.e. it gives them an edge over other banks. They are best suited to exploit the opportunities that are existent. They can easily redress problem faced by other and can also avoid risks by formulating and implementing sound investment policy.

3.4 Sources of Data

This study is mainly based on secondary data. The secondary sources of data collections are Balance Sheet, P&L Accounts of concerned banks, Nepal Stock Exchange's NEPSE report. Other relating data are obtained directly from authorized persons of concerned banks, regulating authorities i.e. Ministry of Finance, NRB budget speech, published books, banks bulletin, newspapers, previous studies, central library T.U., college libraries, Securities Exchange Board etc. The data are prerequisites for any project study. The data collection entails labor and time and it is the most necessary step in project study without which the study cannot be done.

3.5 Data Presentation and Analysis

Data presentation and analysis mechanism is the core of project study. This study heavily depends on selected financial and statistical tools to accomplish the objectives of the research project. The data extracted from financial, statistical, and accounting tools have been used. These results are then compared with each other to interpret the results. Two kind of tools have been used to achieve the purpose, namely: Financial tools and Statistical tools

3.5.1 Financial Tools

Financial tools basically help to analyze the strength and weakness of a firm. Ratio analysis being one of the important financial tools has been used in this study. In financial analysis a ratio is used as a benchmark for evaluating the

financial position and performance of a firm. Ratios help to summarize the large quantities of financial data and to make qualitative judgment about the firm's performance. The point to note is that a ratio indicates a quantitative relationship, which can be used to make a qualitative judgment.

There are several ratios involved in analyzing and interpreting the financial statement. In this study, basically four types of ratios have been used which are related to Investment policy of banks. They are Liquidity Ratio, Asset Management Ratios (Activity Ratio), Profitability Ratio and Risk Ratio.

3.5.1.1 Liquidity Ratios

Liquidity Ratio measures the firm's ability to meet its current obligation. Commercial banks collect fund from the community with a commitment to return depositor's fund, facilitate withdrawal on demand. A firm should ensure that it does not suffer from lack of liquidity and also that it does not have excess liquidity. It is necessary to strike a proper balance between high liquidity and lack of liquidity. The following ratios are evaluated under liquidity ratio.

3.5.1.1.1 Cash and Bank Balance to Total Deposit Ratio

They are the most liquid of current assets to pay off depositors immediately. This ratio is calculated by dividing cash and bank balance by total deposits. In order to bring about consistency in this research, checks for clearing have been excluded from cash and bank balance and included in other assets. Mathematically,

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

Cash and bank balance includes cash in local currency & foreign currency on hand or with banks. The total deposits consists of deposits in current account, savings account, fixed deposit account, money at call deposits, margin deposits

etc. A higher ratio indicates greater ability of banks to meet their deposits and vice-versa.

3.5.1.1.2 Cash and Bank Balance to Current Assets Ratio

This ratio measures the percentage of liquid assets i.e. cash and bank balance in the current assets of the firm. Higher ratio shows greater capacity of firms to meet cash demand. The ratio is calculated by dividing cash and bank balance by current assets. Mathematically,

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

3.5.1.1.3 Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how successfully the selected banks are utilizing their total deposits on loan and advances to generate profits. A higher ratio is indicative of better utilization of total deposits, but the same might not hold true from liquidity point of view. It is computed by dividing total loan and advances by total deposits. Mathematically,

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

3.5.1.1.4 Total Investment to Total Deposit Ratio

This ratio shows the utilization of firm's deposits on investment in government securities and purchasing shares and debentures of other companies. A high ratio is indicative of high success in mobilization of deposits in investments and vice-versa. This ratio can be calculated by dividing total investment by total deposits. Mathematically,

$$\text{Total Investment to Total Deposit Ratio X} \frac{\text{Total Investment}}{\text{Total Deposits}}$$

3.5.1.1.5 Investment on Government Securities to Total Working Fund Ratio

This ratio shows the percentage of total working fund invested in government securities. In other words, this ratio measures the extent to which the banks have been successful in mobilizing their total working fund on different type of government securities. The logic behind Investment in government securities by banks is to diversify the risk by not putting all the eggs in the same basket. This is also beneficial in the sense that banks are assured of adequate liquidity. A high ratio indicates better mobilization of funds as investment on government securities and vice-versa.

This ratio can be calculated by dividing total amount of investment in government securities by the total working fund. Mathematically,

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

3.51.1.6 Investment on Shares and Debentures to Total Working Fund Ratio

This ratio shows the percentage of total working fund invested in purchasing shares and bonds & debentures of other companies. Investment on shares and debentures to total working fund measures the extent to which the banks have been successful in mobilizing their total assets on shares and debenture of other companies to generate income. A high ratio indicates portion of investment on shares and debentures out of total working fund and vice-versa. This ratio is calculated by dividing the total amount of Investment is shares & debenture of other companies by total working fund. Mathematically,

$$\text{Investment on Shares \& Debentures to Total Working} = \frac{\text{Investment in Shares \& Debentures}}{\text{Total Working Fund}}$$

3.5.1.2 Profitability Ratio

The profitability ratios are calculated to measure the overall efficiency of a firm in terms of profit earning and performance. Profit is one of the major indicators of efficient performance of banks. One of the major objectives of banks is to earn profit, so profit is very crucial for the survival of banks. To meet various objectives like, maintaining good liquidity position, meet internal obligations, expansion of banking services, finance short- term government needs, commercial banks need to earn sufficient profit. A higher profit ratio shows higher efficiency of a bank.

The following ratios related to investment policy are calculated under profitability ratios:

3.5.1.2.1 Return on loan and advance ratio

Return on loan and advances ratio indicates how efficiently the bank has utilized its resources in the form of loan and advances to generate good return. It measures the earning capacity of a commercial bank. This ratio is calculated by dividing net profit by loan and advances. Mathematically,

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

3.5.1.2.2 Return on total assets

Return on total assets shows the overall profitability of working fund or total assets. Return on working fund ratio is a measuring rod of the profitability with respect to each financial resource investment of banks asset. If the banks total working fund is well managed and utilized efficiently, return on such assets will be higher and vice-versa. This ratio is calculated by dividing net profit by total working fund. It is calculated by dividing net profit by total assets. Mathematically,

$$\text{Return on Total Assets X} \frac{\text{Net Profit / Loss}}{\text{Total Working Fund}}$$

3.5.1.2.3 Total Interest Earned to Operating Income Ratio

This ratio is measured to find out the ratio of interest income with operating income of the bank. It shows how efficiently the banks have mobilized their resources in interest bearing assets i.e., loan and advances investment in government securities. Total operating income includes interest income, commission fees & discount, dividend income, foreign exchange income etc. This ratio shows the magnitude of interest income in total income. It is calculated by dividing total interest earned by net operating income. Mathematically,

$$\text{Total Interest Earned to Total Operating Income Ratio} = \frac{\text{Total Interest Earned}}{\text{Total Operating Income}}$$

3.5.1.3 Risk Ratios

Risk means uncertainty, variability of return, which is inherent in any investment portfolio of a business enterprise. Risk is an important element since investment with greater risk requires higher return than investments with lower risk. Risk ratios measures the degree of risk involved in various financial operations. The possibility of risk involved in bank's financial operations makes the bank investment a challenging task. As the notion goes," no risk no gain", therefore, if a bank expects high return on its investment it must be prepared to accept the risk and manage it efficiently.

The following risk ratios are used to analyze and interpret the financial data and investment policy.

3.5.1.3.1 Credit Risk Ratio

Normally, every credit is good at the time it is sanctioned. Most of the bank failures are due to shrinkage in the value of loan and advances. Loan is a risky asset and risk of non-repayment of loan in known as credit risk or default risk. Credit risk ratio measures the possibility of loan going into default. While sanctioning loans banks measure credit risk involved in the project. Credit risk

is calculated by dividing total loan and advances by total assets. Mathematically,

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

3.5.1.3.3 Growth Ratios

The growth ratios represent how the commercial banks are maintaining their economic and financial condition. As a conventional rule, a higher ratio is preferable. A high ratio indicates better performance of the banks and vice-versa. The growth ratios like Growth ratio of total deposit, Growth ratio of total investment, Growth ratio of loan and advances and Growth ratio of net profit are directly related to the fund-mobilization and investment of the banks are calculated. So on chapter four, the details of the above ratios are explained.

3.5.2 Statistical Tools

Some important statistical tools have been used to present and analyze the data for achieving the objectives of this study. Co-efficient of variance, Co-efficient of correlation, standard deviation, least square, linear tend analysis etc. have been used for the purpose of investment policy analysis.

3.5.2.1 Arithmetic Mean (Average)

It represents the entire data by a single value. It provides the gist and gives the bird's eye view of the huge mass of unwieldy numerical data. It is calculated as:

$$\overline{X}$$

Where:

$\overline{X}$ =   Arithmetic mean

N   =   Number of observations

X   =   Sum of observation

3.5.2.2 Standard deviation (S.D)

The standard deviation measures the absolute dispersion. The lower the percentage of dispersion lowers the standard deviation. The lower percentage of dispersion also projects a high degree of uniformity of the observations as well as homogeneity of the series. A large value of standard deviation suggests exactly the opposite. In this study standard deviation of different ratios are calculated. Mathematically,

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

3.5.2.3 Co-efficient of Variation (C.V.):

C.V. is the proportion of standard deviation with mean multiplied by 100. Mathematically,

$$C.V. = \frac{S.D.\,|100\%}{Mean}$$

3.5.2.4 Karl Pearson's Correlation Co-Efficient Analysis

This statistical tool interprets and identifies the relationship between two or more variables. It identifies whether two or more variables are positively correlated or negatively correlated Statistical tool helps to analyze the relationship between these variables and aids the selected banks to prepare appropriate investment policy relating to deposit collection, fund utilization (loan and advances and investment) and profit maximization.

Karl Pearson's correlation coefficient (r) can be obtained by using the following formulae.

$$r = \frac{xy}{\sqrt{x^2\ y^2}} \qquad \text{Where } x = (\,x - \bar{x}\,), \quad y = (\,y - \bar{y}\,)$$

Here,

ϕx = Sum of observation in series x

$\phi\ y$ = Sum of observation in series y

$\phi\ x^2$ = Sum of squared observation in series x

$\phi\ y^2$ = Sum of squared observation in series y

$\phi\ xy$ = Sum of the product of observation in series x & y.

The co-efficient of correlation (r) lies between -1 to $+1$, If r = $+1$ there exists a significant relationship between the two variables. If r = -1, then the two variables are negatively correlated or there is no significant relationship between the two variables.

3.5.2.5 Trend analysis

Under this topic the trend of deposits, loan and advances, investments and net profit of NABIL and SCBNL from F/Y 2002/2003 to F/Y 2006/2007 are analyzed. It also aids in making forecasting for the next five years up to 2011/2012. The following trend value analysis has been used in this study.

i.   Trend Analysis of Total Deposits
ii.   Trend Analysis of loan and advances
iii. Trend Analysis of Total Investment
iv.   Trend Analysis of Net Profit

CHAPTER-IV

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This is an analytical chapter, where an attempt has been made to analyze and evaluate major financial items, which have an impact on investment management and fund mobilization of NABIL and SCBNL. A number of financial ratios -- crucial in evaluating the funds mobilization system of commercial banks -- have been calculated and analyzed in this chapter.

4.2 Liquidity Ratios

Liquidity ratios measure the firm's ability to meet its current obligation. The following ratios which measure the liquidity position of banks are calculated.

Cash and bank balance to total deposit ratio:

This ratio is calculated by dividing cash and bank balance by total deposits. Table 4.1 presents with the cash and bank balance to total deposits ratio of NABIL and SCBNL.

Table 4.1

Cash and Bank Balance to Total Deposit Ratio

F/Y	NABIL	SCBNL
2002/2003	5.13	6.23
2003/2004	6.78	5.21
2004/2005	8.51	8.06
2005/2006	6.87	9.56
2006/2007	3.83	5.75
Mean	6.22	6.96
S.D.	1.6	1.6
C.V.	25.72	23.00

Source: Appendix -4

The figures shown in table 4.1 reveals that the cash and bank balance to total deposit of both NABIL and SCBNL are in fluctuating trend. NABIL had a high

ratio of 8.51% in F/Y 2004/2005 and a low ratio of 3.83% in F/Y 2006/2007. Similarly, SCBNL has a high of 9.56% in F/Y 2005/2006 and a low of 5.21% in F/Y 2003/2004. The average mean ratio of SCBNL is slightly higher than NABIL i.e., 6.96%>6.22%. This shows, SCBNL's readiness to meet customer requirement better than NABIL. The C.V. of SCBNL is slightly lower than that of NABIL i.e. 23% <25.72%. On its basis, it can be concluded that SCBNL ratios are more consistent than that of NABIL's.

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

Cash and Bank Balance to Current Assets Ratio

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

Table 4.2 deals with the cash and bank balance to current assets ratios on the basis of available data for this study.

Table 4.2

Cash and Bank Balance to Current Asset Ratio

F/Y	NABIL	SCBNL
2002/2003	4.49	5.00
2003/2004	5.93	4.42
2004/2005	6.88	7.17
2005/2006	5.80	8.51
2006/2007	3.29	5.03
Mean	5.28	6.03
S.D.	1.25	1.56
C.V.	23.76	26.00

Source: Appendix -5

The figures calculated in table 4.2 shows that the cash and bank balance to current assets of both NABIL and SCBNL are in a fluctuating trend. NABIL

has maintained a high ratio of 6.88% in F/Y 2004/05, and a low ratio of 3.29% in 2006/07. Similarly, SCBNL has had a high of 8.51 in F/Y 2005/06 anticipating higher cash requirement depositors in this F/Y. It has a low ratio of 4.42% in F/Y 2003/2004. The average mean ratio of SCBNL is slightly higher than NABIL. The C.V. of SCBNL is greater than that of NABIL i.e., 26%>23.76%.

It shows that the SCBNL ratios are less consistent than that of NABIL. The above information does not show any significant difference between the JVB's with regards to meeting customer's daily cash requirement. Both have fared well in meeting their depositor's daily cash requirement and investing the surplus fund in other productive areas.

