CHAPTER – I

INTRODUCTION

1.1 Background of the Study

The development of a country is measured by its economic indices. Nepal, like any other country has been laying emphasis on the upliftment of its economy. The process of economic development depends upon various factors. Financial institutions are viewed as catalyst in the process of economic development and growth. The mobilization of domestic resources, capital formation and its proper utilization plays an important role in the economic development of a country. Every financial institution, big or small, be it a commercial bank or a finance company or a cooperative bank, plays an important role in the development of a country.

Commercial banks are major financial institutions, occupying an important place in the economy of a country because the deposits collected by them provide much needed capital for the development of industry, trade, and commerce and other sectors, thereby contributing to the economic growth of the nation.

Investment in the actual sense refers to the sacrifice of current dollars for future dollars (Sharpe, 1986:231). Investment involves two attributes, time and risk. The sacrifice takes place in the percent and is certain. The element of time predominates (for example government bonds). In other case, risk is more dominant (for example call option on common stock). In yet others, both time and risk plays a dominant role (for example share of common stock).

Investment is the use of money to earn profit. It can be said that investment is the concerned with the proper management of the investor's wealth. Which is the sum is the sum of the current income and the present value of all future income. Fund to be invested come from assets already owned, borrowed money and saving or foregone consumption. By foregoing today and investing the saving, visitors expect to enhance their future consumption possibilities i.e. the fund is invested to increase wealth. Investors also seeks to manage wealth effectively obtaining the most from it, while protecting it from inflation, taxes and other possible harms.

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Investments policy determines the investor's objective and the amount wealth. It is not appropriate foe a investors to say that the objective is to make a lot of money (Clarke, 1989:97). What is appropriate for a investors in this situation is to state that objective to earn profit while recognizing that here exits some chances of incurring large losses. Investment objective should be stated in terms of both risk and return.

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 nation including Nepal is rapid economic development to promote the welfare of the people and the nation as well. Nepal being listed among the least developed countries, is trying to embark upon the path of economic development by achieving a higher economic growth rate and developing all sectors of economy. The proper mobilization and utilization of domestic resource is one the key factors in the economic development of a country. Similarly, integrated and speedy development of the country is possible only when the competitive and reliable banking services reached and carried to every corner of the country. It has been well established that the economic activities of any country can hardly be carried forward without the assistance and proper support of financial institutions. Financial institutions have catalytic role in the process of economic development. Successful formulation and effective implementation of investment policy is prime requisite for the successful performance of banks and other financial institution. Proper investment policy has a positive impact on economic development of the country.

In general, investment means the use money in the hope to make more money. It is the sacrifice of current dollar for future dollar. It is geared by two factors: time and risk. The sacrifice takes place in the present, is certain while the reward comes later, and is generally uncertain. Investment policy ensures efficient allocation of funds to achieve the overall objectives. A distinction is often made between investments and saving. Saving is defined as foregone consumption; investment to restrict to 'real' investment of the sort that increases national output in future. Thus, investment is only possible where there are adequate savings. They are interrelated and go hand in hand.

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

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

1.1.1 Commercial Banks and Investment Policy

Commercial Bank are major financial institution, which occupy quite important place in the framework of every economy. Commercial banks lender numerous services to their customer with a 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 actives roles, have changed the economic structure of the world. Thus commercial banks have become the heart of financial system.

Commercial banks deal with other people's money. They have to find the ways of keeping their liquid so that they could meet the demand of their customer. In anxiety to make profit, banks can't afford to lock up their funds in institutions assets that are not easily realizable. The depositors confidence could be secured only if the bank able to meet the cash promptly and fully. The banker has to keep adequate cash for this purpose. Cash is an ideal asset and hence the banker can't afford to keep a long portion of his assets in the bank. Therefore the banker has to distribute his assets in such a way that he can have adequate profits without sacrificing liquidity (Radhaswamy and Vasudevan 1999:510).

Commercial banks must mobilize its deposits and other fund to profitable, secured, stable and marketable sector. Then only it can earn more profit and it also be secured and can be converted into cash whenever needed. But, commercial bank have to pay due consideration while formulating investment policy regarding loan and investment. Investment policy is one fact of the overall spectrum of policies that guide banks investment operations. A healthy development of any bank depends heavily upon its investment policy. A sound and viable investment policy attracts both borrowers and lender, which helps to increase the volume and quality of deposits, loan and investment. Commercial bank should be careful while performing the credit creation. The banks should never invest its fund in those securities, which are subject to too much depreciation and fluctuations because a little difference may cause a great loss. It must not invest its funds into speculative businessmen who may become bankrupt at once and who may earn millions in a minute. Emphasizing upon this, H.D Crosse stated "The investment policy should be carefully analyzed." So they must invest their funds where they gain maximum profits with minimum risk.

Commercial banks must follow the rules and regulation as well as different directives issued by central bank. The bank should invest its funds in legal securities only. Diana McNaughton in her research paper "Banking institution in developing markets" state that, investment policy should incorporate several elements such as regulatory environment, the availability of the funds. The selection of risk, loan portfolio balance and term structure and liabilities. (Mc Naught on, Diana, 1994:38). Thus, commercial bank should incorporate several elements while making investment policy. The loan provided by commercial bank is guided by several principles such as length of time, their purpose, profitability, safety etc. These fundamental principles of commercial bank's investment are fully considered while making investment decision.

1.1.2 Profile of Concerned Bank
In this chapter, it has been discussed about the profiles of concerned banks. These profiles are related to the establishment, objectives, capital structure and facilities granted by the concerned banks.

Nabil Bank Ltd.

Nabil Bank Ltd, the commercial bank was incorporated in 1984. Dubai Bank Ltd. was the initial joint venture partner with 50% equity investment. The shares owned by Dubai Bank Ltd. (DBL) were transferred to Emirates Bank International Ltd. (EBIL) Dubai. Later on EBIL sold its entire stock its entire stock to National Bank Ltd, Bangladesh (NBLB).
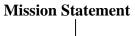
The present configuration consists of 50% share capital by national Bank Ltd, Bangladesh. 10% NIDC, 9.66% Rastriya Bema Sansthan, 0.34% Nepal Stock Exchange and 30% Nepalese public. At present 40 branches of this bank are operating in different parts of country. Authorized capital and paid up capital of Nabil bank Ltd are Rs 1600 million and Rs. 965.74 million. Following activities and services are undertaken by Nabil bank Ltd.

- Tele banking
- Credit Card Facility
- SWIFT
- Deposit locker
- Western Union Money Transfer
- ATM
- International Trade and Bank Guarantee
- This bank is awarded the "Bank of year 2004

Himalayan Bank Limited (HBL)

Despite the cut-throat competition in Nepalese Banking sector, Himalayan Bank has been able to maintain a lead in primary banking activities- loan and deposits. Himalayan Bank Limited was incorporated in 1992 in joint venture with Habib Bank Limited of Pakistan and commenced its operation in Nepal in January 1993, when the country's economic sectors was in boom. Himalayan Bank is also the first commercial bank of Nepal with most of shares held by the private sector of Nepal. Beside commercial banking services, the bank also offers industrial and merchant banking service. The most recent rating of HBL by Bankers' Almanac as country's number one bank, easily confirms Himalayan Bank lead the banking sector of Nepal.

Himalayan Bank has been known throughout Nepal for its innovative approaches to sale/ merchandise products and customer services such as Premium Savings Account, HBL Proprietary Card and Millionaire Deposit Scheme, ATMs and Tele-banking. ATMs and Tele-banking were the first customer services products, which were first introduced by Himalayan Bank. All branches of HBL are integrated into Globus (developed and temenos), the single banking software where bank has made substantial investment. This has helped the Bank 'Any Branch Banking Facility' , Internet Banking and SMS Banking.

Mission Statement

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To become the preferred provider of quality financial services in the country

Vision

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To become a leading Bank of the country by providing premium products & services

Objectives

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To become the bank of first choice

Present Capital Structure of HBL

Table 1.3 shows an idea about the present capital structure of HBL. Authorized capital, of NABIL is Rs3,000 Million, whereas issued capital and paid up capital both are and Rs.1,600 million respectively.

Facilities Granted by HBL

HBL is providing loan/credit facilities such as overdraft loans, demand loans, time loans, trust, receipt loan, fixed term, project financing, revolving cash credit, packing credit, post shipment, personal loan, loan against fixed deposit, counter guarantee, letter of credit (sight/issuance), bid bond, performance bond, advance payment guarantee, hire purchase loan, housing loan, flexi (subidha loan). It receives deposits as current, normal savings, call, fixed term, accidental death insurance, and PSA

scheme. Other facilities provided by HBL are funds transfer, HBL credit card facilities, letter of credit service, SMS banking, etc.

1.2 Focus of the Study

Banking sector plays an important role in the economic development of a nation. Without banking, the development of the nation is a mere thought. It is regarded as the heart of financial system. People invest their earnings with a hope of getting good return on their investment. Nevertheless, due to certain circumstances they loose their hard earnings. Therefore, in order to make the right decision we have to have a sound investment policy. The study focuses on evaluating the deposit utilization of the banks in terms of loans and advances and investments and its contribution in the profitability of the bank.

The main focus of the study is to make a comparative study of Himalayan Bank Ltd and NABIL Bank Ltd regarding financial performance in term of liquidity, asset management, profitability and risk. It also focuses on fund mobilization and investment policy.

1.3 Statement of the Problem

After the restoration of democracy the first elected government in 1991 adopted liberalized and market oriented economic policies followed by liberalization in the financial sector and its reform. As a result, many commercial banks, development banks, financial institution, co-operatives and NGOs operating in micro finance have mushroomed in the country. This has created keen completion among themselves and challenge to them. The problem of commercial banks are facing in Nepal include the problem in resources mobilization, poor investment climate, heavy regulatory procedure, uncertain government policy, and NRB directives etc. Lack of sound investment policy is another reason for commercial banks not utilizing its deposit that is making loan and advances or lending for a profitable project. This condition may even lead the commercial banks to the position of liquidation.

Commercial banks invest their funds in limited area to achieve highest amount of profit. They are found to be more interested to invest in less risky and highly liquid

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sector i.e. treasury bills, development bonds and other securities. There is hesitation to invest on long-term projects because commercial banks are much more safety minded. So, they seem to follow conservative and un- effective investment policy.

In Nepal, every commercial bank has invested in the similar sectors. These major sectors include tourism, garments, and trading as well. But given the current situation of the country, it is not up to them to decide in which sector they want invested. The main factor for success of any organization is secured situation. Once the economic and political situation is stabilized, then only commercial banks can consider rationally as to where they invest and grow. Till then it is a question of moving into sectors as and when thing develop. So, security problem is the big problem for every commercial bank to invest their funds in any sectors.

There are various problems in resource mobilization by financial institution in Nepal. The most important problem is poor investment climate prevailing in Nepal due to heavy regulatory procedure, uncertain government policy, NRB's stringent directives, unsecured social environment etc. Lack of sound investment policy is another reason for a commercial bank not to properly utilizing its deposits that is making loan and advances or lending for a profitable project. This condition may lead the commercial bank to the position of liquidation.

Nepalese commercial banks do not seem to have formulated their investment policy in an organized manner. They mainly rely upon the instruction and guidelines of Nepal Rastrya Bank. They do not have clear view toward investment policy. Furthermore, implementation of policy is not done in effective way. Lack of farsightedness in policy formulation and absence of strong commitment towards its proper implementation has caused many problems to commercial banks.

Following research questions have been developed for this research:

a. Is Himalayan Bank's investment policy more effective and efficient than that of NABIL?
b. Is Himalayan Bank's investment Strategy successful to utilize its available fund in comparison to the NABIL?
c. Are they maintaining sufficient liquidity, profitability and risk position?

d. What is the relationship of investment on loan and advances with total deposit and total net profit?

1.4 Objectives of the Study

The main objective of the study is to analyze the financial performance of HBL and NABIL in term of liquidity, asset management, profitability and risk. Other specific objectives are as follows:

1. To see the utilization of available fund of HBL and NABIL
2. To explore the investment practices of HBL and NABIL.
3. To see the relationship of deposits with loan and advances, and deposit with total investment.

1.5 Significance of the Study

In Nepal, there is less availability of research and articles in investment policy of commercial bank. As investment is the backbone of development of the country and commercial banks have great contribution in the economic growth, this study will try to highlight investment policy of commercial banks.

Every investor in the worlds invests their money in the hope of getting good return from their investment. Some of them succeed while other become failure in their goal. Due to many reasons they lose their hard earning just not by analyzing risk and return involved in the investment. Thus recoverable investment is must because investment policy is the proper management of wealth to generate income. Moreover, without sound investment policy no banks and institutions can run or exits in the long run. Thus the main focus of the study is to analyze the sound investment policy of HBL and NBL. With the help of financial and statistical analysis. Moreover the study is focused on evaluating the deposits utilization in terms of loans and advances and investment and its impact in the profitability of the banks and the study is the portfolio behavior of the banks.

This study will be summarizing, sensible and precious to the people having interest in the investment policy of HBL and NABIL bank. This will be beneficial for bank management, shareholders and customers. Furthermore, this will be useful for teacher

and students related to the accountancy and finance. In conclusion, the importance of the study focuses at following points:

- It will be helpful for commercial banks and financial institutions.
- It will provide required information and data to required persons, readers, shareholders, decision makers, traders, investors, general public, etc.
- It will be valuable property for decision making.
- This study can also be used as reference for future research.

1.6 Limitation of the Study

The study has the following limitations:

- The study deals with only two commercial banks (HBL and NABIL) and data related to other commercial banks have not been accounted.
- The study has covered only 6 years data.
- This is mostly based on secondary data (published annual reports of commercial banks), journals, newspapers, magazines etc and unpublished thesis.
- Out of the numerous affecting factors, this study concentrates only on those factors, which are related with investment policy, and available in the form required for analyzing the different issues.
- The study cannot cover all the dimensions of the subject and cannot penetrate the depth because of the lack of sufficient time and other resources limitation.

1.7 Organization of the Study

This whole study has been divided into five chapters, which are as follows:

Chapter I: Introduction: This chapter includes background of the study, focus of the study, statement of problem, objective of the study, significance/ importance of the study and limitation of the study.

Chapter II: Review of Literature: This chapter deals with conceptual/ theoretical review and review of related studies.

Chapter III: Research Methodology: It includes research design, population and sample, sources of data, data collection techniques, data analysis tools, limitation of methodology and review of related studies.

Chapter IV: Data Presentation and Analysis: It tries to analyze and evaluate data through various tools and interprets major findings of the study.

Chapter V: Summary, Conclusion and Recommendation: This chapter is the concluding part of the study which summarizes the study, conclusion and recommendation.

