Chapter -I

INTRODUCTION

1.1 General Background of the Study

National development of any country depends upon the economic development of that country and economic development is supported by financial infrastructure of that country. Therefore, the primary goal of any nation including Nepal is rapid economic development to promote the welfare of the people and the nation as well. Nepal being listed among least development country is trying to embark upon the path of economic development by economic growth rate and developing all sectors of economy.

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. In its transitional phase, economic development plays a vital role in its development. In the path of its economic development the main contribution is from its economic growth rate and development of its financial sector. We can say that the economic development on the financial aspect depends upon the capital formation and its proper utilization. The financial system deals with the collection, formation and proper utilization of the thrifts of the economic development. Hence, the network of well-organized financial system counts for the economic development of the country- as it collects the scattered financial resources from the masses and invests them in the development of the country. We can say that the main obstacle/restriction in Nepal's effort towards its developed economy is not the lack of resources-but the improper utilization of the available resources. It is an unavoidable fact that the process of economic development depends on various factors; however the economists are now convinced that capital formation and its proper utilization plays a paramount role for the rapid and healthy economic development of a country. It is a known fact that economic activities of any country can hardly be carried without the assistance and the support of the financial institutions, because they play the catalytic role in the role in the process of economic development. Among these financial institutions;

banks have their long term impact not only in the financial development but also in the overall development of the 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.

Besides it contributes to the overall development of the economy by rendering numerous services to their customers which helps in facilitating their economy as well as social life. The active role played by the commercial banks in today's scenario, has shown us the possible favorable changes in the whole infrastructural development of the country. Today, we can see that the commercial banks have become the heart of the system in every possible way; may it be its pace of development towards the direction of making a new Nepal, or its contribution towards the development of the country or the attractive employment opportunities it has shown to the unemployment sector. Hence, we can say that banks are not the outcome of economic development but cause for it, as it provides different facilities to the people engaged in trade, commerce and industry by reaching to the nooks and corners of the country.

Investment can be defined as the employing money in earning asset/assets with the objective of earning some positive return in the future. Investment is the sacrifice of current dollars for the future dollars (Sharpe, 1999). According to economics, investment is the utilization of resources in order to increase income or production output in the future. An amount deposited into a bank or machinery that is purchased in anticipation of earning income in the long run are both examples of investments.

Investment is the use of money to earn income or profit. The term also refers to the expenditure of funds for capital goods – such items as factories, farm equipment, livestock and machinery. Capital goods are used to produce other goods or services. Many people invest part of their income for future financial gain. Others make investments to protect the purchasing power of their savings against rising prices.

Investment policy in simple words is the proper management of any fund/wealth to maximize the value of it or to obtain the favorable return with minimal risk considering the protection of the investment from inflation, taxes, and other factors. It ensures efficiency on the allocation of fund to achieve the materialistic and economic well-being of the society. 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).

Investment policy of the financial institutions, especially banks have long term impact not only on their growth and sustainability but also on the economic development of the country. Above all in today's scenario investing is a very risky job, hence to produce a safe and profitable investment; bank must follow a sound investment policy.

Every commercial bank has its investment policy to guide them on their investing operation. The basic factors that will determine the objectives of a bank's investment policy are its income, liquidity needs and the management's willingness to trade liquidity for greater income opportunities along with the degree of risk associated. Formulation of an investment policy must give awareness about the entire risk exposure that the bank management is willing to assume.

1.2 Statement of Problem

In our country we see unequal distribution of income which is the main cause of less mobilization of money which thus creates less saving, inadequate capital formation and insufficient investment.

The numbers of joint venture banks as well as financial institutions have been set up at a rapid rate after the adoption of economic liberalization policy of the Government of Nepal. However in today's context, where the commercial banks are mushrooming, the competition among them has been a tough job, where it collects lots of deposits with comparatively low investment opportunities. And due to less investment they happen to discourage their depositors by reducing the interest on deposit and increasing the

minimum threshold balance-however nowadays the latter is diminishing instead used as the promotional tool to attract new depositors with minimal threshold balance. On the other hand, these banks seem to be granting much loan, advances and other facilities against insufficient collateral of their clients. Lack of sound knowledge about the financial risk, business risk and other risk leads to more unsecured loan and investment - which compels the bank towards liquidation and bankruptcy. Therefore appropriate investment policy is the essence of all the joint venture banks, commercial banks and other financial institutions to deal with the cutthroat competition.

It is not just because of lack of potential clients or adequate deposit, but the problem here is about the profitable sector or opportunities to invest. Banking sector are not able to grow to their potentials, they are facing problems from the external environment like unstable political, legal, economic and social scenarios in Nepal nowadays; and this leads to resulting insecurity towards any investment. For this reason also there should be a proper investment plans to be made concerning about its-how, where and when the investment is to be made.

Various policies launched by NRB may add advantage to the nation, but also providing unnecessary interference in the daily transaction of the commercial banks. Major problems in state owned commercial banks today are: overstaffing, corruption, cutthroat competition including the never ending offers it makes to attract the customers; which affects the investment policy as well.

Moreover, this study will analyze the relationship of investment policy and the deposit mobilization and the profit position of the banks. Specifically this study will make a modest attempt to analyze the investment policy of selected commercial banks which relates to the investment function of the commercial banks of Nepal as a whole and also deals with the supporting issues like:

1. What is the standard form of the investment policy the commercial banks should have?

2. How efficient are the commercial banks in Nepal in accordance to their investment policy?

3. What is the effect of the investment decision on profitability of commercial banks?

4. What is the effect of the investment decision of commercial banks on GDP?

5. What is the relationship between the various important variables like deposit, loan and advances, total investments and the net profit of the selected banks?

1.3 Objective of the Study

The major objective of the study is to evaluate the investment policy and the fund mobilization of the commercial banks in Nepal.

The specific objectives are as follows:

1. To evaluate the investment policy of the commercial banks in Nepal.

2. To analyze the trends of most influential items to the investment policy of a bank like total deposit, total investment and net profit.

3. To examine and evaluate the liquidity, asset management efficiency, profitability and risk position of the selected banks.

4. To make a comparative study on fund mobilization and investment policy of the banks.

5. To provide suggestions, guidelines and appropriate recommendation.

1.4 Significance of the study

A sound investment policy of a bank is such that its funds are distributed on different types of assets with good profitability on the one hand and provide maximum safety and security to the depositors and banks on the other hand. So the investment policy of commercial banks should be in accordance with the spirit of the economic advancement of the people and also called it as the life-blood of any financial institution because only deposit collection carries no meaning, there should a proper policy of investment also. If it is utilized in a proper investment then only better return and sustainability is possible. Therefore, to this significance on account this study on behalf of the firm's investment policy and its relationship is justified as a specified subject matter.

Nepal is one of the least developed countries with poorest economic condition of the world. As the financial services industry becomes more complex, the financial information is more difficult to understand. Quality governance is impossible with effective analysis and evaluation of financial information. In the context of Nepal, there are less availability of research work, articles and journals in investment policy of commercial banks and their financial institutions. The study will certainly help to the management of the concerned banks to improve their performance and would help them to take corrective actions.

Thus, this study lies mainly in filling a research gap on the study of investment policy of commercial banks. The study is basically confined to reviewing the investment policy of commercial banks in the five years periods. This study is expected to definitely provide a useful feedback to the policy makers of commercial banks of Nepal and also to the government and the NRB in formulating appropriate strategies for the improvement in the financial performance. This study is also expected to be beneficial for the related persons in the field of investment and institution. And also help to find out the causes of failure and success of the bank by using the various financial and statistical tools. This research reports helps to gain and share some practical knowledge of banking and management of the commercial banks in the perspective of improving financial performance.

Similarly, depositors can take decision to deposit on their money, also useful to more people and organization such as trade creditors, investors, academicians, general public, stockbrokers etc. It will prove to be an important value for the entire individual interested in commerce and banking field.

1.5 Limitations of the Study

In the context of Nepal, data availability is the major problem for any purpose – that may be because of the poor document handling management or due to the wretched response from the concerned people when asked for any information.

This study is simply a partial requirement of MBS program, and the limitations faced while doing this study are as follows:

1. Only the available secondary data will be analyzed for the interpretation of any results and the decisions will primarily be depending on the reliability of the secondary data available.
2. The sample taken for the study may not represent the whole population of the commercial banks in Nepal.
3. The study covers the period of five years only i.e. from FY 2005/06 to 2009/10.
4. The data are modified as per the study.
5. Lastly, the time factor is the major limitation of this study, as this has to be completed within a short period of time.

1.6 Organization of the Study

This study is organized into five Chapters to be comprehended in the simple and easy way; as it will be carried out into different stages and procedures and the thesis will be organized in a proper sequence in the following structure:

Chapter-I   Introduction

Background information on the subject matter while undertaking the research will be presented under this section to provide the general idea of the concept and its related areas. So this section will include background of the study which will focus on the concept and importance of the investment policy in the banking. It will be followed by statement of problem, objective of the study, significance of the study and limitations of the study.

Chapter-II   Review of Literature

This section will be dealing with the reviews of relevant previous writings and the studies along with the review of the previous related research projects and unpublished thesis, review of various related books, reports and articles; to find out whether the trend has changed or not on that related field. This will include the definition of commercial banks, its evolution, investment policy, deposit and its types, loan and advancement, etc. Hence

under this section we will refer to various approaches taken by other researchers and related literature on the related topic.

Chapter-III   Research Methodology

The methods to gather data and the tools employed and used in its interpretation will be discussed in this section under the headings- Research design, Population and sample, Nature and sources of data, selection of the enterprise and the study period, the method of analysis(the financial and statistical tools used for the analysis of the data).

Chapter-IV   Presentation and Analysis of Data

The fourth chapter will be consisting systematic presentation and analysis of the financial statements which is the mathematical portion where all the computation and the interpretation will be done employing the financial and statistical tools mentioned in chapter three. It will contain the major findings including all the findings on the theoretical data and the findings on the various ratios which will reflect the financial condition of the concerned banks.

Chapter-V   Summary, Conclusion and Recommendations

The last chapter of the thesis will be the most crucial section as it will be the outcome of the study which is the conclusion part that deals with the summarizing and concluding the major findings and drawing viable recommendations and suggestions on the basis of the study done for the respective institutions.

Besides these, bibliography and appendices will also present at the end of the thesis. Similarly, acknowledgements, table of contents, list of tables, list of figures, abbreviations are included in the front part of the thesis report.

CHAPTER–II
REVIEW OF LITERATURE

This chapter includes the review of previous studies and the conceptual framework on the topic and its related areas. Review of literature is an essential part of all studies. It is a way to discover the research in the area of our problem revealed/covered so far and what is yet to be discovered. It provides the thorough understanding related to the present study by the insight of previous research works and besides it avoids investigating problems that have already been answered. Above all, to present the real framework of the study mere analysis is not enough, review of some related materials should be dealt with to give the research a clear vision. However past study and knowledge provide basic foundation to the present study.

2.1 Conceptual/Theoretical Review

Today banking is an industry in change – it is continuously becoming something new – offering new services, adopting new technologies. In spite of its changes, it probably is and always will remain a service industry. Bank involved in a service industry is dedicated to overall financial activities of the economy; they offer a wide range of financial services such as: currency exchange, discounting commercial notes and making business loans, offering savings deposits, safekeeping of valuables and certification of value, supporting government activities with credit, offering demand deposits, offering trust services, granting consumer loans, financial advising, cash management, offering equipment leasing, making venture capital loans, selling insurance services, selling retirement plans. However among these, the primary function of banks today is to produce and sell financial services demanded by the public. One of the most vital of those services is granting loans, particularly loans used to support business investment. Yet not all bank funds can be allocated to loans because: many loans are illiquid; it is among the riskiest bank asset – carrying the highest borrower default rate of any form of bank credit; all loan income is taxable. For all these reasons, banks have to learn to devote a significant portion of their asset portfolio to another major category of earning asset:

investment in securities like government bonds and notes, corporate bonds and notes, other form of debt securities and other stock permitted by law. These holdings perform a number of vital functions in bank asset portfolios- providing income, liquidity, diversification to reduce risk, and the sheltering of at least some portion of bank earnings from taxation. Hence to have a well-managed bank asset portfolio a bank must have its investment policy.

2.1.1   Investment

Investment can be defined as the employing money in earning asset/assets with the objective of earning some positive return in the future. Investment is the sacrifice of current dollars for the future dollars (Sharpe, 1999). According to economics, investment is the utilization of resources in order to increase income or production output in the future. An amount deposited into a bank or machinery that is purchased in anticipation of earning income in the long run are both examples of investments. Although there is a general broad definition to the term investment, it carries slightly different meanings to different industrial sectors. According to economists, investment refers to any physical or tangible asset, for example, a building or machinery and equipment. On the other hand, finance professionals define an investment as money utilized for buying financial assets, for example stocks, bonds, real properties, and precious items. According to finance, the practice of investment refers to the buying of a financial product or any valued item with an anticipation that positive returns will be received in the future.

"Money attracts Money" , this sounds familiar to every individual involved in some or other investment activities; this means if you know the tactics to invest your money in the right way in the right place and at the right time - you will earn more amount of extra income(money in return) in the future from the investment you made.

Investment is the use of money to earn income or profit. The term also refers to the expenditure of funds for capital goods – such items as factories, farm equipment, livestock and machinery. Capital goods are used to produce other goods or services.

Many people invest part of their income for future financial gain. Others make investments to protect the purchasing power of their savings against rising prices.

By foregoing today's consumption and investing the savings; the investors expect to enhance their future consumption possibilities. The term 'investment' has its primary significance in financial sector, i.e. it refers to the process of determining the worthy area to invest a firm's fund to procure expected return as a favorable one by its maximum utility at the minimal risk. We can say that investment is concerned with the management of an investor's wealth- who is interested in working on it to get more of the money (which includes the sum of current money and the present value of all future money).

Investment promotes economic growth and contributes to a nation's wealth; as in- when people deposit money in a bank, for instance- the bank may invest it by lending the funds to various business companies. These firms in return may invest the money in new factories and other equipments to increase their production. Besides borrowing from the bank most of the companies issue stocks/bonds and sell them to the investors to raise the capital needed for their business expansion. Government also issues bonds to obtain funds to invest in projects such as the construction of dams, roads, schools etc- for the development of the country. All such investments done by the individuals, business firms and government involves a present sacrifice of money to get an expected future benefits. Hence we can say that investment raises a nations' standard of living.

However the investment needs to be a procedural task.' i.e. it must follow a definite investment process, which definitely begins from the formulation of a proper investment policy.

2.1.2 Investment Policy

Investment policy in simple words is the proper management of any fund/wealth to maximize the value of it or to obtain the favorable return with minimal risk considering the protection of the investment from inflation, taxes, and other factors. It ensures efficiency on the allocation of fund to achieve the materialistic and economic well-being

of the society. 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. Making money alone cannot be an appropriate objective in itself; the objective should focus on making decent return by recognizing the possible losses. Therefore investment should state in terms of both risk and return. We can say that there is a positive relation between risk and return for sensible investment strategies, and the investment policy concludes with the identification of the potential categories of financial assets for consideration in the ultimate portfolio. Inappropriate or say unsuitable investment policy and inadequate knowledge on it usually creates dilemma to the investors on selection of an optimal investment area.

Investment policy is one aspect of the overall spectrum of policies that guides any firm in its investment operation. A sound and liable investment policy can be effective for the economy to attain the economic objectives directed towards the acceleration or the pave of the development of the financial aspect of the economy and country's economy as a whole. A good investment policy attracts both borrowers and lenders which enhances the volumes and quality of the deposit, loan and investment.

Sound investment policy minimizes the interest rate spread and NPA, which are the main cause of bank failure; a good investment policy ensures maximum amount of investment to all sectors with proper utilization of the available resources.

'The purpose of the Investment Policy is to guide the Foundation in effectively supervising, monitoring and managing its investments. Investment is a very risky job for a purposeful safe, profitable investment. Bank must follow sound investment policy. The fundamental principals of investment must be followed thoroughly for profitable investment. Investment policy should ensure maximum amount of investment to all sectors with proper utilization. There is high liquidity in the market but there seems no

profitable place to invest. Investment policy provides the bank several inputs through which they can handle their investment operation efficiently ensuring the maximum return with minimum risk, which ultimately leads the bank to the path of success.

From the above explanation we can say that investment policy is an important ingredient for the overall economic development. In this regard, the commercial banks also formulate their investment policies which drive to achieve the priority of the commercial sector along with their needs in the context of the whole country's economic development.

2.1.3 Commercial Banks

Commercial Bank is a corporation, which accepts demand deposits subject to check and makes short term loans to business enterprises, regardless of the scope of its other services. (American institution of banking, 1972; 345-346). Commercial banks are major financial institutions, which occupy quite an important place in the framework of every economy. Commercial banks render numerous services to their customer in view of facilitating their economic and social life. All the economic activities of each and every country are greatly influenced by the commercial banking business of that country. Commercial banks, by playing active roles, have changed the economic structure of the world. Thus, commercial banks have become the heart of financial system.

Today banking is an industry in change; rather than being something in particular, it is continually becoming something new - offering new services, merging and consolidating into much larger and more complex business adopting new technologies that seem to change faster than most of us can comprehend. Despite all of the epic changes sweeping through this vital industry, some things in banking never seem to change. It is and probably always will be a service industry. However service accuracy, friendliness, and quality of service vary from bank to bank in most market areas. Unlike many other jobs, banking requires both technical and personal skills- rather than just one and the other. Banking- we can say is a relationship business. People come to trust in a bank and rely on its accuracy and stability when they need financial guidance, and they routinely expect courtesy when they deal with bankers. Despite the transition and turmoil in the banking

sector, it requires special personal traits. Bankers can never stop learning because their industry is becoming something new everyday, and their customers expect them to be ahead of the curve. Banks are among the most important financial institutions in the economy; they are the principal source of credit (loan-able funds) for millions of individuals, business units and for many units of government as well. Moreover for everyone engaged in the financial activities- banks are often the major source of credit to stock their products; and besides when they need financial information and financial planning, it is the banker whom they turn most frequently for advice and counsel. Banks are those financial institutions that offer the widest range of financial services – especially credit, savings and payment services – and perform the widest range of financial functions of any business firm in the economy.

In case of Nepal, banking started with the establishment of "Nepal Bank Limited" under the Nepal Bank Act 1994 B.S. However after adopting the policy of economic liberalization by the government, the commercial banks paved its ways to the service sector; these commercials banks were established under the Commercial Banks Act 2031 B.S. and were registered with the recommendation of Nepal Rastra Bank- the central Bank of the country. In 2041 B.S. Nepal Arab Bank Limited was established as the first commercial bank (joint venture) Bank in Nepal – Later which was named and still known as NABIL Bank Ltd. After the regain of democracy in 2046 B.S. NRB adopted more liberal policy in establishing the commercial banks in Nepal. As a result the number of commercial banks have fostered since then. Apart from providing different services and facilities to the society it has also been providing modern banking by introducing higher technologies and efficient methods in the banking sector which has shown a new perspective of banking in Nepal these days.

Commercial banks are the heart of the financial system – all the economic activities are greatly influenced by commercial banking business. They hold deposit of millions of people, business units and Government. And make fund available through investing and lending activities to the borrowing individuals, business units and government.

It is unavoidable fact that the role of the commercial banks in its economy is significant; as it mobilizes the domestic resources and invests in the productive sectors. Investment is the most important function of the commercial banks; it is the long-term commitment of the bank in the uncertain and risky environment. Hence it is a very challenging job for any commercial bank so it should be very cautious while investing their funds in various sectors, as the success and failure of the bank heavily depends upon the proper management of its invest-able funds.

2.1.4 Importance of Investment Policy to the Commercial Banks

Investment policy of the financial institutions, especially banks have long term impact not only on their growth and sustainability but also on the economic development of the country. Above all in today's scenario investing is a very risky job, hence to produce a safe and profitable investment; bank must follow a sound investment policy.

As we know that one of the main objectives of the commercial banks is to provide the fund needed to the community, i.e. lending service to the community. To make their lending service more effective, the commercial banks formulates sound investment/lending policies which eventually contributes to the economic development of the bank and further contributes to the overall development of the country. As we know that any action proceeded by plans-made are best implemented. Likewise, sound policies help the commercial banks maximize its quality and quantity of its investment and thereby, achieve their focused desired objective. Investment management of a bank is guided by the investment policy adopted by the bank which helps then in the investment operation of the bank to be efficient and profitable by minimizing the inherent risk. Investment policy comprises the set of guidelines and procedures that direct the long-term management of the investment. Without a clear vision of why the investment are being made and how the goals are to be achieved; it is likely to pursue inefficient approaches which leads to unsatisfactory results. An investment needs a plan that directs the efforts made, and that plan is the investment policy. However, the fundamental principles of the commercial banks like the volume and quality of deposit, loan, and investment are to be considered while making the investment policy. Besides the

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

It is believed that the soundness of a bank is reflected in the distribution of its funds on different types of assets. A good banker is one which follows a profound investment policy which brings maximum profit to shareholders and provides maximum security to the depositors. There are no any consistent rules as in to determine the portfolio of a bank. However there may be local conditions in which the bank operations will necessarily have a acceptance to its investment policy. And apart from the local conditions, a bank fundamentally is governed by three important principles while formulating its investment policy. The guiding principles of the investment policy of a commercial bank are liquidity, profitability and security; these three attributes are inter-related and any bank cannot afford to sacrifice one in favor of the other.

Every commercial bank has its investment policy to guide them on their investing operation. The basic factors that will determine the objectives of a bank's investment policy are its income, liquidity needs and the management's willingness to trade liquidity for greater income opportunities along with the degree of risk associated. Formulation of an investment policy must give awareness about the entire risk exposure that the bank management is willing to assume. One of the acceptable methods of reducing risks in the investment portfolio of a commercial bank is by diversification – a basic and important rule of any investment policy. Risk cannot be completely avoided by diversification, but they can be reduced. Besides the investment policy of a bank should be revised occasionally and modified as economic conditions changes.

The influence on the cost and availability of credit in the economy heavily relies on the loan and investment policy of the commercial banking system. Less exclusively yet significantly, the effectiveness of debt management and open market operations in influencing the terms of credit to private borrowers has been linked to the responsiveness of commercial banks to changes in market prices and yields to government securities. In

any commercial banks we find that the deposit relationship of a loan customer is a primary consideration in determining the cost and availability of bank credit to that customer. Here the discussion is based in terms of the broader analytical categories of yield, risk, and liquidity applicable to any investor. But in case of a commercial bank, it neglects the role of deposit as the principle source of an individual bank's power to lend an invest, and this leads to the significance of the deposit relationship for the individual bank and its influence on broader issues as the cost and availability of the bank credit which totally depends upon the bank's investment policy. Hence the studying devoted to "The Investment Policy of Commercial Banks" is so important.