4.3 Assets Management Ratios

The following ratios measure the asset management ability of NABIL and SCBNL.

Loan and Advances to Total Deposit Ratio

This ratio is calculated by dividing total loan and advances by total deposits. The data tabulated in table 4.3 shows the loan and advances to total deposit ratio of NABIL and SCBNL.

Table 4.3

Loan and Advances to Total Deposit Ratio

F/Y	NABIL	SCBNL
2002/2003	52.56	36.82
2003/2004	50.31	35.97
2004/2005	60.34	32.00
2005/2006	60.55	31.63
2006/2007	75.05	43.55
Mean	59.76	35.99
S.D.	8.66	4.31
C.V.	14.50	11.97

Source: Appendix -6

The above shows that the loan and advances to total deposit of both the banks have a fluctuating trend. NABIL had a high ratio of 75.05% in F/Y 2006/07 and a low ratio of 50.31% in F/Y 2003/04. Accordingly, SCBNL had a high of 43.55% and a low of 31.63%. SCBNL's loan and advances to total deposit has had a decreasing trend till F/Y 2005/06, which has dramatically increased in the year 2006/07. The mean ratio of NABIL is above 1.66 times that of SCBNL i.e. 59.76%>35.99%. NABIL seems stronger in terms of mobilization of its total deposits as loan and advances when compared to SCBNL. In terms of C.V., both seem to be equally consistent.

It can be concluded that, NABIL has been more successful in mobilizing its total deposits as loan and advances than SCBNL. On the contrary, a high ratio should not be perceived as a better state of affairs from the point of view of liquidity, as loan and advance are not as liquid as cash and bank balance and other investment.

Total Investment to Total Deposit Ratio

This ratio is calculated by dividing total investments by total deposits. The data presented in table 4.4 reveal the total investment to total deposit ratio of NABIL and SCBNL.

Table 4.4
Total Investment to Total Deposit Ratios

F/Y	NABIL	SCBNL
2002/2003	48.64	61.95
2003/2004	52.88	58.58
2004/2005	44.85	52.22
2005/2006	41.33	53.68
2006/2007	29.25	50.18
Mean	43.39	55.92
S.D.	11.32	4.32
C.V.	26.09	7.81

Source: Appendix-7

The above information proves a highly fluctuating trend in total investment to total deposit ratios of NABIL and SCBNL. NABIL has a high ratio of 52.88%

and a low ratio of 29.25%. SCBNL, on the other hand had a high ratio of 61.95% and a low ratio of 50.18% in F/Y2003/2004 and 2006/2007 respectively. SCBNL has a high mean ratio than NABIL i.e., 55.92%>43.39%.

From mean ratio perspective, SCBNL has been more successful in mobilization of deposits on various forms of investment. From C.V.'s viewpoint, SCBNL is better in terms of consistency than NABIL.

In conclusion, the above analysis reveals that SCBNL has been more successful in mobilizing its resources on various forms of investment. What is worth mentioning is that interest on treasury bills, inter-bank lending and placements are at an all time low level, so SCBNL has not done itself justice by investing in low yield, less risky and risk free assets.

Investment in Government Securities to Total Working Funds Ratio

This ratio is calculated by dividing investment on government securities by total working fund. The facts presented in table 4.5 reveal the nature of ratios between the investment in government securities to total working funds of NABIL and SCBNL.

Table 4.5
Investment in Government Securities to Total Working Fund Ratio

F/Y	NABIL	SCBNL
2002/2003	14.88	24.85
2003/2004	22.90	30.81
2004/2005	21.53	31.56
2005/2006	21.47	33.22
2006/2007	13.75	32.49
Mean	18.91	30.59
S.D.	9.23	2.98
C.V.	48.76%	9.75%

Source: Appendix-8

From the above figures, it is clearly seen that SCBNL has an increasing trend of investment of government securities to total working fund over the study

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period while NABIL has more of a fluctuating trend. NABIL has a higher ratio 22.90% in F/Y 2003/04 and a low ratio of 13.75% in F/Y 2006/2007. Similarly, SCBNL has a high ratio of 33.22% in F/Y 2005/06 and low ratio of 24.85% in 2002/2003. When mean ratio is considered, NABIL seems to be slightly weaker than SCBNL in mobilizing of total assets as Investment in Government securities i.e. (18.91% <30.59%). Also, when we compare C.V. of both, it reflects that ratios of NABIL are less consistent than SCBNL i.e., (48.76%>9.75%).

From the above information we can conclude that SCBNL has invested larger portion of working fund in government securities than NABIL. The ratios also indicates that both the banks have no concrete or certain investment policy with regards to what percentage of working fund to be invested in purchasing government securities.

Investment on Share and Debentures to Total Working Fund Ratio

The investment on share and debentures to total working fund ratio of NABIL and SCBNL have been shown in table 4.6 below.

Table 4.6

Investment on Share and Debentures to Total Working Fund Ratio

F/Y	NABIL	SCBNL
2002/2003	0.102	0.058
2003/2004	0.123	0.060
2004/2005	0.133	0.053
2005/2006	0.130	0.047
2006/2007	0.156	0.060
Mean	0.129	0.056
S.D.	0.017	0.005
C.V.	13.23	8.77

Source: Appendix- 9

This table clearly reveals that both the banks have invested miniscule percentage of total working fund in purchasing share and debentures of other companies. In either case the ratio is less than 0.2%.

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NABIL has invested slightly higher amount of total working fund on shares and debenture than SCBNL. It also has a mean ratio higher than SCBNL. It indicates that NABIL has been more successful in mobilizing it funds as Investment in shares and debenture than SCBNL, though the fund invested is marginal in comparison to total investment portfolio in case of both. The table also shows NABIL's increasing trend in investment on shares and debentures except for F/Y 2005/06, where as SCBNL has a fluctuating trend through out the period of study. In terms of C.V. both the banks has remained fairly consistent though SCBNL's variability is slightly less than that of NABIL i.e., (8.77%<13.23%).

4.4 Profitability Ratio

To study the profitability of the investment of these institutions, the following ratios are calculated under profitability ratios:

Return on Loan and Advances Ratio

This ratio is calculated by dividing net profit by loan and advances. The information provided in table 4.7 reveals the level of profitability of the investments in relation to return on loan and advances for the study period.

Table 4.7

Return on Loan and Advances Ratio

F/Y	NABIL	SCBNL
2002/2003	3.50	7.58
2003/2004	3.48	8.41
2004/2005	5.13	8.45
2005/2006	5.33	8.03
2006/2007	4.74	6.40
Mean	4.44	7.77
S.D.	0.78	0.76
C.V.	17.84	9.72

Source: Appendix -10

This table shows that the ratio of return on loan and advances of SCBNL are better than NABIL in all F/Y, through they have a fluctuating trend. NABIL's ratios have witnessed a fluctuating trend. NABIL has recorded a high ratio of 5.33% in F/Y 2005/06, and a low ratio of 3.48% in F/Y 2003/04. Similarly, SCBNL recorded a high of 8.45% in F/Y 2004/05 and a low of 6.40% in F/Y 2006/07.

The comparison of mean ratio reveals that SCBNL has a higher ratio than NABIL i.e., 7.77%>4.44%. This shows that SCBNL has been more successful in maintaining its higher return on loan and advances than NABIL.

C.V. of SCBNL is significantly lower than NABIL i.e. 9.72%>17.84%. It proves that NABIL has higher variability of ratio than SCBNL.

In conclusion, it can be said that NABIL's profit earning capacity by utilizing available resources is weaker compared to SCBNL, nevertheless NABIL is making significant improvements in this regard.

Return on Total Working Fund Ratio

This ratio is calculated by dividing net profit by total working fund. Table 4.8 below reflects the profitability position with respect to total assets of NABIL and SCBNL.

Table 4.8

Return on Total Working Fund Ratio

F/Y	NABIL	SCBNL
2002/2003	1.59	2.23
2003/2004	1.51	2.55
2004/2005	2.50	2.38
2005/2006	2.66	2.25
2006/2007	2.96	2.43
Mean	2.24	2.37
S.D.	0.585	0.12
C.V.	26.10	5.00

Source: Appendix -11

The above table 4.8 reveals that the ratio of return on total working fund is in decreasing trend in case of NABIL upto F/Y 2003/04. From F/Y 2004/05 the ratio has an increasing trend. It has surpassed SCBNL since F/Y 2004/05. NABIL has had a high ratio of 2.96% in F/Y 2006/07 and a low ratio of 1.51% in F/Y 2003/04. Similarly, SCBNL has had a high of 2.55% and a low of 2.23% in F/Y 2003/04 and 2002/03 respectively.

SCBNL has a slightly high mean ratio than NABIL i.e., 2.37>2.24. It reveals that SCBNL has been able to earn high profit on total working fund in comparison to NABIL. One point worth making here is that NABIL has managed and utilized it assets more efficiently than SCBNL from F/Y 2004/05 onwards and its return on assets have also been higher. SCBNL has not managed its assets well post F/Y 2004/2005. Its return on total assets has also been lower in comparison to NABIL in F/Y 2005/06 and 2006/07.

From the viewpoint of C.V., SCBNL's ratios are more consistent than NABIL i.e. 5% < 26.10%. Both banks need to exert more effort in mobilizing its working assets in an efficient manner.

Total Interest Earned to Total Operating Income Ratio

This ratio is calculated by dividing total interest earning by net operating income. The following table 4.9 shows interest earned to total operating income ratio of NABIL and SCBNL.

Table 4.9
Interest Earned to Total Operating Income Ratio

F/Y	NABIL	SCBNL
2002/2003	80.51	75.78
2003/2004	68.34	70.06
2004/2005	75.93	66.60
2005/2006	75.10	68.51
2006/2007	74.30	67.29
Mean	74.84	69.65
S.D.	3.90	3.28
C.V.	5.20	4.71

Source: Appendix - 12

The above shows that both the banks have a fluctuating trend of interest earning ratio. SCBNL has a decreasing trend of interest earned to total operating income ratio except for F/Y 2005/06. The higher and lower ratios of NABIL are 80.51% in F/Y 2002/2003 and 68.34% F/Y 2003/2004 respectively. SCBNL has a high of 75.78% in F/Y 2002/2003 and a low of 66.60% in F/Y 2004/2005.

The mean ratio of NABIL is higher than SCBNL i.e., 74.84%>69.65%. On the basis of mean ratio, we can say that NABIL has been more successful in earning higher amount of interest income out of total operating income.

On the other hand, the variability in interest earned to total operating income of both the banks is similar. Both have been equally consistent in their ratios.

From the above analysis, it can be concluded that NABIL has mobilized its funds in interest bearing assets better than SCBNL. It is also evident that SCBNL has given more priority to non-fund based income to earn higher profit than NABIL. NABIL needs to increase its income from off balance sheet operation as well.

4.5 Risk Ratio

The following risk ratios have been used to measure the risk involved in financial operation of NABIL and SCBNL:

Credit Risk Ratio

This ratio is calculated by dividing total loan and advances by total assets. The comparative figures calculated and presented in table 4.10 are instrumental to examine the level of worth of the performance of these institutions in terms of credit risk management.

Table 4.10

Credit Risk Ratio

F/Y	NABIL	SCBNL
2002/2003	52.56	36.82
2003/2004	50.31	35.97
2004/2005	60.34	32.00
2005/2006	60.55	31.63
2006/2007	75.05	43.55
Mean	59.76	35.99
S.D.	8.67	4.31
C.V.	14.51	11.97

Source: Annual reports of SCBN and NABIL

The above table shows that NABIL ratios are in a decreasing trend till F/Y 2003/2004. There after they have an increasing trend. The ratios of SCBNL have a decreasing trend upto F/Y 2005/2006.

NABIL has a high ratio of 75.05% in F/Y 2006/2007 and a low ratio of 50.31% F/Y 2003/2004. Similarly, SCBNL has had a high ratio of 43.55% in F/Y 2006/2007 and a low ratio of 31.63% in F/Y 2005/2006.

The mean ratio of SCBNL is lower than that of NABIL ie.,35.99%<59.76%.This indicates that NABIL has more exposure to credit risk than its counterpart. The decreasing trend of SCBNL's ratios projects a picture that SCBNL is trying to reduce its credit risk. From the point of view of C.V., both banks seem to have had consistent ratios during the study period.

4.6 Growth Ratios

Under this topic the following ratios which directly related to fund mobilization and investment of the banks are calculated:

Growth rate of total deposits

Table 4.11 presents with the comparative facts and figures related to the growth rates of total deposits.

Table 4.11

Growth Rate of Total Deposits

(Rs. Millions)

F/Y	NABIL		SCBNL	
	Total Deposits (Rs.)	%	Total Deposits (Rs.)	%
2002/2003	15839.00	0	15430.05	0
2003/2004	15506.43	(2.1)	15835.75	2.63
2004/2005	13447.66	(13.28)	18755.63	18.44
2005/2006	14119.03	4.99	21161.44	12.83
2006/2007	14,587.00	3.31	19335.09	(8.63)
Mean		(1.42)		5.05
S.D.		7.28		7.54

Source: Annual reports of SCBN and NABIL

The growth rate of deposits of both the banks has been remained in a fluctuating trend. The average growth rates of deposits of SCBNL are significantly higher than NABIL i.e. 5.05%>(1.42%). During the study period NABIL has experienced a negative growth. It also reflects NABIL dismal performance in collecting more deposits. NABIL has experienced negative growth rate in F/Y 2003/2004 and 2004/2005 respectively. NABIL has consciously decreased deposits by 2.1% in F/Y 2003/2004 and 13.28% in F/Y 2004/2005 as per its strategy of shedding high cost and unprofitable deposit.

On the contrary, SCBNL has been successful in increasing its deposit year after year except for F/Y 2006/2007 where it has had a negative growth. This is a solid proof of its high quality service, image, and credibility in the mind of depositors.

Growth Rate of Total Loan and Advances

Table 4.12 below presents with the comparative display of the growth rate of total loan and advances of both the projects.