CHAPTER – II

REVIEW OF LITERATURE

This chapter deals with the theoretical aspect of the topic on investment policy. It provides the foundation for developing a comprehensive theoretical framework and knowledge for the status relevant to the field of research in order to explore the relevant facts for reporting purpose. For this NRB directive, books, journal, article, annual report and some related research paper have been reviewed. This chapter has been broadly classified into two sector: theoretical perspective and review of related studies.

2.1 Conceptual Review

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

2.1.1 Definition of Investment

The term investment covers a wide range of activities. It is commonly known fact that an investment is only possible when there is adequate saving. If all the income and saving are consumed to solve the problem of hand to mouth and to the other basic needs, then there is no existence of investment. Therefore both investment and saving are interrelated. Different author have tried to explain the meaning of investment in their own way. Some of them are explained below.

Investment is the allocation of capital to investment proposal whose benefit are to be received in the future. Because the future benefits are not known with certainty, investment proposal necessarily involve risk. Consequently, they should be evaluated in relation to their expected return and risk, for these are the factor that affect the firm's valuation in the marketplace. Moreover investment in capital projects should provide expected return in the excess of what financial market require (Van Horne, 2002:6).

Investment as the commitment of future one or more assets that will be held over some future time period. Investment is concerned with the management of an investor's wealth. Which is the sum of current income and present value of all income (Charles 1991:2).

The investment objective are to increases systematically the individual wealth, defined as asset minus liabilities. Higher the level of desired wealth the higher must be received. An investor seeking higher return must be willing to face the higher level of risk (John M.Cheney and Edward A.Moses 1998).

Investment are made in assets in all are two types, real assets(land, building, factories etc) and financial assets(stocks, bond, T-bill etc.). These two investment are not competitive but complementary. High developed institution for financial investment greatly facilitates real investment (Bhattari, 2004:3).

From these definitions, it is clear that investment is simply the conversion of money into claims on money and use of fund for productive and income earning assets. It is the employment of funds with the target of achieving additional income or value in the future. It involves saving of resources from current consumption in the hope that some benefits will accrue in the future.

2.1.2 Policy

A policy is a plan of action to guide decisions and actions. It is the course of action to obtain objectives. Policy means rules and regulations set by organization. Policy determines the type of internal and external information resources. Policies in short can be understood as political management, financial and administrative mechanisms arranged to reach explicit goals.

2.1.3 Investment Policy

Investment policy can be defined as the action plan by which its funds are distribute on different type of assets with good profitability on the one hand and provide maximum safety and security on other hand. Investment policy is the cornerstone of the investment process. Without it, investors have no appropriate context in which to make decisions.

Investment policy fixes responsibilities for the investment disposition of the banks assets in terms of allocating funds for investment and loan and establishing responsibility for day to day management of those assets *(Bexley; 1987: 5).*

Commercial bank should consider the national interest followed by borrower's interest and the interest of the bank itself before investing to the borrowers. To further pursue his view, bank lending must be for such purposes of the borrowers that are in keeping with the national policy and bank's overall investment policy. A bank's overall investment should be basically of short term characters, well spread, repayable on demand profitable and well inadequate security *(Clements; 1963: 23).*

2.1.4 Investment Environment

The investment environment refers to all internal and external forces, which have a bearing on the functioning of investment decisions. It encompasses the kinds of marketable securities that exist and where and how they are bought and sold through the broker's network and financial intermediaries. Thus, the investment environment is a combination of securities, markets and intermediaries. Any securities transaction conducted without using broker is directly illegal in accordance with rules and regulation.

Security is a piece of paper representing the investor's rights to certain prospects of property and the conditions under which he or she may exercise those rights. It serves as evidence of property rights. It may be transferred to another investor. The term "security" refers to a claim to receive prospective future benefits under certain conditions.

Security markets are mechanisms created to facilitate the exchange of financial assets. It brings the buyers and sellers together. On the basis of securities traded, security market can be classified into primary and secondary market. On the basis of life-span of securities, it can be divided into money market and capital market.

Financial intermediaries are organization that issue financial claims against themselves and use the proceeds to purchase primarily the financial assets of others. They actively participate as both suppliers and demanders of funs. They include

savings and loan associations, savings banks, credit unions, life insurance companies, mutual funds, pension funds, etc.

2.1.5 Loans and Advances Policy

This policy is also known as Credit Policy of the bank. Credit policy guides the bank's overall credit operation. The Credit policy is the primary means by which senior management and the board guide lending activities. Although the policy primarily imposes standards, it also is a statement of the bank's basic credit philosophy. It provides a framework for achieving asset quality and earnings objectives, sets risk tolerance levels, and guides the bank's lending activities in a manner consistent with the bank's strategic direction. Credit policy sets standards for portfolio composition, individual credit decisions, fair lending, and compliance management *(Pandey, 1992: 73).*

Credit policy should provide a realistic description of where the bank wants to position itself on the risk/reward spectrum. It needs to provide sufficient latitude for a bank to respond to good business opportunities while concurrently controlling credit risk. In normal circumstances, a bank should be able to achieve portfolio objectives and respond to changing market conditions without triggering a limit. Limits should not be so conservative that insignificant changes breach them, nor should they be so liberal that they have no practical effect. For the policy to be an effective risk management tool, it must clearly establish the responsibilities of those involved in the lending process.

Policies should be periodically reviewed and revised to accommodate changes in the bank's strategic direction, risk tolerance, or market conditions. Policy review should consider the organizational structure, breadth and complexity of lending activities, capabilities and skills of lending personnel, and strategic portfolio quality and earnings objectives. Changes in regulations and business conditions also need to be considered. In addition to providing an opportunity for change, the review should evaluate how well the policy has guided lending decisions. For example, a high volume of exceptions indicates that many loan decisions are being made outside the policy. This could mean that the bank is assuming more risk than is desirable or that

the policy is too restrictive. If the bank's policy is too restrictive, easing it could increase business opportunities without unduly increasing risk. Conversely, the absence of exceptions may indicate that the policy is too vague, and a tightening of the policy could strengthen the controls on loan quality. All policy reviews should include the organizational unit responsible for assessing compliance with policy *(Pandey, 1992: 74).*

Since the largest proportion of a bank's assets portfolio is taken by loans and advances, healthy development of any bank depends heavily upon its Credit Policy. A sound and viable Investment Policy can attract both borrowers and lenders, which helps to increase the volume and quality of deposits, loans and investments. The loan provided by Commercial Bank is guided by several principles such as length of time, their purpose, profitability, safety, etc. These fundamental principles of commercial banks' investment are fully considered while making investment policy. Investment through loans and advances to borrowers is risk inherent. For this, commercial banks have to pay due consideration for risk management while formulating Investment Policy. "The Investment Policy should be carefully analyzed". Commercial bank should be careful while performing the credit creation function. Investment policy should ensure minimum risk and maximum profit from lending. Modern portfolio management of bank assets has fundamentally changed the requirements for individuals using this technique: their backgrounds, their training, and their skills in using available resources. While traditional credit training, remains necessary, today's portfolio manager augments this background with knowledge of early-warning systems, alternative structures to better set risk/return parameters, and more *(Corrado and Jordan, 2002: 90).*

Traditional training focused on the individual loan. Traditional credit training focused on the analysis of a firm's management, operations, and financial structure as the basis for determining a borrower's creditworthiness; now training programs incorporate not only these techniques, but also that elusive element called a bank's credit culture.

In essence, a bank's credit culture was a series of written and unwritten rules about which types of customers, industries and credit profiles were acceptable. This culture ultimately dictated the structure and composition of the bank's total portfolio.

Protection measures against portfolio losses focused on loan loss reserves based on moving-average formulas. Concentration risk was to be avoided, but there were always special customers for whom expectations could be made. If the formulas were correct, then overall expected losses in the portfolio would be covered by reserves. But those formulas and expectations were not always so accommodative. As a result, certain concentrations would invariably lead to extraordinary, or unexpected, losses that were charged to income in the year of their incurrence.

Portfolio management looks at the impact of loans individually, collectively and comparatively. Modern portfolio management techniques have supplemented those unwritten rules with portfolio analysis and policies that establish limits on exposure by country, by obligor, by industry and so on. These limits are derived from a specific focus on the technical aspect of these assets class—a segmentation of the credit product and an analysis of the effect of combining credits into portfolios. Credit portfolios can now be evaluated on the basis fundamental as well as quantities portfolio analysis (This is now being further institutionalized in terms of required capital as defined in the updated Basel Capital Accords.) *(Pandey, 1992: 75).*

A well designed Credit Policy should properly address the following six core principles: *(Pandey, 1992: 75).*

1) Principle of Liquidity

It is not enough that the loan will come back; it is also important that the advances granted to the customer must come on demand or in accordance with the agreed terms of repayment. The source of repayment must be definite

Liquidity is the ability of a firm to satisfy its short-term obligations when they become due for payment. It implies the ability to produce cash on demand. People deposit money at the bank in different account with confidence that the bank will repay their money when they need. Such deposits are repayable on demand or on the expiry of a specified period. In either case, the banker must be ready to meet these liabilities. Otherwise, he will suffer in his credit, which is the very foundation of his business.

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Nevertheless, a bank utilizes its deposit liabilities for the purpose of granting loans and advances. To maintain depositors' confidence towards bank, the bank must grant such loans and advances which are as liquid as possible. That is why commercial bank should grant loans and advances of short-term nature. Discounting first class bill of exchange, financing customer's current assets through Overdrafts and Cash Credit facilities generally fulfils this liquidity principle. Investment on industrial fixed assets under term loans is illiquid in nature. Matching the maturity of loans and deposits will assist in managing the loan portfolio's liquidity position. So, a bank's Credit Policy should pay due attention towards the liquidity of loans and advances.

2) Principle of safety

"Safety First" is most important principle of good lending. The Credit Policy formulated by banks should be capable enough to secure its investment. The banker should ensure that the borrower has the ability and will try to repay the advances as per the agreement. When a bank lends, then the bank should confirm on their lending whether they are safe or not. The bank shall ensure that the advances when granted to the right customers and is utilized in such a way that the advances are safe for all time.

In this connection, before granting a secured advances, bank should ensure carefully consider the margin of safety offered by security concerned and possibilities of fluctuation in its value. Credit policy should be devised in such a way to keep the higher margin of safety for secured loans. The bank should never invest its funds in the collateral of those securities which are too volatile i.e., which are subject to too much depreciation and fluctuations because a little difference may cause a great loss. Security means adequate collateral having good value, which can be easily sold off if required at any point of time. The bank should accept such type of securities, which are commercial, durable and marketable having fair market value.

3) Principle of profitability:

The main goal of bank is to earn profit. For this, the bank is required to increase its investment without letting the fund remain idle. The bank should try to invest only on those projects from which it can ensure good and timely interest income. But bank

never should forget its own liquidity condition while lending huge number of loans. Secured and long term loan can give good income.

To fulfill the stakeholders' expectations, it must meet sufficient profit. Main contributor towards a bank's profit is 'interest income' derived by granting loans and advances. Hence, the credit policy of a bank should be aimed at yielding higher interest income. However, such income should be reasonable. Interest rate levied on different loan headings is an indicator of the profitability level of loan portfolio.

Banks credit operation should be profitable to cover the full prudential provisioning, for allocation to capital and reserves, which is essential for any bank to maintain its competitive viability and expand its lending operations, to give reasonable dividends to shareholders and to give the depositors with reasonable return on their money, banks should earn profits.

All the above facts indicate that it is necessary for the banks to make sure that their lending operations are sufficiently profitable.

4. Principle of Diversification

The bank should not concentrate on only one sector while extending the loan. It should try to diversify its investment. It should mobilize its resources on various collateral, various assets, different business and different individuals and organization. This will help to reduce the banks risk in greater extent.

Therefore, the principle of diversification is guided by the fact: "Do not put all eggs in a single basket". The credit policy should avoid excessive concentration of loans and advances in single sector of economy, single geographical area and single borrower or group of borrowers. It should aim at spreading the advances as widely as possible over the different industries and different localities. This would enable banks to compensate any losses which might arise as a result of unanticipated factors adversely affecting particular industries and/or particular localities. In this respect, banks having wide branches network can well exercise the credit diversification. It is also advisable for a banker to advance moderate sums to large number of borrowers than advance large sums to a small number of borrowers.

Nepal Rastra Bank has also directed banks not to avail fund based credit facilities to a single borrower exceeding 25 percent of core capital and non-fund based credit facilities to a single borrower exceeding 50 percent of core capital. This limit is called single obligor limit (SOL) of a bank. The central bank has also circulated instruction to regulate concentration of credit to such borrowers who are operating in a single economic sector.

5. Principle of Purposive

Loans and advances policy of a bank should clearly cite the purposes for which it will advance credit facilities. From the viewpoint of security, a banker should always be known that why a customer needs loans. If a borrower misuses the loan granted by the bank, it can never repay and bank will possess heavy bad debts. Therefore, in order to avoid this situation each and every bank should demand and examine all the essential detailed information about the scheme of the project or activities, before lending. NRB directive no. 2 has required 100% provision for such loans which are diverted from the purposes other than that indicated by the borrower at the time of application. Hence, banks should develop post credit supervision practices to monitor the use of loans and advances.

6. Principle of National Interest

Even when an advance satisfies, all the above principles it might not be suitable if it does not take into account the national interest. Banks are required to grant advances on those sectors, which are priorities by the government on time to time in meeting the national requirements. The bank should invest on such sectors as per the government or Nepal Rastra Bank.

Bank's credit policy should not contradict the national interest. In addition to its own profitability objective, the bank should also consider the national interest. Even though the bank cannot get maximum return from such investment, it should carry out its obligation towards the society and the country. The Bank is required to invest on such sectors as per the Government and Nepal Rastra Bank's instruction. Investment on government bonds, priority and deprived sector lending are the examples of such investments *(Pandey, 1992: 57).*

7. Policy for Risk Management

Bank Credit Policy should also incorporate all the aspects of risk management. Risk is a condition in which there is a possibility of an adverse deviation from a desired outcome that is expected or hoped for.

2.1.6 Commercial Banks and Their Investment Policy

The term "bank" derives from the Latin "bancus", which refers to the bench on which the banker would keep its money and records. Some person traces its origin to the Italian word "banca", which means a bench for keeping, lending and exchanging of money. A bank is one who in the ordinary course of his business receives money which he pays by honouring cheques of persons from whom or whose account receives (*Hampton, 2001: 35*).

The banks are classified on the following ways:

1. Central Bank	5. Exchange Bank	9. Mutual Bank
2. Commercial Bank	6. Savings Bank	10. Pension Funds
3. Agricultural Bank	7. Co-operative Bank	11. Housing Bank
4. Industrial Bank	8. Merchant Bank	12. Equipment Bank

Commercial banks are those banks which perform all kinds of banking functions as accepting deposits, advancing loans, credit creation, and agency function. They provide short term, medium term and long term and long term loans to trade and industry. They also operate off balance sheet functions such as issuing guarantee, bonds, letter of credit, etc. Commercial banks are institutions which provide services such as accepting deposits and giving business loans. They are one of the vital aspects of banking sector, which deal in the process of channel zing the available resources in the needed sectors *(Shakespeare, 2001: 93)*.