For any bank, one of the important steps to take in the investment planning process is the creation of the Investment policy statement. An investment policy statement defines your goals and sets the guidelines for the investment activity, and some even consider it their business plan for making critical decisions. Most importantly it provides discipline. The investment policy statement can be broken down into these following sections:

) Definition of goals and objectives
) Statement of parties' responsibilities
) Risk and return parameters
) Asset allocation detail
) Screening criteria
) Investment due application and monitoring procedures
) Account review and rebalancing guidelines
) Fee and expenses considerations

The investment policy should specifically list how to distribute the investments – also known as the asset allocation which should be very specific. It should also include a provision detailing when to rebalance the portfolio, i.e. reworking the portfolio to the original asset allocation. A lot of time and effort should be given in creating an investment policy – because when constructed and followed properly, it provides the discipline to the investment process (source: Donald Trone of the Foundation for Fiduciary Studies).

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A bank may decide to embark on aggressive, liberal or a conservative investment policy. The type to be adopted will depend on the bank's objective, income and the level of the bank's present and expected risk exposure. For instance, a bank that is already much exposed to liquidity risks in loans and other assets will definitely pursue a conservative investment policy. Preferably, investment policy should be in writing. This will help to ensure uniformity and consistency in its application. However, it should be flexible enough to give room for the use of initiatives, and for easy room for the use of initiatives, and for easy adaptation to changes in the environment.

Finally, to ensure that the investment policy does not end up as a mere paperwork, appropriate machinery must be set on motion for its implementation. Authorities should be defined, and responsibilities assigned to specific officers or departments. There should be a provision for the appraisal and review of such policy.

2.1.5 Creating Investment Policy

An investment policy statement is an important document that will develop a 'blueprint' for managing an organization's assets. A well-developed statement will establish long-term objectives, promote adherence to these objectives, provide a disciplined process, and serve as a guide through difficult markets. Creating an asset allocation policy is an interactive process in which an organization must consider the strategic goals and objectives for their pools of assets. The process can be categorized into four important steps- evaluation, construction, implementation, and review. Each step by itself requires detailed analysis, but equally important is that all four must be completed for a thorough review.

➢ **Review**

This process requires an organization to review its policies and objectives regarding the use of the assets. There are several questions that should be considered specifically targeting the requirements of the portfolio. A review of spending requirements of liabilities is key in developing the return requirements.

The offset to return is to identify an acceptable level of risk that can be taken by the portfolio. This includes the traditional volatility review as measured by the standard deviation. However, standard deviation is not the only risk to be considered. Discussions should include the ability to handle both near- and long-term losses, consideration of a maximum acceptable loss for a given year or longer, and the implications if the required return is not met. The time horizon over which the assets will be invested will help in the risk analysis. Investment risk decreases over time, which implies that longer time horizon portfolios can take on additional risk. During the evaluation process, conflicts between the factors may arise, and further evaluation must be done. As an extreme example, if the required return for a particular asset pool was identified as 10% per year, and the organization is uncomfortable with anything other than a high quality fixed income portfolio, it will be impossible to meet those objectives. In that case, the return requirements and risk analysis must be revisited with changes to one or both to settle on a realistic plan. Every organization is different, and must be reviewed so that we can help develop an investment strategy that will meet their goals and objectives.

➢ **Construction**

Information gathered during the review phase develops the foundation for portfolio construction. Based on that understanding, an asset allocation can be created to meet those objectives. Studies have shown that over 90% of the variability in return is based on the asset allocation selected (Brinson, Singer, and Beebower, 1991) and determining the right mix is a helpful guide in both strong and weak markets.

The foundation for any review is to develop expectations of returns for different investments. Historical analysis is useful by providing an idea of how various asset classes have performed over time and through different market cycles, and forward-looking analysis is critical to reasonably assessing the potential of reaching investment goals. The starting point of our projections is based on forecasting inflation. From that base, we build the estimated returns based on historical risk premium for the different asset classes. We also consider how changes in things such as growth rates of earnings,

the inter-relationship of global markets, inflation, the global yield curve, and investor risk sentiment will affect these projected returns.

Additional asset classes such as Emerging Markets, High Yield Bonds, Real Estate, Alternative Investments, etc. can play an important role and should also be considered depending on the comfort level and appropriateness for the investor. While each of the asset classes by themselves carries varying levels and types of risk, each must be analyzed relative to each other and the value that can be added via a broad portfolio. The power of diversification comes from the relationship of uncorrelated assets. Each asset class is reviewed based on its historical correlations with the other investments.

With projections of asset class returns, standard deviations, and correlations, the next step is to create multiple portfolio options that provide the highest level of return for a given level of risk. Using a mean-variance portfolio optimizer, various portfolios can be created. Mean-variance optimization is a statistical process that uses the mean returns (either historical or projected), standard deviations (variance), and correlations to analyze the inter-relationship between various asset classes, and calculate portfolio mixes that are the highest return for each given level of risk. This collection of "optimal" mixes along the risk spectrum is referred to as the "efficient frontier". This is a useful tool to measure the risk level of portfolios, understand the impact of changes, and ensure that investors are compensated for the amount of risk that is taken. With these benefits, the process does also have limitations. The primary limitation is that it looks at standard deviation as the sole measure of risk. As discussed in the evaluation section, there are other items within the risk category that need to be considered. Nonetheless, it provides useful information as portfolios are constructed.

Projected returns, diversification, and optimizers must be combined with client-specific information gathered in the evaluation phase to develop a customized investment plan. Based on return requirements and risk tolerances, the universe of potential portfolio mixes can be narrowed to specific options that will meet the portfolio objectives.

Investors should review the best and worst returns for different years and time periods to determine their comfort level with the outcomes.

Various portfolio options should also be "stress tested" to understand the range of possible outcomes for a given mix. Factors such as cash flows and spending rates can also be factored in to provide more realistic modeling. The output of such analysis will provide statistical probabilities of certain outcomes. This is especially important relative to an investor's risk tolerance because it can provide guidance for "best" case and "worst" case scenarios, and helps validate the chosen allocation.

➢ **Implementation**

Once the goals are determined and the portfolio structure is identified, the plan is put to work through the implementation phase. Executing the plan is just as important as how the plan has been developed. Care must be given to the choice of investment strategies that will fill the various asset class "buckets". Determining the use of active investment versus passive (indexing), styles such as growth versus value, and rules for rebalancing the portfolio are all considerations that must be reviewed.

The "active versus passive" discussion gives investors the ability to take advantage of asset class efficiencies, or inefficiencies as the case may be. While some investors feel strongly one way or the other, the optimal solution can often be reached through a blend of the two. By blending passive and enhanced indexing (mostly in the more efficient asset classes) with active (mostly in the less efficient asset classes), investors can control the amount of risk that they take, make sure they are being compensated where they do take it, and ultimately create more efficient portfolios.

After the strategic asset allocation and investment strategies have been determined, a critical decision is how to manage the asset mix. One option is to manage the asset weights tactically (called Tactical Asset Allocation) based on the manager's evaluation of the current markets and opportunities. With this approach, the manager adjusts the weightings based on these views and, for example, sells stocks when they appear poised

to fall and increase equity exposure when the manager sees them rising more than the alternatives. However, the manager would always keep the asset weights within the policy ranges as well as determine how cash flows are invested.

The other option is to keep asset mix consistently in line with the policy benchmark regardless of manager or client's views on the market (called Strategic Asset Allocation). The key decision then becomes how frequently to rebalance the strategic allocations of the portfolio, and how to manage cash flows as the holdings deviate from target allocations due to investment performance. Most investors agree that the strategic allocation will be the most important factor responsible for the long-term results of the portfolio; any reallocation activity should be limited to preserving the integrity of the strategic policy.

There are a few schools of thought when it comes to Rebalancing Policies
- Calendar or periodic rebalancing at specific times such as monthly, quarterly, or annually.
- Rebalancing when the mix drifts to a set trigger point.
- Rebalancing to an allowable range within a set tolerance limit.
- Allowing the asset mix to drift.
- To minimize variation of returns away from a benchmark due to asset drift.

➢ Evaluation

A well-created investment policy is a good guide for an organization. But in reality economic system is always changing and it is important to regularly evaluate the policy statement to ensure that it is still appropriate. A formal required evaluation, quite often is suggested to ensure that the investment committee, board, and staff know it is their responsibility to conduct the process. In between formal evaluation, any changes in situation, such as a change in funding status, a change in ownership, a large cash inflow, or re-evaluation of risk tolerance should be discussed and reviewed for its impact on the investments. A evaluation does not necessarily require a change in strategy, but to re-affirm that the approach is appropriate is an important step.

Developing an investment policy can be an involved process, but is necessary for a successful investment program. The steps of evaluation, construction, implementation and review provide the framework for developing a policy that will meet an organization's investment goals and objectives (Farley: 1995)

2.1.6 Principle of Banking Investment Policy

Banking being the service industry- it performs various financial activities. The traditional view about the function of bank was just limited to accepting deposits and providing loan, but today the whole functioning of the bank has came through a revolutionary change; i.e. it provides multiple bank services and hence labeled as 'financial departmental store'. And providing these services includes some integral risks; as bankers are the trustees of the community, they cannot take undue risk. A banker hence has to follow a cautious policy and conduct its business on the basis of certain sound principles- especially regarding its investment plans. There is no universal rule as on how should any investment policy should be made, but there are some principles to guide them. So, here are some principles of the banking investment policy- Source: web-Metropolitan St. Louis Sewer district Public Funds Investment Policy Adopted February 8, 2001.

➢ **Principle of Safety and Security**

Preservation of principal is the foremost objective of any investment program. Investment should be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio. The objective will be to lessen the extent of the banking risks. Normally banks confront different kinds of risks, like:

- Credit risk: Credit risk arises whenever another party enters an obligation to make payment or deliver value to the bank, which is mostly associated with the lending.
- Liquidity risk: Liquidity risk arises when bank itself fail to meet its obligation. The bank has obligations to make payments to different parties at any time, and when they fail to do so, that is termed as liquidity risk.

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⟩ Yield risk: The risk of the bank's assets generating less income than the expenses generated by its liabilities if the yield risk.

⟩ Market risk: The risk of loss resulting from the movements in the market price of financial instruments, in which the bank has a position, is the market risk like bonds, equities, foreign exchange and associated derivative products.

⟩ Operational risk: The risk of failure in the banks procedures or operation – whether internal or external failure due to the negligence of its operation is the operational risk.

➢ **Principle of Liquidity**

The investment portfolio should remain sufficiently liquid to meet all operating and debt service obligations that may be reasonably anticipated. This can be accomplished by structuring the portfolio in such a way that the securities mature with cash needs to meet anticipated demands. Furthermore, since all possible cash demands cannot be anticipated, the portfolio should consist largely of securities with active secondary or resale markets. A portion of the portfolio also may be placed in bank deposits or repurchase agreements that offer same-day or next-day liquidity for short-term funds.

➢ **Principle of Profitability/Yield**

The investment policy should be designed with the objective of attaining a market rate of return throughout the budgetary and economic cycles, taking into account the safety and liquidity objectives stated above. Return on investment- however can be stated as the secondary importance compared to the safety and liquidity objectives described above. The core of investment is limited to relatively low risk securities in anticipating of earning a fair return relative to the risk assumed. In simple words- a bank should focus on earning more profit and maximize the value of their shareholders; and for this it should invest its fund in a profitable sector. Without profit any bank will have difficulty in achieving its success, i.e. profit maximization. Hence to achieve its goal- it should adopt the principle of profitability while making its investment policy.

➢ **Principle of Diversification**

According to this Principle, a bank should not invest all their funds in the same kind of investment or say in the same sector. The investments shall be diversified to minimize the risk of loss resulting from over concentration of assets in specific maturity, specific issuer, or specific class of securities. There is a saying 'Do not put all the eggs in the same basket'- this is so because it has high risk. Likewise in case of investment also a bank should invest on different areas/sectors; so that if one area is on loss and cannot yield sufficient return- the other one would compensate it. In this way, diversification of the investment would help to sustain loss and minimize the risk associated with it.

➢ Principle of Legality

Under this Principle, the investment provisions or the investment plans should be legal in the eyes of the nation's law – i.e. investing in illegal areas or business not supported by the law leads the bank to its dissolution in near future. Hence any commercial bank must abide by the rules and regulations issued by the Central Bank of the nation as well as the rules of the concerned ministries. The central bank- Nepal Rastra Bank issues directives to guide the financial institutions in its operation tracing its rules.

➢ Principle of Social Economic Benefit

While satisfying the objectives of safety, liquidity and yield – a bank should seek to place its investment with financial institutions that demonstrate a strong investment in, and supporting the overall national economy through the institutions' lending practices. Along with its own interest of earning profit, a bank should also consider the national interest. The directives of Nepal Rastra Bank instructs the banks to invest n such sectors/projects which has less attractive return for the bank but carries its obligation towards the society and the country as a whole. Hence, while preparing its own individual investment policy a bank should consider the national economic policy.

2.2 Review of Legislative Provisions

In this section those legislative provisions under which the commercial banks operates are reviewed. There is the specified law, rules and regulations or say a proper defined legal framework to control every financial activities of a country. In case of our country

we have our central bank-NRB which provides a legal framework which controls, regulates and supervises the banking activities and its operations. NRB issues different act and clauses on its directives to guide the financial activities along with the operation. These guidelines- directly or indirectly affect the banking functions and it's decision-making. Hence all the financial institutions and the bank must be aware and pretty much familiar with the directives/rules and regulations formulated by NRB.

The commercial banks are affected by the law/legal provision of the country form its establishment – its overall operation till its dissolution. To be more specific all the commercial banks have to operate under the legislative provisions specified in the Commercial Bank Act 2031 B.S.; along with its rules and regulations under the law which helps in facilitating the smooth running of the commercial banks. The main function of any commercial bank established under this act will be mainly dealing with the exchange of money, accepting of deposits, mobilize the bank deposits by providing loan to the commercial and business activities.

2.2.1 NRB Directives

The directives of NRB must be reviewed while making any decisions. Here, researcher focuses on those which are related to investment function of a commercial bank.

The main provisions established by NRB in the form of prudential norms in the concerned area are basically has been focusing to the deprived and priority sectors. Besides, in course of timely rectification of the existing directives, the NRB has been clarifying, nullifying or modifying the unclear clauses in addition to enforcing new directives. In this action it has defined the provision for deprived and priority sector lending in the following way:

➢ **Priority Sector and Deprived Sector Lending Program**

With the financial liberalization, a policy of phasing out the priority sector lending program has been initiated. However, it has been equally challenging to meet credit demand in rural areas. The priority sector lending program has gradually been phased out

since 2006/07. In 2007/08, commercial banks were required to disburse only 2.0 percent of total loans and advances to the priority sectors. However, the deprived sector lending program has been kept unchanged. Newly established commercial banks are required to disburse 0.25 percent and the existing commercial banks are required to disburse 3.0 percent of their loans and advances to deprived sectors. Individual credit up to Rs.100000 has been defined as deprived sector credit.

Besides, the following directives were enforced in 2004/05 which is directly or indirectly related to lending program of a bank:

) Banks and financial institutions were required to make a loan loss provision of one percent in case of good loans, only if the loan was restructured or rescheduled with hundred percent interest collection. Distribution of dividend to shareholders is not allowed out of profit earned from the use of this facility.

) Banks and financial institutions should maintain minimum capital fund of 11.0 percent (of which, 5.5 percent should be primary capital) of risk weighted assets, instead of 12.0 percent as directed earlier. The downward revision was made in view of the prevailing adverse situation.

Similarly, in case of the maintenance of the Monetary policy stance and instruments, Cash Reserve Ratio CRR), a compulsory cash balance to be maintained by commercial banks at the NRB, is 5.5 percent. The effect of reduction in CRR at the outset of the fiscal year transmitted into short-term interest rates. As a result, short-term interest rates declined significantly. However, the reduction in CRR contributed to bring down the cost of fund of commercial banks. The reduction in CRR and the provision of Standing Liquidity Facility (SLF) provided commercial banks with confidence in liquidity management. These phenomena have developed the base for effective transmission of monetary measures.

2.3 Review of Related Studies

In this section we go through the articles, journals, comments made on this topic and its related areas by the scholars of this area; which includes their views with their suggestions for the further improvement. There are various scholars sharing their views

on the investment policy and its importance, but here are some relevant ones chosen to support the objective of the study.

2.3.1   Review of Articles/Journals

Bajracharya (2047), in his article, "Monetary Policy and Deposit Mobilization in Nepal" has mentioned the mobilization of domestic saving being one of the prime objectives of the monetary policy in Nepal. Moreover, for this purpose commercial banks are the active financial intermediary for generating resources in the form of deposit of the private sector and providing credit to the investors in different sectors of the economy.

Shrestha (2055), in his article, "Portfolio Management in Commercial Bank Theory and Practice" has focused on the use of the excess funds in the best and profitable investment. But here the question may arise on how to make any best investment decisions - and the answer would be proper portfolio management. Portfolio management basically means to invest funds in various schemes of mutual funds like deposits, shares and debentures for the investors with surplus income. Basically, the wealthy clients having plenty of surplus funds seek to maximize the return on their fund prepared to take certain amount of risk for this. But due to lack of technical expertise they can't make such investment decision of their own. Primarily, there are only two options for savers/investors, i.e. to use funds either for purchase of financial assets like securities or for purchase of financial assets like land, building etc. while selecting the best mix of investment assets there are things to be considered like; higher comparable return with alternative opportunities available according to the risk of investor, good liquidity with adequate safety on investment, capital gains, tax concessions, flexible investment, etc.
 However, Shrestha states that, in order to get success in portfolio management and customer's confidence, the bank should possess: skilled manpower, strong research and analysis team, Proper management information system.
Karki (2000), in his article on "Nepalese Financial Sector: Challenges and Some Solution" has stated that, the financial institutions especially commercial banks have to identify new areas of investment to increase loan and advances in liquidity position. Especially with the rapid growth in the number of banks and financial institutions in

today's world – deposit insurance scheme is a must. The principle reason for introducing such deposit insurance should be one of the social justice rather than economic justification in order to protect the interest of the small depositors.

Bhattarai (2003), has presented an article about the "Non Performing Assets (NPA) Management", where he has mentioned that it is very difficult for a borrower to pay back and for the lender to recover his lending. From a banker's view, it is just like a stone to roll down from the top of the hill while approving the loan, but too difficult to roll back the same stone to the top of the hill while recovering the loan. A loan not recovered within the given time frame either in the form of interest servicing or principal repayment is called non-performing loan. There are other parameters as well to quantify an NPL; like inadequate security and safety margin for the loan amount specified, value of security unrealizable, conflict of the charges – these are the various reasons which causes difficulties while recovering the loan. According to him, NPL for a bank is like a developing cancer in a human body, which will collapse the whole bank if not managed in time. Hence managing is an important discipline in banking to prevent whole NPL or avoid situations for a loan to turn into NPL. A loan disbursed as a good loan doesn't turn into a bad one over-night. It takes certain course of time to turn into a bad one. An efficient bank management can recover the loan before turning it into bad and can save itself from the unwanted collapse.

UN report (2005), **"**Investment Policy Review of Nepal" a Report by UN has stated that, despite the growth in the number of financial institutions over the past decades, all is not well in financial sector. The main constraint in the financial sector is not a shortage of commercial institutions or financial resources but rather institutional weakness and low standard of governance (UNIDO, Vision-2020, 2002). The report further says that, in addition to corporate governance issues- commercial banks are also adversely affected by compulsory lending to small borrowers in 'Priority Sector'. Commercials banks must devote certain percent of their lending to these loans, which entail interest rate below the market rate. However, compulsory lending is expected to be phased out within five years.

World Bank report (2006), on "Analyzing and Managing Banking Risk" by Hennie Van Greunning and Sonja Brajovie Bratanovic States that – the investment policy sets out the rationale for holding a liquidity portfolio and defines any target levels, usually in terms of short-term debt coverage/ liquid asset ratio. The investment policy also sets out broad credit and market risk parameters. According to the report the bank risk involved in this study such as liquidity risk, credit risk fall into pure risk which is a part of financial risk (Greunning and Bratanovic, 2003:3-223).

"The importance of banks is premised on the grounds that banks are the main channels of savings and the allocators of credit in an economy. The efficiency of the banks therefore affects the financial system and the entire economy. Bank-failures or systematic banking crisis almost invariably are due to distorted management incentives, bad governance, weakness in macroeconomic policies (which includes their investment policy), weak supervision, or problems related to the real sectors". (Adhikari and Oh, 2001:105).

2.3.2   Review of Research Papers/Previous Studies

Morrios (1990) in his discussion paper, "Latin America's banking system in the 1980s" has concluded that most of the banks concentrated on compliance with central banks rules on reserve requirements, credit allocation and interest rates. While analyzing loan, portfolio quality, operating efficiency and soundness of bank investment management have largely been over looked. The huge losses now found in the bank's portfolio in many developing countries are testimony to the poor quality of their oversight investment function. He further adds that management in financial institutions has involved inadequate and over-optimistic loan appraisal, tax loan recovery, high-risk diversification of lending and investment, high-risk concentration, connected and lending loan mismatching. This has led many banks of developing countries to the failure in 1980s.

Pradhan (2003), in his research paper "Role of saving, investment and capital formation in economic development. A case of Nepal," has studied about the strong role and impact of saving, investment and capital formation on economic development of Nepal. This study is based on secondary data only. The necessary data on saving, investment, capital

formation and gross domestic product has been collected for the period of 1974/75 to 2000/01. The role and impact of saving, investment and capital formation on economic development were analyzed by using various regression models. The regression equations used in this study have been estimated at current prices as well as in real terms with the entire study period divided into different sub periods.

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

Shrestha (1993), entitled "Investment planning of commercial banks in Nepal", Dr. Shrestha has made remarkable efforts to examine the investment planning of commercial banks in Nepal. Based on her study, she concludes that bank portfolio (loans and investment) of commercial banks has been influenced by the variable securities rates. Investment planning of commercial banks in Nepal is directly traced to fiscal policy of the government and heavy regulatory procedure of Nepal Rastra Bank. Therefore, the investments are not made in professional manner. Investment planning and operation of commercial banks in Nepal has not been found satisfactory in terms of profitability, liquidity, safety, productivity and social responsibility. To overcome this problem, she has suggested that "…commercial banks should take their investment function with proper business attitude and should perform lending and investment operation efficiently with proper analysis of the projects".

Thapa (1994), expressed his view that the commercial banks including foreign joint venture banks seems to be doing pretty well in mobilizing deposits. Likewise, loans and advances of these banks are also increasing. But compared to the high credit needs

particularly by the newly emerging industries, the banks still seem to lack adequate funds. The banks are increasing their lending to non-traditional sectors along with the traditional sectors. Among various commercial banks, Nepal Bank Ltd. and Rastriya Banijya Bank are operating with a nominal profit and also turning towards negative from time to time. Because of non-recovery of accrued interest, the margin of interest income is declining. These banks have not been able to increase their income from commission and discount, through traditional off-balance sheet operations. On the contrary, they have got heavy burden of personnel and administrative overheads. Similarly, due to accumulated overdue and defaulting loans, profit position of these banks has been seriously affected.