Table 4.12

Growth Rate of Total Loan and Advances

(Rs. Millions)

F/Y	NABIL		SCBNL	
	Total Loan & Advances (Rs.)	%	Total Loan & Advances (Rs.)	%
2002/2003	8324.44	0	5681.35	0
2003/2004	7801.85	(5.28)	5696.18	0.26
2004/2005	8113.68	4.00	6000.16	5.35
2005/2006	8548.66	5.36	6693.86	11.54
2006/2007	10,947.00	28.06	8420.86	25.80
Mean		6.23		8.59
S.D.		10.17		9.57

Source: Annual reports of SCBN and NABIL

Based on table 4.12, the growth rate of total loan and advances of both the banks are in a fluctuating trend. The average growth rate of total loan and advances of SCBNL is better than NABIL i.e. 8.59%>6.23%. This ratio can be misleading in the sense that the ratio of loan and advance to current assets, total deposits, total working fund of SCBNL is comparatively less than that of NABIL. NABIL has experienced a negative growth in F/Y 2003/2004.

Probably it was due to a cautious approach taken by the bank in consolidating its business instead of exploring high-risk new business.

Growth rate of total investment

Table 4.13 shows the comparative display of growth rate of the total investment over the specified period of time.

Table 4.13

Growth Rate of Total Investment

(Rs. Millions)

F/Y	NABIL		SCBNL	
	Total Investment (Rs)	%	Total Investment (Rs)	%
2002/2003	7704.31	0	9559.18	0
2003/2004	8199.51	6.43	9275.88	(2.96)
2004/2005	6031.18	(26.44)	10357.68	11.66
2005/2006	5835.95	(3.24)	11360.33	9.68
2006/2007	4267.23	(26.88)	9702.50	(14.59)
Mean		(10.03)		0.76
S.D.		11.94		5.58

Source: Annual reports of SCBN and NABIL

The growth rates of total investment of both the banks are in a fluctuating trend. NABIL has witnessed a high growth rate of 6.43% in F/Y 2003/2004 and a negative growth rate of 26.88% in F/Y 2006/2007.

On the other hand SCBNL has had a high growth rate of 11.66% in F/Y 2004/2005 and highest negative growth rate of 14.59% in F/Y 2006/2007. The average growth ratio of investment of SCBNL seems to be higher than NABIL i.e., 0.76%>(10.03%).

Growth Rate of Net Profit

The comparative figures to reveal the growth rate of net profit for the undertaken time period have been presented in table 4.14 hereunder:

Table 4.14

Growth Rate of Net Profit

(Rs. Millions)

F/Y	NABIL		SCBNL	
	Net Profit (Rs.)	%	Net Profit (Rs.)	%
2002/2003	291.38	0	430.83	0
2003/2004	271.64	(6.77)	479.21	11.23
2004/2005	416.24	53.23	506.93	5.78
2005/2006	455.32	9.39	537.80	6.09
2006/2007	519	13.99	539.20	0.26
Mean		13.97		4.67
S.D.		18.77		3.80

Source: Annual reports of SCBN and NABIL

The growth rate of net profit of both the banks has a fluctuating trend. NABIL has recorded a high growth rate of 53.23% in F/Y 2004/2005 and a low negative growth rate of 6.77% in F/Y 2003/2004. Similarly, SCBNL has a high growth rate of 11.23% in F/Y 2003/2004 and a low growth rate of 0.26% in F/Y 2006/2007. Overall, SCBNL has been successful in increasing its net profit year after year though not in a manner its stakeholders would have liked it to.

The mean growth rate of NABIL is higher than SCBNL i.e., 13.97%>4.67%. This is due to a surge in net profit of NABIL by 53.23% in F/Y 2004/2005 over the previous F/Y. This sudden surge in net profit has made the growth ratios of NABIL unstable in comparison to SCBNL.

4.7 Statistical Analysis

Under this, some statistical tools such as coefficient of correlation analysis between different variables, trend analysis of deposits, loan and advances, investment and net profit as well as hypothesis test (t-statistic) are used to achieve the objectives of the study.

The following section deals with the various statistical analysis of the investment effectiveness of these two projects.

Coefficient of Correlation Analysis

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

Coefficient of Correlation between Deposits and Loans and Advances

The coefficient of correlation between deposits and loan and advances measures the degree of relationship between them. In this study, the present researcher has taken deposit as an independent variable denoted by (x) and loans and advances as dependent variable (y). The main objective of calculating 'r' between these two variables is to justify whether deposits are significantly used as loan and advances or not.

Table 4.15 shows the value of 'r' r^2, PEr and 6PEr between total deposits and loans and advances of NABIL and SCBNL during the study period. .

Table 4.15

Correlation between Deposit and Loan and Advances

Bank	Evaluation Criteria			
	R	**r^2**	**PEr**	**6PEr**
NABIL	0.1177	0.0138	0.2975	1.7849
SCBNL	0.595	0.353	0.1948	1.17

Source: Appendix – A1&A2

In the table, the coefficient of correlation between deposits and loans and advances in case of NABIL is 0.1177. This indicates that there exists a somewhat positive relationship between deposit and loan and advances. The calculated value of (r^2) or coefficient of determination is 0.0138. This means

1.38% of variation of the dependent variable (loan and advances) has been explained by the independent variable (deposit). When the value of 'r' i.e., 0.1177 is compared with six times the probable error or 6PEr. i.e., 1.7849, we can say that there exists no significant relationship between deposits and loan advances because 'r' is lower than six times PEr i.e. 0.1177<1.7849.

The coefficient of correlation 'r' between deposits and loan and advances incase of SCBNL is 0.595, which gives us an indication of higher positive correlation between them. Similarly, the value of coefficient of determination (r^2) is found to be 0.353. This shows that 35.30% variation of dependent variable (loan and advances) has been explained by the independent variable (deposits). The value of 'r' is less than six times PE.r. i.e. 0.595>0.1.17.

From the above analysis, it can be concluded that though both the banks show positive relationship between deposits and loan and advance, the relationship is highly significant in case of SCBNL and the value of (r^2) shows higher percentage of dependency. In case of NABIL the relationship is less significant and (r^2) shows lower percentage of dependency. It indicates SCBNL has been more successful in utilizing its deposits in a proper manner than NABIL.

To sum up, the increase in loan and advance is not due to effective mobilization of deposits rather other factors have played a greater role in increase in loan and advances.

Coefficient of Correlation between Deposit and Total Investment
Coefficient of correlation between deposit and total investment measures the degree of relationship between these two variables. Here, the deposit is taken as independent variable (x) and the variable dependent on deposits is total investment, which is denoted by (y). The purpose of calculating 'r' is to judge whether deposits are significantly mobilized as Investments or not.

Table 4.16 shows the value of 'r' (r^2) PEr and 6PEr of NABIL and SCBNL during the study period.

Table 4.16

Correlation between Deposit and Total Investment

Bank	Evaluation Criteria			
	R	**R^2**	**PER**	**6 PER**
NABIL	0.64	0.409	0.178	1.07
SCBNL	0.953	0.908	0.028	0.167

Source: Appendix – A3&A4

The coefficient of correlation 'r' between deposits and total investment in case of NABIL is 0.64, which indicates a positive correlation between deposits and total investment. Coefficient of determination (r^2) is 0.409. This indicates almost 41% of variation of the dependent variable has been explained by independent variable. The value of 'r' i.e. 0.64 is less than six times PEr. This means that there is not any significant relationship between deposits and total investment.

The coefficient of correlation 'r' between deposits and total investment in case of SCBNL is 0.953, which indicates a positive relationship between the two variables. The coefficient of determination (r^2) is 0.908. This indicates that 91% of the variation of the dependent variable has been explained by independent variable. Moreover 'r' is greater than six times P.E.r, which further states that there is a significant relationship between deposits and total investment.

In conclusion, it can be said that both the banks show significant relationship between total deposits and total investment. However, the relationship is more significant in case of SCBNL.

Coefficient of Correlation between Deposit and Net Profit

The coefficient of correlation between deposit and net profit measures the degree of relationship between these two variables. Here, deposit is independent variable (x) and net profit is dependent variable (y).

The main purpose of calculating between these two variables is to justify whether net profit is significantly correlated with deposits or not.

Table 4.17 shows the value of r, r^2, PEr and 6Er of NABIL and SCBNL during the study period.

<div align="center">

Table 4.17

Correlation between Deposit and Net Profit

</div>

Bank	Evaluation Criteria			
	r	**r^2**	**PEr**	**6PEr**
NABIL	-0.70	0.49	0.15	0.92
SCBNL	0.75	0.56	0.132	0.79

Source: Appendix – A5 & A6

The coefficient of correlation between deposits and net profit in case of NABIL is –0.70, which shows a negative relationship between deposits and net profit. It has been able to increase its net profit despite shedding of Rs. 2 billions in deposits. The coefficient of determination (r^2) is 0.49, which indicates 49% of the variation of the dependent variable (net profit) has been explained by the independent variable (deposits). The value of 6PEr is greater than 'r' i.e. 0.92>-0.70. This states that there exists an insignificant relationship between deposits and net profit.

The coefficient of correlation between deposits and net profit in case of SCBNL is 0.75, which indicates a positive relationship between these variables. The value of (r2) is 0.56 indicates that 56% of the variation of the dependent variable has been explained by the independent variable. The value

of 'r' is less than 6PEr i.e. 0.75<0.79, which states that these exists a positive relationship between deposit and net profit though not highly significant.

From the above analysis, it can be concluded that NABIL shows negative relationship or insignificant relationship and SCBNL shows positive relationship between deposit and net profit. The value of (r^2) in case of NABIL shows lower percentage of dependency and the same in case of SCBNL shows higher percentage of dependency. The increase in net profit in case of SCBNL is due to effective mobilization of deposits and other factors have a lesser role to play in increase in net profits. SCBNL has been more successful in mobilizing its deposits to yield higher profits year after year.

Coefficient of Correlation between Deposits and Interest Earned

The coefficient of correlation between deposits and interest earned measure the relationship between these two variables. Here deposit is independent variable (x) and interest earned is dependent variable (y). The main objective of calculating 'r' between these two variables is to justify whether deposit is significantly used to earn interest or not.

For the purpose of statistical analysis of the correlation between the deposits and interests earned the present researcher has developed comparative figures in table 4.18.

Table 4.18

Correlation between Deposit and Interest Earned

Bank	Evaluation Criteria			
	r	r^2	PEr	6PEr
NABIL	0.88	0.78	0.067	0.40
SCBNL	-0.50	0.25	0.23	1.35

Source: Appendix – A7& A 8

The information in this table reveals that the coefficient of correlation 'r' between deposit and interest earned in case of NABIL is 0.88, which indicates

a positive relationship between these variables. When deposits increased, the interest income subsequently increased but when it fell, the interest income also fell. The coefficient of determination (r^2) is 0.78, which shows that 78% of the variation of dependent variable has been explained by independent variable. The value of six times PEr is less than 'r' i.e. 0.40<0.0.88. This states that there exists significant relationship between deposit and interest earned.

The coefficient of correlation 'r' between deposit and interest earned in case of SCBNL is –0.50, which projects a negative relationship between these variables. Its interest income has decreased despite an increase in total deposits. The coefficient of determination (r^2) is 0.25, which shows that 25% of the variation of dependent variable has been explained by the independent variable. The value of 'r' i.e. –0.50 is considerably less than six times PEr. This shows that there is insignificant relationship between the interests earned and total deposits.

In conclusion, the relationship between deposit and interest earned in case of NABIL is highly significant with NABIL showing higher percentage of dependency and the relationship between the variables is insignificant in case of SCBNL. In case of NABIL effective mobilization of deposits has had a major role to play in its earnings where as other factors are responsible in the earnings of SCBNL.

Coefficient of Correlation between Loan and Advances and Interest Paid
The coefficient of correlation between loan and advances and interest paid measures the relationship between these two variables. Here, loan and advances is independent variable (x) and interest paid is dependent variable (y). The purpose of calculating 'r' between these variables is to establish whether increase in loan advances has any role to play in decrease in Interest expenses and vice-versa.

Table 4.19 reveals the values of r, r^2, PEr and 6PEr of NABIL and SCBNL during the period of study.

Table 4.19

Correlation between Loan and Advances and Interest Paid

Bank	Evaluation Criteria			
	r	R^2	PEr	6PEr
NABIL	0.57	0.33	0.203	1.22
SCBNL	-0.50	0.25	0.225	1.35

Source: Appendix – A9&A 10

The calculated values of 'r' of both the banks reflect a negative relationship between loan and advances and Interest paid.

The coefficient of determination (r^2) in case of both the banks shows a lower degree of dependency.

The values of PEr is considerably greater than 'r' in both the cases, which states that there does not exist any significant relationship between loan and advances and interest paid during the study period for the above mentioned banks. In conclusion, no relationship could be established between the variables in case of both the banks.

4.7 Trend Analysis and Projection for Next Five Years

This is known as time series analysis. The objectives of this analysis are to analyze the trend of deposit collection, its utilization and net profit of NABIL and SCBNL. This topic analyzes the trend of deposits, loan and advances, total investment and net profit and its projection for the next five years the basis of past performance and records available.

Analysis of Trend Value of Total Deposits

Under this topic, based on the trend values of deposit from F/Y 2002/2003 to 2006/2007, an attempt has been made to forecast the projection for next five years, i.e. upto F/Y 2011/2012.

The following table 4.20 shows the trend values of deposits from F/Y 2002/2003 to F/Y 2011/2012

Table 4.20

Trend Values of Total Deposit of NABIL and SCBNL

(Rs. Million)

F/Y	Trend Value of NABIL	Trend Value of SCBNL
2002/2003	15478.10	15476.45
2003/2004	15088.96	16790.02
2004/2005	14699.82	18103.59
2005/2006	14310.68	19417.16
2006/2007	13921.54	20730.73
2007/2008	13532.40	22.44.30
2008/2009	13143.26	23357.87
2009/2010	12754.12	24671.44
2010/2011	12364.98	25985.01
2011/2012	11975.84	27298.58

Source: Appendix –A 11 &A 12

From the above comparative table, it is clear that trend values of SCBNL is in an increasing trend. If other things remain unchanged the total deposit of NABIL is predicted to be Rs. 11975.84 million and that of SCBNL to be more than two times the deposit of NABIL by the end of F/Y 2011/2012 i.e. Rs. 27928.58 million.