As per the commercial Bank Act 2031 BS, "A commercial bank means the bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transactions." Commercial banks bring into being the most important

ingredient of the money supply, demand deposits through the creation of credit in the form of loan and investments *(Crosse, 1963).*

Commercial banks deal with other people's money. They have to find ways of keeping their liquid assets so that they could meet demands of their customers. Their motive is wealth maximization and giving maximum benefit to its shareholders. In the anxiety to make profit, the bank cannot afford to lock up their funds in assets, which are not easily releasable. The depositors must be to understand the bank is fully solvent. The depositors' confidence could be secured only if the bank is able to meet the demand for cash promptly and fully. The Banker has to keep adequate cash for this purpose. Cash is an idle asset and bankers cannot afford to keep a large possession of his assets in the form of cash, Cash brings in no income to the bank. Therefore, the banker has to distribute his assets in such a way that he can have adequate profits without sacrificing liquidity.

Commercial banks are profit making organization. A bank established without the aim of gaining the profit is the central bank. Other banks are inspired with the object of earning profit and helping the economic development. They should have the ability to use the policy of banking investment to implement it much more carefully otherwise a bank may be unsuccessful in its goal.

Without investment, a bank can't gain profit. Therefore, after the establishments of bank it collects deposits. It also collects capital by selling its shares. Thus, a great capital is collected in the bank. It is not better to keep such capital fund inactive. The bank should able to clear the policy of its investment by making deep study. Every commercial bank has an investment policy. The basic factors that will determine the objectives of a bank's investment policy are its income and liquidity needs and management's willingness to trade liquidity for greater income opportunities and vice versa, which means accepting greater or less risk. A bank that has a portfolio of high quality loans and relatively stable deposits can assume more risk. It might be preferable for the bank to pursue an aggressive lending policy. The higher risk in the loan portfolio would be countered with a very liquid investment portfolio. One of the acceptable methods of reducing risk is by diversification, a basic and important rule of any investment. The investment process includes following steps:
1. Setting investment policy
2. Performing security analysis
3. Constructing a portfolio
4. Revision of portfolio
5. Evaluating the portfolio

Banks have developed format, written lending policies in recent years. They provide guidance for lending officers by establishing a greater degree of uniformity in lending practices *(Pandey, 1992: 123).*

Emphasizing the importance of investment policy, lending is the essence of commercial banking; consequently the formulation and implementation of sound policies are among the most important responsibilities of bank directors and management (*Crosse, 1963*), Crosse further adds, the formulation of sound lending policies for all banks should have adequate and careful consideration over community needs, sizes of loan portfolio, character of loan, credit worthiness of borrower and asset pledged to security borrowing, interest rate policy.

The investment policy of a bank should be reviewed occasionally and modified as economic conditions change. It should be reviewed when developments occurring within or outside the bank dictate.

2.2 Review of Legislative Provisions

In this section, the review of legislative framework under which the commercial banks are operating has been discussed. All the commercial banks have to conform to the legislative provisions specified in the "*Commercial Bank Act 2031*" and the rules and regulations formulated to facilitate the smooth running of commercial banks.

Some of the important rules and regulations affecting the investment policy of commercial banks that have been directed by Nepal Rastra bank are discussed below.

NRB Rules Regarding Fund Mobilization of Commercial Banks

NRB may establish a legal framework by formulating various rules and regulation to mobilize bank's deposit in different sectors. These directives have direct and indirect impact while making decision in terms of investment and credit to priority sector, deprived sector, CRR, loan loss provision, capital adequacy ratio, interest spread, productive sector investment. The main provisions, established by NRB in the form of prudential norms in relevant area are briefly discussed below:

i. Provision For Investment in Priority and Deprived Sector

NRB has taken a policy of gradual phasing out of the priority sector lending requirement since 2002/003. According to the provision, investment in shares of the rural development bank by commercial banks, which used to be counted for the priority sector lending only is now to be included under the deprived sector lending.

Commercial banks in Nepal are required to earmark a portion of their loan portfolio to priority lending (agricultures, cottage industry, services), which includes 0.25% to 3%

to the deprives sector (poor population). Under this obligations, commercial lend, or provide wholesale funds or equity to microfinance providers serving the poor.

Recently, the priority lending was set at 12% of the loan portfolio. It is now being phased out ending completely in 2007/08 while the 3% deprived sector requirement will stay in place, and therefore loan and investment in microfinance with it.

ii. Cash Reserve Requirement (CRR)

Commercial banks shall maintain liquid assets (also called cash reserve) to ensure adequate liquidity in the commercial banks, to meet the depositors' demand for cash at any time and to inject the confidence in depositors regarding the safety of their deposited funds.

Since the past few years, the bank had adopted the medium term policy to gradually decrease the CRR, as an instrument to reduce the operating cost and narrow the interest rate differentials, to 3 %. However, considering the inflationary pressure in the economy, the CRR has been kept unchanged at 5.5 % that will be revised downwards given the favorable situation. To absorb/inject liquidity, open market instruments such as sale auction, repurchase auction and reverse repurchase auction will be continued.

iii. Loan Classification And Loss Provision

Loan can be classified into performing and non-performing loans. As per directives of NRB, bank and financial institutions (BFIS) classify their loans and advances into pass loan, sub-standard loan, doubtful loan and loss loan. Pass loans are performing loans. Any loan and advances classifies as sub-standard, doubtful and loss are considered as NPL. Pass loan has duration up to 3 months. Sub-standard has duration of 3 months to 6 months. Doubtful loan has the duration up to 1 year. Loss loan has duration of more than 1 year.

Furthermore, NRB has directed commercial banks to maintain certain reserves as loan loss provision (LLP) as given in Table 2.1:

Table 2.1
Loan Loss Provision

Loan classification	Duration	LLP
Pass	Up to 3 months from maturity	1 %
Sub-Standard	3-6 months from maturity	25 %
Doubtful	6 months-1 year from the maturity	50%
Loss	Above 1 year of maturity	100%

Source: NRB Directive 2/061/062; Clause 1 and 8.1

iv. Directives to Raise Capital Funds

According to current provisions, a minimum paid up capital of Rs. 1 billion is required for the establishment of a new national level commercial bank. The existing national level commercial banks are required to increase their paid up capital gradually to Rs. 1 billion by the end of mid –July 2009. For this purpose, all commercial banks are appropriating some amount from their profit to 'capital adjustment fund'. Accordingly, some commercial banks may maintain Rs. 1 billion paid up capital by the end of mid-July 2009 or make adjustment in above stated fund. Commercial banks are free to decide on any of these options and may go for combination of these two. However, those banks increasing paid up capital through fund are required to maintain a minimum paid up capital of Rs.500 million. Following measures will be initiated for those banks, which fail to make provisions of capital requirement as stated above:

a. Distribution of dividend will be banned.
b. Branch expansion will not be allowed.
c. A limit on deposit mobilization will be imposed.
d. Single obligor limit relating to loans to an individual and a company will be reduces.
e. Any other actions can be initiated.

NRB is in the process of implementing BASEL II from 2007. Accordingly, required capital adequacy (CAR) will be decided according to BASEL provision. Unless a higher minimum ratio has been set by Nepal Rastra Bank for an individual bank through a review process, every bank shall maintain at all times, the capital requirement set out below:

a. Core capital of not less than 6 per cent of total risk weighted exposure
b. A total capital fund of not less than 10 per cent of its total risk weighted exposure.

Segregation of Investment Portfolio:

Banks will have to segregate their investment portfolio into any of following three categories:

a. Held for Trading:

An investment that is made for the purpose of generating a profit from short term fluctuations in price should be classified under this category. An asset should be classified as held for trading even if it is a part of a portfolio of similar assets for which there is a pattern of trading for the purpose of generating a profit from short

term fluctuations in price. These investments should be marked to market on a daily basis and differences reflected in the profit and loss account.

b. Held to Maturity:

The investments made with positive intent and ability of the bank to hold till maturity should be classified as held to maturity investments. The bank does not have the positive intent to hold an investment to maturity, if any of the following conditions are met:

) Bank has the intent and the ability to hold the asset for only an undefined period; or

) Bank stands ready to sell the asset (other than if a situation arises that is non-recurring and could not have been reasonably anticipated) in response to changes in market interest rates or risks, liquidity needs, changes in the availability of and the yield on alternative investments, changes in financing sources and terms, or changes in foreign currency risk. The held to maturity investments should be valued at amortised cost i.e. the cost price less any impairments (if applicable). The impairments should be included in the profit and loss accounts for the period.

c. Available for Sale:

All other investments that are neither "held for trading" nor "held to maturity" should be classified under this category. These investments should be marked to market on a regular basis and the difference to be adjusted through reserves. Banks are required to maintain Investment Adjustment Reserve (eligible as Tier 2 capital) to the extent of 2% of available for sale portfolio. The share investment on Credit Information Centre, Nepal Clearing House Ltd. and National Banking Training Institute shall receive an exemption in computing 2% of investment value for Investment Adjustment Reserve (www.nrb.org.np).

2.3 Review of Related Articles

In this section, attempt has been made to review some relevant articles in different economic/finance journals. The World Bank Bulletins, dissertation papers, magazines, newspapers and other related literature.

Chopra (1999), in his article *"Role of Foreign Banks in Nepal"* concluded that the joint venture banks are playing increasingly dynamic and vital role in the economic development of the country that will undoubtly increase with time.

Sharma (2003) in his article, "*Banking the Future on Competition*," in Business Age writes, 'Nepali financial sector (especially the banking sector) has undergone drastic changes in the past one and half decades. One of the most important achievements as a result of the growth in the number of commercial banks in the past liberalization period is in the area of domestic saving. Quantitative growth of the banking sector has positively contributed in raising domestic banking savings.

He further adds post liberalization era competition has forced commercial banks to broaden their lending portfolio that has resulted in the expansion of loan extension from the trading sector to the industrial sector. He adds increasing credit flow to both trading and industrial sector and canalize domestic savings into capital investments towards which the contribution of the banking sector cannot be questioned, will ultimately bolster the country's rate of economic growth. In addition, the sector has actually done more than just providing mere safety to small investor's capital.

He has also highlighted that majority of CBs are being established and have operation in urban areas only. He has added that private banks have mushroomed only in urban areas where large volume of banking transaction and activities are possible. According to him, banks are tempted to invest without proper credit approval and on personal guarantee, whose negative side effects would show true colors only after four or five years. The CBs are also charging higher interest rates on lending.

Mahat (2004), in his article *"Efficient banking"*, he had accomplished, efficiency of banks can be measured by using different parameters. The concept of productivity and profitability can be applied while evaluating efficiency of banks. The term productivity refers to the relationship between the quality of input employed and the quality of outputs produced. Interest expenses to interest income ratio shows the efficiency of banks in mobilizing resources at lower cost and investing in high yielding assets. In other word, it reflects the efficiency in use of funds.

According to the Mahat, the analysis of operational efficiency of banks will help one in understanding the extent of vulnerability of banks under the changed scenario and deciding whom to bank upon. This may also help the inefficient banks to upgrade their efficiency and be winners in the situations developing due to slowdown in economy. The regulators should also be concerned on the fact that the banks with unfavorable ratio may bring catastrophe in the banking industry.

Bhandari (2010), in his article *" Investment policy of joint venture bank of Nepal*" in Business Age has stated that that the JVB of Nepal are more ethical than others in

making and implementing the investment policies, they have also good investments, loans and advances with compare to total deposits and has good liquidity position too. Joint venture poses some advantages such as – provide company with the opportunity to gain new capacity and expertise, allow companies to enter related business or new geographic market or gain new technological knowledge, access to greater resources, including specialized staff and technology, sharing risk with venture partner. In the era of divestiture and consolidation, JV's offer a creative way for companies to exit from non-core business. However, JV may have some demerits like, it takes time and effort to build the right relationship and partnering with another business can be challenging .Problems are likely to arise if: The objectives of the joint venture are not 100 percent clear and communicated to everyone involved, there is an imbalance in levels of expertise, investment or assets brought into the venture by the different partners.

Viswanathan (2012) in her article, *"Nepal: What is the Potential for Foreign Investment ?"* in Business Age has included that the investment potential in Nepal, Kathmandu has increasingly begun to project itself as a potential investment destination in Hydropower, tourism and infrastructure construction (cement), information and communication, agro-processing and health. This projection is well supported by Nepal's liberal investment policies, precisely the Foreign Investment and One Window Policy along with the fact of most of these investment sectors being less explored, and the availability of cheap labour force in Nepal. Since Nepal continues to be the 'yam between two boulders', investments or any form of monetary assistance to the country shall always have political footnotes. These underlying motivations of its neighbours coupled with the country's inability to sustain and increase the flow of investments will continue to impair such initiatives.

According to Vishwanathan, it is expected of Nepal to take two essential steps at this juncture. At the external level, it should not restrict its investment policies to China but approach other countries in the region and beyond, like Bangladesh, and South Korea as well. At the internal level, it should work towards improving the regulatory frameworks overlooking the investment plans. There exists a discrepancy in the existing mechanisms for attracting investment to the country. There is need, therefore, to iron out policies that may hinder investments to the country.

2.4 Review of Related Thesis

Various students regarding the various aspects of commercial banks as financial performance, lending policy, investment policy, resources mobilization policy, resources mobilization and capital structure have concluded several thesis works. Some of them, as supposed to be relevant for the study as prescribed below:

Khadka (2003) in his thesis on "*A Study on Investment Policy of NABIL in Comparison to their Joint Venture Banks of Nepal.*"

Following are the objectives of the study:

) To compare investment policy of NABIL with other joint ventures banks NGBL.

) To evaluate the liquidity, asset management, efficiency, profitability and risk position.

Major findings of the study are as follows:

) Liquidity position of NABIL is worse than that of NGBL and NIBL. NABIL has more portion current assets as loan and advances but less portion as investment on government securities.

) NABIL is less successful in on balance sheet operations as well as well as off-balance sheet operations that of NGBL and NIBL.

) NIBL is more successful in deposit mobilization but fails to maintain high growth rate of profit in compare to BGBL and NIBL.

) It is strongly recommended NABIL to utilize its risks assets and shareholders fund to gain highest profit margin and reduce its expenses and collect cheaper fund for more profitability.

) It is recommended investing its fund in different sectors of investment and administering various deposits schemes to collect fund such as cumulative deposit scheme, price bonds scheme, gift cheques scheme, etc. He has recommended adopting liberal lending policy however he has not explained his idea of liberal lending 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.