On the other hand, the foreign venture banks have been functioning in an extremely efficient way. They are making huge profit year after year and have been distributing large amount of loans and dividends to its employees and shareholders. Because of their effective persuasion for loan recovery, overdue and defaulting loans have been limited resulting in high margins between interest income and interest expenses. Similarly, concentration of these banks to modern off-balance sheet activities and efficient personnel management has added to the maximization of their profits.

At the end of article, he concludes that by its varying nature of the public sector the domestic banks couldn't compete with the private sector banks. Therefore, only remedy to the problem 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.

Rastra Bank has given a short glimpse on the "Portfolio management in commercial banks - theory and practice".

Maharjan (2003)**,** has conducted a study on "Investment Policy of Nepal Investment Bank in comparison to Standard Chartered Bank Ltd." The researcher has conducted primary as well as secondary study on his research work. The objectives he focused on was to study the asset management system, profitability and risk position of the banks under the study. He has also conducted an empirical study on the opinions of customers

and the bank staffs regarding organizations' investment, facilities, services and their contribution to the nation.

Through the primary study, it found out that most of the customers did not have any problem with the bank service, and more than seventy percent of the customers had not borrowed loan yet. However the study showed that most of the customers and staffs had the opinion that the bank should give investment priority to the rural areas of the nation. The study has recommended the banks to reduce its minimum required balance and to extend its branches to the under privileged sector. The bank is also suggested to follow liberal lending policy and to invest more of its total deposits on loan and advances and maintain its investment policy.

Joshi (2005), conducted a study on "Investment Policy of Commercial Banks in Nepal: A Comparative Study of Everest Bank Limited with NABIL Bank Limited and Bank of Kathmandu. The secondary data were used to conduct the study. The research findings of the study were: The liquidity position of the EBL was better than NABIL and BOK. EBL had the highest cash and bank balance to total deposits and cash and bank balance to current assets ratio. NABIL had the lowest liquidity position. EBL had good deposit collection and made enough investment on Government Securities, but it maintained a moderate investment policy on loans and advances. From the analysis of assets management or activity ratio, it was concluded that EBL was average, or in between NABIL and BOK. The total investment of EBL was in between the other two banks. In the study, loans and advances to total deposit was higher in BOK, but total investment to total deposit was higher in NABIL. Investment on shares and debentures to total working fund ratio was higher in BOK. However, the coefficient of variation was higher in EBL. In analysis of profitability, total interest earned to total outside assets of EBL is lowest at all. However, overall analysis of profitability ratios showed that EBL was an average in comparison to other compared banks i.e., NABIL and BOK. From the viewpoint of risk ratio, EBL had higher capital risk ratio, but average of credit risk ratio of NABIL and BOK.

Regmi ƒ2006), conducted "A Comparative Study on Investment Policy of Everest Bank and Himalayan Bank Limited". The research findings of the study were: The liquidity position of EBL was comparatively better than HBL. EBL had the highest cash and bank balance to total deposit ratio, cash and bank balance to current assets ratio than that of HBL. Both EBL and HBL had almost same pattern of investment on government securities, but fluctuating ratios showed the unstable policy of investment. EBL has higher loan and advances to current assets ratio and successful in deposit collection as well. The assets management ratios of both banks are satisfactory. Both bank EBL and HBL had provided its most portion of deposit as loan and advances. Moreover, EBL had invested its more portions as loan and advances, in case of investment in other sectors, HBL had adopted diversified investment policy. EBL invest its working fund in government securities and other companies share and debentures than that of HBL, So HBL is less effective in comparison to EBL. In profitability analysis, HBL had maintained high profit margin regarding profitability position. HBL was more successful to generate income through loan and advances and operating income and it has earned more from total outside assets and total working fund. From the study, it was concluded that profitability of HBL was better than that of EBL. From the risk point of view, HBL had borne lower liquidity risk and credit risk in comparison to EBL regarding various aspects of banking activities. It could be said that HBL had followed a stable liquidity policy justified by lower coefficient of variation.

Shrestha ƒ2007), conducted a study on "A Comparative Analysis on investment performance of commercial banks in Nepal". The research findings of the study were as follows: The liquidity position of NIBL was stronger than NABIL and HBL. At the same time, liquidity position of NIBL was highly fluctuating, which showed that NIBL bore higher risk than other two banks. NIBL had the least investment in Government Securities, which considered the least risky asset. From the analysis of assets, management ratio of NIBL in comparison to NABIL and HBL was more successful regarding asset management and deposit mobilization. NIBL's investment on shares and debentures was high in comparison to the other two banks but its performance regarding total investment has been very poor. In the profitability analysis, none of the three banks'

profitability position was clearly better. However, NABIL was slightly better profitability. Therefore, their profitability ratios were in moderate position. From the risk point of view, NABIL and NIBL were facing higher risk than HBL, but the risk level of all three banks seemed almost the same. From the analysis of growth ratios, NIBL's collection of deposit, granting of loans and advances and net profit were better but in terms of investment, HBL is better. The coefficient of correlation analysis between different variables of NABIL, NIBL and HBL revealed that NABIL was weaker regarding mobilization of deposits as loans and advances and NIBL was performing extremely well regarding earning profits from outside assets. From the trend analysis study, it was found that all banks were mobilizing their total deposits into loans and advances in increasing trend, which was the indication of efficient mobilization.

Dhakal *f*2008), conducted a study on "Investment Policy of Commercial Banks in Nepal". The research findings of the study were the following: The liquidity position of Everest Bank Ltd. (EBL) was comparatively better than that of Nabil Bank Ltd. (NABIL) and Bank of Kathmandu Ltd. (BOK). All the three banks had met the normal standard current asset ratio to meet the short-term obligations of their customers. EBL had invested the most in Government Securities, followed by BOK and NABIL. BOK had mobilized a huge sum its funds to earn the profit. From the analysis of assets management ratio, EBL was in better position than NABIL and BOK. The loans and advances to total deposit ratio, loan and advances to total working fund ratio of EBL lied in between those of NABIL and BOK. EBL had invested the highest portion of its total working fund on government securities as compared to NABIL and BOK. Investment on shares and debentures to total working fund ratio was higher in BOK. Overall analysis of profitability ratios showed that EBL was on an average profitable in comparison to other bank i.e. NABIL and BOK. The return on loan and advances ratio and return on assets of EBL was lowest of all. The degree of risk was average on EBL. EBL had shown its good performance by increasing earnings by providing loan to clients. The trend of the total investment, total deposit, loan and advances and net profit of EBL showed better position than that of NABIL and BOK.

2.4 Research Gap

We have had a plenty of research work done on the topic 'Investment Policy' of varying banks; from Government regulated banks to the emerging joint venture banks. And among those studies, some focused basically on the investment policy of the selected banks, some included the study on their deposit mobilization and some also emphasized on the consistency of the investment with the NRB directives.

Here, this study also focuses on all the above issues related to the investment policy of the bank with similar kind of analysis tools. However the previous study on their selection of the samples, i.e. on their selection of the banks – they have done random sampling without any base to its selection. In this study the sample selection is categorized in a definable way which makes sense. The selection of the sample banks here is made on the basis of their performance, i.e. they are categorized as best banks of Nepal. The selected banks are considered as best because they are among the high profit earning banks in recent. Besides this study on the investment policy on NABIL, HBL and SCBNL has covered the latest data which covers the information from 2005/06 to 2009/10; which makes it the fresh study with these 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. In this chapter we deal with all the techniques and tactics used to conduct this research process. This would highlight the research design used, population and samples used, sampling procedures, the data gathering procedure, the variables and measures, the statistical procedures, data processing procedure and the pilot study.

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 using both financial and statistical tools.

3.2 Research Design

Research design means drawing an outline of planning or arranging details in an economic, efficient and relevant manner before the data collection and data analysis. It is the process of making decisions before the situation arises in which the actual decision has to be made. According to Kerlinger (1986) "Research design is the plan, structure, and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The plan is the overall scheme or program of the research. It includes an outline of what the investigator will do from writing the hypothesis and their operational implications to the final analysis of data".

Since the major objective of this study is to evaluate and analyze the investment policy of the commercial banks in Nepal; various parameters related to this topic has to be evaluated – which here will highly concentrate on the performance of the selected banks.

Further, for the effective research work – the type of research design considered here are: descriptive research design and analytical research design.

3.3 Sources of Data

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

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

3.4 Population and Sample

Since new commercial banks are being incorporated every year, the number of commercial banks in Nepal has been increasing rapidly. Currently, however, there are 31 commercial banks functioning all over the country and most of their stocks are traded actively in the stocks market. All commercial banks are taken as population for the study. The selection of the sample banks here is made on the basis of their performance, i.e. they are categorized as best banks of Nepal. The selection of the sample banks here is made on the basis of their performance, i.e. they are categorized as best banks of Nepal. The selected banks are considered as best because they are among the high profit earning banks in recent. The commercial banks for study as sample are as follows:

    i)   Himalayan Bank Ltd. (HBL)

    ii)   Nabil Bank Ltd. (NABIL)

iii) Standard Chartered Bank Nepal Ltd. (SCBNL)

3.5 Methods of Data Analysis

For the effective analysis of the available data to gain the objective of the study – various tools including financial and statistical tools would contribute to study on the topic. The selected tools which contribute in this research are categorized on the basis of their nature. Simple analytical statistical tools such as percentage, karl person's coefficient of correlation, regression, the method of least square and test of hypothesis are used in this study. Similarly some financial tools such as ratio analysis and trend analysis have also been used for financial analysis.

The various tools used in this study are:

3.5.1 Financial Tools

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

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

3.5.1.1 Liquidity Ratios

Liquidity ratios measure the firm's ability to current obligations. It reflects the short term financial strength of the business. It is the measurement of speed with which a bank's assets can be converted into cash to meet deposit withdrawal and other current obligations. A bank should ensure that it does not suffer from lack of

liquidity and also it does not have excess liquidity. Both condition of liquidity are not in favour the viewpoint of banks.

The following ratios are evaluated under liquidity ratios:

i) Current Ratio

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

$$\text{Current Ratio} = \frac{Total\ Current\ Assets}{Total\ Current\ Liabilitie\ s}$$

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

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

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

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

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

Hence, cash and bank balance includes cash on hand, foreign cash on hand, cheques and other cash items, balance with domestic and abroad banks where as the

total deposits include current deposits, saving deposits, fixed deposits, money at call and short term notice and other deposits.

iii)   Cash   and   Bank   Balance   to   Current   Assets   Ratio

This ratio measures the proportion of most liquid assets i.e. cash and balance among the total current assets of the bank. Higher ratio shows the banks ability to meet its demand for cash. This ratio is calculated by dividing cash and bank balance by current assets. Mathematically it is expressed as,

$$\text{Cash and Bank Balance to Current Assets Ratio} = \frac{\textit{Cash and Bank Balance}}{\textit{Current Assets}}$$

iv) Investment on Government Securities to current Assets Ratio

Investment on government securities includes treasury bills and development bonds etc. This ratio is calculated to find out the percentage of current assets invested in government securities. This ratio is calculated by dividing investment made on government securities by current assets. Mathematically it is expressed as,

$$\text{Investment on Govt. Securities to Current Assets Ratio} = \frac{\textit{Investment on Government Securities}}{\textit{Current Assets}}$$

v) Loan and Advances to Current Assets Ratio

Loan and advances to current asset ratio shows the percentage of loan and advances in the total current assets. Where loan and advances include loans, advances, cash credit, local and foreign bill purchased and discounted etc. This ratio can be calculated by dividing loans and advances by current assets. Mathematically it is expressed as,

$$\text{Loan and Advances to Current Assets Ratio} = \frac{\textit{Loan and Advances}}{\textit{Current Assets}}$$

3.5.1.2 Assets Management Ratios (Activity Ratios)

Activity ratios are employed to evaluate the efficiency with which the firm manages

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

The following ratios are used under this asset management ratio.

i) Loan and Advances to Total Deposit Ratio

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

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

ii) Total Investment to Total Deposit Ratio

This ratio implies the utilization of firm's deposit on investment in government securities and share debentures of other companies and bank. This ratio can be calculated by dividing total investment by total deposit. Which can be states as;

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

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

iii) Loan and Advances to Working Fund Ratio

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

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

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

iv) Investment on Government Securities to Total Working Fund Ratio

This ratio shows that banks investment on government securities in comparison to the total working fund. This ratio is calculated by dividing investment on government securities by total working fund, which can be states as,

Investment on Govt. Securities to Total Working Fund Ratio

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

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

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

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

Investment on Shares and Debentures to Total Working Fund Ratio

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

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

3.5.1.3 Profitability Ratios

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

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implies that higher the profitability ratio, better the financial performance of the bank and vice versa.

The following ratios are taken into account under this heading.

i) Return on Total Working Fund Ratio

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

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

ii) Return on Loan and Advances Ratio

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

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

iii) Total Interest Earned to Total Outside Assets Ratio

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

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

iv) Total Interest Earned to Total Working Fund Ratio

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

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

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

v) Total Interest Paid to Total Working Fund Ratio

This ratio is calculated to find out the percentage of interest paid on liabilities with respect to total working fund. This ratio is calculated by dividing total interest paid by total working fund. Which, can be expressed as

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

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

3.5.1.4 Risk Ratios

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

The following ratios are taken into account under this heading.

i) Liquidity Risk Ratio

The Liquidity risk ratio measures the level of risk associated with the liquid assets i.e. cash, bank balance that are kept in the bank for the purpose of satisfying the depositor's demand for cash. Higher the ratio, lower is the liquid risk. Dividing cash and bank balance calculate this ratio by total deposits. This can be mentioned as,

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

ii) Credit Risk Ratio

Credit risk ratios measures the possibility that loan will not be repaid or that

investment will deteriorate in quality or go into default with consequent loss to the bank. By definition, credit risk ratio is expressed as the percentage of non-performing loan to total loan and advances. This ratio is calculated by dividing total loan and advances by total assets. This can be mentioned as,

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

iii) Capital Risk Ratio

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

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

3.5.1.5 Growth Ratios

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

The following growth ratios are calculated in this study.

  i.   Growth ratio of total deposit
 ii.   Growth ratio of loan and advances
iii.   Growth ratio of total investment
 iv.   Growth ratio of net profit

3.5.2 Statistical Tools

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

3.5.2.1 Trend Analysis

Under this topic, trend of different types of investment made by selected banks are analyzed and also trends are forecasted for next five years. The forecast is based on the following assumptions:

⟩ The first assumption is that other things will remain unchanged.

⟩ The bank will run in present position.

⟩ The economy will remain in the present stage

⟩ The forecast will be true only when the limitation of least square method is carried out

⟩ Nepal Rastra Bank will not change its guidelines to commercial banks.

The trend analysis of following investent sector has been done:

  i. Trend analysis of Real Estate Loan.

  ii. Trend analysis of Housing Loan.

 iii. Trend analysis of Margin Type Lending.

 iv. Trend analysis of Consumer Lending.

3.5.2.2 Co- efficient of Correlation Analysis

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

  i. Co-efficient of correlation between deposit and loan and advances.

  ii. Co-efficient of correlation between deposit and total investment.

 iii. Co- efficient of correlation between total outside assets and net profits.

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

3.5.2.3 Test of Hypothesis

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

i) Test of hypothesis on loan and advances to total deposit ratios between NABIL, HBL and SCBNL.

ii) Test of hypothesis on total investment to total deposit ratio between NABIL, HBL and SCBNL.

iii) Test of hypothesis on investment on government securities to current assets ratio between NABIL, HBL and SCBNL.

iv) Test of hypothesis on loan and advances to current assets ratio between NABIL, HBL and SCBNL.

CHAPTER- IV

DATA PRESENTATION AND ANALYSIS

The collected data should be compiled, analyzed and interpreted carefully before their full meanings and implications can be understood. The collected data are thus transformed into information and this process of transformation of data is the analysis part – which is also the examination and interpretation of data to draw conclusions. The analysis of data consists of organizing, tabulating, performing statistical analysis and drawing inferences, i.e. interpretation. Data analysis and interpretation are so closely related that data analysis is considered as a special aspect of analysis rather than a separate activity. The general purpose of this chapter is to examine the processes by which the meaning and implications of research data can best be extracted by using various financial tools and statistical tools.

4.1. Financial Analysis

In simple words, liquidity is the paying ability of a firm to meet its current expenses and obligations. Therefore, every firm has to maintain adequate liquidity for that purpose.

4.1.1 Liquidity Ratios

Few chosen liquidity ratios suitable for our study purpose on the sample banks from fiscal year 2005/06 to 2009/10 are as follows:

i) Current Ratio

Current ratio indicates the ability of a bank to meet its current obligation. Standard of current ratio is 2:1 for banking and seasonal business current ratio is 1:1 and so on. Table 4.1 shows the mean, standard deviation and coefficient of variation of Current Ratio NABIL, HBL and SCBNL.

Table 4.1

Current Ratio (Times)

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.9331	1.2726	1.8573
2	2006/07	1.3853	1.5111	1.5699
3	2007/08	1.3012	1.6134	1.5680
4	2008/09	0.8368	1.9179	2.0018
5	2009/10	1.1007	1.5533	1.0047
Total		5.5571	7.8683	8.0017
Mean		1.1114	1.5737	1.6003
S.D.		0.2336	0.2319	0.3821
C.V		21.02	14.73	23.88

Source: Appendix

Current ratio of all three banks NABIL, HBL and SCBNL are in fluctuating trend. In an average, SCBNL has maintained higher current ratio than NABIL and HBL, which states that liquidity position of SCBNL is better than NABIL and HBL. The coefficient of variation between the current ratio of NABIL is 21.02%, which is comparatively lower than 23.88% of SCBNL and greater than 14.73% of HBL, it shows that current ratio of NABIL is consistence than SCBNL and it is less consistence than HBL. Current ratio of HBL is more consistence than other banks because coefficient of variation is less. This above table along with its supporting figure shows that the current assets of all the banks exceeds its current liabilities on average in the study period from 2005/06 to 2009/10 – this indicates that all the banks had sound liquidity to meet their short term obligations in the given study period.

ii) Cash and Bank Balance to Total Deposit Ratio

The ratio between the cash and bank balance and total deposits measures the ability of bank to meet the banks immediate funds to cover their *f*current margin, call margin and saving) deposits. Table 4.2 shows the mean, standard deviation and coefficient of variation of Cash and Bank Balance to Total Deposit Ratio of NABIL, HBL and SCBNL.

Table 4.2

Cash and Bank Balance to Total Deposit Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.0326	0.0648	0.0553
2	2006/07	0.0600	0.0585	0.0820
3	2007/08	0.0837	0.0455	0.0689
4	2008/09	0.0903	0.0879	0.0887
5	2009/10	0.0302	0.1028	0.0548
Total		0.2968	0.3595	0.3497
Mean		0.0594	0.0719	0.0699
S.D.		0.0279	0.0231	0.0153
C.V		47.02	32.15	21.94

Source: Appendix

Analysis shows that the cash and bank balance to total deposit ratio of NABIL, HBL and SCBNL has followed fluctuating trend. NABIL has increasing trend upto 2008/09 and then decreasing in 2009/10. In average, NABIL has maintained lower cash and bank balance to total deposit ratio than other banks i.e. 0.0594. It states that cash and bank balance in liquidity position of NABIL is lower than other banks. The Coefficient of variation of NABIL is 47.02%, which is comparatively higher than that of other banks. It indicates that cash and bank balance to Total deposit ratio is less consistence than HBL and SCBNL. Comparatively NABIL has maintained low ratios, it shows some difficulties to meet the demand of its customers on their deposit to pay at any time but it may be earning more by investing cash to different sectors. But it should ensure to have enough liquid funds to serve its customer.

iii) Cash and Bank Balance to Current Asset Ratio

This ratio shows the banks' liquidity position in terms of the most liquid assets i.e. cash and bank balance. Table 4.3 shows the total mean, standard deviation and Coefficient of variation of Cash and Bank Balance to Current Assets Ratio of NABIL, HBL and SCBNL.

Table 4.3

Cash and Bank Balance to Current Asset Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.1757	0.2356	0.1220
2	2006/07	0.2314	0.1841	0.2067
3	2007/08	0.3175	0.1586	0.1798
4	2008/09	0.5851	0.3751	0.2202
5	2009/10	0.1348	0.5067	0.1681
Total		1.4445	1.4601	0.8968
Mean		0.2889	0.2920	0.1794
S.D.		0.1792	0.1463	0.0382
C.V		62.02	50.10	21.29

Source: Appendix

Current asset ratio of all three banks is better as they show the ability to manage the deposit withdrawals from the customers. The above table shows that cash and bank balance to current assets ratio of all banks is in fluctuating trend. From the above analysis we can conclude that liquidity position (only cash and bank balance) of SCBNL is lesser than NABIL and HBL. But SCBNL has higher consistency. HBL has higher liquidity position than NABIL and SCBNL. The table also reveals that SCBNL has utilized its funds more efficiently.

iv) Investment on Government Securities to Current Assets Ratio

This ratio shows current assets invested in Government Securities, Treasury Bills and Development Bonds, which are issued by government. These securities are regarded as safest investment for the bank in terms of its riskiness, but are not so much liquid as cash and bank balance. These securities are marketable and therefore, they are easily converted into cash and as such are risk-free. Table 4.4 shows that the ratio of Investment on Government Securities to Current Assets Ratio of NABIL, HBL and SCBNL.

Table 4.4

Investment on Government Securities to Current Assets Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.6415	0.7059	0.8253
2	2006/07	0.7949	0.6761	0.7270
3	2007/08	0.5524	0.8181	0.7135
4	2008/09	0.6429	0.5183	0.7020
5	2009/10	0.7648	0.5852	0.7433
Total		3.3965	3.3036	3.7111
Mean		0.6793	0.6607	0.7422
S.D.		0.0994	0.1151	0.0489
C.V		14.63	17.43	6.59

Source: Appendix

In overall, the mean ratio of investment in govt. securities to current assets ratio of HBL is lower than that of other bank i.e. 0.6607 and SCBNL mean ratio is greater than other i.e. 0.7422. It means HBL had invested its fewer portions of current assets on government securities, than other banks. On the other hand, Coefficient of variation of HBL is greater than that other i.e. 17.43 which means the variability's of ratios of HBL is less consistent than others.

v) Loan and Advances to Current Assets Ratio

The ratio shows the relationship between loans and advances to total current assets or it show the banks' liquid capacity of discounting and purchasing the bills and loan, cash credit and overdraft facilities to the customers. If the bank cannot grant sufficient loans and advances, it will have to pay interest on those unutilized deposits funds and at the same time may lose substantial earnings. However, too little and too high of high loans and advances may be undesirable to the bank, as too little investment in loans and advances will result in high amount of unutilized funds and too high investment in loans and advances will result in lack of liquidity and difficulty in collecting them at the time of their maturity. Table 4.5 shows the mean, standard deviation and coefficient of variation of Loan and Advances to Current Assets Ratio of NABIL, HBL and SCBNL.