From the above trend analysis, it is quite obvious that SCBNL's deposit collection is proportionately much better than NABIL. The trend values of total deposit of both NABIL and SCBNL are fitted in the trend lines given in diagram 4.1 in the next page.

Figure 4.1

Trend Values of Total Deposit of NABIL and SCBNL
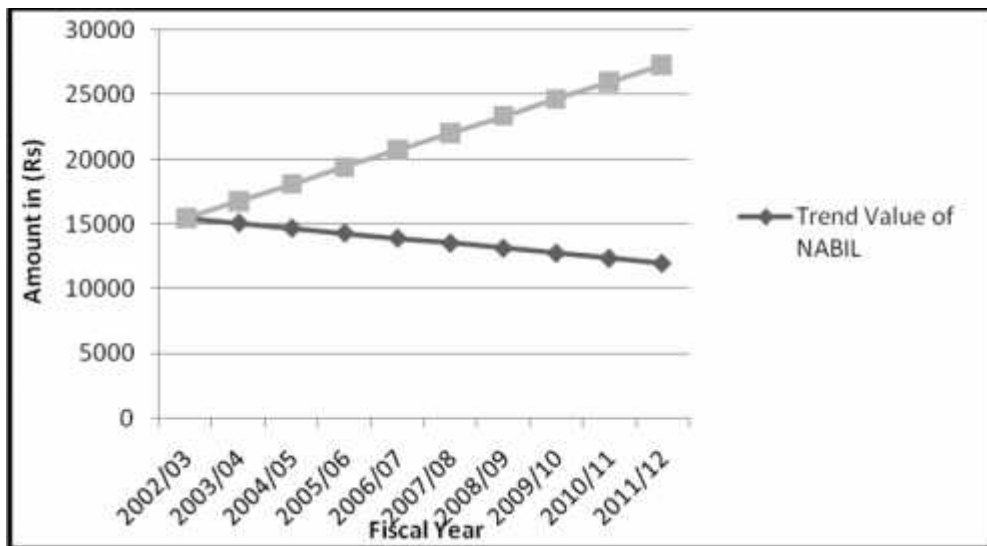
The diagram illustrates that the deposit amount of NABIL and SCBN for coming five years. Based on past data, it is seen from diagram that deposit of SCBN will grow drastically in five years making steeper curve where as the deposit of NABIL is in slight decreasing trend.

Analysis of Trend Values of Loan and Advances

Here, the trend values of loan and advances of NABIL and SCBNL have been calculated for five years from F/Y 2002/2003 to 2006/2007 and the forecast for next five years. i.e. from F/Y 2007/2008 to F/Y 2011/2012 has been made.

Table 4.21 illustrates the statistical information to reveal the trend values of loan and advances of NABIL and SCBNL.

Table 4.21

Trend Values of Loan and Advances of NABIL and SCBNL

(Rs. Million)

F/Y	Trend Value of NABIL	Trend Value of SCBNL
2002/2003	7698.10	5203.14
2003/2004	8222.61	5850.81
2004/2005	8747.12	6498.48
2005/2006	9271.63	7146.15
2006/2007	9796.14	7793.82
2007/2008	10320.65	8441.49
2008/2009	10845.16	9081.16
2009/2010	11369.67	9736.83
2010/2011	11894.18	10384.50
2011/2012	12418.69	11032.17

Source: Appendix – A13 &A 14

The above table clearly shows that the loan and advance of both the banks are in an increasing trend. Assuming that other things will remain constant, the loan and advances of NABIL at the end of F/Y 2011/2012 is predicted to be Rs. 12418.69 million. Similarly, the projection for SCBNL at the end of F/Y 2011/2012 is Rs 11032.17 million.

From the above trend analysis, it is quite clear that NABIL's loan and advances in relation to SCBNL is comparatively higher through out the trend projection period. The above trend values of loan and advances of NABIL and SCBNL are fitted in the trend line given in diagram 4.2.

Figure 4.2
Trend Values of Loan and Advances of NABIL and SCBNL
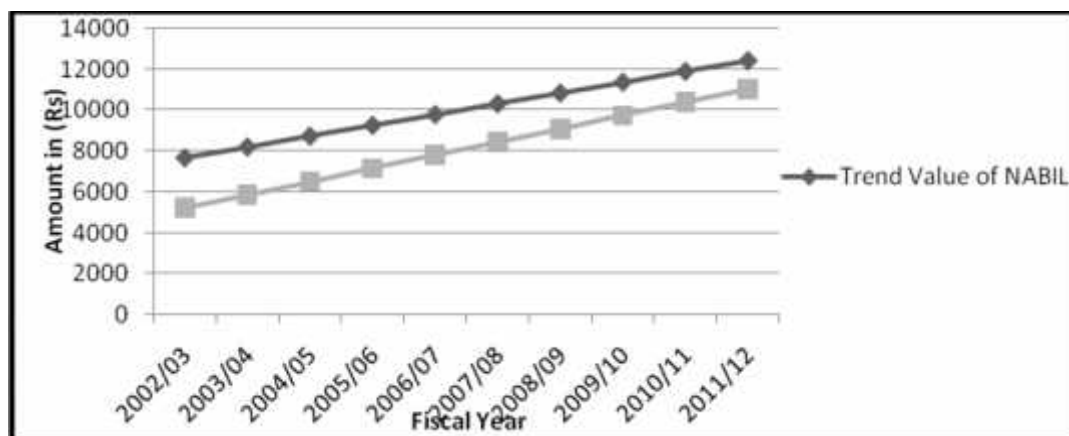
The figure reveals that loan and advances for both banks are in increasing trend. The magnitude of increment is more or less similar so they have made same curve and slope.

Analysis of Trend Values of Total Investment

Under this topic, based on the trend values of Investment from F/Y 2002/2003 to 2006/2007, an attempt has been made to forecast the projections for next five years i.e. up to F/Y 2011/2012.

Table 4.22 shows the trend value investment from F/Y 2002/2003 to F/Y 2011/2012.

Table 4.22
Trend Values of Investment of NABIL and SCBNL

(Rs. Million)

F/Y	Trend Value of NABIL	Trend Value of SCBNL
2002/2003	8255.77	9576.91
2003/2004	7330.00	9814.01
2004/2005	6404.23	10051.11
2005/2006	5478.46	10288.21
2006/2007	4552.69	10525.31
2007/2008	3626.92	10762.41
2008/2009	2701.15	10999.51
2009/2010	1775.38	11236.61
2010/2011	849.61	11473.71
2011/2012	0	11710.81

Source: Appendix -A15 &A 16

From the above table it is clear that the trend value of both the banks are in an increasing trend. If other things remain unchanged total investment of SCBNL to be Rs. 11710.81 million. Which is also the highest under the review period.

The above table reveals that SCBNL's total investment is higher than that of NABIL through out the trend projection period. It can be said that SCBNL has followed the policy of maximizing its investment. The above calculated trend values of NABIL and SCBNL are fitted in the trend line given in diagram 4.3.

Figure 4.3

Trend values of Investment of NABIL and SCBNL
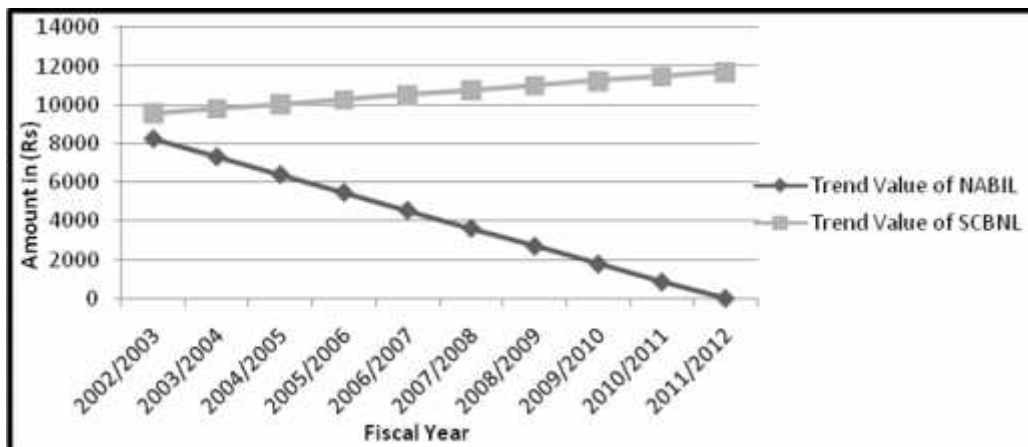
If trend line is drawn for Investment of NABIL and SCBNL, it is found that if present trends continuously occur, then the Investment of NABIL will decline drastically in coming future. This may be due to the low deposit collection by bank and lack of invest able funds. On contrary, trend line predicts that Investment of SCBNL will grow rapidly within coming five years.

Analysis of Trend Values of Net Profit

Under this topic, based on the trend values of net profit from F/Y 2002/2003 to 2006/2007, an attempt has been made to forecast the projections for next five years i.e. upto F/Y 2011/2012.

The information presented in table 4.23 communicates the trend value of net profit from F/Y 2002/2003 to F/Y 2011/2012.

Table 4.23

Trend Value of Net Profit of NABIL and SCBNL

(Rs. Million)

F/Y	Trend Value of NABIL	Trend Value of SCBNL
2002/2003	262.87	443.73
2003/2004	326.79	471.26
2004/2005	390.71	498.79
2005/2006	454.63	526.32
2006/2007	518.55	553.85
2007/2008	582.47	581.38
2008/2009	646.39	608.91
2009/2010	710.31	636.44
2010/2011	774.23	663.97
2011/2012	838.15	691.50

Source: Appendix -A17 &A 18

From the above figures, it is clear that the trend values of both the banks are in increasing trend. The trend values of NABIL will be highest in F/Y 2011/2012 i.e. Rs. 838.15 million. In case of SCBNL net profit will be Rs 691.50 million in F/Y 2011/2012, which is the highest under the review period.

Looking at the trend values, it can be estimated that NABIL would surpass SCBNL in this fiscal itself. It can be said that both the banks have followed the policy of maximizing their net profit.

However, we can draw a conclusion that NABIL has utilized its fund better than SCBNL to earn higher amounts of profit. The above calculated trend values of net profit of NABIL and SCBNL are fitted in the trend live given in diagram 4.4 below.

Figure 4.4

Trend values of Net Profit of NABIL AND SCBNL
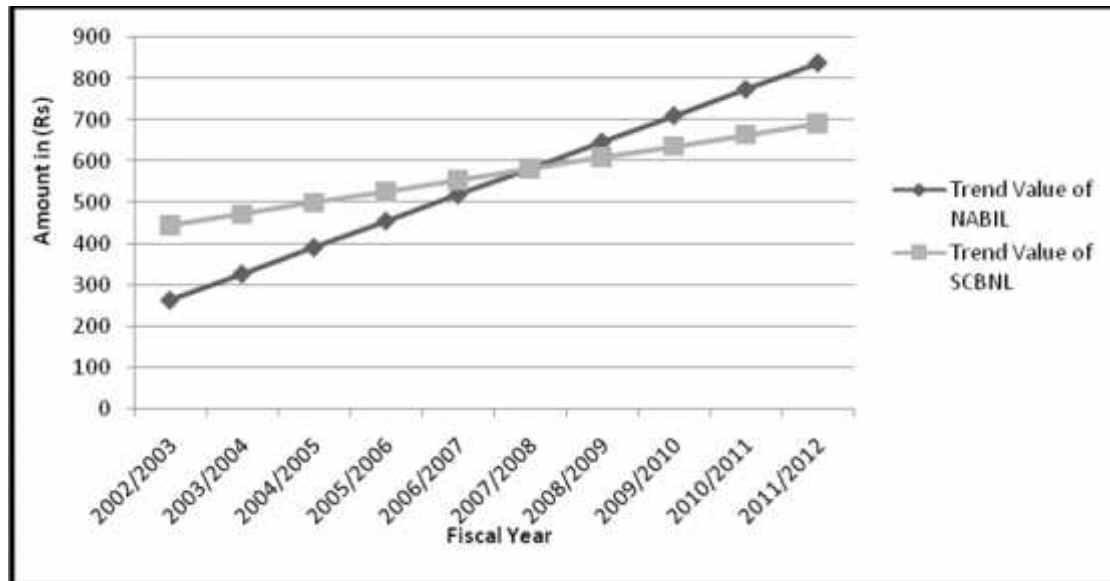
Trend line for net profit indicates that the net profit of NABIL bank will exceed the net profit of SCBNL in the days ahead. This is so because the profit of NABIL is growing at steeper rate than SCBNL. Thus it indicates that the profit exceeds Rs 800 million in FY 2011/12.

4.8 Major Findings of the Study

Having completed the basic analysis required for this study, the final and the most important task of the research is to enlist the findings. This will give meaning to the desired results.

On the basis of various categories of analysis adopted in this study, a comprehensive summary of the major findings of this study is presented below:

Liquidity Ratio

The liquidity position of NABIL and SCBNL reveals that:

➢ The mean ratio of cash and bank balance to total deposits of SCBNL is slightly higher than NABIL. SCBNL has better liquidity position than

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NABIL because of high percentage of liquid assets. This shows SCBNL readiness to meet its customer requirement. On the contrary, a high liquidity also indicates the inability of the bank to mobilize its current assets. The ratios of NABIL are more consistent than SCBNL.

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

➢ From the above findings, it is concluded that the liquidity position of SCBNL is comparatively better than NABIL. It has the highest cash and bank balance to total deposit, cash and bank balance to current assets. SCBNL is in a better position to meet its daily cash requirement. NABIL has a higher current ratio, which justifies that it is also capable enough to meet its current obligations. SCBNL's mean investment in Government securities is better than NABIL.