Following are the objectives of the study:

⎠ To evaluate whether the liquidity management assets management, efficiency, profitability position, risk position and investment practices of Nabil and BOK.

⎠ To find out the relationship between deposit and total investment, deposit and loan and advances and net profit and outside assets

Following are the major findings of the study:

⎠ 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.

Sapkota (2006), in his thesis, "*A study of Investment Policy of Joint Venture Commercial bank.*" has compared investment policy of NABIL and SCNBL.

Following are the objectives of the study:

⟩ To analyze the management assets management, efficiency, profitability position, risk position and investment practices of Nabil and SCBNL.

⟩ To find out the relationship between deposit and total investment, deposit and loan and advances and net profit and outside assets

Following are the major findings of the study:

⟩ Cash and bank balance of SCBBL with respect to current assets is higher than NABIL. He concludes that it shows greater capacity of SCBNL to meet its customer's requirement but that does not mean that NABIL cannot meet its daily requirements.

⟩ SCBNL has invested more portions of its current assets and total working fund in govt. securities than NABIL, where as NABIL has invested more of its fund to other productive sectors.

⟩ NABIL has been more successful in mobilizing its deposits and working fund as loan and advances and achieving higher profits in comparison to SCBNL. He adds that NABIL has invested more of its funds in purchasing shares and debentures of other companies than SCBNAL. He further adds that liquidity risk and credit risk of SCBNL is comparatively lower than NABIL. NABIL has more exposure to risk than SCBNL.

Pandit (2006) has conducted on *"Investment Policy Analysis of Joint Venture Banks with Special Reference to Nepal SBI Bank, Bank of Kathmandu and Everest Bank Limited."*

Following are the objectives of the study:

⟩ To evaluate whether the liquidity management assets management, efficiency, profitability position, risk position and investment practices of Nepal SBI Bank, BOK and EBL

⟩ To find out the relationship between deposit and total investment, deposit and loan and advances and net profit and outside assets

Following are the major findings of the study:

) Liquidity position of SBI Bank was slightly good as compared to BOK and EBL. However, the liquidity positions of the banks under study were not so satisfactory. Therefore, banks should improve their liquidity position to meet their current obligations.

) The study of assets management ratio showed that SBI Bank was not in a better position regarding its on balance sheet activities.

) The profitability position of SBI was not as good as of other banks. Risk ratio of BOK was the highest and the capital risk ratio of EBL was the highest of all. It indicated that BOK and EBL must be careful about risk.

) Growth ratio of SBI and BOK had not successful to increase their source of funds. EBL had succeeded to maintain its higher growth rate of total deposit.

*Regmi ƒ*2008) conducted *"A Comparative Study on Investment Policy of Everest Bank and Himalayan Bank Limited."*

Following are the objectives of the study:

) To find out the relationship between total investments, deposits, loans and advances, net profit and assets and compare them.

) To evaluate the liquidity, asset management, efficiency, profitability and risk portion of EBL and HBL.

) To analyze the deposit utilization trend and its projection for five years of HBL and EBL

) To provide package of a workable suggestions and possible guidelines to improve investment policies.

Following are the major findings of the study:

) 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.

Shrestha (2010) in his thesis entitled "*A Study on Investment Portfolio of Commercial Banks in Nepal*" has been done in 2006. The general objective of this research is to identify the current situation of investment portfolio of CBs in Nepal.

Following are the objectives of the study:

- To analyze the investment portfolio of Commercial Banks
- To analyze the risk and return of selected commercial banks on investment using Portfolio concept.
- To forecasting and examine the trend of investment and to provide complementary measures based on analysis.

Following are the major findings of the study:

- Proper investment on various securities i.e. balance allocation of funds on various government securities such as Treasury bills, National saving bonds, Development bonds etc and fixed income percentage rate that help to reduce the variability of return. In the analysis of risk and return comparatively

SCBNL have more return from investment on government securities like same NABIL has better position on investment on loan and advances.

) The return on share and debenture of commercial banks shows wide fluctuation. These fluctuations in returns are caused mainly by the volatility of the shares prices in market and by the changes in dividends in some extent. Comparatively to other assets, share and debenture has higher return and higher risk. Hence, it is cleared from analysis that investment on share and debenture is high risky assets.

*Shrestha f*2011) conducted a study on *"A Comparative Analysis on investment performance of commercial banks in Nepal."*

Following are the objectives of the study:

) To analyze the investment activities and fund mobilization with respect to fund based on-balance sheet transactions and fee based off-balance sheet transactions

) To study the asset utilization system, profitability and risk position of commercial banks under study

) To assess the deposit utilization trends and its projection for the future

) To evaluate the growth ratios of loan and advance and total investment and respective growth rate of total deposit and net profit

) To appraise the suggestion on the basis of findings for further growth of the banks under study

Major findings of the study are 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.

Basnet (2012) has conducted a study on "*A Study on Investment Policy of Commercial Banks in Nepal*" has been done in 2013.

Following are the objectives of the study:

) To analyze the investment portfolio of Commercial Banks
) To analyze the risk and return of selected commercial banks on investment using Portfolio concept.
) To forecasting and examine the trend of investment and to provide complementary measures based on analysis.

Following are the major findings of the study:

) Proper investment on various securities i.e. balance allocation of funds on various government securities such as Treasury bills, National saving bonds, Development bonds etc and fixed income percentage rate that help to reduce the variability of return. In the analysis of risk and return comparatively SCBNL have more return from investment on government securities like same NABIL has better position on investment on loan and advances.

) The return on share and debenture of commercial banks shows wide fluctuation. These fluctuations in returns are caused mainly by the volatility of the shares prices in market and by the changes in dividends in some extent. Comparatively to other assets, share and debenture has higher return and

higher risk. Hence, it is cleared from analysis that investment on share and debenture is high risky assets.

Karki ƒ2012) has conducted a study on *"An analysis of investment policy of commercial banks in Nepal."*

Following are the objectives of the study:

- ⟩ To study the asset utilization system, profitability and risk position of commercial banks under study
- ⟩ To assess the deposit utilization trends and its projection for the future
- ⟩ To evaluate the growth ratios of loan and advance and total investment and respective growth rate of total deposit and net profit

Following are the major findings of the study:

- ⟩ 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.

Research Gap

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

overall ratio, trend analysis, correlation matrix and hypothesis. So this study will be fruitful to those interested person, scholars, students, teachers, civil society, businessmen and government for academically as well as policy perspectives. There have been a number of valuable studies on investment policies, all of which present evidence on financial performance, utilization of resources. However, non of these studies provides a picture of the changes over the last five years. Therefore, to complete this research many books , journals, articles and various published and unpublished dissertation are followed as guideline to make research easier and smooth through reference material.

CHAPTER – III

RESEARCH METHODOLOGY

Research methodology is a way to systematically solve the research problem. It refers to the various sequential steps that are to be adopted by a researcher during the course of studying the problem with certain objectives. This chapter deals with overall research method used for the purpose of the study. It includes research design, sources of data, population and sample and method of analysis (Paudyal, Basnet and Pant, 2068). This chapter contains the discussion about the methods and processes that has been used for the study and analysis of the investment strategy of NABIL and HBL. It includes general introduction, research design, and sources of data, population and sample and methods of data analysis.

3.1 Research Design

A research design is the arrangement of conditions for collection and analysis of data. Moreover the research design is the conceptual structure within which research is conducted; it constitutes the blueprint for collection and analysis of data. This study follows descriptive and analytical research designs. Some financial and statistical tools have been applied to evaluate investment policy of HBL & NABIL.

3.2 Sources of Data

This study is conducted on the basis of secondary data. The data required for the analysis are directly obtained from the Balance Sheet, Profit and Loss account, and annual reports of concerned banks and publications of NRB. Supplementary data and information are collected from number of institutions like SEBON, NEPSE, ministry of finance, budget speech of different fiscal year, economic survey, etc. Likewise various data and information are collected from the economic journals, magazines and other published and unpublished reports.

3.3 Population and Sample

There are altogether 32 commercial banks functioning all over the country and most of their stocks are traded actively in the stock market. From these populations, NABIL Bank Ltd. and Himalayan Bank Ltd. are selected for the study.

3.4 Methods of Data Analysis

In this study, various financial and statistical tools have been used. The various tools are presented as follows:

3.5.1 Financial Tool

Financial tools are used to examine to examine the financial strength and weakness of bank. The analysis of the financial position of any firm to examine its performance is known as financial analysis. It is the process of evaluating the position of a firm by establishing relationship with various components parts of the financial statements. Financial analysis is the process of identifying the financial strength and weakness of a firm by properly establishing the relationship between the items of balance sheet and profit and loss account *(Pandey, 1999)*.

1. Ratio Analysis

Ratio is the mathematical relationship between two accounting figures. Ratio analysis is the main tools of financial statement analysis. Ratio means the numerical or quantitative relationship between two items or variables. It can be expressed as percentage, fraction or a stated comparison between two numbers *(Pandey, 1999)*. Hence, ratio analysis is the calculation and interpretation of financial ratios to assess the forms performance and status. Qualitative judgement can be done with the help of ratio analysis. In this study, some of the relevant financial ratios are used. They are presented into three broad groupings.

I.   Financial Policy Measures

A. Liquidity ratios

II. Operating Efficiency Measures

A. Asset management ratios (Activity or performing ratios)

III. Performance Measures

A. Profitability ratios

B. Risk ratios

C. Growth ratios

D. Capital adequacy ratios

I. Financial Policy Measures

A. Liquidity Ratios

Liquidity simply means short-run solvency of a firm. It reflects the short term financial strength of banks. Liquidity means the ability of a firm to satisfy its short term obligation. It is the measurement of speed with which a bank's assets can be converted into cash to meet deposits withdrawal and other current obligations. The certain percentage of deposit should be kept in bank in the form of cash .It the bank will keep greater deposit in cash, it loses the opportunity cost. Similarly, if bank keeps low amount in deposit, it could not be able to pay depositors on time. Liquidity can be measured in following ways.

i. Current Ratio

It measures short-term debt paying ability of a bank. It measures the availability of current liabilities. It is computed by dividing current assets by current liabilities. Current assets consists of cash in hand, cash at bank, short term marketable securities, bills receivable, sundry debtors, prepaid expenses, inventory and accrued income. Current liabilities consist of bills payable, sundry creditors, short-term loan, income tax draft.

Mathematically,

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

Current ratio is considered to be satisfactory one when 2:1. Higher current ratio indicates that the firm is in liquid and has ability to pay its current obligation in time. On the other hand, lower current ratio represents that liquidity position is not good and the bank will face difficulty in payment of current obligation.

ii. Cash and Bank Balance to Total Deposit Ratio (CRR)

This ratio also known as cash reserve ratio shows the percentage of deposit maintained as liquid assets. This ratio is maintained to meet any unexpected demands of the depositors. A higher ratio represents a greater ability to meet any unexpected demand of the depositors. If the bank is not able to maintain adequate amount of deposit it cannot operate day to day transactions. Keeping idle cash is not desirable as it blocks the capita. Therefore, this ratio is designed to measure the bank's ability to

meet the immediate obligation. It is calculated by dividing cash and bank balance by total deposits.

Mathematically,

Cash and Bank balance to Total Deposit Ratio $= \dfrac{Cash \text{ \& } Bank \text{ } Balance}{Current \text{ } Liabilities}$

iii. Cash and Bank Balance to Current Assets Ratio

This ratio shows the percentage of readily available fund with the bank. It measures the proportion of the most liquid assets among the current assets of bank. Higher ratio shows the bank ability to meet demand for cash. It is calculated by dividing cash and bank balance by current assets.

Mathematically,

Cash & Bank Balance to Current Assets Ratio $= \dfrac{Cash \text{ \& } Bank \text{ } Balance}{Current \text{ } Assets}$

iv Investment on Government Securities to Total Deposit Ratio

Government security is a risk free security. The banks instead of keeping their funds idle, invest in various government securities i.e. treasury bills and development bonds which are liquid in nature as they can be traded any time. This ratio measures how much of the total deposit is utilized in investing in government securities. It is calculated as dividing investment in government securities by total deposit.

Mathematically,

Government Securities to Total Deposit Ratio $= \dfrac{Government \text{ } Securities}{Total \text{ } Deposits}$

I. Operating Efficiency Measures

A. Assets Management Ratios/Activity or Performing Ratios

Asset management or activity ratio measures the effectiveness of the bank's investment decision and the utilization of its resources. It indicates the speed with which assets are being converted or turnover. The greater the rate of turnover or conversion, the more efficient is the management or utilization of assets. Here, some of these ratios are computed to assess the bank's efficiency in utilization of available assets in following ways:

i. Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how successfully the banks are utilizing their total deposits on loans and advances for profit generating purpose. Greater ratio implies the better utilization of total deposits. This can be obtained by dividing loan and advances by total deposits.

Mathematically,

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

ii. Total Investment to Total Deposit Ratio

Investment implies the utilization of firm's deposit on investment in government securities, shares, debentures and bonds of other companies and bank. It can be computed by dividing total investment by total deposit.

Mathematically,

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

iii. Loan and Advances to Working Fund Ratio

Loan and advances is the major component in the total working fund, which indicates the ability of bank to canalize its deposits in the form of loan and advances to earn high return. This ratio is calculated by dividing loan and advances by total working fund. Total working fund includes all assets of on balance sheet items i.e. current assets, net fixed assets, loan for development banks and other miscellaneous assets but excludes off balance sheet items such as Letter of Credit, Letter of Guarantee, etc.

Mathematically,

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

iv. Investment on Government Securities to Total Working Fund Ratio

This ratio shows bank's investment on government securities in comparison to the total working fund. It is computed by dividing investment on government securities by total working fund.

Mathematically,

Investment on Government Securities to

$$\text{Total Working Fund Ratio} = \frac{\text{Government Securities}}{\text{Total Working Fund}}$$

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

This ratio shows the bank's investment in shares and debentures in comparison to the total working fund and calculated by dividing investment in shares and debentures by total working fund.

Mathematically,

Investment on Shares and Debentures to

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

vi. Performing Loan Loss Provision

Performing loan is a loan which had due up to 90 days. This ratio shows how much the banks are successful in utilizing their assets for the purpose of profit generation. Higher ratio indicates efficiency in utilizing the good loans.

Mathematically,

$$\text{Performing Loan Loss Provision} = \frac{\text{Performing Loan}}{\text{Total Loan}} \times 100\%$$

vii. Non Performing Loan Loss Provision

Loan is said to be non-performing with the due date of more than 90 days. Non-performing loan consists of substandard loan, doubtful loans and bad loans. Higher non-performing loan ratio indicates worse management of assets. If the ratio is low, it indicates a favorable credit management position.