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Table 4.5

Loan and advances to Current Assets Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	3.6020	2.0091	0.8539
2	2006/07	2.5699	1.7805	1.0742
3	2007/08	2.5399	2.1348	1.2028
4	2008/09	4.7864	3.0508	0.9640
5	2009/10	3.1075	3.6670	1.3903
Total		16.6057	12.6422	5.4852
Mean		3.3211	2.5284	1.0970
S.D.		0.9282	0.7989	0.2089
C.V		5.59	6.32	3.81

Source: Appendix

Loans and advances to Current Asset ratios are in fluctuating trend in sample banks, i.e. highest in the fiscal year 2008/09 of NABIL (4.7864) and lowest in the fiscal year 2005/06 of SCBNL (0.8539). Mean value of this ratio of SCBNL is 1.0970, which is less than that of NABIL and HBL. But coefficient of variation of HBL is greater than NABIL and SCBNL which indicates loans and advances providing trend of HBL is slightly less consistency than other banks.

4.1.2 Asset Management Ratios (Activity Ratio)

Assets management ratio measures the efficiency of the bank to manage its assets in profitable and satisfactory manner. A commercial bank must manage its assets properly to earn high profit. Assets management ratios suitable for our study purpose on the sample banks from fiscal year 2005/06 to 2009/10 are as follows:

i) Loan and Advances to Total Deposit Ratio

This ratio measures the extent to which the banks are successful to mobilize their total deposits on loan and advances for profit generation. Therefore, the higher the ratio, the better is the mobilization of total deposits in terms of loan and advances. Table 4.6 shows the mean, standard deviation and coefficient of variation of Loan and Advances to Total Deposit Ratio of NABIL, HBL and SCBNL.

Table 4.6

Loan and Advances to Total Deposit Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.6679	0.5527	0.3875
2	2006/07	0.6660	0.5657	0.4261
3	2007/08	0.6694	0.6123	0.4612
4	2008/09	0.7387	0.7149	0.3870
5	2009/10	0.6963	0.7439	0.4535
Total		3.4383	3.1895	2.1153
Mean		0.6877	0.6379	0.4231
S.D.		0.0311	0.0870	0.0352
C.V		4.52	13.64	8.32

Source: Appendix

Analysis shows, all the banks have fluctuating trend regarding the ratios. In overall mean ratio of loan and advances to total deposit of NABIL is higher than that of other banks, i.e. NABIL has strong position regarding the mobilization of total deposit on loan and advances and acquiring higher profit in comparison to other. The coefficient of variation of HBL is higher than other banks, i.e. HBL has less uniform in the mobilization of total deposit on loan and advances. In fiscal year 2009/10, HBL has mobilized its deposit to high ratio i.e. 0.7439.

ii) Total Investment to Total Deposit Ratio

This ratio measures the extent to which the banks are able to mobilize their deposits in investments in various securities and other investments. Higher ratio indicates the success in mobilizing deposits in securities and vice versa. This ratio can be computed by dividing the total investment by total amount of deposits collections. Table 4.7 shows the mean, standard deviation and coefficient of variation of Total Investment to Total Deposit Ratio of NABIL, HBL and SCBNL.

Table 4.7

Total Investment to Total Deposit Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.3193	0.4110	0.5567
2	2006/07	0.3832	0.3935	0.5499
3	2007/08	0.3114	0.4189	0.4674
4	2008/09	0.2899	0.2512	0.5724
5	2009/10	0.2935	0.2245	0.5641
Total		1.5973	1.6991	2.7105
Mean		0.3195	0.3398	0.5421
S.D.		0.0377	0.0940	0.0426
C.V		11.79	27.67	7.86

Source: Appendix

Table 4.7 exhibits that the ratio of Total investment to Total deposit is in fluctuating trend. The mean ratio of NABIL (0.3195) is lower than HBL and SCBNL and the mean ratio of SCBNL (0.5421) is higher than NABIL and HBL. It indicates that NABIL is in weak condition to mobilize its deposits by investing is different sectors in comparison and SCBNL is in good condition to mobilize its deposit. The coefficient of variation of HBL is 27.67% which is higher than other, which indicates HBL is unstable in investing its deposit.

iii) Loan and Advances to Total Working Fund Ratio

This ratio reflects the extent to which the commercial banks are successful in mobilizing their assets in the form of loans and advances for generating income. Therefore, it is higher the ratio the better in mobilization of funds as loans and advances, or vice versa. The commercial banks have to be very careful in mobilizing the total assets in the form of loans and advances to an appropriate level to generate profit. Table 4.8 shows the mean, standard deviation and coefficient of variation of Loan and Advances to Total Working Fund Ratio of NABIL, HBL and SCBNL.

Table 4.8

Loan and Advances to Total Working Fund Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.8483	0.7153	0.5214
2	2006/07	0.8535	0.7262	0.6207
3	2007/08	0.7835	0.7417	0.6589
4	2008/09	0.8742	0.7586	0.5263
5	2009/10	0.8037	0.7907	0.6079
Total		4.1632	3.7325	2.9352
Mean		0.8326	0.7465	0.5870
S.D.		0.0376	0.0296	0.0607
C.V		4.52	3.97	10.34

Source: Appendix

Analysis shows that the ratio of loan and advance to working is in fluctuating trend. The greater ratio 0.8742 is maintained by NABIL in fiscal year 2006/07. On the basis of mean ratios, NABIL and on the basis of Standard deviation, SCBNL has maintained the higher ratio than other banks. So, NABIL is in good condition to mobilize its total working fund as loan and advances. Coefficient of variation of HBL is less than other banks. It indicates more uniform of HBL is comparison to other banks. Lastly, we can also say that SCBNL fund mobilization in terms of loan and advances with respect to total working fund is less consistency.

iv) Investment on Government Securities to Total Working Fund Ratio

From the liquidity and security point of view, a Government Security is a safe medium of investment though it is not liquid as cash and bank balance. Therefore, this ratio is very important to know the extent to which the banks are successful in mobilizing their total funds on different types of Government Securities to maximize its income. The high ratio indicates better mobilization of funds as invest on government securities, vice versa. Table 4.9 shows the mean, standard deviation and coefficient of variation of Investment on Government Securities to Total Working Fund Ratio of NABIL, HBL and SCBNL.

Table 4.9

Investment on Govt. Securities to Total Working Fund Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.1511	0.2513	0.5039
2	2006/07	0.2640	0.2758	0.4201
3	2007/08	0.1708	0.2842	0.3908
4	2008/09	0.1174	0.1289	0.3847
5	2009/10	0.1978	0.1262	0.3250
Total		0.9011	1.0664	2.0245
Mean		0.1802	0.2133	0.4049
S.D.		0.0553	0.0792	0.0652
C.V		30.66	37.13	16.11

Source: Appendix

Analysis shows that the ratio of Investment on government securities to Total working fund is in fluctuating trend. In an average SCBNL invest more on government securities than NABIL and HBL. NABIL invest less on government securities than SCBNL and HBL. Similarly, coefficient of variation of SCBNL (16.11%) is less than NABIL and HBL which indicates more consistency in investment. In fiscal year 2005/06, SCBNL has invested 0.5039 ratio of working fund into government securities which is highest in above analysis. Similarly, lowest investment is made by NABIL (0.1174) in fiscal year 2008/09.

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

The ratio of investment on shares and debentures to total working fund shows the investment of banks on shares and debentures of the other companies in terms of their total working funds. The higher the ratio, the more is the amount of investments on shares and debentures out of the total working fund, and vice versa. Table 4.10 shows the mean, standard deviation and coefficient of variation of Investment on Shares and Debentures to Total Working Fund Ratio of NABIL, HBL and SCBNL.

Table 4.10

Investment on Shares and Debentures to Total Working Fund Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.0068	0.0019	0.0009
2	2006/07	0.0158	0.0031	0.0027
3	2007/08	0.0119	0.0034	0.0055
4	2008/09	0.0112	0.0031	0.0044
5	2009/10	0.0086	0.0022	0.0044
Total		0.0543	0.0137	0.0179
Mean		0.0109	0.0027	0.0036
S.D.		0.0034	0.0007	0.0018
C.V		31.63	23.74	50.33

Source: Appendix

Analysis exhibits that the ratio of Investment on government securities to Total working fund is in fluctuating trend. Ratio of SCBNL is in increasing trend but NABIL and HBL has fluctuating trend. In an average NABIL invest more on share and debentures than SCBNL and HBL. Similarly, HBL invest less than NABIL and SCBNL. Coefficient of variation of SCBNL (50.33%) is more than NABIL and HBL which indicates less consistency in investment and HBL is more consistency in investment.

4.1.3 Profitability Ratios

Profitability ratios are very much helpful to measure the overall efficiency of operation of financial institutions. In the context of bank, strictly speaking no bank can survive without profit. Profitability ratios measure the efficiency of bank. Higher the profit ratio shows that higher the efficiency of a bank. Various profitability ratios of selected commercial banks are as follows:

i) Return on Total working Fund Ratio

This ratio measures the profit earning capacity by utilizing available resources of banks. A high ratio usually indicates the efficiency and utilization of its overall resources, and vice versa. Table 4.11 shows the total mean, standard deviation and coefficient of variation of Return on Total Working Fund Ratio of NABIL, HBL and SCBNL.

Table 4.11

Return on Total working fund Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.0417	0.0223	0.0384
2	2006/07	0.0370	0.0210	0.0409
3	2007/08	0.0274	0.0242	0.0393
4	2008/09	0.0327	0.0230	0.0394
5	2009/10	0.0284	0.0144	0.0414
Total		0.1672	0.1049	0.1994
Mean		0.0334	0.0210	0.0399
S.D.		0.0060	0.0039	0.0012
C.V		17.90	18.38	3.10

Source: Appendix

Analysis shows returns on total working fund ratio of all banks are in fluctuating trend. In fiscal year 2005/06, NABIL has high ratio. Similarly, HBL lowest ratio is in fiscal year 2009/10. In an average, SCBNL has high ratio of 0.0399 i.e. return on Total working fund of SCBNL is better than NABIL and HBL. The coefficient of variation of SCBNL is lower than NABIL and HBL. It indicates the return on total working fund ratio of SCBNL is stable and consistence. It also reveals that investment policy of SCBNL bank is efficient and effortable.

ii) Return on Loan and Advance Ratio

Return on loan and advances ratio measures how efficiently the banks have utilized their resources to earn good return on loans and advances provided. Put it another way, it measures the earning capacity of commercial banks on its deposits used in the form of loans and advances. Table 4.12 shows the total mean, standard deviation and coefficient of variation of Return on Loan and Advances Ratio of NABIL, HBL and SCBNL.

Table 4.12

Return on Loan and Advance Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.0492	0.0312	0.0737
2	2006/07	0.0434	0.0289	0.0659
3	2007/08	0.0349	0.0326	0.0597
4	2008/09	0.0374	0.0304	0.0749
5	2009/10	0.0353	0.0182	0.0680
Total		0.2002	0.1413	0.3422
Mean		0.0400	0.0283	0.0684
S.D.		0.0061	0.0058	0.0062
C.V		15.35	20.46	9.02

Source: Appendix

Analysis exhibits that the ratio of Return on loan and advance are fluctuating trend at the study period. The mean of the SCNBL is higher i.e. 0.0684 which indicates return on loan and advance of SCBNL is higher than NABIL and HBL. Similarly, coefficient of variation of SCBNL (9.02%) is lower than NABIL and HBL which indicates return on loan and advance is more uniform than other banks. HBL has high coefficient of variation (20.46%) which indicates more variation in return.

iii) **Total Interest Earned to Total outside Assets Ratio**

It reflects that the extent to which the bank is successful to earn interest as major income on all the outside assets. Table 4.13 shows the total mean, standard deviation and coefficient of variation of Total interest Earned to Total Outside Assets Ratio of commercial banks.

Table 4.13

Total Interest Earned to Total Outside Assets Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.0686	0.0637	0.0546
2	2006/07	0.0648	0.0616	0.0587
3	2007/08	0.0632	0.0598	0.0576
4	2008/09	0.0728	0.0699	0.0556
5	2009/10	0.0882	0.0864	0.0570
Total		0.3576	0.3414	0.2835
Mean		0.0715	0.0683	0.0567
S.D.		0.0100	0.0108	0.0016
C.V		14.03	15.85	2.86

Source: Appendix

The ratio of total interest earned to total outside assets of NABIL and HBL is fluctuating trend but SCBNL has consistency trend. Mean ratio of NABIL (0.0715) is higher than HBL and SCBNL which indicates NABIL have better position with respect to the income earned from the total outside asset in comparison to HBL and SCBNL. Similarly, coefficient of variation of SCBNL (2.86%) is low which indicates that there is less variation in interest earned. HBL has high coefficient variation (15.85%) which prevails less uniform in interest earned from Total outside assets.

iv) Total Interest Earned to Total Working Fund Ratio

The total interest earned to working funds ratio reveals how much interest mobilizing assets in the banks has generated. Table 4.14 shows the total mean, standard deviation and coefficient of variation of Total Interest Earned to Total Working Fund Ratio of NABIL, HBL and SCBNL.

Table 4.14

Total Interest Earned to Total Working Fund Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.0860	0.0795	0.0694
2	2006/07	0.0872	0.0759	0.0834
3	2007/08	0.0727	0.0747	0.0764
4	2008/09	0.0887	0.0717	0.0726
5	2009/10	0.1008	0.0890	0.0778
Total		0.4354	0.3908	0.3796
Mean		0.0871	0.0782	0.0759
S.D.		0.0100	0.0067	0.0053
C.V		11.47	8.54	7.01

Source: Appendix

Analysis shows that the ratio of total interest earned to total working fund are in fluctuating trend. NABIL has highest ratio 0.1008 in fiscal year 2009/10 and lowest ratio 0.0694 of SCBNL in fiscal year 2005/06. Mean ratio of NABIL (0.0871) is higher than HBL and SCBNL which concluded that the total interest earned to total working fund ratio of NABIL bank is satisfactory in compared to other two banks. Similarly, coefficient of variation of SCBNL (7.01%) is lower than other banks. It means the total interest earned to total working fund ratio of the SCBNL is stable and consistency in comparison NABIL and HBL.

v) Total Interest Paid to Total Working Fund Ratio

Total interest paid to total working fund ratio measure the percentage of total interest paid against the total working fund. A high ratio indicates the higher interest expenses on total working fund and vice-versa. Table 4.15 shows that the total mean, standard deviation and coefficient of variance of Total Interest Paid to Total Working Fund Ratio of NABIL, HBL and SCBNL.

Table 4.15

Total Interest Paid to Total Working Fund Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.0234	0.0317	0.0177
2	2006/07	0.0305	0.0328	0.0244
3	2007/08	0.0279	0.0313	0.0227
4	2008/09	0.0365	0.0286	0.0209
5	2009/10	0.0488	0.0439	0.0210
Total		0.1671	0.1683	0.1067
Mean		0.0334	0.0337	0.0213
S.D.		0.0098	0.0059	0.0025
C.V		29.37	17.61	11.66

Source: Appendix

Analysis shows that total interest paid to total working fund ratio of all three bank has fluctuating trend. In fiscal year 2009/10 NABIL (0.0488) has high ratio and in fiscal year 2005/06 SCBNL has low ratio .If the mean ratios are observed, it is found that the SCBNL has the lowest of all. It means SCBNL has paid lower interest in comparison to other banks. But the coefficient of variation of NABIL is higher than that of other two banks. It indicates that the total interest paid to total working fund ratio of NABIL is less consistent than HBL and SCBNL. It can be concluded that the position of SCBNL is better than other is as its ratio is always lower than other bank. That means it is paying less interest against its working fund.

4.1.4 Risk Ratios

The possibility of risk makes banks investment a challenging task. Bank has to take risk to get return on investment. The risk taken is compensated by the increase in profit. A bank has to take high if it expects high return on its investment. So, the banks options for high profit, so it has to accept the risk and manage it efficiently. The risk measures the level of risk. The following ratios are studied for the purpose of measuring risk.

i) Liquidity Risk Ratio

The liquidity risk ratio measures the level of risk associated with the liquid assets i.e. cash and bank balance that are kept in the bank for the purpose of satisfying the

depositor's demand for cash. Table 4.16 shows the mean, standard deviation and coefficient of variation of Liquidity Risk ratio NABIL, HBL and SCBNL.

Table 4.16

Liquidity Risk Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.0326	0.0648	0.0553
2	2006/07	0.0600	0.0585	0.0820
3	2007/08	0.0837	0.0455	0.0689
4	2008/09	0.0903	0.0879	0.0887
5	2009/10	0.0302	0.1028	0.0548
Total		0.2968	0.3595	0.3497
Mean		0.0594	0.0719	0.0699
S.D.		0.0279	0.0231	0.0153
C.V		47.02	32.15	21.94

Source: Appendix

Liquidity ratios of the commercial banks are in fluctuating trend. HBL has maintained a highest ratio of 0.1028 in the fiscal year 2009/10. Similarly, NABIL have lowest ratio of 0.0302 in fiscal year 2009/10. If the mean ratios are observed, NABIL (0.0594) has lesser than that of HBL and SCBNL, which indicate that NABIL liquidity risk is higher. Similarly, HBL (0.0719) has higher liquidity ratio which indicates HBL liquidity risk is lower. The coefficient of variation of NABIL (47.02%) is higher than HBL and SCBNL which indicates liquidity risk ratio of NABIL is less consistency and liquidity risk ratio of SCBNL is more consistency because its coefficient of variation (21.94%) is lower than NABIL and HBL.

ii) Credit Risk Ratio

Credit risk ratios measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. Table 4.17 shows the mean, standard deviation and coefficient of variation of Liquidity Risk ratio NABIL, HBL and SCBNL.

Table 4.17
Credit Risk Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.5787	0.4970	0.3468
2	2006/07	0.5704	0.5071	0.3673
3	2007/08	0.5754	0.5390	0.4115
4	2008/09	0.6289	0.6305	0.3414
5	2009/10	0.6196	0.6550	0.3968
Total		2.9730	2.8286	1.8638
Mean		0.5946	0.5657	0.3728
S.D.		0.0274	0.0725	0.0307
C.V		4.61	12.82	8.23

Source: Appendix

Analysis shows that the credit risk ratio of NABIL and SCBNL in fluctuating trend in study period and in case of HBL is in increasing trend. The mean ratio of NABIL (0.5946) is higher than of other banks. It means credit risk of NABIL is higher than HBL and SCBNL. Similarly, SCBNL (0.3728) has low mean ratio which indicates lower credit risk than NABIL and HBL. The coefficient of variation of HBL is 12.82% which is higher than NABIL and SCBNL which indicates more variation in Credit risk ratio.

iii) Capital Risk Ratio

Capital ratio measures bank ability to attract deposits and inter-bank funds. It also determine the level of profit, a bank can earn if a bank chooses to take high capital risk. Table 4.18 shows the total mean, standard deviation and coefficient of variance of Capital Risk Ratio of NABIL, HBL and SCBNL.

Table 4.18

Capital Risk Ratio

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	0.1451	0.1452	0.1963
2	2006/07	0.1323	0.1475	0.2015
3	2007/08	0.1253	0.1730	0.1817
4	2008/09	0.1243	0.1460	0.2231
5	2009/10	0.1281	0.1408	0.2112
Total		0.6551	0.7525	1.0138
Mean		0.1310	0.1505	0.2028
S.D.		0.0085	0.0128	0.0156
C.V		6.46	8.52	7.69

Source: Appendix

Capital risk ratio of NABIL is in decreasing trend. But, there is fluctuating trend in HBL and SCBNL. If the mean ratios are observed HBL ratio is slightly lesser than SCBNL but higher than that NABIL. Coefficient of variation of NABIL (6.46%) is lower than that of other two banks. It is concluded that the NABIL is more stable than the other two banks ant it is also more consistency than HBL and SCBNL.

4.1.5 Growth Ratio

A firm seeks not only to survive by generating profits, but also to achieve growth. A growing firm is, therefore, regarded as a successful firm in the end. Therefore, in order to assess the success or potential for achieving success in the end, it is essential to analyze the growth that the bank has achieved in terms of deposits it has received, loans and advances it has provided, investments it has made, and its profitability. The following growth ratios are calculated for the analysis.

i) Growth Ratio of Total Deposit

Table 4.19 shows that the Growth Ratio of Total Deposit of NABIL, HBL and SCBNL.

Table 4.19

Growth Ratio of Total Deposit

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	19,347,399,440	26,490,851,640	23,061,032,000
2	2006/07	23,342,285,327	30,048,417,756	24,647,021,000
3	2007/08	31,915,047,467	31,842,789,356	29,743,999,000
4	2008/09	37,348,255,840	34,681,345,179	35,350,824,000
5	2009/10	46,340,700,628	37,611,202,274	35,182,721,000
	Growth ratio (%)	24.40%	9.16%	11.14%

Source: Appendix

We can see Total deposit growth rate of SCBNL i.e. 11.14% is less than NABIL and HBL. NABIL growth rate of 24.40% is higher than HBL and SCBNL. The above position of growth rate indicates that HBL and SCBNL need to increase its deposit in order to increase its growth rate as per NABIL.

ii) Growth Ratio of Loan and Advances

Table 4.20 shows the Growth Ratio of Loan and Advances of NABIL, HBL and SCBNL.

Table 4.20

Growth Ratio of Loan and Advances

S.N.	Fiscal Year	NABIL	HBL	SCBNL
1	2005/06	12,922,543,153	14,642,559,555	8,935,418,000
2	2006/07	15,545,778,730	16,997,997,046	10,502,637,000
3	2007/08	21,365,053,318	19,497,520,482	13,718,597,000
4	2008/09	27,589,933,041	24,793,155,269	13,679,757,000
5	2009/10	32,268,873,283	27,980,628,760	15,956,955,000
	Growth rate (%)	25.71%	17.57%	15.60%

Source: Appendix

The Loan and Advances growth ratio of NABIL is 25.71%, HBL is 17.57% and SCBNL is 15.60%. This position of growth ratio indicates that the performance of NABIL to grant loan and advances in comparison to HBL and SCBNL is better.

iii) Growth Ratio of Total Investment

Table 4.21 shows the growth ratio of total investment of NABIL, HBL and SCBNL.

Table 4.21

Growth Ratio of Total Investment

S.N.	Fiscal Year	NABIL	HBL	SCBNL
1	2005/06	6,178,533,108	10,889,031,449	12,838,555,000
2	2006/07	8,945,310,567	11,822,984,558	13,553,233,000
3	2007/08	9,939,771,428	13,340,176,785	13,902,819,000
4	2008/09	10,826,379,001	8,710,690,646	20,236,121,000
5	2009/10	13,600,916,613	8,444,910,165	19,847,511,000
	Growth rate (%)	21.81%	6.16%	11.51%

Source: Appendix

The Total Investment growth ratio of NABIL is 21.81%, HBL is 6.16% and SCBNL is 11.51%. Analysis shows that growth ratio of NABIL is better than HBL and SCBNL. HBL need to increase in investment since its ratio is less of all.

iv) Growth Ratio of Net profit

The table 4.22 shows the Growth Ratio of Net profit of NABIL, HBL and SCBNL.