Asset Management Ratio

On the basis of the study of asset management ratio of NABIL and SCBNL, the results reveal that:

➢ The mean ratio of loan and advances to total deposit ratio of NABIL is higher than SCBNL. In terms of consistency both have been stable in their ratios.

➢ The mean ratio of total investment to total deposits of SCBNL is higher than NABIL. The ratios of SCBNL are more consistent and less variable than NABIL.

➢ The mean ratio of Investment in Government securities to total working fund ratio of SCBNL is higher than NABIL. The ratios of SCBNL are less variable and more consistent than NABIL.

➢ The mean ratio of Investment in shares and debentures to total working fund ratio of NABIL is slightly higher than SCBNL. NABIL ratios are more variable than that of SCBNL.

From the above findings it may be concluded that NABIL has been more successful in mobilization of its total deposits and working fund as loan and advances. On the other hand, SCBNL appears to be stronger in mobilization of total deposits and working fund as investment in risk free government securities. NABIL has fared better in purchasing shares and debentures of other companies, but both have invested marginal amount under this heading. Both the banks have successfully managed their assets towards different income generation activities.

Profitability Ratios

Similarly, the various profitability ratios indicated that:

➢ The mean ratio of return on total loan and advances of SCBNL has been found to be significantly greater than NABIL. The ratios of SCBNL are less variable and more consistent than NABIL.

➢ The mean ratio of return on total working fund of SCBNL is slightly greater than NABIL. The ratios of NABIL are less consistent and more variable than SCBNL.

➢ The mean ratio of total interest earned to total operating income of NABIL is higher than SCBNL. Both the banks have been fairly consistent in their ratios.

On these grounds, it may be concluded that SCBNL has been more successful in maintaining its higher return on loan and advances and total working fund. NABIL has been more successful in mobilization of its funds in interest bearing assets to earn higher interest income than SCBNL. SCBNL is in a better position than NABIL from interest payment point of view. NABIL has paid higher interest than SCBNL, whereas the latter seems to have collected its funds from cheaper sources than NABIL.

Risk Ratios

The Risk ratios of NABIL and SCBNL reveal that:

➢ The mean credit risk ratio of SCBNL is lower than NABIL. Both the banks have been fairly consistent in their ratios.

Based on above findings, it may be claimed that SCBNL has lower credit risk than NABIL. NABIL has greater exposure to risk in its financial operations than SCBNL.

Growth Ratio

The results related to growth ratios revealed that:

➢ The mean growth rate of deposits of SCBNL is significantly higher than NABIL.

➢ The mean growth rate of total loan and advances of SCBNL is higher than NABIL.

➢ The mean growth rate of total investment of NABIL is significantly higher than SCBNL.

➢ The mean growth rate of net profit of NABIL is higher than SCBNL.

Based on the above findings, SCBNL has been more successful in increasing its deposits, loan and advances and investment during the study period, whereas, NABIL has been more efficient in terms of increasing its net profit. While other banks have initiated a host of measures and schemes to attract customer deposits, NABIL's strategy of shedding deposits seems to be off the tune. NABIL needs to seriously rethink its strategy.

Co-efficient of Correlation Analysis

The coefficients of correlation analysis between different variables of NABIL and SCBNL reveal that:

- SCBNL has a higher value of coefficient of correlation between deposits and loan and advances than NABIL.
- The co-efficient of correlation between deposits and total investment of SCBNL is slightly higher than NABIL.
- The co-efficient of correlation between outside assets and net profit in case of NABIL is negative, whereas the same variables in case of SCBNL are highly correlated.
- The co-efficient of correlation between deposit and net profit in case of NABIL to negative, where as SCBNL has a higher value of coefficient of correlation.
- The coefficient of correlation between deposits and interest earned in case of SCBNL is negative, whereas NABIL has a higher value of coefficient of correlation.
- The coefficient of correlation between total working fund and net profit in case of NABIL is negative, whereas the same variables are highly correlated in case of SCBNL.

In conclusion, there is significant relationship between deposit and loan and advances, deposits and total investment, outside assets and net profit, deposits and net profit in case of SCBNL, and the relationship is insignificant, deposit and interest earned, loan and advances and interest paid, total assets and net profit.

Incase of NABIL, three exists significant relationship between deposits and total loan and advances, deposits and total investment, deposits and interest earned, whereas the relationship is insignificant between deposit and net profit, deposit and interest earned, loan and advances and interest paid, total assets and net profit, outside assets and net profit.

Trend Analysis and Projection for next five years
The trends analysis of deposits, loan and advances, total investment and net profit and its projection for next five years of NABIL and SCBNL reveals that:

- The deposits of SCBNL have an increasing trend while NABIL'S trend values have a fluctuating trend. The total deposit of NABIL is predicted to be Rs. 11975.84 million and that of SCBNL to be Rs. 27298.58 million at the end of F/Y 20011/2012. The deposit collection of SCBNL is much better than NABIL.

- The loan and advance of both the banks have an increasing trend. The total loan and advance of NABIL is predicted to be Rs. 12418.69 million and that of SCBNL to be Rs. 11032.17 million at the end of F/Y 2011/2012. The trend of loan and advances of NABIL is much better compared to SCBNL.

- The total investments of SCBNL have formed an increasing trend while it is exactly the opposite in case of NABIL. SCBNL seems to have a much-focused policy with regards to total investment than NABIL.

- The net profits of both the banks are in an increasing trend. The net profit of NABIL and SCBNL is predicted at Rs. 838.15 million and Rs. 691.50 million respectively by the end of F/Y 2011/2012. The position of NABIL with regard to utilization of the fund to earn profit is better than SCBNL.

The liquidity position of SCBNL is better than NABIL. The cash and bank balance of SCBNL w.r.t. deposits is greater than NABIL. The cash and bank balance of SCBNL w.r.t. current assets is higher than NABIL. From the point of view of profitability, NABIL seems to be more successful than SCBNL w.r.t. Profit earning capacity by utilizing available resources. The liquidity risk and credit risk of SCBNL is comparatively lower than NABIL. NABIL has more exposure to risk than SCBNL. SCBNL has been successful in maintaining a steady growth rate on deposits, investments and loan and advances year after year.

CHAPTER-V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

As the last part of the thesis report, this chapter presents with the summary, conclusions, and recommendations for corrective measures to be undertaken by the concerned institutions.

The first part of the chapter briefly summarizes the total study in respect with the general introduction of the study, various theoretical and application-associations of the present study, study methodology, and key findings of the study. The second part of the chapter deals with the present researcher's conclusions drawn in the basis of this research. Finally, the recommendations have been presented in the third section of the chapter.

5.1 Summary

As an exploratory research, the present study attempts to develop comparative analysis of the financial performance of two joint venture banks, viz. NABIL and SCBNL in respect with their investment in government securities. The total study has been based on the available final accounts of the concerned banks. For the purpose of the analysis, the financial information of the five consecutive years has been taken into account of the study.

This study reveals that the current ratio of both the banks is greater than one, which should be considered satisfactory. The liquidity position of SCBNL is better than NABIL. The cash and bank balance of SCBNL with respect to deposits is greater than NABIL. This puts, SCBNL in a better position with respect to meeting customer requirement than NABIL. In contrast, a high ratio of non-earning cash and bank balance is an indication of bank's inability to invest its fund in income generation areas. The cash and bank balance of SCBNL with respect to current assets is higher than NABIL. This shows greater capacity of SCBNL to meet its customer's cash requirement but that

does not mean NABIL cannot meet its daily customer cash requirement. SCBNL needs to invest its funds in more productive sectors.

SCBNL has invested more portions of its current assets and total working fund in government securities than NABIL. This is due to lack of other secured and profitable investment sector, whereas NABIL has invested more of its fund in other productive sectors.

NABIL has invested more of its funds in purchasing shares and debentures of other companies than SCBNL.

From the point of view of profitability, NABIL seems to be more successful than SCBNL with respect to profit earning capacity by utilizing available resources. NABIL has also been more successful in terms of interest earning power. It has been more successful in mobilizing its funds in interest bearing assets to earn higher interest income. SCBNL is in a better position to meet its interest expenses as it has collected its fund from cheaper sources than NABIL.

The liquidity risk and credit risk of SCBNL is comparatively lower than NABIL. NABIL has more exposure to risk than SCBNL.

SCBNL has been successful in maintaining a steady growth rate on deposits, investments and loan and advances year after year. The average growth rate of net profit of NABIL is higher than SCBNL. SCBNL's growth in deposits can be accounted to its credibility, image and high quality service.

From the analysis of coefficient of correlation, we can say that both the banks show positive relationship between deposit and loan and advances, deposits and total investment. There exists a positive relationship between deposits and net profit, outside assets and net profit in case of SCBNL and also between deposits and interest earned in case of NABIL.

SCBNL has insignificant relationship between deposits and interest earned, loan and advances and interest paid.

There is an insignificant relationship between deposits and net profit in case of NABIL.

The trend value of loan and advances, net profits of NABIL and SCBNL are in an increasing trend. The trend values of deposits and investment of SCBNL are proportionately higher than NABIL in all the years. The trend value of loan and advances of NABIL is proportionately better than SCBNL in all the years.

5.2 Conclusion

On the basis of the key findings of the study, the following conclusions have been deducted:

The study results reveal that there exists difference between the JVBs in relation to their capacity to meet the customer's cash requirement. The individual bank's investment behavior also shows that the banks are not equally prioritizing the investment policies, as a result, some of them invest heavily on government securities yielding less returns on total investment.

On the basis of this study, it also can be concluded that the banks are not equally competent to select the credit risk areas as professional financial institutions. There exists a significant relationship between deposits and interest earned, loan and advances and interest paid, but the JVBs lack using their maximum risk taking potential so as to make themselves more productive institutions.

The trends value of loan and advances, net profits are in an increasing pattern, it could be as a result of the banks' limited risk taking behavior over the time.

5.3 Recommendations

On the basis of the present study, following recommendations have been deducted for necessary policy improvements in respect with investment policies of the JVBs in Nepal:

Increase Deposits

SCBNL, backed by its credibility and high quality service has been able to increase its deposit collection consistently. While other banks are coming up with a host of measures to increase their deposits, NABIL's strategy of selective shedding of unprofitable deposits seems off the tune. NABIL is recommended to rethink its strategy and collect more deposits. Since the past few years, banks have been targeting depositors through a large variety of deposit schemes and facilities. NABIL, itself introduced a saving plus deposit scheme a few years back to target high-end depositors, but the growth in deposits does not look convincing. Like others, it also needs to come up with various incentives, schemes, and facilities to increase deposits. As of now, the minimum balance required to operate an account is Rs. 30.000, which is too high. The minimum balance ceiling should be brought down to attract small depositors and entrepreneurs.

NABIL has so far been providing ATM facilities through its own premises. The ATM facilities need further expansion. For this, bank needs to identify potential locations.

Increase Investment in Productive Sectors

SCBNL has given more priority to invest its fund in government securities and depositors' money has been less utilized as loan and advances. Though securities issued by government are risk free but such instruments yield lower interest rate. SCBNL should identify less risky and profitable investment sectors and invest in them. SCBNL has been following a wait, watch and act

policy towards investment in productive sectors for a long time. Despite the uncertain security and political situation in the country, the macro-economic indicators are good. Once the political and security conditions improve, a good turn-around in the economy is expected and unless SCBNL quickly acts it might be left behind in the race.

Increase Consumer Lending

Currently the size of the consumer lending market is estimated at Rs. 10 billion (Himalayan News Services, March 28). Housing and vehicle finance have become two important and viable sectors with minimum risk. However, the market has not been fully exploited. Retail lending of EBL alone accounts for 20 percent of the total loan portfolio, which is the highest among the commercial banks in Nepal. The sale of automobiles recorded a two-digit growth in the past five years and the real estate business, especially in urban areas is doing much better, thanks to consumer financing. Both NABIL and SCBNL are recommended to increase their investment in consumer loan sector by offering competitive interest rates.

Increase Investment in Share and Debentures

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

Increase Investment in Deprived and Priority Sectors

NRB has directed the banks to extend a certain percentage of loan and advances to the deprived and priority sector. Both the banks are recommended to adhere to the directives issued by NRB and invest more in these sectors. NRB should also speed up its supervision and monitoring in this regard. It should ensure that such directives are put into practice in letter and spirit.

Commence Margin Lending

The introduction of margin lending by NBL at 6.5% per annum against shares of selected companies can be viewed as a new opportunity for investment. Bank sources claim to have already disbursed over Rupees 2.5 billion in a one and a half year period to margin customers. Since NABIL and SCBNL have sound liquidity position and also as their cost of fund is lower, the banks could embark on margin lending after conducting appropriate feasibility study.

Effective Portfolio Management

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

Enhancement of OBS Operation

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

Increase Branches in Rural Areas

Integrated and speedy development of the country is possible only when competitive banking services reaches nooks and corners of the country. NABIL and SCBNL have shown no interest to open branches in rural areas. Both the banks are recommended to expand their branches and banking services and facilities in rural areas and communities to accelerate their economic development. NRB should implement policies to encourage banks, which

provide extensive services while penalizing those who are not responsive to the banking needs of the community, including the underprivileged.

Appendix -1
Profile of Concerned Banks

NABIL Bank Ltd.

NABIL Bank Ltd. (erstwhile Nepal Arab Bank Ltd.) was established on July 12th 1984 under a technical service agreement with Dubai Bank Ltd., Dubai, which was later, merged with Emirate Bank Ltd., Dubai. NABIL is the first and major joint venture bank in the country with key points of representation all over Nepal. The bank is managed by a team of qualified and highly experienced professionals.

The shareholdings are distributed as follows:

- 50% is owned by N.B. International Limited, Ireland.
- 20% is owned by local financial institutions and
- 30% by the Nepalese Public.

NABIL is amongst the most successful joint venture organizations in Nepal registering strong growth in balance sheet footing as well as profits year after year. The initial capital of Rs. 30 million, invested in 1984, has grown to Rs.1482 million as at mid July 2005.