Mathematically,

$$\text{Non Performing Loan Loss Provision} = \frac{\text{Non-Performing Loan}}{\text{Total Loan}} \times 100\%$$

viii. Loan Loss Provision Ratio

This ratio depicts how much provision a bank has to create for its loan provided. It is the ability of the management to have sufficient provision for the non-performing loans. Higher the rate, better is the financial position and vice versa.

Mathematically,

$$\text{Loan Loss Provision Ratio} = \frac{\text{Total Loan Provision}}{\text{Non-Performing Loan}} \times 100\%$$

III. Performance Measures

A. Profitability Ratios

Profitability ratio is calculated to measure the efficiency of operation of a firm in terms of profit. It is the indicator of the financial performance of any institution. This implies that higher the profitability ratio better the financial performance of bank. Profitability ratio can be calculated through following ways.

i. Return on Loan and Advances Ratio

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

Mathematically,

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

ii. Return on Total Working Fund Ratio (ROA)

This ratio, also known as return on assets measures the overall profitability of all working funds i.e. total assets. It is computed by dividing net profit (loss) by total working fund.

Mathematically,

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

iii. Return on Equity Ratio (ROE)

This ratio measures how efficiently the banks have used the funds of owners. It is calculated by dividing Net profit by total equity capital. Total capital includes shareholder's reserve including P/L A/C and share capital i.e. ordinary share and preference share capital.

Mathematically,

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

iv. Total Interest Earned to Total Asset Ratio

This ratio measures the interest earning capacity of the bank through the efficient utilization of assets. It is computed by dividing total interest earned by total assets.

Mathematically,

$$\text{Return on Equity} = \frac{\text{Total Interest Earned}}{\text{Total Assets}}$$

v. Total Interest Earned to Total Working Fund Ratio

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

Mathematically,

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

B. Risk Ratios

Risk taking is the prime business of bank's investment management. The possibility of risk makes bank's investment a challenging task. Bank has to take risk to get return on its investment. The risk taken is compensated by the increase in profit. So, the bank should have the idea of the level of risk that ultimately influences the bank's investment policy.

i. Credit Risk Ratio

Credit risk ratio measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. This is expressed as the percentage of loan and advances to total assets. It helps to check the probability of loan non- repayment loan or the possibility of loan to go into defaults. Risk of non-repayment loan is known as credit risk.

Mathematically,

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

ii. Capital Risk Ratio

Capital risk ratio measures banks ability to attract deposit and interbank funds. It also determines the level of profit, a bank can earn. The capital risk is directly related to return on equity. Higher the ratios, higher will be the capital risks. It is computed by dividing total share capital to risk-weighted assets. Risk- weighted asset is the minimum amount of capital that is required within banks and other institutions, based on a percentage of the assets, weighted by risk. It is the total of all assets held by the bank which are weighted for credit risk according to a formula determined by the Regular (Central bank). It includes the sum of on- balance sheet and off- balance sheet items.

Mathematically,

$$\text{Capital Risk Ratio} = \frac{Share\ Capital}{Risk\ Weighted\ Assets}$$

C. Growth Ratio

Growth rates of total deposits, loan & advances, total investment and profit are calculated to analyze and examine the expansion and growth of the bank.

Mathematically,

$$D_n = D_o (1 + g)^n$$

Here, D_n = Total amount in n^{th} year

D_o = Total amount in n^{th} initial year

g = Growth rate

n= period

D. Capital Adequacy Ratios (CAR)

Capital adequacy ratio is the measure of the amounts of a bank's capital expressed as a percentage of its risk weighted credit exposures. It is the ratio which determines the capacity of the bank in terms of meeting the time liabilities and other risk. CAR protects depositors there by maintaining confidence in the banking system. The investment of the commercial banks has deep impact in the capital. Therefore, the commercial banks have to maintain the investment policy in such a way that it should also be helpful in maintaining the adequate capital as specified by NRB. Capital fund of bank should be based on the measurement of risks associated with the assets of the bank, the minimum capital fund required to be maintained is based on the risk weighted assets, the bank need to maintain its assets so as to minimize total risk weighted assets or to increase the capital by issuing shares, debentures or generating more and more profit. So, capital adequacy policy of bank also has effect on investment portfolio.

Mathematically,

$$\text{Total Capital Adequacy Ratio} = \frac{\text{Core Capital} + \text{Supplementary Capital}}{\text{Total Risk Weighted Assets}}$$

$$\text{Core Capital Adequacy Ratio} = \frac{\text{Core Capital}}{\text{Total Risk Weighted Assets}}$$

The capital adequacy norm has been set on the basis of total risk weighted assets. As all the credit/advances and investments are the assets of the bank, the banks need to take extra care while making an investment decision. The assets discussed are on-balance sheet as well as off-balance sheet.

On the basis of the types of risks, the assets are classified into four buckets by assigning weight of 0%, 20%, 50% and 100% risk. The highly secured assets weight 0% risk and highly on secured assets weigh100% risk. So, if the bank has the tendency of investing in 0% risk weighted asset then the total risk weighted asset will be low and hence the minimum capital require to be maintained can be easily met. But

if the bank takes the risk and invests heavily in 100% risk weighted assets then the total risk weighted asset will be high and hence the bank will have to increase its capital by different means so as to meet the minimum required capital as prescribed by NRB.

3.5.2 Statistical Tools

After the collection, organization and the presentation of data, the next step is to analyze the data. On this study, various statistical tools like trend analysis, standard deviation, coefficient of variance, coefficient of correlation analysis, etc. have been used to analyze this data. Statistical tool or appropriate technique of analysis depends upon the nature of the data and the purpose of the enquiry. The following tools are used in the analysis of the financial position of the bank:

1 Arithmetic Mean (Average

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

$$\bar{X} = \frac{\sum x}{n}$$

Where: $\bar{x}$ =   Arithmetic mean

N   =   Number of observations

X   =   Sum of observations

2. Standard Deviation (S.D.)

The measurement of the scatterness of the mass of figures in a series about an average is known as dispersion. The standard deviation measures the absolute dispersion. Standard deviation, usually denoted by the letter   (sigma: the Greek alphabet) was firs suggested by Karl Pearson as a measure of dispersion. It is defined as the positive square root of the arithmetic mean of the squares of the deviations of the given observations from arithmetic mean as is given by:

$$\sigma = \sqrt{\frac{1}{x}\sum(x - \bar{x})^2}$$

Where,

$\bar{x}$ $= \frac{1}{n}\sum x$ is the arithmetic mean of the given values.

3. Coefficient of Variance (CV)

Standard deviation is only an absolute measure of dispersion, depending upon the units of measurement. The relative measure of dispersion based on standard deviation is called the coefficient of standard *(Gupta, 1993).*

It is given by: $CV = \frac{\sigma}{\bar{x}} \times 100\%$

For comparing the variability of two distributions, CV is computed of each distribution. A distribution with smaller CV is said to be less variable or more consistent or more homogeneous or more uniform or more stable than the other and vice versa.

4 Trend Analysis (Least Square Method)

A widely and most commonly used method to describe the trend is the method of least square. Under this, a trend line is fitted to the data satisfying the conditions. It is used to describe the trend of any variable whether it increases or decreases with the passage of time.

The trend line between the two variables x and y is represented by:

$$Y_c = a + bx$$

Where,

$$a = \frac{\sum y}{n} \qquad \text{and} \qquad b = \frac{\sum xy}{\sum x^2}$$

Here, yc is used to designate the trend value to distinguish the actual value. The x variable represents the time, 'a' refers to the y-intercept or value of y_c when x=o and 'b' is the slope of the trend line. For the trend analysis of different banks, the following heads have been considered:

i.   Total Deposit Analysis
ii. Investment Analysis
iii. Loan & advances
iv. Net Profit

5 Karl Pearson's Coefficient of Correlation (r)

One of the widely used mathematical methods of calculating relationship between two variables is the Karl Pearson's correlation coefficient. It is denoted by 'r' and is defined by:

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

Where, $X = x - \bar{x}$ and $Y = y - \bar{y}$

The value of 'r' always lies between (-1) and (+1), and (r=+1) denotes the perfect positive correlation between the two variables and (r=-1) denotes the negative correlation between the two variables.

Probable Error (P.Er)

It is the measure of testing the reliability of the calculated value of **'r'.** If r be calculated value of r from a sample of n pair of observations, then PE is defined by,

$$P.Er = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

If the value of **'r'** is less than **6 PE (r<6P.Er),** it is insignificant; perhaps there is no evidence of correlation. If 'r' is greater than **6 PE (r>6P.Er),** then, it is significant. The probable error of correlation coefficient is used to determine the limits with in which the population correlation coefficient lies. Limits for population correlation coefficient are **r + PEr.**

Calculations of Correlation Coefficient are As Follows

a. Coefficient of correlation between deposit and loan & advances.
b. Coefficient of correlation between deposit and total investment

CHAPTER-IV

DATA PRESENTATION AND ANALYSIS

This chapter makes systematic presentation and analysis of data. Analysis is based on the data obtained from secondary sources. Appropriate statistical as well as financial tools as described in the research methodology chapter have been used to derive actual result from the analysis of data. The chapter has been divided into two main section. The first section of the chapter includes presentation and analysis of data while the second section includes major finding of the study.

4.1 Financial Analysis

Financial analysis is process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of balance sheet. Here relevant ratio is calculated and appropriate interpretations are made.

4.1.1 Liquidity Ratio

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

i. Current Ratio

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

We have,

Current ratio = $\dfrac{Current\ assets}{Current\ liabilities}$

Where, current assets consist of cash and bank balance, money at call or short-term notice, loan advances investment in government securities, other interest receivable and miscellaneous current assets whereas current liabilities consist of deposit, loan and advances, wills payable and miscellaneous current liabilities.

Table 4.1

Current Ratio (Times)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	0.87	1.02
2	2007/08	0.89	1.13
3	2008/09	0.89	1.08
4	2009/10	0.84	1.03
5	2010/11	0.98	1.04
6	2011/12	0.99	1.08
	Total	5.46	6.38
	Mean	0.91	1.06
	S.D.	0.06	0.04
	C.V.	6.70	3.89

Source: Appendix 1 'A'

The above table No. 4.1 shows the current ratio of Nabil and HBL Bank. Total mean, standard deviation and coefficient of variation have also been calculated.

Although the current ratio of Nabil has been fluctuating it always less one current ratio of HBL, on the other has always more than 1. In fact, the ratio of both banks seems to be appropriate. But, the lower ratio of Nabil indicates that it may often not be in proper liquidity position. HBL liquidity position is better than that of Nabil's. The coefficient of variation between the current ratio of Nabil is 6.70% that is greater than that of HBL 3.89%. It shows that current ratio of HBL is fewer consistencies than that of Nabil bank.

ii. Cash and Bank Balance to Total Deposit Ratio (CRR Ratio)

Cash and bank balance are the most liquid assets. This ratio measures the ability of the bank to meet the unanticipated cash and all types of deposits.

We have,

Cash and bank balance to total deposit $= \dfrac{Cash \ and \ bank \ balance}{Total \ deposit}$

Where,

Cash and bank balance includes cash on hand, foreign cash on hand, cheques and other cash items, balance with domestic and abroad banks whereas the total deposits include current deposits, saving deposits, money of call and short-term notice and other deposits.

Table 4.2

Cash and Bank Balance to Total Deposit Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	3.25	11.03
2	2007/08	5.99	13.14
3	2008/09	8.37	11.13
4	2009/10	9.02	18.49
5	2010/11	3.02	21.17
6	2011/12	2.90	20.04
	Total	32.55	95
	Mean	5.425	15.83
	S.D.	2.79	4.60
	C.V.	51.35	29.04

Source: Appendix 1 'B'.

The table 4.2 shows total mean, standard deviation and coefficient of variation of cash and bank balance to total deposit ratio of these two banks.

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Above table shows that CRR of the banks quite fluctuating, although HBL's CRR is quite high as compared to that of Nabil's. It indicates that Nabil bank is maintaining appropriate CRR ratio. If HBL bank can maintain consistent CRR, the remaining fund can be used for further investment.

Mean and standard deviation of Nabil bank is less than HBL bank. CV ratio of Nabil and HBL bank are 51.35 and 29.04. From this, we can conclude that HBL has better maintained its liquidity than Nabil bank.

iii. Cash and Bank Balance to Current Assets Ratio

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

Cash and bank balance to current assets $= \dfrac{Cash\ and\ bank\ balance}{Current\ asset}$

Where, cash and bank balance represent of local currency, foreign currency, cash in hand and various bank balances in local as well as foreign banks. Whereas current assets consist of cash and bank balance, money at call, short term notice loan and advances, investment in government securities and other interest receivable and other miscellaneous current assets.

Table 4.3

Cash and Bank Balance to Current Assets Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	3.58	10.17
2	2007/08	6.27	11.51
3	2008/09	8.72	10.91
4	2009/10	8.32	17.51
5	2010/11	3.55	19.68
6	2011/12	3.92	21.97
	Total	34.36	91.75
	Mean	5.73	15.29
	S.D.	2.39	5.07
	C.V.	41.76	33.15

Source: Appendix 1 'C'

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The above table No. 4.3 shows the total mean, standard deviation and C.V. of cash and bank balance to current ratio of commercial banks.

The above table shows that the cash and bank balance to current assets ratio of Nabil bank is fluctuating trend. But, HBL bank has increasing trend. From above analysis we can conclude that liquidity position of Nabil bank is lesser than that of HBL bank.

Mean and standard deviation of Nabil bank is less than that of HBL bank. C.V. of Nabil and HBL bank are 41.76 percent and 33.15 percent respectively. It shows Nabil bank has lower consistency than HBL bank.

iv. Investment on Government Securities to Current Assets Ratio

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

Investment on government securities

investment on to current assets ratio $= \dfrac{Government\ securities}{Current\ assets}$

Table 4.4

Investment on Government Securities to Current Assets Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	19.61	15.37
2	2007/08	21.08	23.16
3	2008/09	15.74	17.75
4	2009/10	12.71	10.05
5	2010/11	11.04	19.98
6	2011/12	11.07	16.60
	Total	91.25	102.91
	Mean	15.21	17.15
	S.D.	4.36	4.44
	C.V.	28.64	25.86

Source: Appendix 1 'D'

The above table no. 4.4 shows the total mean, standard deviation and coefficient of variation of investment on government securities to current assets ratio of commercial bank.

Above table shows that investment on government securities to current asset ratio of Nabil bank has increasing trend in first 3 years but then after, it follows decreasing trend. But HBL bank has increasing trend, first 3 year and decreasing in 4th year and again increasing in 5th year then increased in 6th year.