Table 4.22

Growth Ratio of Net profit

S.N.	Fiscal Year	NABIL	HBL	SCBNL
1	2005/06	635,262,349	457,457,696	658,756,000
2	2006/07	673,959,698	491,822,905	691,668,000
3	2007/08	746,468,394	635,868,519	818,921,000
4	2008/09	1,031,053,098	752,834,735	1,025,114,000
5	2009/10	1,139,099,399	508,798,193	1,085,970,000
	Growth rate (%)	15.72%	2.69%	13.31%

Source: Appendix

The Net-profit growth rate of NABIL, HBL and SCBNL is 15.72%, 2.69% and 13.31% respectively. Above analysis indicates that growth ratio of net profit of NABIL is slightly higher than HBL and SCBNL and HBL ratio is slightly lower.

4.2 Statistical Analysis

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

4.2.1 Trend Analysis

i) Trend Analysis of Real Estate Loan

Table 4.23 shows the Trend of Real Estate Loan of NABIL, HBL and SCBNL for five years from fiscal year 2005/06 to 2009/10 and forecasted trend for two years i.e. for fiscal year 2010/2011 and 2011/12..

Table 4.23

Trend Analysis of Real Estate Loan

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	868,394,000	983,980,002	600,460,090
2	2006/07	1,854,043,500	1,666,100,034	1,072,307,376
3	2007/08	2,168,468,285	1,880,298,253	919,279,670
4	2008/09	1,435,731,583	1,310,233,376	821,889,718
5	2009/10	1,044,676,331	1,142,265,401	705,777,206
6	2010/11	1,454,538,562	1,384,786,655	832,007,783
7	2011/12	1,447,963,836	1,380,857,069	828,029,440

Source: Appendix

When analyzing the table, it is clear that Real Estate Loan is increasing rapidly from fiscal year 2005/06 to 2007/08 and after that it is decreasing. At the forecasted year it is increasing but rate of increasing is low. Analysis shows that NABIL is invested more on Real Estate in comparison to HBL and SCBNL. Similarly, SCBNL is investment less on Real Estate in comparison to NABIL and HBL.

The calculated and projected trend values of Real Estate Loans of NABIL, HBL and SCBNL are fitted in trend line as shown in Figure 4.1.

Figure 4.1

Trend Analysis of Real Estate Loan

ii) Trend Analysis of Housing Loan

Table 4.24 shows the trend analysis of Housing Loan of NABIL, HBL and SCBNL for five years from fiscal year 2005/06 to 2009/10 and forecasted trend value for two years i.e. for fiscal year 2010/2011 and 2011/12.

Table 4.24

Trend Analysis of Housing Loan

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	404,475,601	458,312,114	279,678,583
2	2006/07	486,582,874	532,037,308	328,732,538
3	2007/08	668,726,169	610,272,391	429,392,086
4	2008/09	863,564,904	776,025,760	428,176,294
5	2009/10	1,010,015,734	875,793,680	499,452,692
6	2010/11	1,163,091,746	974,173,725	554,784,030
7	2011/12	1,321,897,976	1,082,068,883	608,683,227

Source: Appendix

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When analyzing the table, it is clear that the amounts of housing loan are in increasing trend. NABIL is granting more loan as housing loan in comparison to HBL and SCBNL. Similarly, SCBNL is granting low loan as housing loan.

The calculated and projected trend values of Housing Loan of NABIL, HBL and SCBNL are fitted in the trend line as shown in Figure 4.2.

Figure 4.2

Trend analysis of Housing Loan
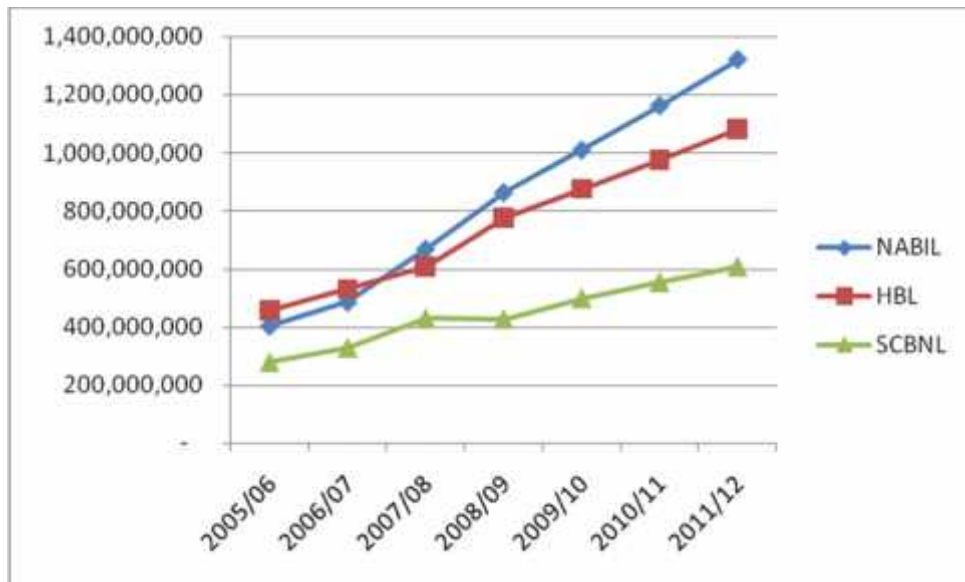
iii) Trend Analysis of Margin Type Lending

Table 4.25 shows the trend analysis of Margin type lending of NABIL, HBL and SCBNL for five years from fiscal year 2005/06 to 2009/10 and forecasted trend value for two years i.e. for fiscal year 2010/2011 and 2011/12.

Table 4.25

Trend Analysis of Margin Type Lending

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	32,306,358	36,606,399	22,338,545
2	2006/07	38,864,447	42,494,993	26,256,593
3	2007/08	43,412,633	48,743,801	34,296,493
4	2008/09	48,974,833	51,982,888	34,199,393
5	2009/10	52,672,183	59,951,572	39,892,388
6	2010/11	58,498,703	64,809,403	44,311,829
7	2011/12	63,582,907	70,427,227	48,616,878

Source: Appendix

When analyzing the table, it is clear that the amounts of Margin type lending are in increasing trend. HBL is giving more loan as Margin lending in comparison to NABIL and SCBNL. Similarly, SCBNL is giving low loan as Margin lending in comparison NABIL and HBL.

The calculated and projected trend values of Margin type lending of NABIL, HBL and SCBNL are fitted in the trend line as shown in Figure 4.3.

Figure 4.3

Trend analysis of Margin Type Lending
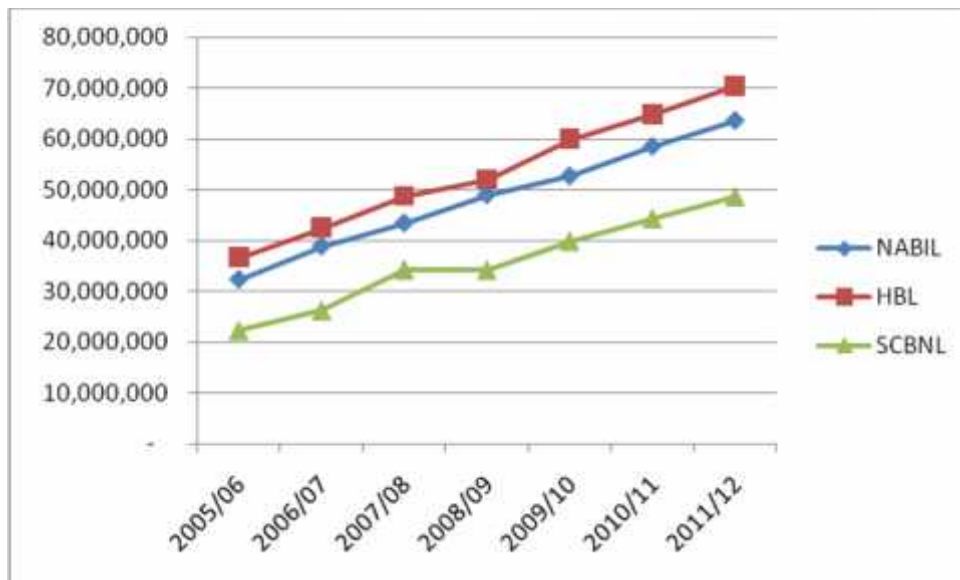
iv) Trend Analysis of Consumer Lending

Table 4.26 shows the trend analysis of Consumer lending of NABIL, HBL and SCBNL for five years from fiscal year 2005/06 to 2009/10 and forecasted trend value for two years i.e. for fiscal year 2010/2011 and 2011/12.
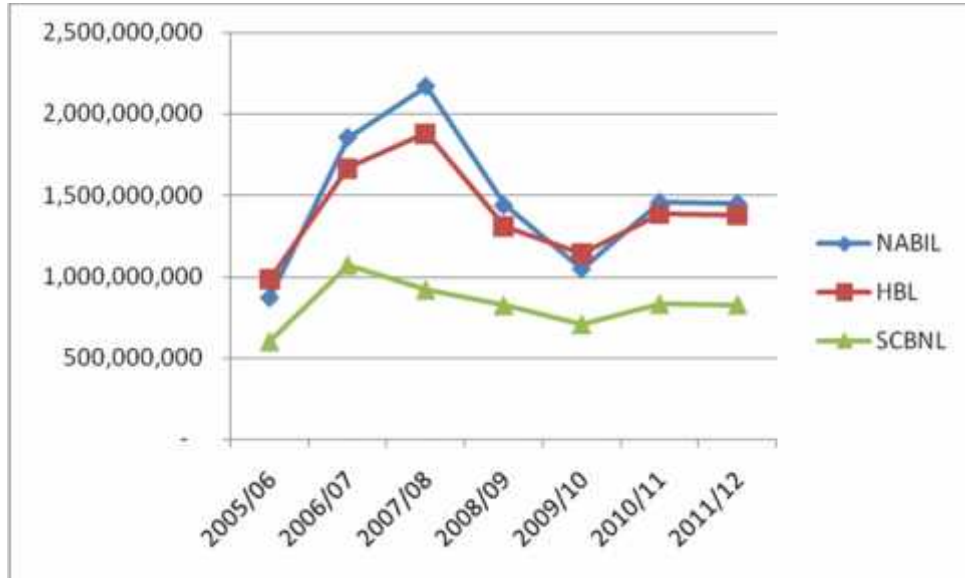
Table 4.26

Trend Analysis of Consumer Lending

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	1,288,377,552	1,459,863,188	890,861,175
2	2006/07	1,549,914,139	1,694,700,305	1,047,112,909
3	2007/08	2,130,095,816	1,943,902,792	1,367,744,121
4	2008/09	2,750,716,324	2,471,877,580	1,363,871,773
5	2009/10	3,217,206,666	2,789,668,687	1,590,908,414
6	2010/11	3,704,800,222	3,103,038,991	1,767,155,680
7	2011/12	4,210,646,263	3,446,717,818	1,938,841,014

Source: Appendix

When analyzing the table, it is clear that the amounts of Consumer lending are in increasing trend. NABIL is giving more loan as Consumer lending in comparison to HBL and SCBNL. Similarly, HBL is giving low loan as Consumer lending in comparison to NABIL and HBL.

The calculated and projected trend values of Consumer lending of NABIL, HBL and SCBNL are fitted in the trend line as shown in Figure 4.4.

Figure 4.4

Trend analysis of Consumer Lending
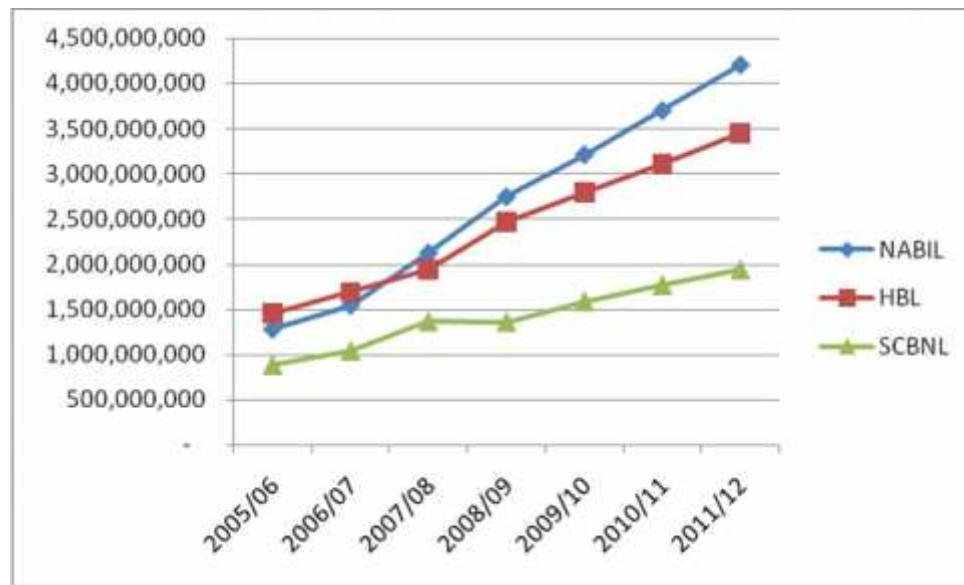
4.2.2 Coefficient of Correlation Analysis

Under this topic, Karl person's coefficient of correlation is used to find out the relationship Between Deposit and Loan and Advances, Deposit and Total investment, Outside Asset and Net-profit.

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

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

Table 4.27

Coefficient of Correlation between Deposits and Loan and Advances

Evaluation criteria	NABIL	HBL	SCBNL
r	0.45	0.98	0.88
r^2	0.20	0.97	0.78
P.E.r	0.11	0.004	0.03
6P.E.r	0.65	0.024	0.18

Source: Appendix

Table 4.27 shows that r, r^2, P.E.r. and 6P.E.r between deposit and loan and advances of NABIL, HBL and SCBNL for the period of 2005/06 to 2009/2010. It is found that the co-efficient of correlation (r) between deposit and loan and advances of NABIL, HBL and SCBNL are 0.45, 0.98 and 0.88 respectively. It shows the highly positive relationship between these two variables. However co-efficient of determination i.e. r^2 it indicates that in the case of NABIL 0.20 of the variation in the dependent variable i.e. loan and advances has been explained by the independent variables i.e. deposit. In the case of HBL 0.97 and in case of SCBNBL 0.78 of the dependent variable has been explained by the independent variable. More over considering the probable error in case of NABIL r^2 is lower than 6P.E.r but HBL and SCBNL of r^2 is greater than 6P.E.r.

From the analysis it can be conclude that the value of r is significant that means there is significant relationship between deposit and loan and advances of NABIL, HBL and SCBNL. It also reveals that all three banks are successful in mobilizing their deposits are loan and advances. HBL has the highest value of 'r' that indicates the better position of it is mobilizing deposit as loan and advances in comparison to NABIL and SCBNL.

ii) Coefficient of Correlation Between Deposit and Total Investment.

Coefficient of correlation between deposit and total investment measures the degree of relationship between these two variables. The purpose of calculating this analysis is to find out whether deposit is significantly used as investment or not. In this

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

Table 4.28

Coefficient of Correlation Between Deposit and Total Investment

Evaluation criteria	NABIL	HBL	SCBNL
r	0.87	0.84	0.76
r^2	0.76	0.71	0.57
P.E.r	0.03	0.04	0.06
6P.E.r	0.19	0.23	0.35

Source: Appendix

Table 4.28 shows that, the value of r, r^2, P.E.r and 6P.E.r between deposit and loans and advances of NABIL, HBL and SCBNL for the study period 2005/06 to 2009/2010. In case of NABIL it is found that coefficient of correlation between deposit and total investment is 0.87, which is higher than HBL and SCBNL. It shows that positive relationship between these two variables. Moreover, when we consider the value of coefficient of determination (r^2) it is 0.76 it means 76% of variation in the dependent variable is explained by the independent variable. When analyze the value of r and comparing with 6P.E.r. we can find that r is much greater than value 6P.E.r. that reveals there is significant relationship between deposit and investment. Similarly, HBL and SCBNL have the positive correlation between deposit and loans and advances. The relationship is significant and the value of r^2 shows high percent in the dependent variables, which has been explained by the independent variable. Above analysis indicated that NABIL is successful in maximizing the investment of their deposits in comparison to other two banks because we have the highest value of r of NABIL than HBL and SCBNL.

iii) Coefficient of Correlation between Outside Assets and Net Profit

Coefficient of correlation between outside asset and net profit measures the degree of relationship between these two variables. The purpose of computing these analysis is to find out whether net profit is significantly correlated with respect to

total assets or not. In this analysis outside asset is independent variable (x) and net profit is independent variable (y).

Table 4.29

Coefficient of Correlation between Outside Assets and Net profit

Evaluation criteria	NABIL	HBL	SCBNL
r	(0.15)	0.91	0.50
r^2	0.02	0.82	0.25
P.E.r.	0.13	0.02	0.10
6P.E.r.	0.79	0.14	0.61

Source: Appendix

Table 4.29 shows the value of r, r^2, P.E.r and 6P.E.r. between outside assets and net profit of NABIL, HBL and SCBNL for the study period 2005/06 to 2009/10. In case of NABIL it is found that coefficient of correlation between outside assets and net profit is (0.15). It shows the negative relationship between these two variables. Moreover, when we consider the value of coefficient of determination (r^2) it 0.02 and it means 2% of the variation in the dependent variable is explained by the independent variable. Where analyze the value of r and comparing with 6P.E.r we can find that r is very lower than the value of 6P.E.r, which reveals that NABIL is not capable to earn net profit by mobilizing its total outside assets. In case of HBL and SCBNL there is positive correlation between outside asset and net profit. The relationship is significant and the value of r^2 shows high percent in the dependent variable, which has been explained by the independent variable. Above analysis indicates that HBL and SCBNL have significant correlation between mobilization of funds and returns.

4.2.3 Test of Hypothesis

A hypothesis is a statistical statement of the relation between two or more variables. It always in declarative sentence form and they relate either generally or specifically variables to variables. After setting the hypothesis it is necessary to test the reliability of such statistical statement. Under this analysis hypothesis test has been made to test the significance regarding the parameter of the population on the basis of sample drawn from the population. The following steps have been followed from the test of hypothesis.

1. Formulating and test of Hypothesis

   H_0 – There is no significance difference between mean ratios of two variables.

   H_1 – There is significance difference between mean ratios of two variables.

2. Computing the test static

3. Fixing the level of significance

4. Finding the critical region

5. Decision Making

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

t-test

   If we draw a large number of small samples i.e. (n<30) and compute the mean for each sample and then plot the frequency distribution of theses mean, the resulting sampling distribution would be t-test. On the study sample are taken only for five years i.e. (5<30).

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

   (a) The parent populations from which samples are drawn are normally distributed.

   (b) The two samples are random and independent of each other.

   (c) The population variances are equal and unknown.

   i) Test of Hypothesis on Loan and Advances to Total Deposit Ratios Between NABIL, HBL and SCBNL.

   Here, mean ratio of loan and advances tot total deposit of NABIL, HBL and SCBNL are taken and carried out under t-test of significance difference.

Table 4.30

Test of Hypothesis on Loan and Advances to Total Deposit Ratios Between NABIL, HBL and SCBNL.

	NABIL	HBL	SCBNL
.N			

80

		$X_1=3.4383$	$X_2=3.1895$	$X_3=2.1153$
	2	$\overline{X_1}=0.6877$	$\overline{X_2}=0.6379$	$\overline{X_3}=0.4231$
	3	$(X_1 - \overline{X_1})^2 = 0.0039$	$(X_2 - \overline{X_2})^2 = 0.0303$	$(X_3 - \overline{X_3})^2 = 0.0050$

Source: Appendix

(a) Test of significance of difference between NABIL and HBL

Setting of hypothesis,

Null hypothesis (H₀): $\overline{X_1} = \overline{X_2}$

i.e., there is no significant difference between mean ratios of loan and advances to total deposit of NABIL and HBL.

Alternative hypothesis (H₁): $\overline{X_1} \mid \overline{X_2}$ **(two tailed test)**

i.e., there is significant difference between mean ratios of loans and advances to total deposit of NABIL and HBL.

The test statistics under H₀ is,

$$t = \frac{\overline{X_1} Z \overline{X_2}}{\sqrt{S^2 \; \dfrac{1}{n_1} \Gamma \dfrac{1}{n_2}}}$$

Where,

$$s^2 = \frac{1}{n_1 + n_2 - 2} \left\{ \Sigma(X_1 - \overline{X_1})^2 + \Sigma(X_2 - \overline{X_2})^2 \right\}$$

$$= \frac{1}{5 \Gamma 5 Z 2} f0.0039 \Gamma 0.0303 A$$

$$= 0.0043$$

Now,

$$t = \frac{0.6877 \, Z \, 0.6379}{\sqrt{0.0043 \; \dfrac{1}{5} \Gamma \dfrac{1}{5}}}$$

$= 1.2008$

The calculated value of $|t| = 1.2008$

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

Decision: -

Since the calculated value of $|t|$ i.e. 1.2008 is less than its tabulated value i.e. 2.306 at 5% Level of significance for two tailed test. Null hypothesis is accepted, i.e. there is no significant difference between mean ratios of loan and advances to total deposit of NABIL and HBL.

(b) Test of significance difference between NABIL and SCBNL.

Settings of hypothesis,

Null hypothesis (H_0): $\overline{X}_1 = \overline{X}_3$

i.e. there is no significant difference between mean ratios of loan and advances to total deposit of NABIL and SCBNL.

Alternative hypothesis (H_1): $\overline{X}_1 \mid \overline{X}_3$ **(two tailed test)**

i.e. there is significant difference between mean ratios of loan and advances to total deposit of NABIL and SCBNL.

The test statistics under H_0 is,

$$t = \frac{\overline{X}_1 Z \overline{X}_3}{\sqrt{S^2 \dfrac{1}{n_1} \Gamma \dfrac{1}{n_3}}}$$

Where,

$$s^2 = \frac{1}{n_1 + n_3 - 2}\left\{\Sigma(X_1 - \overline{X}_1)^2 + \Sigma(X_3 - \overline{X}_3)^2\right\}$$

$$= \frac{1}{5 \Gamma 5 \ Z 2} f0.0039 \Gamma 0.0050 A$$

$$= 0.0011$$

Now,

$$t = \frac{0.6877 \, Z \, 0.4231}{\sqrt{0.0011 \, \dfrac{1}{5} \Gamma \dfrac{1}{5}}}$$

$$= 12.6143$$

The calculated value of $|\,t\,| = 12.6143$

Tabulated value of 't' (two tailed test) at 5% value of $(n_1 + n_3 - 2)$ d.f. i.e. 8 d.f. is 2.306.