The bank provides a complete range of personal, commercial and corporate banking and related financial services through its 16 branches and 2 airport counters, the largest number of braches amongst any JVB"s in Nepal. The bank was able to receive "Bank of Year 2004" award from Financial Times London.

The bank has been a pioneer in introducing modern banking and numerous innovative products into Nepal. It was the first to introduce consortium finance in Nepal. NABIL is the sole banker to a multitude of International Aid Agencies, NGO's, Embassies and consulates in the Kingdom, which is a compliment to its image and servicing capabilities. NABIL was the first bank to issue credit card in Nepal. NABIL has correspondent banking relationship

with banks in 47 countries. NABIL is a member of SWIFT. It has also been providing ATM facilities to its account holders.

Standard Chartered Bank Nepal Ltd.

Nepal Grindlays Bank Ltd. (recently named Standard Chartered Bank Nepal Ltd.) was established in 1987 A.D. as a joint venture bank with 50% of the equity share capital originally owned by ANZ Grindlays Bank, UK that managed and controlled overall activities of the bank. The bank has made significant contribution in the Nepalese banking sector since its inception.

In August 2000, the ownership of ANZ Grindlays Bank, U.K. was transferred to SCB, Australia. Since then, the bank is being managed and controlled by SCBL Australia, as Standard Chartered Bank Nepal Ltd. (SCBNL) in Nepal. SCBL holds 50% of total equity capital investment. Out of 35% of the total equity share capital that was held by NBL, Standard Chartered Bank, UK, now has bought 25%. The general public holds the remaining 25% shares.

The bank is being managed under joint venture & technical services agreement (T.S.A.) signed between SCB and Nepalese promoters. The bank has been providing various banking services to its customers through its braches nation wide. It has four branches including its main branch /corporate office in the Kathmandu valley. The bank is well equipped with the latest technology in the banking sector. It leads the Nepalese list in the best 500 banks of Asia as voted by Fortune magazine. It has some of the best banking professionals in the banking industry in Nepal.

Some of the facilities are listed below.
- ➢ Tele-banking
- ➢ Credit Card facilities
- ➢ Foreign Currency Transaction
- ➢ Automated Teller Machines

- ➢ Personalized & Corporate Financial services
- ➢ SWIFT, TELEX
- ➢ Western Union Money Transfer
- ➢ Money Gram

The present capital structure of SCBNL is shown below.

(Rs. in million)

Authorized equity share central	339.54
Issued Capital	339.54
Paid up Capital	339.54

Source: Annual Report of SCBNL 2063/64

Appendix 2
Nabil Bank Ltd.

(Rs   in

S.N.	F/Y	2002/03	20003/04	2004/05	2005/06	2006/07
1	Current Assets	18098.96	17732.35	16644.97	16742.67	17027.75
2	Current Liabilities	17226.20	16482.82	15248.44	15263.80	15528.69
3	Cash and Bank Balance	812.91	1051.82	1144.77	970.49	559.38
4	Total Investment	7704.31	8199.51	6031.18	5835.95	4267.23
5	Total Deposit	15839	15506.43	13447.66	14119.03	14587
6	Loan and Advances	8324.44	7801.85	8113.68	8548.66	10947
7	Investment in Govt. Securities	2732.96	4120.30	3588.77	3672.63	2413
8	Investment on Shares and Debn.	18.82	22.22	22.22	22.22	27.36
9	Total Working Fund	18367.15	17993.20	16668.44	17104.27	17546.89
10	Total Interest Earned	1266.70	1120.18	1017.87	1001.62	1068.74
11	Total Interest Paid	578.36	462.08	317.35	282.95	244
12	Net Profit	291.38	271.64	416.24	455.32	519
13	Operating Income	1573.33	1639.12	1340.50	1333.65	1438.44
14	Total Outside Assets	16028.75	16001.36	14144.26	14384.61	15213.97

million)

Appendix 3

Standard Chartered Bank Nepal Ltd.

(Rs. in

million)

S.N	F/Y	2002/03	2003/04	2004/05	2005/06	2006/07
1	Current Assets	19224.20	18663.02	21101.94	23778.25	22086.48
2	Current Liabilities	18245.18	17207.63	19631.60	22146.32	20311.16
3	Cash and Bank Balance	961.05	825.26	1512.30	2023.16	1111.11
4	Total Investment	9559.18	9275.88	10357.68	11360.33	9702.5
5	Total Deposit	15430.05	15835.75	18755.63	21161.44	19335.09
6	Loan and Advances	5681.35	5696.18	60001.16	6693.86	8420.86
7	Investment in Govt. Securities	4811.01	5784.72	6722.83	7948.22	7203.06
8	Investment on Share and Debn.	11.195	11.195	11.195	11.195	13.348
9	Total Working Fund	19357.2	18775.27	21304.84	23925.68	22171.24
10	Total Interest earned	1242.92	1013.64	1001.36	1042.18	1058.67
11	Total Interest paid	474.4	299.86	255.15	275.81	254.13
12	Net profit	430.83	479.21	506.93	537.8	539.20
13	Operating Income	1640.26	1446.81	1503.60	1521.16	1573.32
14	Total Outside Assets	15240.53	14974.06	16357.84	18054.19	18123.42

Appendix 4

Nabil Bank Ltd.

Cash and Bank Balance to Total Deposit Ratio

F/Y	Cash & Bank Balance	Total Deposit	Percentage
2002/2003	812.91	15839.00	5.13
2003/2004	1051.82	15506.43	6.78
2004/2005	1144.77	13447.66	8.51
2005/2006	970.49	14119.03	6.87
2006/2007	559.38	14587.00	3.83

Standard Chartered Bank Nepal Ltd.

Cash and Bank Balance to Total Deposit Ratio

F/Y	Cash & Bank Balance	Total Deposit	Percentage
2002/2003	961.05	15430.05	6.23
2003/2004	825.26	15835.75	5.21
2004/2005	1512.30	18755.63	8.06
2005/2006	2023.13	21161.44	9.56
2006/2007	1111.11	19,335.09	5.75

Appendix 5

Nabil Bank Ltd

Cash and Bank Balance to Current Asset

F/Y	Cash & Bank Balance	Current Asset	Percentage
2002/2003	812.91	18098.96	4.49
2003/2004	1051.82	17732.35	5.93
2004/2005	1144.77	16644.97	6.88
2005/2006	970.49	16742.67	5. 80
2006/2007	559.38	17027.75	3.29

Standard Chartered Bank Nepal Ltd

Cash and Bank Balance to Current Asset

F/Y	Cash & Bank Balance	Current Asset	Percentage
2002/2003	961.05	19224.20	5.00
2003/2004	825.26	18663.20	4.42
2004/2005	1512.30	21101.94	7.17
2005/2006	2023.16	23778.25	8.51
2006/2007	1111.11	22086.48	5.03

Appendix 6

Nabil Bank Ltd.

Loan and Advances to Total Deposit Ratio

F/Y	Loan and Advance	Total Deposit	Percentage
2002/2003	8324.44	15839.00	52.56
2003/2004	7801.85	15506.43	50.31
2004/2005	8113.68	13447.66	60.34
2005/2006	8548.66	14119.03	60.55
2006/2007	10947.00	14587.00	75.05

Standard Chartered Bank Nepal Ltd

Loan and Advances to Total Deposit Ratio

F/Y	Loan and Advances	Total Deposit	Percentage
2002/2003	5681.35	15430.05	36.82
2003/2004	5696.18	15835.75	35.97
2004/2005	6000.16	18755.63	32.00
2005/2006	6693.86	21161.44	31.63
2006/2007	8420.86	19335.09	43.55

Appendix 7

Nabil Bank Ltd

Total Investment to Total Deposit Ratio

F/Y	Total Investment	Total Deposit	Percentage
2002/2003	7704.31	15839	48.64
2003/2004	8199.51	15506.43	52.88
2004/2005	6031.18	13447.66	44.85
2005/2006	5835.95	14119.03	41.33
2006/2007	4267.23	14587.00	29.25

Standard Chartered Bank Nepal Ltd

Total Investment to Total Deposit Ratio

F/Y	Total Investment	Total Deposit	Percentage
2002/2003	9559.18	15430.05	61.95
2003/2004	9275.88	15835.05	58.58
2004/2005	10357.68	18755.63	55.22
2005/2006	11360.33	21161.44	53.68
2006/2007	9702.55	19335.09	50.18

Appendix 8

Nabil Bank Ltd.

Investment in Government Securities to Total Working Fund Ratio

F/Y	Investment in Govt. Securities	Total Working Fund	Percentage
2002/2003	2732.96	18367.15	14.88
2003/2004	4120.30	17993.20	22.90
2004/2005	3588.77	16668.44	21.53
2005/2006	3672.63	17104.27	21.47
2006/2007	2413.00	17546.89	13.75

Standard Chartered Bank Nepal Ltd.

Investment in Government Securities to Total Working Fund Ratio

F/Y	Investment in Government Securities	Total Working Fund	Percentage
2002/2003	4811.01	19357.2	24.85
2003/2004	5784.72	18775.27	30.81
2004/2005	6722.83	21304.84	31.56
2005/2006	7948.22	23925.68	33.22
2006/2007	7203.06	22171.24	32.49

Appendix 9

Nabil Bank Ltd.

Investment in Share & Debentures to Total Working Fund Ratio

F/Y	Investment in Share & Debenture	Total Working Fund	Percentage
2002/2003	18.82	18367.15	0.102
2003/2004	22.22	17993.20	0.123
2004/2005	22.22	16668.44	0.133
2005/2006	22.22	17104.27	0.130
2005/2007	27.36	17546.89	0.156

Standard Chartered Bank Nepal Ltd.

Investment in Share & Debentures to Total Working Fund Ratio

F/Y	Investment in Share & Debenture	Total Working Fund	Percentage
2002/2003	11.195	19357.2	0.058
2003/2004	11.195	18775.27	0.060
2004/2005	11.195	21304.84	0.053
2005/2006	11.195	23925.68	0.047
2006/2007	13.348	22171.24	0.060

Appendix 10

Nabil Bank Ltd.

Return on Loan and Advances Ratio

F/Y	Net Profit	Loan and Advances	Percentage
2002/2003	291.38	8324.44	3.50
2003/2004	271.64	7801.85	3.48
2004/2005	416.24	8113.68	5.13
2005/2006	455.32	8548.66	5.33
2006/2007	519.00	10947.00	4.74

Standard Chartered Bank Nepal Ltd.

Return on Loan and Advances Ratio

F/Y	Net Profit	Loan and Advances	Percentage
2002/2003	430.83	5681.18	7.58
2003/2004	479.21	5696.18	8.41
2004/2005	506.93	6000.16	8.45
2005/2006	537.80	6693.86	8.03
2006/2007	539.20	8420.86	6.40

Appendix 11

Nabil Bank Ltd.

Return on Total Working Fund Ratio

F/Y	Net profit	Total Working Fund	Percentage
2002/2003	291.38	18367.15	1.59
2003/2004	271.64	17993.20	1.51
2004/2005	416.24	16668.44	2.50
2005/2006	455.32	17104.27	2.66
2006/2007	519.00	17546.89	2.96

Standard Chartered Bank Nepal Ltd.

Return on Total Working Fund Ratio

F/Y	Net profit	Total Working Fund	Percentage
2002/2003	430.83	19357.2	2.23
2003/2004	479.21	18775.27	2.55
2004/2005	506.93	21304.84	2.38
2005/2006	537.8	23925.68	2.25
2006/2007	539.20	22171.24	2.43

Appendix 12

Nabil Bank Ltd.

Total Interest Earned to Total Operating Income Ratio

F/Y	Total Interest Earned	Total Operating Income	Percentage
2002/2003	1266.70	1573.33	80.51
2003/2004	1120.18	1639.12	68.34
2004/2005	1017.87	1340.50	75.93
2005/2006	1001.62	1333.65	75.10
2006/2007	1068.74	1438.44	74.30

Standard Chartered Bank Nepal Ltd.