Mean and standard deviation of HBL bank is higher than that of Nabil bank. Coefficient of variation of HBL is higher than Nabil bank. It can be concluded that HBL bank has invested its current assets in government securities more than Nabil bank.

v. Loan and Advances to Current Assets Ratio

To make an appropriate profit a commercial bank should not keep it all collection funds as cash and bank balance but they should be invested as loan and advances to customer. Loan and advances represent local and foreign bill discounted and purchased, loans, cash credit and overdraft in local current as well as in convertible foreign currency.

We have,

Loan and Advances to Current Assets ratio $= \dfrac{Loan\ and\ advances}{Current\ assets}$

Table 4.5

Loan and Advances to Current Assets Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	73.46	65.47
2	2007/08	69.65	65.82
3	2008/09	69.74	70.06
4	2009/10	68.13	67.86
5	2010/11	81.78	69.35
6	2011/12	84.73	78.20
Total		447.49	416.76
Mean		74.58	69.46
S.D.		7.01	4.66
C.V.		9.39	6.71

Source: Appendix 1 'E'

Table no. 4.5, total mean standard deviation and coefficient of variation of loan and advances to current assets ratio of these two banks.

Above table shows Nabil bank loan and advances to current assets ratio are in fluctuating trend i.e. highest in Fy 2011/12 is 84.73% lowest in Fy 2009/10 i.e. 68.13. Similarly, the ratio of HBL bank are also in fluctuating trend i.e. highest in Fy 2011/12 (78.20%) and low in Fy 2006/07 (65.47%).

Mean, standard deviation and coefficient of variation of Nabil bank is greater than that of HBL bank. This analysis shows that Nabil bank provides more loan and advances than HBL bank.

Table 4.6

Calculation of Overall Liquidity Ratio of NABIL Bank and HBL Bank Ltd.

Fiscal year	Nabil		HBL	
	Ratio	Index	Ratio	Index
2006/07	20.154	100	20.612	100
2007/08	20.736	102.88	22.952	115.22
2008/09	20.692	102.66	22.186	101.35
2009/10	19.868	98.58	22.988	118.94
2010/11	20.074	99.60	26.241	135.78
2011/12	20.88	98.90	26.24	136.28
Total	122.404		141.219	
Mean	20.40		23.54	
S.D.	0.42		2.26	
C.V.	2.05		9.62	

The above table no. 4.6 shows the total means, standard deviation and C.V. of overall liquidity ratio of both banks.

The table shows that overall liquidity position of both banks has fluctuating trend. The mean and S.D. of HBL is greater than Nabil bank. This analysis shows overall liquidity position of HBL is better than Nabil. But C.V. of Nabil is less than HBL, which shows Nabil has consistent liquidity position than HBL.

4.1.2 Assets Management Ratios (Activity Ratio)

Assets management ratio measures the efficiency of the bank to manage its asset in profitable sector. This indicates the ability of the bank to utilize their available resources. Following ratios are discussed under this topic.

i. Loan and Advances to Total Deposit Ratio

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

We have,

$$\text{Loan and Advance to Total Deposit Ratio} = \frac{Loan\ and\ advances}{Total\ deposit}$$

Where, loan and advances includes loans, advances, cash credit, local and foreign bill purchased and discount. Total deposit includes saving, fixed, current, short deposit and others.

Table 4.7

Loan and Advances to Total Deposit Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	66.79	71.10
2	2007/08	66.59	75.13
3	2008/09	66.94	76.48
4	2009/10	73.87	71.67
5	2010/11	69.63	74.61
6	2011/12	84.08	77.11
	Total	427.9	446.1
	Mean	71.32	74.35
	S.D.	6.84	2.47
	C.V.	9.60	3.33

Source: Appendix 2 'A'

The above table no. 4.7 shows ratio of Nabil bank fluctuating trend i.e. highest in Fy 2011/12 (84.08%) and lowest in Fy 2007/08 (66.59%). HBL bank ratio is increasing

trend in first three years then after it decreased and again it increases. It has highest ratio in Fy 2011/12 i.e. 77.11 % and lowest in Fy 2006/07 i.e. 71.10%.

The mean value of Nabil bank is lower than that of HBL bank. Coefficient of variation of HBL is lower than that of Nabil bank. It shows HBL has strong position regarding the mobilization of total deposit on loan and advances and acquiring high profit.

ii. Total Investment to Total Deposit Ratio

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

We have,

$$\text{Total investment to total deposit ratio} = \frac{Total\ investment}{Total\ deposit}$$

Whereas, total investment includes investment on government securities, investment on debenture and bonds, shares in subsidiary companies, shares in other companies and other investments.

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Table 4.8

Total Investment to Total Deposit Ratio (%)

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S.N.	Fiscal year	Nabil	HBL
1	2006/07	31.93	30.43
2	2007/08	38.32	27.40
3	2008/09	31.14	21.10
4	2009/10	28.97	17.85
5	2010/11	29.34	13.56
6	2011/12	30.34	12.52
	Total	190.04	122.86
	Mean	31.67	20.48
	S.D.	3.44	7.29
	C.V.	10.85	35.58

Source: Appendix 2 'B'

Table no. 4.8 shows total mean, S.D. and C.V. of total investment to total deposit ratio of these banks.

The above table reveals that Nabil bank has fluctuating trend i.e. highest in Fy 2007/08 i.e. 38.32% and lowest in Fy 2009/10 (28.97%). But HBL ban has decreasing trend; it has ranged from 30.43% in Fy 2006/07 to 13.56% in Fy 2010/11.

The mean value of Nabil is higher than that of HBL bank i.e. 31.67 > 20.48. But C.V. of Nabil is less than that of HBL bank i.e. 10.85 < 35.58. Form the above analysis it is clear that Nabil is more successful to utilize it's deposit than HBL bank and also it has higher consistency to investment than HBL.

iii. Loan and Advances to Total Working Fund Ratio

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

We have,

$$\text{Loan and advances to total working fund ratio} = \frac{Loan\ and\ advnaces}{Total\ working\ fund}$$

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

Table 4.9

Loan and Advance to Total Working Fund (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	57.87	61.41
2	2007/08	57.04	63.75
3	2008/09	57.53	67.54
4	2009/10	62.98	64.69
5	2010/11	61.96	66.58
6	2011/12	74.00	50.50
	Total	371.38	374.47
	Mean	61.90	62.41
	S.D.	6.43	6.22
	C.V.	10.38	9.97

Source: Appendix 2 'C'

Table No. 4.9 shows the total mean, S.D. and C.V. of loan and advances to total working fund ratio of banks.

The above table shows that the loan and advances to total working fund ratio of Nabil bank is fluctuating trend i.e. highest in Fy 2011/12 (74%) and lowest in Fy 2007/08 (57.04%). HBL bank has increasing trend in Fy 2006/07 (61.77%) and Fy 2008/09 (67.54%). But it has decreased in Fy 2009/10 (64.69%) and again it increases in Fy 2010/11 (66.58%) and then decreased in Fy 2011/12 (50.50%).

Mean value of Nabil is lower than that of HBL bank i.e. 61.90 < 62.41 but C.V. of HBL is lower than Nabil bank 10.38 > 9.97. From the above analysis, we conclude that HBL bank has done better utilization fund as loan and advances for the purpose of income generation. It has lower consistency than that of Nabil bank.

iv. Investment on Government Securities to Total Working Fund Ratio

To some extend commercial banks seem to utilize its fund by purchasing government securities. Government securities are a safe medium of investment though it is not liquid as cash and balance. This ratio is very important to the extent to which the banks are successful in mobilization their total fund on different type of government securities to maximizes their income.

We have,

Investment on government securities to

$$\text{total working fund ratio} = \frac{Investment\ on\ government\ \sec urities}{Total\ working\ fund}$$

Table 4.10

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

S.N.	Fiscal year	Nabil	HBL
1	2006/07	15.44	14.42
2	2007/08	17.26	22.43
3	2008/09	12.98	17.11
4	2009/10	11.73	10.03
5	2010/11	8.39	19.19
6	2011/12	7.94	15.32
	Total	73.74	98.5
	Mean	12.29	16.42
	S.D.	3.73	4.25
	C.V.	30.35	25.89

Source: Appendix 2 'D'

Table no. 4.10 shows total mean, S.D. and C.V. of investment on government securities to total working fund ratio of these two banks.

In the above table, it shows that investment on government securities to working fund ratio of Nabil has increasing in Fy 2007/08 then after it has in decreasing trend. It has decreased from 12.98 in Fy 2008/09 and 7.94 in Fy 2011/12. But, the HBL has fluctuating trend i.e. highest in Fy 2007/08 (22.43%) and lowest in Fy 2010/11 (19.19%).

Mean ratio of HBL is higher than that of Nabil bank. C.V. of Nabil is less than HBL 30.35 > 25.89. From this analysis, we can say that HBL bank is more successful in mobilizing its funds as investment on government securities. HBL's investment policy is consistence than Nabil bank.

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

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

We have,

Investment on Shares and debentures to

total working fund ratio $= \dfrac{Investment\ on\ shares\ and\ debenture}{Total\ working\ fund}$

Where, investment on shares and debenture includes investment on debentures, bonds and share of other companies.

Table 4.11

Investment on Shares and Debentures to Total Working Fund Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	0.44	0.13
2	2007/08	1.05	0.093
3	2008/09	0.87	0.37
4	2009/10	0.81	0.27
5	2010/11	0.67	0.25
6	2011/12	0.58	0.20
Total		4.42	1.313
Mean		0.74	0.22
S.D.		0.22	0.10
C.V.		29.64	45.93

Source: Appendix 2 'E'

Table No. 4.11 shows the total mean, S.D. and C.V. of investment on shares and debentures to total working fund ratio of Nabil and HBL bank.

The above table shows the investment on shares and debenture to total working fund ratio of Nabil bank has fluctuating trend. It has highest in Fy 2007/08 (1.05) and lowest in Fy 2006/07 (0.44%). HBL bank has also in fluctuating trend i.e. highest in Fy 2008/09 (0.37) and lowest in Fy 2007/08 (6.09).

The mean value of Nabil is higher than HBL. The C.V. of Nabil is less than HBL. The above analysis shows that Nabil has invested its funds in shares and debenture more than HBL bank, we can say that Nabil's investment in shares and debentures is more consistence than HBL.

Table 4.12

Calculation of Overall Activity Ratio of Nabil Bank and HBL Bank Ltd.

Fiscal year	Nabil		HBL	
	Ratio	Index	Ratio	Index
2006/07	34.494	100	35.498	100
2007/08	36.052	104.52	37.760	106.37
2008/09	33.892	98.25	36.52	102.87
2009/10	35.672	103.42	32.902	92.68
2010/11	33.998	98.56	34.38	98.14
2011/12	39.388	114.19	31.13	87.70
Total	213.496		208.19	
Mean	35.58		34.70	
S.D.	2.06		2.42	
C.V.	5.80		6.99	

The above table no. 4.12 shows total mean, S.D. and C.V. of overall activity ratio of both banks.

The above table shows that overall activity ratio both bank has fluctuating trend as shown by index. Nabil has highest ratio in 2011/11 i.e. 114.19 and lowest in 2008/09 i.e. 98.25 HBL has highest ratio in 2007/08 i.e. 106.377 and lowest in 2011/12 i.e. 87.70.

Total mean value of HBL is higher than Nabil, which shows that HBL has utilize its assets in profitable sector than Nabil.

4.1.3 Profitability Ratios

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

The following profitability ratios are taken under this headings:

i. Return on Total Working Fund Ratio

This ratio measures the profit earning capacity of the bank by utilizing its available resources i.e. total asset. Return will be higher if the bank working fund is well managed and if efficiency is utilized.

We have,

Return on total working fund ratio = $\dfrac{Net\ profit}{Total\ working\ fund}$

Table 4.13

Return on Total Working Fund Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	2.73	1.48
2	2007/08	2.47	1.38
3	2008/09	2.01	1.59
4	2009/10	2.35	1.73
5	2010/11	2.18	2.00
6	2011/12	1.85	2.05
	Total	13.59	10.23
	Mean	2.27	1.71
	S.D.	0.32	0.27
	C.V.	14.10	16.09

Source: Appendix 3 'A'

Table no. 4.13 shows the total mean, S.D. and C.V. of return on total working fund ratio Nabil and HBL bank. IN the above table, return on total working fund ratio of Nabil has decreasing trend in Fy 2006/07 to 2008/09. Then after, it has increasing trend. The ratio of HBL bank has fluctuating trend. It has highest in Fy 2011/12 (2.05) and lowest in Fy 2007/08 (1.48).

Mean ratio of Nabil is higher than that of HBL i.e. 2.27 > 1.71. Whereas C.V. of Nabil is lower than that of HBL bank i.e. 10.14 < 16.09. From this analysis it found Nabil is successful to maintain the higher ratio in return on total working fund. It also shows than investment policy of Nabil is consistence.

ii. Return on Loan and Advance Ratio

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

$$\text{Return on loan and advances ratio} = \frac{Net\ profit}{Loan\ and\ advances}$$

Table 4.14

Return on Loan and Advances Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	2.82	2.78
2	2007/08	4.33	2.17
3	2008/09	3.49	2.35
4	2009/10	3.74	2.67
5	2010/11	3.52	3.01
6	2011/12	3.14	3.48
Total		21.04	16.46
Mean		3.51	2.74
S.D.		0.52	0.47
C.V.		14.76	17.13

Source: Appendix 3 'B'

Table no. 4.14 shows the total mean, S.D. and C.V. of return on loans and advances ratio of Nabil and HBL.

In the above table, return on loans and advances ratio of Nabil bank has fluctuating trend. It has highest in Fy 2007/08 (4.33) and 10 west in Fy 2006/07 (2.82). The ratio

of HBL bank has also in fluctuating trend. It has highest in Fy 2011/12 (3.48) and lowest in Fy 2007/08 (2.17). Mean ratio of Nabil is greater than HBL bank i.e. 3.51 > 2.74 whereas, C.V. of HBL is less than Nabil bank 14.76 < 17.13. From the above analysis, it is found that Nabil has maintained higher ratio than HBL bank, which indicates that it is successful to earn high return on its loan and advance. But C.V. of HBL is less than Nabil, which shows investment policy return of HBL bank is consistence than Nabil.

iii. Total Interest Earned on Total Working Fund Ratio

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

We have,

Total interest earned to total working fund ratio $= \dfrac{Total\ interest\ earned}{Total\ working\ fund}$

Table 4.15

Total Interest Earned to Total Working Fund Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	5.61	5.66
2	2007/08	5.83	5.33
3	2008/09	5.32	5.70
4	2009/10	6.38	5.92
5	2010/11	7.77	7.49
6	2011/12	9.60	7.71
Total		40.51	37.81
Mean		6.75	6.30
S.D.		1.64	1.03
C.V.		24.33	16.27

Source: Appendix 3 'C'

Table no. 4.15 shows the total mean, S.D. and C.V. of total interest earned to total working fund ratio of Nabil and HBL bank.