Decision: -

Since the calculated value of $|\,t\,|$ i.e. 12.6143 is greater than that it's tabulated value i.e. 2.306 at 5% Level of significance for two-tailed test. Null hypothesis is rejected, i.e. there is significant difference between mean ratio of loan and advances to total deposit of NABIL and SCBNL.

(c) Test of significance difference between HBL and SCBNL.

Settings of hypothesis,

Null hypothesis (H_0): $\overline{X_2} = \overline{X_3}$

i.e. there is no significant difference between mean ratios of loan and advances to total deposit of HBL and SCBNL.

Alternative hypothesis (H_1): $\overline{X_2} \mid \overline{X_3}$ **(two tailed test)**

i.e. there is significant difference between mean ratios of loan and advances to total deposit of HBL and SCBNL.

The test statistics under H_0 is,

$$t = \frac{\overline{X_2} \, Z \, \overline{X_3}}{\sqrt{S^2 \, \dfrac{1}{n_2} \Gamma \dfrac{1}{n_3}}}$$

Where,

$$s^2 = \frac{1}{n_2 + n_3 - 2}\left\{ \Sigma(X_2 - \overline{X_2})^2 + \Sigma(X_3 - \overline{X_3})^2 \right\}$$

$$= \frac{1}{5 \Gamma 5 \ Z2} \int 0.0303 \Gamma 0.0050 \!\textit{A}$$

$$= 0.0044$$

Now,

$$t = \frac{0.6379 \ Z0.4231}{\sqrt{0.0044 \ \left[\frac{1}{5} \Gamma \frac{1}{5}\right]}}$$

$$= 5.1201$$

The calculated value of $| \, t \, | = 5.1201$

Tabulated value of 't' (two tailed test) at 5% value of $(n_2 + n_3 - 2)$ d.f. i.e. 8 d.f. is 2.306.

Decision: -

Since the calculated value of $| \, t \, |$ i.e. 5.1201 is greater than that it's tabulated value i.e. 2.306 at 5% Level of significance for two-tailed test. Null hypothesis is rejected, i.e. there is significant difference between mean ratio of loan and advances to total deposit of HBL and SCBNL.

ii) Test of Hypothesis on Total Investment to Total Deposit ratios Between NABIL, HBL and SCBNL.

Here, mean ratio of total investment to total deposit of NABIL, HBL and SCBNL are taken and carried out under t-test of significance difference.

Table 4.31

Test of Hypothesis on Total Investment to Total Deposit Ratios Between NABIL, HBL and SCBNL.

S.N	NABIL	HBL	SCBNL
1	$X_1 = 1.5973$	$X_2 = 1.6991$	$X_3 = 2.7105$
2	$\overline{X_1} = 0.31$	$\overline{X_2} = 0.33$	$\overline{X_3} = 0.5421$

	95	98	
3	$(X_1 - \overline{X_1})^2 = 0.0057$	$(X_2 - \overline{X_2})^2 = 0.054$	$(X_3 - \overline{X_3})^2 = 0.0073$

Source: Appendix

(a) Test of significance of difference between NABIL and HBL

Setting of hypothesis,

Null hypothesis (H₀): $\overline{X_1} = \overline{X_2}$

 i.e., there is no significant difference between mean ratios of total investment to total deposit of NABIL and HBL.

Alternative hypothesis (H₁): $\overline{X_1} \mid \overline{X_2}$ **(two tailed test)**

 i.e., there is significant difference between mean ratios of total investment to total deposit of NABIL and HBL.

 The test statistics under H₀ is,

$$t = \frac{\overline{X_1} Z \overline{X_2}}{\sqrt{S^2 \frac{1}{n_1} \Gamma \frac{1}{n_2}}}$$

Where,

$$s^2 = \frac{1}{n_1 + n_2 - 2} \left\{ (X_1 - \overline{X_1})^2 + (X_2 - \overline{X_2})^2 \right\}$$

$$= \frac{1}{5 \Gamma 5 Z 2} \int 0.0057 \Gamma 0.0354 \!$$

$$= 0.0411$$

Now,

$$t = \frac{0.3195 Z 0.3398}{\sqrt{0.0411 \frac{1}{5} \Gamma \frac{1}{5}}}$$

$$= -0.1583$$

The calculated value of $\mid t \mid = 0.1583$

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

Decision: -

Since the calculated value of $| t |$ i.e. 0.1583 is less than its tabulated value i.e. 2.306 at 5% Level of significance for two tailed test. Null hypothesis is accepted, i.e. there is no significant difference between mean ratios of Total investment to total deposit of NABIL and HBL.

(b) Test of significance difference between NABIL and SCBNL.

Settings of hypothesis,

Null hypothesis (H_0): $\overline{X}_1 = \overline{X}_3$

i.e. there is no significant difference between mean ratios of Total investment to total deposit of NABIL and SCBNL.

Alternative hypothesis (H_1): $\overline{X}_1 \mid \overline{X}_3$ **(two tailed test)**

i.e. there is significant difference between mean ratios of Total investment to total deposit of NABIL and SCBNL.

The test statistics under H_0 is,

$$t = \frac{\overline{X}_1 Z \overline{X}_3}{\sqrt{S^2 \dfrac{1}{n_1} \Gamma \dfrac{1}{n_3}}}$$

Where,

$$s^2 = \frac{1}{n_1 + n_3 - 2} \left\{ \Sigma(X_1 - \overline{X}_1)^2 + \Sigma(X_3 - \overline{X}_3)^2 \right\}$$

$$= \frac{1}{5 \Gamma 5 \ Z2} f0.0057 \Gamma 0.0073A$$

$$= 0.0016$$

Now,

$$t = \frac{0.3195 \, Z \, 0.5421}{\sqrt{0.0016 \, \frac{1}{5} \, \Gamma \, \frac{1}{5}}}$$

$$= -8.7990$$

The calculated value of $|\,t\,| = 8.7990$

Tabulated value of 't' (two tailed test) at 5% value of $(n_1 + n_3 - 2)$ d.f. i.e. 8 d.f. is 2.306.

Decision: -

Since the calculated value of $|\,t\,|$ i.e. 8.7990 is greater than that it's tabulated value i.e. 2.306 at 5% Level of significance for two-tailed test. Null hypothesis is rejected, i.e. there is significant difference between mean ratios of total investment to total deposit of NABIL and SCBNL.

(c) Test of significance difference between HBL and SCBNL.

Settings of hypothesis,

Null hypothesis (H$_0$): $\overline{X}_2 = \overline{X}_3$

i.e. there is no significant difference between mean ratios of total investment to total deposit of HBL and SCBNL.

Alternative hypothesis (H$_1$): $\overline{X}_2 \mid \overline{X}_3$ **(two tailed test)**

i.e. there is significant difference between mean ratios of total investment to total deposit of HBL and SCBNL.

The test statistics under H$_0$ is,

$$t = \frac{\overline{X}_2 \, Z \, \overline{X}_3}{\sqrt{S^2 \, \frac{1}{n_2} \, \Gamma \, \frac{1}{n_3}}}$$

Where,

$$s^2 = \frac{1}{n_2 + n_3 - 2} \left\{ \Sigma(X_2 - \overline{X}_2)^2 + \Sigma(X_3 - \overline{X}_3)^2 \right\}$$

$$= \frac{1}{5 \, \Gamma \, 5 \, Z \, 2} f 0.0354 \, \Gamma \, 0.0073 A$$

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= 0.0053

Now,

$$t = \frac{0.3398 \ Z \ 0.5421}{\sqrt{0.0053 \ \left[\frac{1}{5} \ \Gamma \ \frac{1}{5}\right]}}$$

= -4.3977

The calculated value of | t | = 4.3977

Tabulated value of 't' (two tailed test) at 5% value of $(n_2 + n_3 - 2)$ d.f. i.e. 8 d.f. is 2.306.

Decision: -

Since the calculated value of | t | i.e. 4.3877 is greater than that it's tabulated value i.e. 2.306 at 5% Level of significance for two-tailed test. Null hypothesis is rejected, i.e. there is significant difference between mean ratios of total investments to total deposit of HBL and SCBNL.

iii) Test of Hypothesis of Investment on Government Securities to Current Asset Ratios Between NABIL, HBL and SCBNL.

Here, mean ratio of investment on government securities to current asset of NABIL, HBL and SCBNL are taken and carried out under t-test of significance difference.

Table 4.32

Test of Hypothesis of Investment on Government securities to Current Asset Ratios Between NABIL, HBL and SCBNL.

	NABIL	HBL	SCBNL
. N			
	$X_1 = 3.3965$	$X_2 = 3.3036$	$X_3 = 3.7111$

	$\overline{X_1} = 0.679$ 3	$\overline{X_2} = 0.66$ 07	$\overline{X_3} = 0.74$ 22
	$(X_1 - \overline{X_1})^2 = 0.0395$	$(X_2 - \overline{X_2})^2 = 0.0530$	$(X_3 - \overline{X_3})^2 = 0.0096$

Source: Appendix

(a) Test of significance of difference between NABIL and HBL

Setting of hypothesis,

Null hypothesis (H$_0$): $\overline{X_1} = \overline{X_2}$

i.e., there is no significant difference between mean ratios of investment on government securities to current asset of NABIL and HBL.

Alternative hypothesis (H$_1$): $\overline{X_1} \mid \overline{X_2}$ **(two tailed test)**

i.e., there is significant difference between mean ratios of investment on government securities to current asset of NABIL and HBL.

The test statistics under H$_0$ is,

$$t = \frac{\overline{X_1} Z \overline{X_2}}{\sqrt{S^2 \left[\frac{1}{n_1} \Gamma \frac{1}{n_2}\right]}}$$

Where,

$$s^2 = \frac{1}{n_1 + n_2 - 2} \left\{ (X_1 - \overline{X_1})^2 + (X_2 - \overline{X_2})^2 \right\}$$

$$= \frac{1}{5 \Gamma 5 Z 2} f 0.0395 \Gamma 0.0530 A$$

$$= 0.0116$$

Now,

$$t = \frac{0.6793 Z 0.6607}{\sqrt{0.0116 \left[\frac{1}{5} \Gamma \frac{1}{5}\right]}}$$

$$= 0.2731$$

The calculated value of $\mid t \mid = 0.2731$

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

Decision: -

Since the calculated value of $|t|$ i.e. 0.2731 is less than its tabulated value i.e. 2.306 at 5% Level of significance for two tailed test. Null hypothesis is accepted, i.e. there is no significant difference between mean ratios of investment on government securities to current asset ratio of NABIL and HBL.

(b) Test of significance difference between NABIL and SCBNL.

Settings of hypothesis,

Null hypothesis (H$_0$): $\overline{X_1} = \overline{X_3}$

i.e. there is no significant difference between mean ratios of investment on government securities to current asset of NABIL and SCBNL.

Alternative hypothesis (H$_1$): $\overline{X_1} \mid \overline{X_3}$ **(two tailed test)**

i.e. there is significant difference between mean ratios of Total investment to total deposit of NABIL and SCBNL.

The test statistics under H$_0$ is,

$$t = \frac{\overline{X_1} \, Z \, \overline{X_3}}{\sqrt{S^2 \, \dfrac{1}{n_1} \, \Gamma \, \dfrac{1}{n_3}}}$$

Where,

$$s^2 = \frac{1}{n_1 + n_3 - 2} \left\{ \Sigma (X_1 - \overline{X_1})^2 + \Sigma (X_3 - \overline{X_3})^2 \right\}$$

$$= \frac{1}{5 \, \Gamma 5 \,\, Z 2} f0.0395 \, \Gamma \, 0.0096 A$$

$$= 0.0061$$

Now,

$$t = \frac{0.6793 \, Z \, 0.7422}{\sqrt{0.0061 \, \frac{1}{5} \, \Gamma \, \frac{1}{5}}}$$

$$= -1.2734$$

The calculated value of $|t| = 1.2734$

Tabulated value of 't' (two tailed test) at 5% value of $(n_1 + n_3 - 2)$ d.f. i.e. 8 d.f. is 2.306.

Decision: -

Since the calculated value of $|t|$ i.e. 1.2734 is greater than that it's tabulated value i.e. 2.306 at 5% Level of significance for two-tailed test. Null hypothesis is accepted, i.e. there is no significant difference between mean ratios of investment on government securities to current assets of NABIL and SCBNL.

(c) Test of significance difference between HBL and SCBNL.

Settings of hypothesis,

Null hypothesis (H₀): $\overline{X}_2 = \overline{X}_3$

i.e. there is no significant difference between mean ratios of investment on government securities to current asset of HBL and SCBNL.

Alternative hypothesis (H₁): $\overline{X}_2 \mid \overline{X}_3$ **(two tailed test)**

i.e. there is significant difference between mean ratios of total investment to total deposit of HBL and SCBNL.

The test statistics under H₀ is,

$$t = \frac{\overline{X}_2 \, Z \, \overline{X}_3}{\sqrt{S^2 \, \frac{1}{n_2} \, \Gamma \, \frac{1}{n_3}}}$$

Where,

$$s^2 = \frac{1}{n_2 + n_3 - 2} \left\{ \Sigma(X_2 - \overline{X}_2)^2 + \Sigma(X_3 - \overline{X}_3)^2 \right\}$$

$$= \frac{1}{5 \, \Gamma \, 5 \, Z \, 2} \int 0.0530 \, \Gamma \, 0.0096^t$$

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$$= 0.0078$$

Now,

$$t = \frac{0.6607\ Z0.7422}{\sqrt{0.0078\ \dfrac{1}{5}\ \Gamma\ \dfrac{1}{5}}}$$

$$= -1.4580$$

The calculated value of $|\,t\,| = 1.4580$

Tabulated value of 't' (two tailed test) at 5% value of $(n_2+ n_3 -2)$ d.f. i.e. 8 d.f. is 2.306.

Decision: -

Since the calculated value of $|\,t\,|$ i.e. 1.4580 is less than that it's tabulated value i.e. 2.306 at 5% Level of significance for two-tailed test. Null hypothesis is accepted, i.e. there is significant no difference between mean ratio of investments on government securities to total asset of HBL and SCBNL.

iv) Test of Hypothesis on Loan and Advances to Current Assets Ratios Between NABIL, HBL and SCBNL.

Here, mean ratio of loan and advances to current assets of NABIL, HBL and SCBNL are taken and carried out under t-test of significance difference.

Table 4.33

Test of Hypothesis on Loan and Advances to Current Asset Ratios Between NABIL, HBL and SCBNL.

. N	NABIL	HBL	SCBNL
	$X_1=16.60$ 57	$X_2=12.$ 6422	$X_3=5.4$ 852
	$\overline{X_1}=3.321$ 1	$\overline{X_2}=02.$ 5284	$\overline{X_3}=1.09$ 70
	$(X_1 -$	$(X_2 -$	$(X_3 -$

	$\overline{X_1})^2 = 3.4462$	$\overline{X_2})^2 = 2.5533$	$\overline{X_3})^2 = 0.1745$

Source: Appendix

(a) Test of significance of difference between NABIL and HBL

Setting of hypothesis,

Null hypothesis (H_0): $\overline{X_1} = \overline{X_2}$

i.e., there is no significant difference between mean ratios of loan and advances to current asset of NABIL and HBL.

Alternative hypothesis (H_1): $\overline{X_1} \mid \overline{X_2}$ **(two tailed test)**

i.e., there is significant difference between mean ratios of loan and advances to current asset of NABIL and HBL.

The test statistics under H_0 is,

$$t = \frac{\overline{X_1} Z \overline{X_2}}{\sqrt{S^2 \; \frac{1}{n_1} \Gamma \frac{1}{n_2}}}$$

Where,

$$s^2 = \frac{1}{n_1 + n_2 - 2} \left\{ \Sigma(X_1 - \overline{X_1})^2 + \Sigma(X_2 - \overline{X_2})^2 \right\}$$

$$= \frac{1}{5 \Gamma 5 Z 2} \beta.4462 \Gamma 2.5533 A$$

$$= 0.7499$$

Now,

$$t = \frac{3.3211 Z 2.5284}{\sqrt{0.7499 \; \frac{1}{5} \Gamma \frac{1}{5}}}$$

$$= 1.4474$$

The calculated value of $|t| = 1.4474$

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

Decision: -

Since the calculated value of | t | i.e. 1.4474 is less than its tabulated value i.e. 2.306 at 5% Level of significance for two tailed test. Null hypothesis is accepted, i.e. there is no significant difference between mean ratio of loan and advances to current asset ratio of NABIL and HBL.

(b) Test of significance difference between NABIL and SCBNL.

Settings of hypothesis,

Null hypothesis (H₀): $\overline{X}_1 = \overline{X}_3$

i.e. there is no significant difference between mean ratios of loan and advances to current asset of NABIL and SCBNL.

Alternative hypothesis (H₁): $\overline{X}_1 \mid \overline{X}_3$ **(two tailed test)**

i.e. there is significant difference between mean ratios of loan and advances to current asset of NABIL and SCBNL.

The test statistics under H₀ is,

$$t = \frac{\overline{X}_1 Z \overline{X}_3}{\sqrt{S^2 \dfrac{1}{n_1} \Gamma \dfrac{1}{n_3}}}$$

Where,

$$s^2 = \frac{1}{n_1 + n_3 - 2} \left\{ \Sigma (X_1 - \overline{X}_1)^2 + \Sigma (X_3 - \overline{X}_3)^2 \right\}$$

$$= \frac{1}{5 \Gamma 5 \ Z2} \hat{\beta}.4462 \ \Gamma \ 0.1745 A$$

$$= 0.4562$$

Now,

$$t = \frac{3.3211 \ Z 1.0970}{\sqrt{0.4562 \ \dfrac{1}{5} \Gamma \dfrac{1}{5}}}$$

= 5.2065

The calculated value of $|t| = 5.2065$

Tabulated value of 't' (two tailed test) at 5% value of $(n_1 + n_3 - 2)$ d.f. i.e. 8 d.f. is 2.306.

Decision: -

Since the calculated value of $|t|$ i.e. 5.2065 is greater than that it's tabulated value i.e. 2.306 at 5% Level of significance for two-tailed test. Null hypothesis is rejected, i.e. there is significant difference between mean ratio of loan and advances to current assets of NABIL and SCBNL.

(c) Test of significance difference between HBL and SCBNL.

Settings of hypothesis,

Null hypothesis (H$_0$): $\overline{X}_2 = \overline{X}_3$

i.e. there is no significant difference between mean ratios of loan and advances to current asset of HBL and SCBNL.

Alternative hypothesis (H$_1$): $\overline{X}_2 \mid \overline{X}_3$ **(two tailed test)**

i.e. there is significant difference between mean ratios of loan and advances to current asset of HBL and SCBNL.

The test statistics under H$_0$ is,

$$t = \frac{\overline{X}_2 Z \overline{X}_3}{\sqrt{S^2 \frac{1}{n_2} \Gamma \frac{1}{n_3}}}$$

Where,

$$s^2 = \frac{1}{n_2 + n_3 - 2} \left\{ \Sigma(X_2 - \overline{X}_2)^2 + \Sigma(X_3 - \overline{X}_2)^2 \right\}$$

$$= \frac{1}{5 \Gamma 5 \ Z2} f 2.5533 \Gamma 0.1745 A$$

= 0.3410

95

Now,

$$t = \frac{2.5284 \; Z \; 1.0970}{\sqrt{0.3410 \; \dfrac{1}{5} \; \Gamma \; \dfrac{1}{5}}}$$

$$= 3.8757$$

The calculated value of $|\,t\,| = 3.8757$

Tabulated value of 't' (two tailed test) at 5% value of $(n_2 + n_3 - 2)$ d.f. i.e. 8 d.f. is 2.306.

Decision: -

Since the calculated value of $|\,t\,|$ i.e. 3.8757 is greater than that it's tabulated value i.e. 2.306 at 5% Level of significance for two-tailed test. Null hypothesis is rejected, i.e. there is significant difference between mean ratio of loan and advances to current asset of HBL and SCBNL.

4.3 Major Findings of the Study

The main findings of the study derived from the analysis of financial data of NABIL, HBL and SCBNL are given below:

⟩ From the analysis of current ratio, it is found that the mean ratio of HBL is higher than NABIL but lower than SCBNL. The mean ratio of cash and bank balance to total deposits comparatively NABIL has maintained low ratios. The mean ratio of cash and bank balance to current assets ratio of SCBNL is lesser than NABIL and HBL. But, SCBNL has higher consistency than that of other two compared banks. The mean ratio of investment on government securities to current assets ratio of HBL is lower than NABIL and SCBNL. The mean ratio of loan and advances to current assets of SCBNL is lower than NABIL and HBL.

⟩ NABIL has strong position regarding the mobilization of total deposit on loan ad advances and acquiring higher profit with compare to other. The mean ratio of total investment to total deposit of SCBNL is higher than NABIL and HBL. The

mean ratio of loan and advances to working fund ratio of HBL is lower than NABIL and SCBNL. The mean of investment on government securities to total working fund ratio of SCBNL is higher than NABIL and HBL. And, its ratio is also more uniform than that of two compared banks. The mean ratio of Investment on share and debentures to total working fund of NABIL is higher than SCBNL and HBL and also NABIL ratio is more consistent and homogeneous than SCBNL and HBL.

) From the analysis the mean ratio of return on total working fund ratio of SCBNL is greater than that of NABIL and HBL. And according to coefficient of variation SCBNL is more consistent than NABIL and HBL. The analysis shows that mean ratio of return on loan and advances of SCBNL is greater than NABIL and HBL as well as SCBNL has lowest variation. From the analysis, the mean ratio of total interest earned to total outside assets of NABIL is slightly higher than that of HBL and SCBNL. But, the ratio of SCBNL is more stable and consistent. The mean ratio of total interest earned to total working fund of NABIL is higher than HBL and SCBNL. But, variability of SCBNL is lower than that of NABIL and HBL. HBL has the highest mean ratio for the interest payment to total working fund ratio than NABIL & SCBNL.

) The mean ratio of liquidity risk of HBL is greater than NABIL and SCBNL. But, liquidity risk ratio of NABIL is more uniform. Similarly, credit risk ratio of NABIL is higher than HBL & SCBNL on average. The mean of capital risk ratio of SCBNL is greater than NABIL & SCBNL.

) In the context of growth ratio, NABIL's deposit growth ratio, loan and advances growth ratio, total investment growth ratio and Net-profit growth ratio is higher than that of HBL and SCBNL.

) Trend analysis shows that Real Estate Loan is in decreasing trend of all sample banks. But, Housing Loan, Margin Lending and Consumer Lending of selected sample banks are in increasing trend.

) The coefficient of correlation between total deposit and loan and advances of HBL is near to one, which is higher than NABIL and SCBNL. The coefficient of correlation between total deposit and total investment of NABIL is slightly higher than that of HBL and SCBNL. The coefficient of correlation between total outside assets and net profit of HBL is found highest being nearly perfectly correlated.