Total Interest Earned to Total Operating Income Ratio

F/Y	Total Interest Earned	Total Operating Income	Percentage
2002/2003	1242.92	1640.26	75.78
2003/2004	1013.64	1446.81	70.06
2004/2005	1001.36	1503.60	66.60
2005/2006	1042.18	1521.16	68.51
2006/2007	1058.67	1573.32	67.29

Appendix A - 1

NABIL

Correlation between Total Deposit and Loan and Advances

F/Y	Deposit (X)	Loan and Advance (Y)	$X=(x-\bar{x})$ (x-14699.83	x^2	$y = (y-\bar{y})$ (y-)	Y^2	XY
02/03	15839.00	8324.44	1139.17	1297708.3	-422.69	178666.84	-481515.77
03/04	15506.43	7801.85	806.6	650603.56	-945.28	893554.28	-762462.85
04/05	13447.66	8113.68	-1252.17	1567929.71	-633.45	401258.90	793187.09
05/06	14119.03	8548.66	-580.8	337328.64	-198.47	39390.34	115271.38
06/07	14587.00	10947.00	-112.83	12730.61	2199.87	4839428.02	-248211.33
	$\phi x=$ 73499.12	$\phi y=$ 43735.63		$\phi x^2=$ 3866300.82		$\phi y2=$ 6352298.38	$\phi xy=$ 583731.48

Here, N = 5

$$\bar{X} = \frac{\sum x}{N} = \frac{73499.12}{5} = 14699.83$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{43735.63}{5} = 8747.13$$

We have,

$$\phi x^2 = 3866300.82, \quad \phi y^2 = 6352298.38, \quad \phi xy = 583731.48$$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}} = \frac{583731.48}{4955794.23} = 0.1177$$

or, r = 0.1177 & $r^2 = 0.0138$

Calculation of Probable error,

$$P. Er. = 0.745 \frac{1Zr^2}{\sqrt{N}} = 0.2975 \quad Or \ P. Er = 0.2975 \quad and \ 6. \ P. Er. =$$

1.7849

Appendix A - 2

SCBNL

Correlation between Total Deposit and Loan and Advances

F/Y	Deposit (X)	Loan and Advance (Y)	$X=(x-\bar{x})$ (x-18103.59	x^2	$y = (y-\bar{y})$ (y-6498.68)	Y^2	XY
02/03	15430.05	5681.35	-2673.54	7147816.13	-817.33	668028.33	2185164.45
03/04	15835.75	5696.18	-2267.84	5143098.27	-802.50	644006.25	1819941.60
04/05	18755.63	6001.16	652.04	425156.16	-497.52	247526.15	-324402.94
05/06	21161.44	6693.86	3057.85	9350446.62	195.18	38095.23	596831.16
06/07	19335.09	8420.86	1231.5	1516592.25	1922.18	3694775.95	2367164.67
	$\phi x=$ 90517.96	$\phi Y=$ 32493.41		$\phi x^2=$ 23583109.44		$\phi y^2=$ 1597655.96	$\phi xy=$ 6644698.94

Here, N = 5

$$\bar{X} = \frac{\sum x}{N} = \frac{90517.96}{5} = 18103.59$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{32493.41}{5} = 6498.68$$

We have,

$$\phi x^2 = 23583109.44, \quad \phi y^2 = 5292431.68, \quad \phi xy = 6644698.94$$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}} = \frac{6644698.94}{11171928.91} = 0.595$$

or, r = 0.595 $r^2 = 0.353$

Calculation of Probable error,

$$\text{P. Er.} = 0.6745 \quad \frac{1 Z r^2}{\sqrt{N}} \quad \text{Or, P. Er.} = 0.1948 \quad \text{and 6 P. Er.} = 1.17$$

Appendix A - 3

NABIL

Correlation between Total Deposit and Total Investment

F/Y	Deposit (X)	Total Investment(Y)	$X=(x-\bar{x})$ (x-14699.82)	x^2	$y = (y-\bar{y})$ (y-6407.64)	Y^2	XY
02/03	15839.00	7704.31	1139.18	1297731.08	1296.67	1681353.09	1477140.53
03/04	15506.43	8199.51	806.61	650619.69	1791.87	3210798.1	1445340.26
04/05	13447.66	6031.18	-1252.16	1567904.67	-376.46	141722.13	471388.15
05/06	14119.03	5835.95	-580.79	337317.02	-571.69	326829.46	332031.83
06/07	14587.00	4267.23	-112.82	12728.35	-2140.41	4581354.97	241481.05
	$\phi x=$ 73499.12	$\phi Y=$ 32038.18		$\phi x^2=$ 3866300.81		$\phi y^2=$ 9942057.74	$\phi xy=$ 3967381.82

Here, N = 5

$$\bar{X} = \frac{\sum x}{N} = \frac{73499.12}{5} = 14699.82$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{14699.82}{5} = 6407.64$$

We have,

$$\phi x^2 = 6887773.39, \quad \phi y^2 = 30132632.46, \quad \phi xy = 12537985.38$$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}} = \frac{3967381.82}{6199918.22} = 0.64$$

or, r = 0.64 $r^2 = 0.409$

Calculation of Probable error,

$$P.\ Er. = 0.6745\ \frac{1Zr^2}{\sqrt{N}} \quad Or,\ P.\ Er. = 0.178 \quad and\ 6\ P.\ Er.\ = 0.107$$

Appendix A - 4

Correlation between Total Deposit and Total Investment

F/Y	Deposit (X)	Total Investment (Y)	$X=(x-\bar{x})$ (x-18103.59)	x^2	$y = (y-\bar{y})$ (y-10051.11)	Y^2	XY
02/03	15430.05	9559.18	-2673.54	7147816.13	-491.93	241995.13	1315194.53
03/04	15835.75	9275.88	-2267.84	5143098.30	-775.23	600981.55	1758097.60
04/05	18755.63	10357.68	652.04	425156.16	306.57	93985.16	199895.90
05/06	21161.44	11360.33	3057.85	9350446.62	1309.22	1714057.01	4003398.37
06/07	19335.09	9702.5	1231.5	1516592.25	-348.61	121528.93	429313.21
	$\phi x=$ 90517.96	$\phi Y=$ 50255.57		$\phi x^2=$ 23583109.46		$\phi y^2=$ 2772547.78	$\phi xy=$ 7705899.61

Here, N = 5

$$\bar{X} = \frac{\sum x}{N} = \frac{90517.96}{5} = 18103.59$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{50255.57}{5} = 10051.11$$

We have,

$$\phi x^2 = 23583109.46, \quad \phi y^2 = 2772547.78, \quad \phi xy = 7705899.61$$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}} = \frac{7705899.61}{8086117.60}$$

or r = 0.953 & r^2 = 0.908

Calculation of Probable error,

$$P.\,Er. = 0.6745 \quad \frac{1 Z r^2}{\sqrt{N}} \quad Or,\ P.\,Er. = 0.028 \text{ and } 6\,P.\,Er. = 0.167$$

Appendix A - 5

NABIL

Correlation between Total Deposits and Net Profit

F/Y	Total Deposits (X)	Net Profit (Y)	$X=(x-\bar{x})$ (x-14670)	x^2	$y=(y-\bar{y})$ (y-390.72)	Y^2	XY
02/03	15839.00	291.38	1169	1366561	-99.34	9868.44	-116128.46
03/04	15506.43	271.64	836.43	699615.15	-119.08	14180.05	-99602.08
04/05	13447.66	416.24	-1222.34	1494115.08	25.52	651.27	-31194.11
05/06	14119.03	455.32	-550.97	303567.94	64.6	4173.16	35592.66
06/07	14587.00	519.00	-83	6889.00	128.28	16455.76	10647.24
	$\phi x=$ 73499.12	$\phi Y=$ 1953.58		$\phi x^2=$ 3870748.16		$\phi y^2=$ 45328.67	$\phi xy=$ -293164.55

Here, N = 5

$$\bar{X} = \frac{\sum x}{N} = \frac{73499.12}{5} = 14670.00$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{1953.58}{5} = 390.72$$

We have,

$\phi xy = -293164.55, \ \phi x^2 = 3870748.16, \ \phi y^2 = 45328.67$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}} \quad r = \frac{-293164.55}{418874.52}$$

or, r = - 0.70 $\qquad r^2 = 0.49$

Calculation of Probable error,

$$\text{P. Er.} = 0.6745 \ \frac{1 Z r^2}{\sqrt{N}} \quad \text{or, P. Er.} = 0.15 \quad \& \ 6 \text{ P. Er.} = 0.92$$

Appendix A - 6

SCBNL

Correlation between Total Deposits and Net Profit

F/Y	Total Deposits (X)	Net Profit (Y)	$X=(x-\bar{x})$	x^2	$y=(y-\bar{y})$	Y^2	XY

F/Y			(x-18103.59)		(y-498.80)		
02/03	15430.05	430.83	-2673.54	7147816.13	-67.97	4619.92	181720.51
03/04	15835.75	479.21	-2267.84	5143098.27	-19.59	383.77	44426.98
04/05	18755.63	506.93	652.04	425156.16	8.13	66.10	43099.84
05/06	21161.44	537.80	3057.85	9350446.62	39	1521	119256.15
06/07	19335.09	539.20	1231.5	1516592.25	40.4	1632.16	49752.60
	$\phi x=$ 90517.96	$\phi Y=$ 2493.97		$\phi x^2=$ 22066517.18		$\phi y^2=$ 8222.95	$\phi xy=$ 318999.93

Here, N = 5

$$\overline{X} = \frac{\sum x}{N} = \frac{90517.96}{5} = 18103.59$$

$$\overline{Y} = \frac{\sum y}{N} = \frac{2493.97}{5} = 498.80$$

We have,

$$\phi xy = 318999.93, \quad \phi x^2 = 22066517.18, \quad \phi y^2 = 8222.95$$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}} \qquad r = \frac{318999.93}{425971.67}$$

or r = 0.75 $r^2 = 0.56$

Calculation of Probable error,

$$P. Er. = 0.6745 \quad \frac{1 Z r^2}{\sqrt{N}} \quad \text{or, P. Er.} = 0.132 \text{ \& 6 P. Er.} = 0.79$$

Appendix A - 7

NABIL

Correlation between Total Deposits and Interest Earned

F/Y	Total Deposits (X)	Interest Earned(Y)	$X=(x-\overline{x})$ (x-14699.82)	x^2	$y = (y-\overline{y})$ (y-1095.02)	Y^2	XY
02/03	15839.00	1266.7	1139.18	1297731.07	171.5	29412.25	195369.37

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F/Y	X	Y	X=(x-x̄)	x²	y=(y-ȳ)	y²	xy
03/04	15506.43	1120.18	806.61	650619.69	25.16	633.03	20294.30
04/05	13447.66	1017.87	-1252.16	1567904.67	-77.15	5852.12	96604.14
05/06	14119.03	1001.62	-580.79	337317.02	-93.4	8723.56	54245.78
06/07	14587.00	1068.74	-112.82	12728.35	-26.28	690.64	2964.91
	$\phi x=$ 73499.12	$\phi Y=$ 5475.11		$\phi x^2=$ 3866300.81		$\phi y^2=$ 45411.60	$\phi xy=$ 369478.49

Here, N = 5

$$\bar{X} = \frac{\sum x}{N} = \frac{318999.93}{5} = 14699.82$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{5475.11}{5} = 1095.02$$

We have,

$$\phi xy = 369478.49, \quad \phi x^2 = 3866300.81, \quad \phi y^2 = 45411.60$$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}} = \frac{369478.49}{419016.59}$$

or, r = 0.882   r² = 0.78

Calculation of Probable Error

$$P.\,Er. = 0.6745\,\frac{1Zr^2}{\sqrt{N}} \quad or, \; P.\,E.r. = 0.067 \; \& \quad 6\,P.E.r. = 0.40$$

Appendix A - 8

SCBNL

Correlation between Total Deposits and Interest Earned

F/Y	Total Deposits(X)	Interest Earned (Y)	X=(x-$\bar{x}$) (x-18103.59)	x²	y = (y-$\bar{y}$) (y-1071.75)	Y²	XY
02/03	15430.05	1242.92	-2673.54	7147816.13	171.17	29299.17	-457629.84
03/04	15835.75	1013.64	-2267.84	5143098.27	-58.11	3376.77	131784.18
04/05	18755.63	1001.36	652.04	425156.16	-70.39	4954.75	-45897.09

05/06	21161.44	1042.18	3057.85	9350446.62	-29.57	874.38	-90420.62
06/07	19335.09	1058.67	1231.5	1516592.25	-13.08	171.09	-16108.02
	$\phi x=$ 90517.96	$\phi Y=$ 5358.77		$\phi x^2=$ 23583109.43		$\phi y^2=$ 38676.16	$\phi xy=$ -478271.39

Here, N = 5

$$\bar{X} = \frac{\sum x}{N} = \frac{90517.96}{5} = 18103.59$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{5358.77}{5} = 1071.75$$

We have,

$$\phi xy = -478271.39, \quad \phi x^2 = 23583109.43, \quad \phi y^2 = 38676.16$$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}} = \frac{-478271.39}{955041.42}$$

or, r = - 0.50 $\qquad$ $r^2 = 0.25$

Calculation of P. Er.

$$P. Er. = 0.6745 \quad \frac{1Zr^2}{\sqrt{N}} \quad \text{or, P. E.r.} = 0.23 \text{ \& } 6 \text{ P.E.r.} = 1.35$$

Appendix A - 9

NABIL

Correlation between Loan and Advances and Interest Paid

F/Y	Outsides Assets (X)	Interest Paid (Y)	$X=(x-\bar{x})$ (x-8747.12)	x^2	$y = (y-\bar{y})$ (y-376.94)	Y^2	XY
02/03	8324.44	578.36	-422.68	178658.38	201.42	40570.02	-85136.2
03/04	7801.85	462.08	-945.27	893535.37	85.14	7248.82	-80480.28
04/05	8113.68	317.35	-633.44	401246.23	-59.59	3550.97	37746.68
05/06	8548.66	282.95	-198.46	39386.37	-93.99	8834.12	18653.25
06/07	10947.00	244.00	2199.88	4839472.01	-132.94	17673.04	-292452.04

	$\phi x=$	$\phi Y=$		$\phi x^2=$		$\phi y^2=$	$\phi xy=$
	43735.63	1884.74		6352298.38		77876.97	-401668.59

Here, N = 5

$$\bar{X} = \frac{\sum x}{N} = \frac{43735.63}{5} = 8747.12$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{1884.74}{5} = 376.94$$

We have,

$$\phi xy = -401668.59, \quad \phi x^2 = 6352298.38, \quad \phi y^2 = 77876.97$$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}} = \frac{-401668.59}{703347.53}$$

or, r = -0.57 $r^2 = 0.33$

Calculation of Probable Error

$$P.\ Er. = 0.6745 \quad \frac{1 Z r^2}{\sqrt{N}} \quad \text{or, P. Er. } = 0.203 \quad \& \ 6\ P.\ Er. = 1.22$$

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SCBNL

Correlation between Loan and Advances and Interest Paid

F/Y	Loan & Advance (X)	Interest Paid (Y)	X=(x-$\bar{x}$) (x-6498.48)	x^2	y = (y-$\bar{y}$) (y-312)	Y^2	XY
02/03	5681.35	474.4	-817.13	667701.44	162.4	26373.76	-132701.91
03/04	5696.18	299.86	-802.3	643685.29	-12.14	147.38	9739.92
04/05	6000.16	255.86	-498.32	248322.82	-56.14	3151.70	27975.68
05/06	6693.86	275.81	195.38	38173.34	-36.19	1309.72	-7070.80
06/07	8420.86	254.13	1922.38	3695544.86	-57.87	3348.94	-111248.13
	$\phi x=$	$\phi Y=$		$\phi x^2=$		$\phi y^2=$	$\phi xy=$

	32492.41	1560.00		5293427.76		34331.49	-213305.24

Here, N = 5

$$\overline{X} = \frac{\sum x}{N} = \frac{32492.41}{5} = 6498.48$$

$$\overline{Y} = \frac{\sum y}{N} = \frac{1560}{5} = 312.00$$

We have,

$$\phi xy = -213305.24, \quad \phi x^2 = 5293427.76, \quad \phi y^2 = 34331.49$$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}} = \frac{-213305.24}{426299.50}$$

or, r = -0.50 r^2 = 0.25

Calculation of Probable Error

$$\text{P. Er.} = 0.6745 \quad \frac{1 Z r^2}{\sqrt{N}} \quad \text{or, P. E.r.} = 0.225 \quad \& \ 6 \text{ P.E.r.} = 1.35$$

Appendix A - 11

NABIL

The Trend value of Total Deposits of NABIL

(Rs. in million)

F/Y	Total Deposits (y)	x=T- 2004/2005	x^2	xy	y = a + bx Trend Values
02/03	15839.00	-2	4	-31678.00	15478.10
03/04	15506.43	-1	1	-15506.43	15088.96
04/05	13447.66	0	0	0	14699.82
05/06	14119.03	1	1	14119.03	14310.68
06/07	14587.00	2	4	29174.00	13921.54
	ϕy = 73499.12	ϕx=0	ϕx^2=10	ϕxy=-3891.40	

Here, N = 5

or, $a = \dfrac{\Sigma y}{N} = \dfrac{73499.12}{5}$ or , a =14699.82

$b = \dfrac{\Sigma xy}{\Sigma x^2} = \dfrac{-3891}{10}$ or , b =-389.14

Let the trend line be,

y = a + bx .... (i) x: Known time variable i.e.