The above table shows that the ratio of interest earned to total working fund ratio of Nabil bank has increasing in Fy 2007/08 and it decreasing in Fy 2008/09 and then after it's increasing in Fy 2011/12 (9.60). HBL bank has fluctuating trend, it has highest in Fy 2011/12 (7.71) and lowest in Fy 2007/08 (5.33).

Mean ratio of Nabil bank is higher than HBL bank i.e. 6.75 > 6.30. C.V. of HBL is less than Nabil i.e. 16.27 < 24.33. From the above analysis, we can conclude that Nabil bank ratio is satisfactory than HBL. But mean ratio of HBL is consistence than Nabil bank.

iv. Total Interest Paid to Total Working Fund

This ratio measures the percentage of total interest paid against the total working fund. A high ratio indicates the highest interest expenses on total working and vice-versa.

We have,

$$\text{Total interest paid to total working fund ratio} = \frac{Total\ int\,erest\ paid}{Total\ working\ fund}$$

where, total interest paid includes total expenses on deposit liabilities, loan and advance and other deposits.

Table 4.16

Total Interest Paid to Total Working Fund Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	1.53	2.42
2	2007/08	2.03	2.41
3	2008/09	2.04	2.33
4	2009/10	2.62	2.62
5	2010/11	3.76	3.76
6	2011/12	3.20	3.44
	Total	15.18	16.98
	Mean	2.53	2.83
	S.D.	0.83	0.61
	C.V.	32.88	21.64

Source: Appendix 3 'D'

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Table no. 4.16 shows the total mean, S.D. and C.V. of total interest paid to total working fund ratio of Nabil and HBL bank.

The above table shows that the total interest paid to total working fund ratio of Nabil bank has increasing trend. It has increased from 1.53 in Fy 2006/07 to 3.76 in 2010/11. HBL bank decreased in Fy 2006/07 (2.52), to 2.33 in Fy 2.33. But it has increasing trend then after.

The mean ratio of Nabil is less than HBL i.e. 2.53 < 2.83. It means the Nabil has paid lower interest than HBL bank. But C.V. of Nabil is higher than that of HBL bank i.e. 32.88 > 21.64, which indicate that total working fund ratio is less consistence than HBL bank.

Table 4.17

Calculation of Overall Profitability Ratio of NABIL Bank and HBL Bank Ltd.

Fiscal year	Nabil		HBL	
	Ratio	Index	Ratio	Index
2006/07	3.172	100	3.085	100
2007/08	3.665	115.22	2.822	91.47
2008/09	3.215	101.35	2.992	96.98
2009/10	3.773	118.94	3.235	104.86
2010/11	4.307	135.78	4.065	131.76
2011/12	4.448	140.23	4.17	135.17
Total	22.58		20.369	
Mean	3.76		3.39	
S.D.	0.53		0.58	
C.V.	14.18		16.98	

Above table no. 4.17 shows total mean, S.D. and C.V. of overall profitability ratio of both banks.

The above table shows that overall profitability ratio of both banks has fluctuating trend. Nabil has highest in 2011/12 i.e. 140.23 and lowest in 2006/07 i.e. 100 HBL has highest in 2011/012 i.e. 135.17% and lowest in 2007/08 i.e. 91.47. The mean value of Nabil is higher than HBL, which shows that overall profitability of Nabil is better than HBL.

4.1.4 Risk Ratio

The possibility of risk makes bank's investment a challenging task. Bank has to take risk to get return on investment. It increases effectiveness and profitability of bank. If a bank expects high return on its investment, it has no accept the risk and manage it efficiently. Following ratio ahs been made to measure the level of risk.

i. Liquidity Risk Ratio

The liquidity risk ratio measure the level of risk associated with liquid assets i.e. cash, bank balance etc. that are kept in the bank for the purpose of satisfying the depositor's demand for cash. Higher the ratio, lower the liquidity risks.

We have,

$$\text{Liquidity risk ratio} = \frac{\text{Total cash and bank balance}}{\text{Total deposit}}$$

Table 4.18

Liquidity Risk Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	3.25	11.25
2	2007/08	5.99	13.15
3	2008/09	8.39	11.12
4	2009/10	9.02	18.49
5	2010/11	3.02	21.16
6	2011/12	3.40	17.97
	Total	33.076	93.14
	Mean	5.51	15.52
	S.D.	2.71	4.24
	C.V.	49.11	27.31

Source: Appendix 4 'A'

Table no. 4.18 shows the total mean, S.D. and C.V. of liquidity risk ratio of Nabil and HBL bank.

In the above table, liquidity risk ratio of Nabil bank is in increasing trend in Fy 2006/07 to 2009/10 then after it is decreasing. HBL bank has fluctuating trend it has highest in Fy 2010/11 and lowest in Fy 2008/09.

The mean ratio of Nabil is lower than that of HBL bank i.e. 5.51 < 15.52 which indicates that HBL bank's liquidity risk lower than of Nabil bank. C.V. of Nabil is also higher than HBL bank i.e. 49.11 > 27.31 which indicates HBL liquidity position is consistence than Nabil bank.

ii. Credit Risk Ratio

Credit risk ratio measures the possibility that loan will not be repaid or that investment will deteriorate inequality or go into default with consequent loss to the bank. Actually, credit risk ratio shows the proportion of non-performing assets in total loan advance of the bank.

We have,

$$\text{Credit risk ratio} = \frac{Total\ loan\ and\ advance}{Total\ assets}$$

Table 4.19

Credit Risk Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	57.87	61.41
2	2007/08	57.04	63.75
3	2008/09	57.53	67.54
4	2009/10	62.98	64.69
5	2010/11	61.96	66.58
6	2011/12	66.05	55.85
	Total	363.43	379.82
	Mean	60.57	63.30
	S.D.	3.65	4.24
	C.V.	6.03	6.70

Source: Appendix 4 'B'

Table no. 4.19 shows total mean, S.D. and C.V. of credit risk ratio of Nabil and HBL bank. The above table shows that the credit risk of these two banks are fluctuating trend. Nabil bank mentioned highest ratio in Fy 2011/12 i.e. 66.05 and lowest in Fy 2007/08 i.e. 57.04. Similarly, HBL bank has maintained highest ratio in Fy 2008/09 i.e. 67.54 and lowest in Fy 2006/07 i.e. 61.41.

Mean ratio of Nabil bank is lower than that of HBL bank i.e. 60.57 < 63.30. It indicates that HBL bank has more credit risk than Nabil bank. C.V. of Nabil is more than HBL bank i.e. 6.03< 6.70, which shows NABIL risk ratio is consistence than that of Nabil bank.

iii. Capital Risk Ratio

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

We have,

$$\text{Capital risk ratio} = \frac{Capital\,(Paid\,up\,\Gamma\,\mathrm{Re}\,serve)}{Risk\ weighted\ assets}$$

Table 4.20

Capital Risk Ratio (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	11.04	8.26
2	2007/08	10.73	8.02
3	2008/09	9.03	9.13
4	2009/10	8.99	10.01
5	2010/11	7.78	9.12
6	2011/12	7.35	9.00
Total		54.92	53.54
Mean		9.15	8.92
S.D.		1.50	0.71
C.V.		16.37	7.96

Source: Appendix 4 'C

Table no. 4.20 shows the total mean, S.D. and C.V. of capital risk ratio of these banks.

In the above table, capital risk ratio of Nabil has decreasing trend i.e. it has 11.04 in Fy 2006/07 and 7.78 in Fy 2010/11. The ratio of HBL bank are in fluctuating trend i.e. highest in Fy 2009/10 (10.01) and lowest in Fy 2007/08 (8.02).

The mean ratio of Nabil is higher than that of HBL bank i.e. 9.15 > 8.92. But C.V. of Nabil is greater than HBL bank 16.37 > 7.96. It shows that Nabil bank high capital risk ratio.

Table 4.21

Calculation of Overall Risk Ratio of Nabil Bank and HBL Bank Ltd.

Fiscal year	Nabil		HBL	
	Ratio	Index	Ratio	Index
2006/07	24.05	100	26.97	100
2007/08	24.58	102.20	28.31	104.96
2008/09	24.98	103.87	29.26	108.49
2009/10	24.99	103.91	31.01	114.97
2010/11	24.25	100.83	32.28	119.68
2011/12	25.60	106.44	27.61	102.37
Total	148.45		175.44	
Mean	24.74		29.24	
S.D.	0.57		2.05	
C.V.	2.29		7.02	

The above table 4.21 shows overall risk position of both banks. Above table shows that overall risk ratio of Nabil is increasing trend except Fy 2010/11. But HBL has increasing trend. Total mean and S.D. of HBL is higher than Nabil bank. It shows that HBL has taken high risk than Nabil bank.

4.1.5 Growth Ratio

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

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

A. Growth Ratio of Total Deposit

Table 4.22

Growth Ratio of Total Deposit (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	19347.39	13802.44
2	2007/08	23342.28	18186.25
3	2008/09	31915.05	23976.29
4	2009/10	37348.26	33322.9
5	2010/11	46340.70	36932.31
6	2011/12	4950.20	3960.34
	Growth ratio	19.09%	19.48%

Source: Appendix -5.

The above table no. 4.22 shows the growth ratio of Nabil bank is less than HBL bank i.e. 19.09 < 19.48. The above position of growth rate shows that HBL bank used to increase its deposit than Nabil bank.

ii. Growth Ratio of Loan and Advances

Table 4.23

Growth Ratio of Loan and Advances (%)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	12922.54	9801.30
2	2007/08	15545.78	13664.08
3	2008/09	21365.05	18399.08
4	2009/10	27589.93	23884.07
5	2010/11	32589.33	27556.35
6	2011/12	42268.87	32800.00
	Growth ratio	20.32%	22.97%

Source: Appendix -6.

The above table no. 23 shows the growth ratio of loan and advances. The growth rate of Nabil is less than HBL i.e. 20.32 < 22.97. This position of growth ratio indicates that the performance of HBL bank to grant loan and advances is better than that of Nabil bank.

iii. Growth Ratio of Total Investment

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Table 4.24

Growth Ratio of Total Investment (%)

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S.N.	Fiscal year	Nabil	HBL
1	2006/07	6178.53	4200.51
2	2007/08	8945.31	4984.31
3	2008/09	9939.71	5059.57
4	2009/10	10826.37	5948.48
5	2010/11	13600.91	5008.30
6	2011/12	15229.13	5028.20
	Growth ratio	17.09%	19.23%

Source: Appendix -7.

The above table no. 24 shows the growth ratio of total investment of Nabil and HBL bank. The growth ratio of total investment of Nabil is greater than HBL bank i.e. 19.23% > 17.09%. Which indicates that Nabil bank's performance is better than that of HBL.

v. Growth Ratio of Net Profit

<div align="center">

Table 4.25

Growth Ratio of Net Profit

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S.N.	Fiscal year	Nabil	HBL
1	2006/07	635.26	273.29
2	2007/08	673.59	296.40
3	2008/09	746.46	431.21
4	2009/10	1031.46	638.73
5	2010/11	1138.50	831.76
6	2011/12	1205.85	1025.75
	Growth ratio	12.38	24.93

Source: Appendix -8.

The above table 4.25 shows that growth ratio of net profit of Nabil and HBL bank. The growth ratio of Nabil is les than HBL bank i.e. $12.38\% < 24.93\%$. The above position indicates that HBL bank has better position than Nabil bank.

4.2 Statistical Analysis

4.2.1 Trend Analysis

Under this topic an effort has been made to analyze and interpret trend of deposits, loan and advance, investment and net profit of Nabil and HBL to forecast them for next five years period.

i. Trend Analysis of Total Deposit

Under this topic an efforts has been made to calculated the trend values of deposits of Nabil and HBL for six years from 2006/07 to 2011/12 and forecasted for next five years from 2012/13 to 2016/17.

Table 4.26

Trend Value of Total Deposit of Nabil and HBL

S.N.	Fiscal year	Nabil	HBL
1	2006/07	18060.18	12964.77
2	2007/08	24859.46	19104.40
3	2008/09	31658.74	25244.03
4	2009/10	38458.02	31383.66
5	2010/11	45257.14	37523.29
6	2011/12	52056.58	43662.92
7	2012/13	58855.86	49802.55
8	2013/14	65655.14	55942.18
9	2014/15	72454.42	62081.81
10	2015/16	79253.70	68221.44
11	2016/17	86052.98	74361.07

Source: Appendix -9.

Trend analysis of loans and advances, total investment and net profit are calculated accordingly.
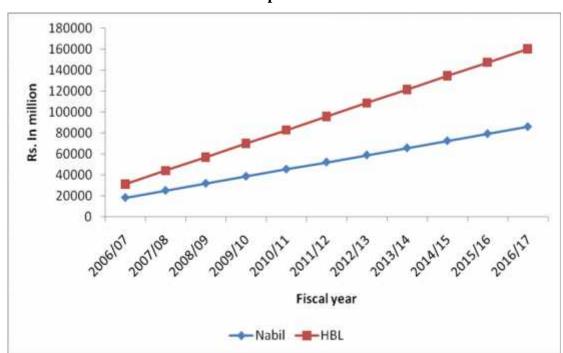
Figure 4.1

Trend Value of Total Deposit of Nabil and HBL Bank

Table 4.27 and graph 4.1 shows the trend value of total deposit from 2006/07 to 2016/17 of two banks.

Total deposits of Nabil and HBL have in the increasing trend. If all other things remain the same the total deposits of the Nabil will be highest deposit among the two banks under study period. Total deposit of HBL will be 74361.07 million. The total deposit Nabil will be 86052.98 million in 2017.

By analyzing above trend value it is found that the total deposit position collection of Nabil is better than HBL bank.

iii. Trend Analysis of Loan and Advances

Here, the trend values of loan and advances of Nabil and HBL has been calculated five years from 2006/07 to 2011/12 and forecast for next five years upto 2016/17.

Table 4.27

Trend Values of Loan and Advances of Nabil and HBL

S.N.	Fiscal year	Nabil	HBL
1	2006/07	11803.07	9502.94
2	2007/08	16864.75	14573.06
3	2008/09	21926.43	18649.09
4	2009/10	26987.43	23222.15
5	2010/11	32049.79	27795.21
6	2011/12	37111.47	32368.27
7	2012/13	42173.15	36941.33
8	2013/14	47234.83	41514.39
9	2014/15	52296.51	46087.45
10	2015/16	57358.19	50660.51
11	2016/17	62419.87	55233.57

Source: Appendix -10.

Figure No. 4.2

Trend Value of Loan and Advances of Nabil and HBL

Table no. 4.28 and figure 4.2 shows trend value of loan and advances form 2006/07 to 2016/17 of two banks. Trend value of loan and advances of two banks have been in increasing trend. Total loan and advance of Nabil will 62419.87 and HBL will be 55233.57 million. Total loan and advance of Nabil is the highest among study period.