) Hypothesis testing of loan and advances to total deposit ratio between NABIL, HBL and SCBNL, it is found that there is no significance difference between mean ratios of NABIL and HBL. But, there is significance difference between mean ratios of NABIL and SCBNL and HBL and SCBNL. Hypothesis testing of total investment to total deposits ratio between NABIL, HBL and SCBNL, it is found that there is no significance difference between mean ratios of NABIL and HBL. But, there is significance between mean ratios of NABIL and SCBNL and HBL and SCBNL. Hypothesis testing of investment on government securities to current assets ratio between NABIL, HBL and SCBNL, it found there is no significance difference between mean ratios of all three banks. Hypothesis on loan and advances to current assets ratios between NABIL, HBL and SCBNL, it is found that there is no significance difference between mean ratios of NABIL and HBL. But, there is significance difference between mean ratio of NABIL and SCBNL and HBL and SCBNL.

CHAPTER - V
SUMMARY CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of the study, conclusions derived from the analysis of data and their interpretation and recommendations offered for the improvement of the investment policies by using some important financial as well as statistical tools. After completing the basic analysis required for the study the final and the most important task of the researcher is to be summarized for the study and to recommend for the further importance. This would be meaningful to the management of the bank to initiate the action and achieve the desired result. Thus, the chapter is divided into three sections. The first section of this chapter focuses on summarizing the whole study, the second section draws conclusions from the analysis of data and interpretation of the results thereof; and the third section offers recommendations for improvement of the investment policy of the concerned bank.

5.1 Summary

Economic development of a country cannot be imagined without the development of commerce and industry. No doubt, banking promotes the development of commerce to its extreme, as banking itself is the part of commerce.

In the study the word investment conceptualized the investment of income, savings or other collected fund. The term investment covers the wide range of activities. It is only possible where there is adequate savings. Investment policy is an important ingredient of overall national economic development because it ensures efficient allocation of fund to achieve the materials and economic well being of the society as a whole.

Commercial banks play an important role for economic development of a country as they provide capital for the development of industry trade and business by investing the saving collected as deposits from public joint venture banks are the commercial banks firmed by joining the two or more enterprises for the purpose of carrying out specific operation such

as investment in trade, business and industry as well as in the form of negotiation between various groups of industries or traders to achieve mutual exchange of goods and services. Commercial Banks formulate sound investment policies to make it more effective, which eventually contribute to the economic growth of a country.

Commercial banks should be careful while performing the credit creation function. Investment policy should ensure minimum risk and maximum profit from lending, good investment policy ensures maximum of investment to all sector with proper utilization.

Banking in Nepal in true sense started from the establishment of the first commercial bank, Nepal Bank Limited in 1994 B.S. government sector. The establishment of Nepal Rastra Bank, Central Bank of Nepal in 2013 B.S. was a significant dimension in the development of banking sector.

When the government adopted liberal and market oriented economic policy since mid - 1980, Nepal allowed foreign banks on joint venture banks to operate in the country after getting the approval from Nepal Rastra Bank.

The study basically deals with the utilization of available fund, relationship of investment loan and advances with total deposit and total Net Profit, Investment decision and liquidity position of concerned banks i.e. NABIL, HBL and SCBNL.

The objective of the study is to examine and evaluate the investment policy trend of the commercial banks in Nepal and to suggest for its improvement in the investment policy. The study has been constrained by various common limitations.

On the second chapter the focus has been made on the review of literatures relevant to the investment policy of commercial banks for this the following areas have been reviewed.

In the study the financial tools (ratio analysis) like liquidity ratio, assets management ratio, profitability ratio, risk ratios and growth ratios are used. The statistical tools like

Trend analysis, Co-efficient of correlation and Hypothesis testing have been used for the analysis and interpretation of the data. The data which were employed in this research are secondary in nature. They are obtained from annual reports of the concerned banks, likewise, the financial statement of five years (2005/06 to 2009/10) were selected for the purpose of evaluation.

5.2 Conclusion

Investment is the major essence of every commercial bank. The formulation and implementation of sound investment policies are among the most important responsibilities of the bank management. Therefore, the main objectives of the study are to assess and evaluate the investment policy and strategy adopted by the concerned banks. From the above analysis, we found out the major stamina of investment policy adopted by concerned bank, and concluding results are as follows:

Liquidity position of SCBNL was comparatively better than NABIL and HBL. According to current ratio, SCBNL had better position but HBL is more consistency as per coefficient of variation. In addition, HBL had maintained better cash and bank balance ratio to meet the customers demand than NABIL and SCBNL. SCBNL was not successful to mobilize funds as loans and advances with respect to current assets in comparison to NABIL and HBL. When analyzing the investment on Government securities in respect to current assets, HBL had less investment on Government securities where as SCBNL had more.

Analyzing asset management ratio, loans and advances to total deposit ratio and loan and advances to total working fund ratio of NABIL was comparatively higher than HBL and SCBNL. Regarding total investment to total deposit ratio, SCBNL was in better position, which indicated that SCBNL was successful to mobilize the funds on various investment. Similarly, SCBNL has more investment on government securities to total working fund. And lastly, regarding investment on share and debenture to total working fund, again NABIL was in better position than HBL and SCBNL that meant NABIL had maintain highest investment policy on share and debentures.

Profit is ultimate output of a commercial bank and it will have no future if it fails to make sufficient profit. In analysis of profitability, return on total working fund and return on loan and advances of SCBNL is higher, total interest earned to total outside assets and total interest earned to total working fund of NABIL is higher and total interest paid to total working fund of SCBNL is lower.

When a firm wants to bear risk, the profitability and effectiveness of the firm increase. Liquidity risk ratio of HBL is higher i.e. HBL is holding cash more than NABIL and SCBNL. From the study credit risk ratio of banks, comparatively NABIL has high ratio, it indicates NABIL utilize its total assets as loans and advances by taking high risk, which helped to increase the level of profit and maximizing the value of the firm. Capital risk ratio of SCBNL is higher than NABIL and HBL.

The study also focused on finding out growth position of total deposits, total loan and advances, total investment and net profit of concerned banks. Here the growth position of total deposit of NABIL is better than HBL and SCBNL. Similarly, growth rate of total loan and advances, total investment and net profit of NABIL is better than HBL and SCBNL.

Trend analysis shows that loan on Real Estate sector of concerned sample banks are in decreasing trend. But, Housing loan, Margin lending and Consumer lending are in increasing trend. Similarly, the ratio of investment made on this sector by NABIL is slightly higher than HBL and SCBNL.

From coefficient of correlation analysis, it can be concluded that the value of r is significant that means there is significant relationship between deposit and loan and advances and total investment of NABIL, HBL and SCBNL. But, in case of NABIL, there is negative relation between Total outside assets and net profit.

From hypothesis testing, it can be conclude that there is no significance difference between loan and advances to total deposit, investment to total deposit, investment on government securities to current assets and loan and advances to current asset of NABIL. But, there is significance difference in HBL and SCBNL.

5.3 Recommendations

⟩ Current ratio of sample banks is not sufficient to achieve standard ratio i.e. 2:1. So, it is recommended to all banks to maintain required current ratio. They need to maintain the present mean current ratio for the proper management of their liquidity position.

⟩ The liquidity position of a bank may be affected by external as well as internal factors. The affecting factors may be interest rates, supply as demand position of loan and advances as well as savings, investment situations, central banks directives, the lending policies, capability of management, strategic planning and funds flow situation. As NABIL has maintained lower cash and bank to total deposit and current assets ratio, NABIL is recommended to increase cash and bank balance to meet current obligations and loan demand.

⟩ Deposit is most important influential item to the Investment Policy of the commercial. Analysis shows that high deposit result high investment and finally high profit. So, commercial banks should develop and implement plans and program in order to increase deposit.

⟩ Out of working fund, SCBNL has not invested its more funds as loans and advances in comparison to other two banks. SCBNL is in weak condition to mobilize its deposits by investing in different sectors in comparison to other banks. Therefore, SCBNL is strongly recommended to follow the liberal lending policy, invest more and more percentage of total deposits in loans and advances, and similarly maintain stability on the investment policy. Though, the percentage of invested fund by all banks is very nominal. So, it is recommended to all banks to invest their more funds in different types of companies' indifferent areas.

⟩ Government securities such as treasury bills, development bonds, and national saving bonds are considered as the safest medium of investment as they are risk-free and highly liquid in nature. The study has revealed that NABIL and HBL has

invested fewer portions of current assets in government securities, treasury bills, development bonds, which is safest place of investment in compare to SCBNL. So, NABIL and HBL is recommended to follow liberal investment policy on government securities and treasury bills and so on, which maintain more stability on the liquidity position.

⟩ Portfolio condition of all banks should be examined carefully from time to time and attention should be made to maintain equilibrium in the portfolio condition as far as possible. So it can be said, "All eggs should not be kept in the same basket". The bank should make continuous efforts to explore new competitive and high yielding investment opportunities to optimize their investment portfolio.

⟩ In terms of recovery of loan, NABIL is worse in comparison to other banks. The loan loss ratio is comparatively high that makes negative impact on profit. It may be facing a lot of problems on recovering loans. It has large non-performing asset as loan unrecovered. Therefore, it is recommended to apply recovery act that would help to realize overdue loan in time.

⟩ As the amount on Real Estate loan is very high, it shows that most of the commercial banks have focused their banking services especially to big clients. So, small clients are very far from enjoying the banking facilities provided by such commercial banks. So, all banks should make policy to encourage small entrepreneurs for promoting and mobilizing small investors' funds.

⟩ Though commercial banks have played important role in the economic development of the country, they are not efficiently playing the role of a merchant bank. So, the commercial banks is suggested to play the role of financial intermediary and merchant banking like underwriting of securities brokers, development of capital markets and supportive role to the security exchange center.

⟩ In the light of growing competition in the banking sector, the business of the bank should be customer oriented. It should strengthen and activate its marketing function, as it is an effective tool of attracting and retaining customers. For this purpose, the banks should develop an "Innovative approach to Bank Marketing" and formulate new strategies of serving customers in a more convenient and satisfactory way.

⟩ Although most of the banks have recently expanded their braches all over the country but some of them do not have branches in the rural areas of the country. Its branches are limited to the urban areas only. Therefore, commercial banks are recommended to open branches in rural areas too to help in economic development of the country. Nepal government has also encouraged the joint venture banks to expand baking service in rural areas and communities without making unfavorable impact in their profit.

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APPENDIX

1. **Current ratio**

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Current Assets	3,587,609,191	6,049,193,487	8,411,888,597	5,764,220,208	10,384,126,465
Current liabilities	3,844,965,283	4,366,725,238	6,464,880,757	6,888,129,495	9,434,518,992
Current Ratio	0.9331	1.3853	1.3012	0.8368	1.1007

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Current Assets	7,287,952,396	9,546,741,582	9,133,206,728	8,126,662,370	7,630,360,839
Current liabilities	5,726,888,075	6,317,836,280	5,660,848,866	4,237,321,247	4,912,344,702
Current Ratio	1.2726	1.5111	1.6134	1.9179	1.5533

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Current Assets	10,464,012,501	9,777,274,329	11,405,512,943	14,243,700,434	11,477,340,686
Current liabilities	5,634,118,373	6,227,849,396	7,273,802,842	7,115,373,762	11,424,043,975
Current Ratio	1.8573	1.5699	1.5680	2.0018	1.0047

2. **Cash & Bank balance to Total deposits**

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Cash and Bank Balances	630,238,588	1,399,825,851	2,671,141,055	3,372,512,471	1,400,097,804
Deposits	19,347,399,440	23,342,285,327	31,915,047,467	37,348,255,840	46,340,700,628
Cash and Bank Balance to Deposit Ratio	0.0326	0.0600	0.0837	0.0903	0.0302

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Cash & Bank Balances	1,717,352,336	1,757,341,252	1,448,142,890	3,048,526,788	3,866,490,684
Deposits	26,490,851,640	30,048,417,756	31,842,789,356	34,681,345,179	37,611,202,274
Cash & Bank Balance to Deposit Ratio	0.0648	0.0585	0.0455	0.0879	0.1028

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Cash & Bank Balances	1,276,241,000	2,021,021,000	2,050,243,000	3,137,164,000	1,929,307,000
Deposits	23,061,032,000	24,647,021,000	29,743,999,000	35,350,824,000	35,182,721,000
Cash & Bank Balance to Deposit Ratio	0.0553	0.0820	0.0689	0.0887	0.0548

3. **Cash & Bank balance to Current assets**

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Cash & Bank Balances	630,238,588	1,399,825,851	2,671,141,055	3,372,512,471	1,400,097,804
Current Assets	3,587,609,191	6,049,193,487	8,411,888,597	5,764,220,208	10,384,126,465
Cash & Bank Balance to current asset Ratio	0.1757	0.2314	0.3175	0.5851	0.1348

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Cash & Bank Balances	1,717,352,336	1,757,341,252	1,448,142,890	3,048,526,788	3,866,490,684
Current Assets	7,287,952,396	9,546,741,582	9,133,206,728	8,126,662,370	7,630,360,839
Cash & Bank Balance to current asset Ratio	0.2356	0.1841	0.1586	0.3751	0.5067

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Cash & Bank Balances	1,276,241,000	2,021,021,000	2,050,243,000	3,137,164,000	1,929,307,000
Current Assets	10,464,012,501	9,777,274,329	11,405,512,943	14,243,700,434	11,477,340,686
Cash & Bank Balance to current asset Ratio	0.1220	0.2067	0.1798	0.2202	0.1681

4. **Investment on government securities to Current assets**

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Investment on gov. Securities	2,301,463,338	4,808,348,503	4,646,883,136	3,706,102,662	7,941,556,440
Current Assets	3,587,609,191	6,049,193,487	8,411,888,597	5,764,220,208	10,384,126,465
Inv on Gov securities to Current Assets ratio	0.6415	0.7949	0.5524	0.6429	0.7648

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Investment on gov.	5,144,413,000	6,454,873,471	7,471,667,904	4,212,300,379	4,465,372,409
Current Assets	7,287,952,396	9,546,741,582	9,133,206,728	8,126,662,370	7,630,360,839
Inv on Gov securities to Current Assets ratio	0.7059	0.6761	0.8181	0.5183	0.5852

<div align="center">SCBNL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Investment on gov. Securities	8,635,876,440	7,107,937,303	8,137,615,178	9,998,753,558	8,531,519,525
Current Assets	10,464,012,501	9,777,274,329	11,405,512,943	14,243,700,434	11,477,340,686
Inv on Gov securities to Current Assets ratio	0.8253	0.7270	0.7135	0.7020	0.7433

5. **Loan & advances to Current asset ratio**

<div align="center">NABIL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Loan and advances	12,922,543,153	15,545,778,730	21,365,053,318	27,589,933,041	32,268,873,283
Current Assets	3,587,609,191	6,049,193,487	8,411,888,597	5,764,220,208	10,384,126,465
loan & adv. to Current Assets ratio	3.6020	2.5699	2.5399	4.7864	3.1075

<div align="center">HBL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Loan and advances	14,642,559,555	16,997,997,046	19,497,520,482	24,793,155,269	27,980,628,760
Current Assets	7,287,952,396	9,546,741,582	9,133,206,728	8,126,662,370	7,630,360,839
loan & adv. to Current Assets ratio	2.0091	1.7805	2.1348	3.0508	3.6670

<div align="center">SCBNL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Loan and advances	8,935,418,000	10,502,637,000	13,718,597,000	13,679,757,000	15,956,955,000
Current Assets	10,464,012,501	9,777,274,329	11,405,512,943	14,243,700,434	11,477,340,686
loan & adv. to Current Assets ratio	0.8539	1.0742	1.2028	0.9604	1.3903

6. **Loan & advances to Total deposit ratio**

<div align="center">NABIL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Loan and advances	12,922,543,153	15,545,778,730	21,365,053,318	27,589,933,041	32,268,873,283
Total deposit	19,347,399,440	23,342,285,327	31,915,047,467	37,348,255,840	46,340,700,628
Loan & adv. to total deposit ratio	0.6679	0.6660	0.6694	0.7387	0.6963

<div align="center">HBL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Loan and advances	14,642,559,555	16,997,997,046	19,497,520,482	24,793,155,269	27,980,628,760
Total deposit	26,490,851,640	30,048,417,756	31,842,789,356	34,681,345,179	37,611,202,274
Loan & adv. to total deposit ratio	0.5527	0.5657	0.6123	0.7149	0.7439

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Loan and advances	8,935,418,000	10,502,637,000	13,718,597,000	13,679,757,000	15,956,955,000
Total deposit	23,061,032,000	24,647,021,000	29,743,999,000	35,350,824,000	35,182,721,000
Loan & adv. to total deposit ratio	0.3875	0.4261	0.4612	0.3870	0.4535

7. **Total investment to Total deposit ratio**

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total investment	6,178,533,108	8,945,310,567	9,939,771,428	10,826,379,001	13,600,916,613
Total deposit	19,347,399,440	23,342,285,327	31,915,047,467	37,348,255,840	46,340,700,628
Total investment to Total Deposit Ratio	0.3193	0.3832	0.3114	0.2899	0.2935

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total investment	10,889,031,449	11,822,984,558	13,340,176,785	8,710,690,646	8,444,910,165
Total deposit	26,490,851,640	30,048,417,756	31,842,789,356	34,681,345,179	37,611,202,274
Total investment to Total Deposit Ratio	0.4110	0.3935	0.4189	0.2512	0.2245

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total investment	12,838,555,000	13,553,233,000	13,902,819,000	20,236,121,000	19,847,511,000
Total deposit	23,061,032,000	24,647,021,000	29,743,999,000	35,350,824,000	35,182,721,000
Total investment to Total Deposit Ratio	0.5567	0.5499	0.4674	0.5724	0.5641

8. **Loan and advance to working fund ratio**

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Loan and advances	12,922,543,153	15,545,778,730	21,365,053,318	27,589,933,041	32,268,873,283
Working Fund	15,233,720,352	18,213,192,033	27,206,254,286	31,558,778,185	40,151,640,924
Loan & adv. to working fund ratio	0.8483	0.8535	0.7853	0.8742	0.8037

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Loan and advances	14,642,559,555	16,997,997,046	19,497,520,482	24,793,155,269	27,980,628,760
Working Fund	20,470,383,251	23,407,329,473	26,287,217,294	32,681,752,158	35,389,175,398
Loan & adv. to working fund ratio	0.7153	0.7262	0.7417	0.7586	0.7907

<div align="center">SCBNL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Loan and advances	8,935,418,000	10,502,637,000	13,718,597,000	13,679,757,000	15,956,955,000
Working Fund	17,137,258,205	16,920,819,621	20,821,554,736	25,991,828,791	26,251,411,438
Loan & adv. to working fund ratio	0.5214	0.6207	0.6589	0.5263	0.6079

9. Investment on Government Securities to Total Working Fund ratio

<div align="center">NABIL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Inv on Gov securities	2,301,463,338	4,808,348,503	4,646,883,136	3,706,102,662	7,941,556,440
Total Working Fund	15,233,720,352	18,213,192,033	27,206,254,286	31,558,778,185	40,151,640,924
Inv on Gov securities to Total Working Fund	0.1511	0.2640	0.1708	0.1174	0.1978

<div align="center">HBL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Inv on Gov securities	5,144,413,000	6,454,873,471	7,471,667,904	4,212,300,379	4,465,372,409
Total Working Fund	20,470,383,251	23,407,329,473	26,287,217,294	32,681,752,158	35,389,175,398
Inv on Gov securities to Total Working Fund	0.2513	0.2758	0.2842	0.1289	0.1262

<div align="center">SCBNL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Inv on Gov securities	8,635,876,440	7,107,937,303	8,137,615,178	9,998,753,558	8,531,519,525
Total Working Fund	17,137,258,205	16,920,819,621	20,821,554,736	25,991,828,791	26,251,411,438
Inv on Gov securities to Total Working Fund	0.5039	0.4201	0.3908	0.3847	0.3250

10. Investment on share and debentures to Total Working Fund ratio

<div align="center">NABIL</div>

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Inv on share and debentures	104,192,082	286,957,542	323,236,300	354,930,664	346,856,085
Total Working Fund	15,233,720,352	18,213,192,033	27,206,254,286	31,558,778,185	40,151,640,924
Inv on share & deb. to Total working Fund	0.0068	0.0158	0.0119	0.0112	0.0086

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Inv on share and debentures	39,908,797	73,423,859	89,558,359	99,883,359	78,882,459
Total Working Fund	20,470,383,251	23,407,329,473	26,287,217,294	32,681,752,158	35,389,175,398
Inv on share & deb. to Total working Fund	0.0019	0.0031	0.0034	0.0031	0.0022

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Inv on share and debentures	15,343,000	44,943,000	114,536,000	115,418,500	115,418,500
Total Working Fund	17,137,258,205	16,920,819,621	20,821,554,736	25,991,828,791	26,251,411,438
Inv on share & deb. to Total working Fund	0.0009	0.0027	0.0055	0.0044	0.0044

11. Return on Total Working Fund Ratio

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Return	635,262,349	673,959,698	746,468,394	1,031,053,098	1,139,099,399
Total working fund	15,233,720,352	18,213,192,033	27,206,254,286	31,558,778,185	40,151,640,924
Return on Total Working Fund Ratio	0.0417	0.0370	0.0274	0.0327	0.0284

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Return	457,457,696	491,822,905	635,868,519	752,834,735	508,798,193
Total working fund	20,470,383,251	23,407,329,473	26,287,217,294	32,681,752,158	35,389,175,398
Return on Total Working Fund Ratio	0.0223	0.0210	0.0242	0.0230	0.0144

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Return	658,756,000	691,668,000	818,921,000	1,025,114,000	1,085,870,000
Total working fund	17,137,258,205	16,920,819,621	20,821,554,736	25,991,828,791	26,251,411,438
Return on Total Working Fund Ratio	0.0384	0.0409	0.0393	0.0394	0.0414

12. Return on Loan & Advances Ratio

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Return	635,262,349	673,959,698	746,468,394	1,031,053,098	1,139,099,399
Loan & Advance	12,922,543,153	15,545,778,730	21,365,053,318	27,589,933,041	32,268,873,283
Return on Loan & Advances Ratio	0.0492	0.0434	0.0349	0.0374	0.0353

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Return	457,457,696	491,822,905	635,868,519	752,834,735	508,798,193
Loan & Advance	14,642,559,555	16,997,997,046	19,497,520,482	24,793,155,269	27,980,628,760
Return on Loan & Advances Ratio	0.0312	0.0289	0.0326	0.0304	0.0182

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Return	658,756,000	691,668,000	818,921,000	1,025,114,000	1,085,870,000
Loan & Advance	8,935,418,000	10,502,637,000	13,718,597,000	13,679,757,000	15,956,955,000
Return on Loan & Advances Ratio	0.0737	0.0659	0.0597	0.0749	0.0680