The two normal equation are y: Unknown variable

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

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

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

From (iii) $b = \dfrac{xy}{x^2}$ .... (v)

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

y = a + bx│ 14699.82+(-)389.14x

For year 2007/2008, y = a + bx│ 14699.82 –389.14│ 3

x = 3

y = Rs.13532.40 million

Other trend values have been calculated accordingly.

(Rs. in Million)

Year (t)	x = t – 2004/2005	y (Projected Deposit) = a+bx
2007/2008	3	13532.40
2008/2009	4	13143.26
2009/2010	5	12754.12
2010/2011	6	12364.98

2011/2012	7	11975.84

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SCBNL

The Trend value of Total Deposits of SCBNL

(Rs. in million)

F/Y	Total Deposits (y)	x=t-2004/2005	x^2	Xy	y = a + bx Trend Values
02/03	15430.05	-2	4	-30860.10	15476.45
03/04	15835.75	-1	1	-15835.75	16790.02
04/05	18755.63	0	0	0	18103.59
05/06	21161.44	1	1	21161.44	19417.16
06/07	19335.09	2	4	38670.18	20730.73
	$\phi y = 90517.96$	$\phi x=0$	$\phi x^2=10$	$\phi xy=13125.77$	

Here, N = 5

$$\text{or,} \quad a = \frac{\Sigma y}{N} = \frac{90517.96}{5} \qquad \text{or,} \quad a = 18103.59$$

$$b = \frac{\Sigma xy}{\Sigma x^2} = \frac{13125.77}{10} \qquad \text{or,} \quad b = 1313.57$$

Let the trend line be,

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

The two normal equation are

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

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

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

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

… The straight line trend for total deposits is,

$y = a + bx \mid \quad 18103.59 + 1313.57 \times x$

For year 2007/2008, $\quad y = a + bx \mid \quad 18103.59 + 1313.57 \times 3$

$\quad x = 3$

$y = \text{Rs.} 22044.30 \text{ million}$

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t – 2004/2005	y (Projected Deposit) = a+bx
2005/2006	3	22044.3
2006/2007	4	23357.87
2007/2008	5	24671.44
2008/2009	6	25985.01
2009/2010	7	27298.58

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NABIL

The Trend value of Loan and Advances of NABIL

(Rs. in million)

F/Y	Loan and Advances (y)	x=t-2004/2005	x^2	xy	y = a + bx Trend Values
02/03	8324.44	-2	4	-16648.88	7698.10
03/04	7801.85	-1	1	-7801.85	8222.61
04/05	8113.68	0	0	0	8747.12
05/06	8548.66	1	1	8548.66	9271.63
06/07	10947.00	2	4	21894.00	9796.14
	$\phi y = 43735.63$	$\phi x=0$	$\phi x^2=10$	$\phi xy=5245.12$	

or, $a = \dfrac{\Sigma y}{N} = \dfrac{43735.63}{5}$ or ,   a = 8747.12

$b = \dfrac{\Sigma xy}{\Sigma x^2} = \dfrac{5245.12}{10}$ or ,   b = 524.51

Let the trend line be,

$y = a + bx$ .... (i)

The two normal equation are

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

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

…From (ii) $a = \dfrac{y}{N}$ .... (iv)

From (iii) $b = \dfrac{xy}{x^2}$ .... (v)

Here, N = 5

… The straight line trend for total deposits is,

$$y = a + bx \begin{vmatrix} 8747.12 + 524.51 \end{vmatrix} x$$

For year 2007/2008, $\quad y = a + bx \begin{vmatrix} 8747.12 + 524.51 \end{vmatrix} 3$

$\qquad x = 3$

$y = Rs\ 10320.65\text{million}$

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t – 2004/2005	y (Projected deposit) = a+bx
2007/2008	3	10320.65
2008/2009	4	10845.16
2009/2010	5	11369.67
2010/2011	6	11894.18
2011/2012	7	12418.69

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SCBNL

The Trend value of Loan and Advances of SCBNL

(Rs. in million)

F/Y	Loan and Advances (y)	x=t-2004/2005	x^2	xy	y = a + bx Trend Values
02/03	5681.35	-2	4	-11362.70	5203.14
03/04	5696.18	-1	1	-5696.18	5850.81
04/05	6000.16	0	0	0	6498.48
05/06	6693.86	1	1	6693.86	7146.15
06/07	8420.86	2	4	16841.72	7793.82
	$\phi y = 32492.41$	$\phi x=0$	$\phi x^2=10$	$\phi xy=6476.70$	

or, $a = \dfrac{\Sigma y}{N} = \dfrac{32492.41}{5}$ or , a = 6498.48

$b = \dfrac{\Sigma xy}{\Sigma x^2} = \dfrac{6476.67}{10}$ or , b = 647.67

Let the trend line be,

  y = a + bx .... (i)

The two normal equation are

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

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

…From (ii) a = $\dfrac{y}{N}$ .... (iv)

From (iii) b = $\dfrac{xy}{x^2}$ .... (v)

Here, N = 5

… The straight-line trend for total deposits is,

$y = a + bx \mid 6498.48 + 647.67 \mid x$

For year 2007/2008, $\quad y = a + bx \mid 6498.48 + 647.63 \mid 3$

$\qquad x = 3 \qquad\qquad y = Rs.\ 8441.49$ million

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t – 2004/2005	y (Projected Deposit) = a+bx
2007/2008	3	8441.49
2008/2009	4	9081.16
2009/2010	5	9736.83
2010/2011	6	10384.50
2011/2012	7	11032.17

Appendix A - 15

NABIL

The Trend value of Investment of NABIL

(Rs. in million)

F/Y	Investment (y)	x=t-2004/2005	x^2	xy	y = a + bx Trend Values
02/03	7704.31	-2	4	-15408.62	8255.77
03/04	8199.51	-1	1	-8199.51	7330.00
04/05	6031.18	0	0	0	6404.23
05/06	5835.95	1	1	5825.95	5478.46
06/07	4267.23	2	4	8524.46	4552.69
	$\phi y = 32021.18$	$\phi x=0$	$\phi x^2=10$	$\phi xy=-9257.72$	

or, $\quad a = \dfrac{\Sigma y}{N} \quad = \dfrac{32021.18}{5} \quad$ or, $\quad a = 6404.23$

$\quad b = \dfrac{\Sigma xy}{\Sigma x^2} \quad = \dfrac{-9257.72}{10} \quad$ or, $\quad b = -925.77$

Let the trend line be,

$\quad y = a + bx$ .... (i)

The two normal equation are

$\quad \phi\, y = na + b\, \phi x$ .... (ii)

$\quad \phi xy = a\, \phi x + b\, \phi\, x^2$ .... (iii)

$\ldots$ From (ii) $a = \dfrac{y}{N}$ .... (iv)

From (iii) $b = \dfrac{xy}{x^2}$ .... (v)

Here, N = 5

$\ldots$ The straight line trend for total deposits is,

$y = a + bx \mid \quad 6404.23+(-) x$

For year 2007/2008, $\quad y = a + bx \mid \quad 6404.23(-)\,925.77 \mid 3$

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$x = 3$ $y = $ Rs. 3626.92 million

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t – 2004/2005	Y (Projected Deposit) = a+bx
2007/2008	3	3626.92
2008/2009	4	2701.15
2009/2010	5	1775.38
2010/2011	6	849.61
2011/2012	7	0

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SCBNL

The Trend value of Investment of SCBNL

(Rs. in million)

F/Y	Investment (y)	x=t-2004/2005	x^2	xy	y = a + bx Trend Values
02/03	9559.18	-2	4	-19118.36	9576.91
03/04	9275.88	-1	1	-9275.88	9814.01

04/05	10357.68	0	0	0	10051.11
05/06	11360.33	1	1	11360.33	10288.21
06/07	9702.50	2	4	19405.00	10525.31
	$\phi y =50255.57$	$\phi x=0$	$\phi x^2=10$	$\phi xy=2371.10$	

or,　　$a = \dfrac{\Sigma y}{N} = \dfrac{50255.57}{5}$　　or,　$a = 10051.11$

　　　　$b = \dfrac{\Sigma xy}{\Sigma x^2} = \dfrac{2371.10}{10}$　　　　or,　$b = 237.10$

Let the trend line be,

　　$y = a + bx$ .... (i)

The two normal equation are

　　$\phi y = na + b\,\phi x$ .... (ii)

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

　　…From (ii) $a = \dfrac{y}{N}$ .... (iv)

From (iii) $b = \dfrac{xy}{x^2}$ .... (v)

Here, N = 5

　　…The straight-line trend for total deposits is,

　　$y = a + bx\,|\;\; 10051.11+237.10X$

For year 2007/2008,　　　$y = a + bx\,|\;\; 10051.11+237.10\,|\,3$

　　　x = 3　　　　　　　$y = Rs.10762.41 million$

Other trend values have been calculated accordingly.

Year (t)	x = t – 2004/2005	y (Projected Deposit) = a+bx
2007/2008	3	10762.41
2008/2009	4	10999.51
2009/2010	5	11236.61
2010/2011	6	11473.71
2011/2012	7	11710.81

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NABIL

The Trend value of Net Profit of NABIL

(Rs. in million)

F/Y	Net profit (y)	x=t- 2004/2005	x^2	xy	y = a + bx Trend Values
02/03	291.38	-2	4	-582.76	262.87
03/04	271.64	-1	1	-271.64	326.79
04/05	416.24	0	0	0	390.71
05/06	455.32	1	1	455.32	454.63
06/07	519.00	2	4	1038.00	518.55
	ϕy =1953.58	ϕx=0	ϕx^2=10	ϕxy=638.92	

or, $\quad a = \dfrac{\Sigma y}{N} \quad = \dfrac{1953.58}{5} \quad$ or, $\quad a = 390.71$

$\quad b = \dfrac{\Sigma xy}{\Sigma x^2} \quad = \dfrac{638.92}{10} \quad$ or, $\quad b = 63.92$

Let the trend line be,

$\quad y = a + bx$ .... (i)

The two normal equation are

$\quad \phi\, y = na + b\, \phi x$ .... (ii)

$\quad \phi xy = a\, \phi x + b\, \phi\, x^2$ .... (iii)

$\quad \ldots$ From (ii) $a = \dfrac{y}{N}$ .... (iv)

From (iii) $b = \dfrac{xy}{x^2}$ .... (v)

Here, N = 5

$\quad \ldots$ The straight line trend for total deposits is,

$y = a + bx \big|\ \ 390.71 + 63.92X$

For year 2007/2008, $\quad y = a + bx \big|\ \ 390.71 + 3.92 \big| 3$

$\quad\quad x = 3 \quad\quad\quad\quad\quad\quad y = Rs.582.47$ million

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t – 2004/2005	y (Projected Deposit) = a+bx
2007/2008	3	582.47
2008/2009	4	646.39
2009/2010	5	710.31

2010/2011	6			774.23	
2011/2012	7			838.15	

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SCBNL

The Trend value of Net Profit of SCBNL

(Rs. in million)

F/Y	Net profit (y)	x=t-2004/2005	x^2	xy	y = a + bx Trend Values
02/03	430.83	-2	4	-861.66	443.73
03/04	479.21	-1	1	-479.21	471.26
04/05	506.93	0	0	0	498.79
05/06	537.80	1	1	537.80	526.32
06/07	539.20	2	4	1078.40	553.85
	ϕy =2493.97	ϕx=0	ϕx^2=10	ϕxy=276.33	

or, $a = \dfrac{\sum y}{N} = \dfrac{2493.97}{5}$ or , $a = 498.79$

$b = \dfrac{\sum xy}{\sum x^2} = \dfrac{276.33}{10}$ or , $b = 27.53$

Let the trend line be,

$$y = a + bx \ \text{............. (i)}$$

The two normal equation are

$$\phi\, y = na + b\, \phi x \ \text{.............. (ii)}$$

$$\phi xy = a\, \phi x + b\, \phi\, x^2 \ \text{............ (iii)}$$

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

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

Here, N = 5

… The straight line trend for total deposits is,

$y = a + bx$ ⎸ 498.79+27.53X

For year 2007//2008,　$y = a + bx$ ⎸ 498.79+27.53 ⎸3

　　　x = 3　　　　　　　　y = Rs. 581.38 million

Other trend values have been calculated accordingly.

(Rs. in million)

Year (t)	x = t – 2004/2005	y (Projected Deposit) = a+bx
2007/2008	3	581.38
2008/2009	4	608.91
2009/2010	5	636.44
2010/2011	6	663.97
2011/2012	7	691.50

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