13. **Total interest Earned to Total Outside Asset Ratio**

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total Interest Earned	1,309,998,500	1,587,758,714	1,978,696,727	2,798,486,196	4,047,725,656
Total Outside asset	19,101,076,261	24,491,089,297	31,304,824,746	38,416,312,042	45,869,789,896
Total interest Earned to Total Outside Asset	0.0686	0.0648	0.0632	0.0728	0.0882

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total Interest Earned	1,626,473,819	1,775,582,617	1,963,647,472	2,342,198,179	3,148,605,196
Total Outside asset	25,531,591,004	28,820,981,604	32,837,697,267	33,503,845,915	36,425,538,925
Total interest Earned to Total Outside Asset	0.0637	0.0616	0.0598	0.0699	0.0864

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total Interest Earned	1,189,603,000	1,411,982,000	1,591,196,000	1,887,221,000	2,042,109,000
Total Outside asset	21,773,973,000	24,055,870,000	27,621,416,000	33,915,878,000	35,804,466,000
Total interest Earned to Total Outside Asset	0.0546	0.0587	0.0576	0.0556	0.0570

14. Total Interest Earned to Total Working Fund Ratio

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total interest earned	1,309,998,500	1,587,758,714	1,978,696,727	2,798,486,196	4,047,725,656
Total working Fund	15,233,720,352	18,213,192,033	27,206,254,286	31,558,778,185	40,151,640,924
Total Interest Earned to Total Working Fund	0.0860	0.0872	0.0727	0.0887	0.1008

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total interest earned	1,626,473,819	1,775,582,617	1,963,647,472	2,342,198,179	3,148,605,196
Total working Fund	20,470,383,251	23,407,329,473	26,287,217,294	32,681,752,158	35,389,175,398
Total Interest Earned to Total Working Fund	0.0795	0.0759	0.0747	0.0717	0.0890

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total interest earned	1,189,603,000	1,411,982,000	1,591,196,000	1,887,221,000	2,042,109,000
Total working Fund	17,137,258,205	16,920,819,621	20,821,554,736	25,991,828,791	26,251,411,438
Total Interest Earned to Total Working Fund	0.0694	0.0834	0.0764	0.0726	0.0778

15. Total interest paid to Total working fund ratio

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total interest Paid	357,161,304	555,710,109	758,436,212	1,153,280,052	1,960,107,902
Total Working Fund	15,233,720,352	18,213,192,033	27,206,254,286	31,558,778,185	40,151,640,924
Total interest paid to Total working fund	0.0234	0.0305	0.0279	0.0365	0.0488

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total interest Paid	648,841,818	767,411,247	823,744,838	934,778,015	1,553,530,687
Total Working Fund	20,470,383,251	23,407,329,473	26,287,217,294	32,681,752,158	35,389,175,398
Total interest paid to Total working fund	0.0317	0.0328	0.0313	0.0286	0.0439

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total interest Paid	303,198,000	413,055,000	471,730,000	543,786,000	575,741,000
Total Working Fund	17,137,258,205	16,920,819,621	20,821,554,736	25,991,828,791	26,251,411,438
Total interest paid to Total working fund	0.0177	0.0244	0.0227	0.0209	0.0219

16. **Liquidity Risk ratio**

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total cash & bank balance	630,238,588	1,399,825,851	2,671,141,055	3,372,512,471	1,400,097,804
Total Deposit	19,347,399,440	23,342,285,327	31,915,047,467	37,348,255,840	46,340,700,628
Liquidity Risk Ratio	0.0326	0.0600	0.0837	0.0903	0.0302

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total cash & bank balance	1,717,352,336	1,757,341,252	1,448,142,890	3,048,526,788	3,866,490,684
Total Deposit	26,490,851,640	30,048,417,756	31,842,789,356	34,681,345,179	37,611,202,274
Liquidity Risk Ratio	0.0648	0.0585	0.0455	0.0879	0.1028

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total cash & bank balance	1,276,241,000	2,021,021,000	2,050,243,000	3,137,164,000	1,929,307,000
Total Deposit	23,061,032,000	24,647,021,000	29,743,999,000	35,350,824,000	35,182,721,000
Liquidity Risk Ratio	0.0553	0.0820	0.0689	0.0887	0.0548

17. **Credit Risk Ratio**

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total Loan & advances	12,922,543,153	15,545,778,730	21,365,053,318	27,589,933,041	32,268,873,283
Total Assets	22,329,971,078	27,253,393,008	37,132,759,149	43,867,397,504	52,079,725,697
Credit Risk Ratio	0.5787	0.5704	0.5754	0.6289	0.6196

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total Loan & advances	14,642,559,555	16,997,997,046	19,497,520,482	24,793,155,269	27,980,628,760
Total Assets	29,460,389,672	33,519,141,111	36,175,531,637	39,320,322,069	42,717,124,613
Credit Risk Ratio	0.4970	0.5071	0.5390	0.6305	0.6550

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Total Loan & advances	8,935,418,000	10,502,637,000	13,718,597,000	13,679,757,000	15,956,955,000
Total Assets	25,767,352,000	28,596,689,000	33,335,788,000	40,066,570,000	40,213,320,000
Credit Risk Ratio	0.3468	0.3673	0.4115	0.3414	0.3968

18. Capital Risk Ratio

NABIL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Capital (paid up + reserves)	1,874,994,417	2,057,049,715	2,677,198,989	3,430,240,637	4,134,225,929
Risk Weighted Assets	12,922,543,153	15,545,778,730	21,365,053,318	27,589,933,041	32,268,873,283
Capital Risk Ratio	0.1451	0.1323	0.1253	0.1243	0.1281

HBL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Capital (paid up + reserves)	2,126,175,616	2,506,499,655	3,372,991,602	3,619,880,537	3,939,205,130
Risk Weighted Assets	14,642,559,555	16,997,997,046	19,497,520,482	24,793,155,269	27,980,628,760
Capital Risk Ratio	0.1452	0.1475	0.1730	0.1460	0.1408

SCBNL

Particulars/Fiscal year	2005/06	2006/07	2007/08	2008/09	2009/10
Capital (paid up + reserves)	1,754,139,000	2,116,353,000	2,492,547,000	3,052,469,000	3,369,710,000
Risk Weighted Assets	8,935,418,000	10,502,637,000	13,718,597,000	13,679,757,000	15,956,955,000
Capital Risk Ratio	0.1963	0.2015	0.1817	0.2231	0.2112

19. Growth Ratio

Growth can be calculated as follows:

Here,

Dn = total deposit in nth year

Do = Total deposit in initial year

g = growth year

We have,

$Dn = Do \, f1+g)^{n-1}$

$D_{2009/10} = D_{2005/06} \, f1+g)^{5-1}$

a) Growth ratio of total deposit (%)

S.N.	Fiscal year	NABIL	HBL	SCBNL
1	2005/06	19,347,399,440	26,490,851,640	23,061,032,000
2	2006/07	23,342,285,327	30,048,417,756	24,647,021,000
3	2007/08	31,915,047,467	31,842,789,356	29,743,999,000
4	2008/09	37,348,255,840	34,681,345,,179	35,350,824,000
5	2009/10	46,340,700,628	37,611,202,274	35,182,721,000
	Growth ratio (%)	24.40%	9.16%	11.14%

i) NABIL

$46340700628 = 19347399440\ (1+g)^4$

$(1+g)^4 = 2.3952$

$1+g = 2.3952^{1/4 \text{ or } 0.25}$

$1+g = 1.2440$

$g = 0.2440 = 24.40\%$

ii) HBL

$37611202274 = 26490851640\ (1+g)^4$

$(1+g)^4 = 1.4198$

$1+g = 1.4198^{1/4 \text{ or } 0.25}$

$1+g = 1.0916$

$g = 0.916 = 9.16\%$

iii) SCBNL

$35182721000 = 23061032000\ (1+g)^4$

$(1+g)^4 = 1.5256$

$1+g = 1.5256^{1/4 \text{ or } 0.25}$

$1+g = 1.1114$

$g = 0.1114 = 11.14\%$

b) Growth ratio of loan & advances

S.N.	Fiscal Year	NABIL	HBL	SCBNL
1	2005/06	12,922,543,153	14,642,559,555	8,935,418,000
2	2006/07	15,545,778,730	16,997,997,046	10,502,637,000
3	2007/08	21,365,053,318	19,497,520,482	13,718,597,000
4	2008/09	27,589,933,041	24,793,155,269	13,679,757,000
5	2009/10	32,268,873,283	27,980,628,760	15,956,955,000
	Growth rate (%)	**25.71%**	**17.57%**	**15.60%**

i) NABIL

$32268873283 = 12922543153\ (1+g)^4$

$(1+g)^4 = 2.4971$

$1+g = 2.4971^{1/4 \text{ or } 0.25}$

$1+g = 1.2571$

$g = 0.2571 = 25.71\%$

ii) HBL

$27980628760 = 14642559555\ (1+g)^4$

$(1+g)^4 = 1.9190$

$1+g = 1.9190^{1/4 \text{ or } 0.25}$

$1+g = 1.1757$

$g = 0.1757 = 17.57\%$

iii) SCBNL

$15956955000 = 8935418000\ (1+g)^4$

$(1+g)^4 = 1.7858$

$1+g = 1.7858^{1/4 \text{ or } 0.25}$

$1+g = 1.1560$

$g = 0.1560 = 15.60\%$

c) Growth ratio of total investment

S.N.	Fiscal Year	NABIL	HBL	SCBNL
1	2005/06	6,178,533,108	10,889,031,449	12,838,555,000
2	2006/07	8,945,310,567	11,822,984,558	13,553,233,000
3	2007/08	9,939,771,428	13,340,176,785	13,902,819,000
4	2008/09	10,826,379,001	8,710,690,646	20,236,121,000
5	2009/10	13,600,916,613	8,444,910,165	19,847,511,000
	Growth rate (%)	21.81%	6.16%	11.51%

i) NABIL

$13600916613 = 6178533108 (1+g)^4$

$(1+g)^4 = 2.2013$

$1+g = 2.2013^{1/4 \text{ or } 0.25}$

$1+g = 1.2181$

$g = 0.2181 = 21.81\%$

ii) HBL

$8444910165 = 10889031449 (1+g)^4$

$(1+g)^4 = 0.7755$

$1+g = 0.7755^{1/4 \text{ or } 0.25}$

$1+g = 0.9384$

$g = -0.0616 = 6.16\%$

iii) SCBNL

$19847511000 = 12838555000 (1+g)^4$

$(1+g)^4 = 1.5459$

$1+g = 1.5459^{1/4 \text{ or } 0.25}$

$1+g = 1.1151$

$g = 0.1151 = 11.51\%$

d) Growth ratio of Net profit

S.N.	Fiscal Year	NABIL	HBL	SCBNL
1	2005/06	635,262,349	457,457,696	658,756,000
2	2006/07	673,959,698	491,822,905	691,668,000
3	2007/08	746,468,394	635,868,519	818,921,000
4	2008/09	1,031,053,098	752,834,735	1,025,114,000
5	2009/10	1,139,099,399	508,798,193	1,085,970,000
	Growth rate (%)	15.72%	2.69%	13.31%

i) NABIL

$1139099399 = 635262349 \, f1+g)^4$

$f1+g)^4 = 1.7931$

$1+g = 1.7931^{1/4 \text{ or } 0.2\,5}$

$1+g = 1.1572$

$g = 0.1572 = 15.72\%$

ii) HBL

$508798193 = 457457696 \, f1+g)^4$

$f1+g)^4 = 1.1122$

$1+g = 1.1122^{1/4 \text{ or } 0.2\,5}$

$1+g = 1.0269$

$g = 0.0269 = 2.69\%$

iii) SCBNL

$1085970000 = 658756000 \, f1+g)^4$

$f1+g)^4 = 1.6485$

$1+g = 1.6485^{1/4 \text{ or } 0.2\,5}$

$1+g = 1.1331$

$g = 0.1331 = 13.31\%$

20.   **Trend analysis of Real Estate Loan**

NABIL

Year ft)	y	x=t-2007.5	x^2	Xy
2005/06	868,394,000	-2	4	ZKΠMŒPPΠ I I |
2006/07	1,854,043,500	-1	1	|ZKΠ≥NΠ NVΠI I |
2007/08	2,168,468,285	0	0	||||||||||||||| ||||||||||||I |||||||||||||||||
2008/09	1,435,731,583	1	1	|||KΠNVΠΠMKΠPM|
2009/10	1,044,676,331	2	4	|||ΛΠ PΣΠMΠΛΠOΛ|
N = 5	y = 7,371,313,699|	x = 0	x^2 = KI |	xy = ZŒΠΠNΠΛΞΞ

$$a = \frac{\sum y}{N} = \frac{7371313699}{5} = 1474262740 \qquad b = \frac{\sum xy}{\sum x^2} = \frac{-65747255}{10} = -6574726$$

Forecasted Trend value of Real Estate Loan

Year ft)	X	y=a+bx
20010/11	3	1,454,538,562
2011/12	4	1,447,963,836

HBL

Year ƒt)	Y	x=t-2007.5	x^2	Xy
2005/06	983,980,002	-2	4	-1,967,960,004
2006/07	1,666,100,034	-1	1	-1,666,100,034
2007/08	1,880,298,253	0	0	0
2008/09	1,310,233,376	1	1	1,310,233,376
2009/10	1,142,265,401	2	4	2,284,530,802
N = 5	y = 6982877066	x = 0	x^2 = 10	xy = -39,295,860

$$a= \frac{\Sigma y}{N} = \frac{6982877066}{5} = 1396575413 \qquad b= \frac{\Sigma xy}{\Sigma x^2} = \frac{-39295860}{10} = -3929586$$

Forecasted Trend values of Real Estate Loan

Year ƒt)	x	y= a+bx
20010/11	3	1,384,786,655
2011/12	4	1,380,857,069

SCBNL

Year ƒt)	y	x=t-2007	x^2	Xy
2005/06	600,460,090	-2	4	-1,200,920,180
2006/07	1,072,307,376	-1	1	-1,072,307,376
2007/08	919,279,670	0	0	0
2008/09	821,889,718	1	1	821,889,718
2009/10	705,777,206	2	4	1,411,554,412
N = 5	y = 4119714060	x = 0	x^2 = 10	xy = -3,978,343

$$a= \frac{\Sigma y}{N} = \frac{4119714060}{5} = 823942812 \qquad b= \frac{\Sigma xy}{\Sigma x^2} = \frac{-3978342}{10} = 3978343$$

Forecasted Trend value of Real Estate Loan

Year ƒt)	X	y=a+bx
20010/11	3	832,007,783
2011/12	4	828,029,440

(Note: Other Trend analysis of NABIL, HBL and SCBNL are calculated accordingly.)

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21. Co- efficient of correlation

Co- efficient of correlation between Total deposit and Loan & advances

NABIL   (Figures in Rs. Hundred

Fiscal year	Total deposits (X)	Loan & advances (Y)	x= X- $\overline{X}$	y=Y- $\overline{Y}$	xy	X^2	Y^2
2005/06	193473.99	129225.43	-123113.38	-90158.93	11099770609.48	15156904335.02	8128632658.74
2006/07	233422.85	155457.78	-83164.52	-63926.58	5316423340.94	6916337386.83	4086607630.50
2007/08	319150.47	213650.53	2563.10	-5733.83	-14696379.67	6569481.61	32876806.47
2008/09	373482.55	275899.33	56895.18	56514.97	3215429390.84	3237061507.23	3193941834.10
2009/10	463407.00	322688.73	146819.63	103304.37	15167109380.78	21556003753.34	10671792861.10
	X = 1582936.86	Y = 1096921.80	x = 0	y = 0	xy= 34784036342.38	x^2= 46872876464.03	y^2= 26113851790.91

Thousands)

$$\overline{X} = \frac{\sum X}{N} = \frac{1582936.86}{5} = 316587.37$$

$$\overline{Y} = \frac{\sum Y}{N} = \frac{1096921.80}{5} = 219384.36$$

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

r = $\dfrac{5 \mid 34784036342.38 - 0 \mid 0}{\sqrt{5 \mid 46872876464.03 - 0^2}\sqrt{5 \mid 26113851790.91 - 0^2}}$

r = 0.45

Co-efficient of determination (r^2) = 0.02

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Probable Error (P.E.r) = 0.6745 $\dfrac{1Zr^2}{n}$

= 0.6745 $\dfrac{1Z0.20}{5}$

= 0.11

6 P.E. r = 0.65

(Note: Other Coefficients of correlation of NABIL, HBL & SCBNL are calculated accordingly.)

22. Testing of Hypothesis

i) Test of hypothesis on loan and advances to total deposit ratios between NABIL, HBL &

S.N.	FY	NABIL		HBL		SCBNL	
		X_1	$(X_1 - \overline{X_1})^2$	X_2	$(X_2 - \overline{X_2})^2$	X_3	$(X_3 - \overline{X_3})^2$
1	2005/06	0.6679	0.0004	0.5527	0.0073	0.3875	0.0013
2	2006/07	0.6660	0.0005	0.5657	0.0052	0.4261	0.0000
3	2007/08	0.6694	0.0003	0.6123	0.0007	0.4612	0.0015
4	2008/09	0.7387	0.0026	0.7149	0.0059	0.3870	0.0013
5	2009/10	0.6963	0.0001	0.7439	0.0112	0.4535	0.0009
		$X_1 =$ 3.4383	$\Sigma(X_1 - \overline{X_1})^2$ =0.0039	$X_2=$ 3.1895	$\Sigma(X_2 - \overline{X_2})^2 =$ 0.0303	$X_3 =$ 2.1153	$\Sigma(X_3 - \overline{X_3})^2 =$ 0.0050

SCBNL.

$\overline{X}1 = \dfrac{X_1}{n} = \dfrac{3.4383}{5} = 0.6877$ $\Sigma(X_1 - \overline{X_1})^2 = 0.0039$

$\overline{X}2 = \dfrac{X_2}{n} = \dfrac{3.1895}{5} = 0.6379$ $\Sigma(X_2 - \overline{X_2})^2 = 0.0303$

$\overline{X}3 = \dfrac{X_3}{n} = \dfrac{2.1153}{5} = 0.4231$ $\Sigma(X_3 - \overline{X_3})^2 = 0.0050$

ii) Test of hypothesis on Total investment loan to total deposit ratios between NABIL, HBL & SCBNL.

S.N.	FY	NABIL		HBL		SCBNL	
		X_1	$f(X_1-X_1)^2|$	X_2	$f(X_2-X_2)^2|$	X_3	$f(X3-X3)^2|$
1	2005/06	0.3193	0.0000	0.4110	0.0051	0.5567	0.0002
2	2006/07	0.3832	0.0041	0.3935	0.0029	0.5499	0.0001
3	2007/08	0.3114	0.0001	0.4189	0.0063	0.4674	0.0056
4	2008/09	0.2899	0.0009	0.2512	0.0078	0.5724	0.0009
5	2009/10	0.2935	0.0007	0.2245	0.0133	0.5641	0.0005
		$X_{1=}$ 1.5973	$\sum(X_1-\overline{X_1})^2$ = 0.0057	$X_2=$ 1.6991	$\sum(X_2-\overline{X_2})^2$ = 0.0354	$X_3=$ 2.7105	$\sum(X_3-\overline{X_3})^2$ = 0.0073

$$\overline{X}1 = \frac{X_1}{n} = \frac{1.5973}{5} = 0.3195 \qquad \sum(X_1-\overline{X_1})^2 = 0.0057$$

$$\overline{X}2 = \frac{X_2}{n} = \frac{1.6991}{5} = 0.3398 \qquad \sum(X_2-\overline{X_2})^2 = 0.0354$$

$$\overline{X}3 = \frac{X_3}{n} = \frac{2.7105}{5} = 0.5421 \qquad \sum(X_3-\overline{X_3})^2 = 0.0073$$

iii) Test of hypothesis on Investment on gov. securities to current asset between NABIL, HBL & SCBNL.

S.N.	FY	NABIL		HBL		SCBNL	
		X_1	$f(X_1-X_1)^2|$	X_2	$f(X_2-X_2)^2|$	X_3	$f(X3-X3)^2|$
1	2005/06	0.6415	0.0014	0.7059	0.0020	0.8253	0.0069
2	2006/07	0.7949	0.0134	0.6761	0.0002	0.7270	0.0002
3	2007/08	0.5524	0.0161	0.8181	0.0248	0.7135	0.0008
4	2008/09	0.6429	0.0013	0.5183	0.0203	0.7020	0.0016
5	2009/10	0.7648	0.0073	0.5852	0.0057	0.7433	0.0000
		$X_{1=}$ 3.3965	$\sum(X_1-\overline{X_1})^2$ =0.0395	$X_2=$ 3.3036	$\sum(X_2-\overline{X_2})^2$ = 0.0530	$X_3=$ 3.7111	$\sum(X_3-\overline{X_3})^2$ = 0.0096

$$\overline{X}_1 = \frac{X_1}{n} = \frac{3.3965}{5} = 0.6793 \qquad \sum(X_1 - \overline{X}_1)^2 = 0.0395$$

$$\overline{X}_2 = \frac{X_2}{n} = \frac{3.3036}{5} = 0.6607 \qquad \sum(X_2 - \overline{X}_2)^2 = 0.0530$$

$$\overline{X}_3 = \frac{X_3}{n} = \frac{3.7111}{5} = 0.7422 \qquad \sum(X_3 - \overline{X}_3)^2 = 0.0096$$

iv) Test of hypothesis on loan & advances to current ratio between NABIL, HBL & SCBNL.

S.N.	FY	NABIL		HBL		SCBNL	
		X_1	$f(X_1\text{-}X_1)^2$|	X_2	$f(X_2\text{-}X_2)^2$|	X_3	$f(X3\text{-}X3)^2$|
1	2005/06	3.6020	0.0789	2.0091	0.2697	0.8539	0.0591
2	2006/07	2.5699	0.5643	1.7805	0.5594	1.0742	0.0005
3	2007/08	2.5399	0.6103	2.1348	0.1549	1.2028	0.0112
4	2008/09	4.7864	2.1471	3.0508	0.2729	0.9640	0.0177
5	2009/10	3.1075	0.0456	3.6670	1.2964	1.3903	0.0860
		$X_1 =$ 16.6057	$\sum(X_1 - \overline{X}_1)^2$ = 3.4462	$X_2=$ 12.6422	$\sum(X_2 - \overline{X}_2)^2$ = 2.5533	$X_3 =$ 5.4852	$\sum(X_3 - \overline{X}_3)^2 =$ 0.1754

$$\overline{X}_1 = \frac{X_1}{n} = \frac{16.6057}{5} = 3.3211 \qquad \sum(X_1 - \overline{X}_1)^2 = 3.4462$$

$$\overline{X}_2 = \frac{X_2}{n} = \frac{12.6422}{5} = 2.5284 \qquad \sum(X_2 - \overline{X}_2)^2 = 2.5533$$

$$\overline{X}_3 = \frac{X_3}{n} = \frac{5.4852}{5} = 1.0970 \qquad \sum(X_3 - \overline{X}_3)^2 = 0.1754$$