By analyzing above trend, Nabil provides more loan and advance than HBL bank and it indicates Nabil may use large portion of its deposit in providing loan.

iii. Trend Analysis of Total Investment

Under this, an effort has been made to calculate trend values of total investment form the 2006/07 to 2011/12 have been calculated and forecasted for next five years upto 2017.

Table 4.28

Trend Value of Total Investment of Nabil and HBL

(Rs. in million)

S.N.	Fiscal year	Nabil	HBL
1	2006/07	6553.00	4536.28
2	2007/08	8225.58	4788.25
3	2008/09	9898.16	5040.23
4	2009/10	11570.74	5292.21
5	2010/11	13243.92	5544.18
6	2011/12	14916.5	5796.15
7	2012/13	16589.08	6048.13
8	2013/14	18261.66	6300.10
9	2014/15	19934.24	6552.08
10	2015/16	21606.82	6804.06
11	2016/17	23279.40	7056.04

Figure No. 4.3

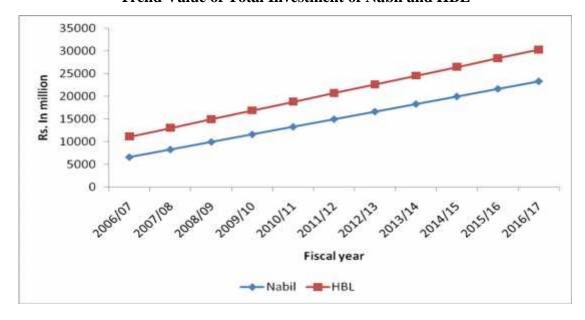**Trend Value of Total Investment of Nabil and HBL**

Table no. 4.29 and figure no. 4.3 shows trend value of total investment from 2006/07 to 2016/17 of two banks.

Total investment of Nabil and HBL have been in increasing trend. Total investment of the Nabil will be highest investment among the two banks under study period. Total investment of HBL will be 7056.04 and Nabil will be 23279.40 in 2017. The total investment trend of Nabil is satisfactory than HBL bank.

iv. Trend Analysis of Net Profit

Under this topic an effort has been made to analyze net profit of Nabil and HBL form 2006/07 to 2011/12 and forecasted for next five years 2012/13 to 2016/17.

Table 4.29

Trend Analysis of Net Profit of Nabil and HBL

S.N.	Fiscal year	Nabil	HBL
1	2006/07	572.03	180.83
2	2007/08	708.48	333.95
3	2008/09	844.92	487.07
4	2009/10	981.36	640.19
5	2010/11	1117.8	793.37
6	2011/12	1254.24	946.43
7	2012/13	1390.68	1099.55
8	2013/14	1527.12	1252.67
9	2014/15	1663.56	1405.79
10	2015/16	1800	1558.39
11	2016/17	1936.44	1711.00

Source: Appendix -11.

Figure No. 4.4

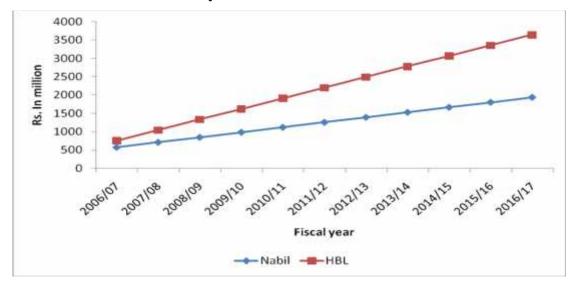**Trend Analysis of Net Profit of Nabil and HBL**

Table no. 4.30 and figure no. 4.4 shows the trend value of net profit from 2006/07 to 2016/17. Net profit of two banks have the increasing trend value. The net profit of Nabil will be 1936.44 million net profit of HBL will be 1711. Total net profit of Nabil is highest among the two banks during the study period.

4.2.2 Test of Hypothesis

The test of hypothesis disclose the fact whether the difference between the computed statistic and hypothetical parameter is significant.

Types of hypothesis:

    i.   Null hypothesis

    ii.   Alternative hypothesis

i. Null hypothesis (H_0): $\overline{X}_1 = \overline{X}_2$

    This hypothesis always rejects the difference and accepts of the assumption value and the actual value are same i.e. there is no significant difference between mean ratio of loan and advances to total deposit of Nabil and HBL bank limited.

ii. Alternative hypothesis (H_1): $\overline{X}_1 \quad \overline{X}_2$

    Complementary of null hypothesis is called alternative hypothesis i.e. there is significant difference between mean ratios of loan and advance to total deposit of Nabil and HBL bank.

    Generally, following steps are taken for test of hypothesis:

1. Formulating hypothesis
    a. Null hypothesis
    b. Alternative hypothesis
2. Computing the test statistics
3. Fixing the level of significance
4. Finding critical region
5. Making decision

In this topic t-statistics is used to find out the test of significance regarding the parameter of population on the basis of sample drawn form 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 these mean, the resulting sampling distribution would be t-test. In this study, samples are taken only for five years i.e. (6 < 30).

Assumption made for using t-test in this case are:

a. The parent populations form which samples are drawn are normally distributed.

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

Based on above assumptions, following hypothesis are tested:

1. Test of hypothesis on loan and advance to total deposit ratio between Nabil and HBL bank

We take the mean ratio of loan and advance to total deposit of Nabil and HBL bank to carry out t-test.

Table 4.30

Test of Hypothesis on Loan and Advances to Total Deposit Ratio between Nabil and HBL Bank

S.N.	Nabil	HBL
1	$|\phi X_1 = 343.82$	$\phi X_2 = 368.99$
2	$\overline{X}_1 = 68.76$	$\overline{X}_2 = 73.79$
3	$|\phi X_1^2 = 38.77$	$|\phi X_2^2 = 21.43$

Source: Appendix- 10.

Setting 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 total deposit of Nabil and HBL bank.

Alternative hypothesis (H_1): $\overline{X}_1 \quad \overline{X}_2$ (two-tailed test), i.e. there is significant difference between the mean ratios of loan and advances to total deposit of Nabil and HBL bank.

The test statistics under H_0 is

$$t = \frac{\overline{X}_1 Z \overline{X}_2}{\sqrt{S^2 \left(\dfrac{1}{n_1} \Gamma \dfrac{1}{n_2}\right)}}$$

Where, $S^2 = \dfrac{1}{n_1 \Gamma n_2 Z 2}\left(X_1^2 \Gamma X_2^2 \Gamma \right)$

$= \dfrac{1}{6 \Gamma 6 Z 2}(38.77 \Gamma 21.43)$

$= 7.525$

Now, $t = \dfrac{68.76 Z 73.79}{\sqrt{7.525 \left(\dfrac{1}{6} \Gamma \dfrac{1}{6}\right)}}$

$= -2.907$

Calculated value of $|t| = 2.907$

Tabulated value of 't' (two-tailed test) at 5% level of significance of (n_1+n_2-2) d.f. i.e. 10 d.f. is 2.306.

Decision: Since the calculated value of $|t|$ i.e. 2.907 is greater than that of tabulated value i.e. 2.306 at 5% LOS for two tailed test. Null hypothesis rejected, i.e. there is significant difference between mean ratios of loan and advance to total deposit ratio of Nabil and HBL bank.

ii. Test of Hypothesis on Total Investment to Total Deposit Ratio between Nabil and HBL

We take the mean ratio of total investment to total deposits of Nabil and HBL bank are taken and carried out under t-test of significance difference.

Table 4.31

Test of Hypothesis on Total Investment to Total Deposit Ratio between Nabil and HBL Bank

S.N.	Nabil	HBL
1	$\lvert \phi X_1 = 159.7$	$\phi X_2 = 110.34$
2	$\overline{X}_1 = 31.94$	$\overline{X}_2 = 22.068$
3	$\lvert \phi X_1^2 = 56.92$	$\lvert \phi X_2^2 = 189.47$

Source: Appendix- 10.

Setting hypothesis,

Null hypothesis (H_0): $\overline{X}_1 = \overline{X}_2$, i.e. there is no significant difference between mean ratios of total investment to total deposit of Nabil and HBL bank.

Alternative hypothesis (H_1): $\overline{X}_1 \quad \overline{X}_2$ (two-tailed test), i.e. there is significant difference between the mean ratios of total investment to total deposit of Nabil and HBL bank.

The test statistics under H_0 is

$$t = \frac{\overline{X}_1 \, Z \, \overline{X}_2}{\sqrt{S^2 \,\dfrac{1}{n_1}\, \Gamma \, \dfrac{1}{n_2}}}$$

Where, $S^2 = \dfrac{1}{n_1 \, \Gamma \, n_2 \, Z2}(\quad X_1^{\,2} \, \Gamma \quad X_2^{\,2})$

$= \dfrac{1}{6 \, \Gamma \, 6 \, Z2}(56.92 \, \Gamma \, 189.47)$

$= 30.798$

Now, $t = \dfrac{31.94 \, Z \, 22.068}{\sqrt{30.798 \,\dfrac{1}{6}\, \Gamma \, \dfrac{1}{6}}}$

$= 2.812$

Calculated value of t $= 2.812$

Tabulated value of 't' (two-tailed test) at 5% level of significance of (n_1+n_2-2) d.f. i.e. 10 d.f. is 2.306.

Decision: Since the calculated value of t i.e. 2.812 is greater than that of tabulated value i.e. 2.306 at 5% LOS for two tailed test. Null hypothesis rejected, i.e. there is significant difference between mean ratios of total investment to total deposit ratio of Nabil and HBL bank.

iii. Test of hypothesis on Government Securities to Current Assets Ratio between Nabil and HBL Bank

Here, mean ratios of government securities to current assets of Nabil and HBL bank are taken and carried out under t-test of significance difference.

Table 4.32

Test of Hypothesis on Government Securities to Current Assets Ratio between Nabil and HBL Bank

S.N.	Nabil	HBL
1	$\vert\phi X_1 = 80.18$	$\phi X_2 = 86.31$
2	$\overline{X}_1 = 16.04$	$\overline{X}_2 = 17.26$
3	$\vert\phi X_1^2 = 74.32$	$\phi X_2^2 = 98.08$

Source: Appendix- 10.

Setting hypothesis,

Null hypothesis (H_0): $\overline{X}_1 = \overline{X}_2$, i.e. there is no significant difference between mean ratios of government securities to current assets of Nabil and HBL bank.

Alternative hypothesis (H_1): $\overline{X}_1 \quad \overline{X}_2$ (two-tailed test), i.e. there is significant difference between the mean ratios of government securities to current assets of Nabil and HBL bank.

The test statistics under H_0 is

$$t = \frac{\overline{X}_1 \, Z \, \overline{X}_2}{\sqrt{S^2 \left[\dfrac{1}{n_1} \Gamma \dfrac{1}{n_2}\right]}}$$

Where, $S^2 = \dfrac{1}{n_1 \Gamma n_2 \, Z2}(\quad X_1^2 \Gamma \quad X_2^2)$

$$= \frac{1}{6 \Gamma 6 \, Z2}(74.32 \, \Gamma \, 98.08)$$

= 21.55

Now, t = $\dfrac{16.04 \, Z \, 17.26}{\sqrt{21.55 \, \dfrac{1}{6} \, \Gamma \, \dfrac{1}{6}}}$

= -0.414

Calculated value of |t| = 0.414

Tabulated value of 't' (two-tailed test) at 5% level of significance of (n_1+n_2-2) d.f. i.e. 10 d.f. is 2.306.

Decision: Since the calculated value of t i.e. 0.414 is greater than that of tabulated value i.e. 2.306 at 5% LOS for two tailed test. Null hypothesis rejected, i.e. there is significant difference between mean ratios of government securities to current assets ratio of Nabil and HBL bank.

iv. Test of Hypothesis on Loan and Advance to Current Assets between Nabil and HBL Bank

Here, mean ratio of loan and advance to current assets of Nabil and SBI bank taken and carried out under t-test of significance difference.

Table 4.33

Test of Hypothesis on Loan and Advance to Current Assets Ratio between Nabil and HBL Bank

S.N.	Nabil	HBL
1	$\|\phi X_1 = 362.76$	$\phi X_2 = 338.56$
2	$\overline{X}_1 = 72.55$	$\overline{X}_2 = 67.71$
3	$\|\phi X_1^2 = 121.86$	$\phi X_2^2 = 16.82$

Source: Appendix- 10.

Setting 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 assets of Nabil and HBL bank.

Alternative hypothesis (H_1): $\overline{X}_1 \quad \overline{X}_2$ (two-tailed test), i.e. there is significant difference between the mean ratios of loan and advance to current assets of Nabil and HBL bank.

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, $S^2 = \dfrac{1}{n_1 \, \Gamma \, n_2 \, Z \, 2}\left(\sum X_1^2 \, \Gamma \, \sum X_2^2 \right)$

$= \dfrac{1}{6 \, \Gamma \, 6 \, Z \, 2}(121.86 \, \Gamma \, 16.82)$

$= 17.33$

Now, $t = \dfrac{72.55 \, Z \, 67.71}{\sqrt{17.33 \left[\dfrac{1}{6} \, \Gamma \, \dfrac{1}{6}\right]}}$

$= 1.84$

Calculated value of $t = 1.84$

Tabulated value of 't' (two-tailed test) at 5% level of significance of (n_1+n_2-2) d.f. i.e. 10 d.f. is 2.306.

Decision: Since the calculated value of t i.e. 1.84 is greater than that of tabulated value i.e. 2.306 at 5% LOS for two tailed test. Null hypothesis rejected, i.e. there is significant difference between mean ratios of loan and advances to current assets ratios of Nabil and HBL bank.

v. Test of Hypothesis on Return on Loan and Advance Ratio between Nabil and HBL Bank

Here, mean ratio on loan and advances to Nabil and HBL bank are taken and carried out under t-test of significant difference.

Table 4.34

Test of Hypothesis on Return on Loan and Advance Ratio between Nabil and HBL Bank

S.N.	Nabil	HBL
1	$\lvert\phi X_1 = 17.9$	$\phi X_2 = 12.98$
2	$\overline{X}_1 = 3.58$	$\overline{X}_2 = 2.59$
3	$\lvert\phi X_1^2 = 1.1774$	$\phi X_2^2 = 0.4529$

Source: Appendix- 10.

Setting hypothesis,

Null hypothesis (H₀): $\overline{X}_1 = \overline{X}_2$, i.e. there is no significant difference between mean ratios of return on loan and advances of Nabil and HBL bank.

Alternative hypothesis (H₁): $\overline{X}_1 \quad \overline{X}_2$ (two-tailed test), i.e. there is significant difference between the mean ratios of return on loan and advances of current assets of Nabil and HBL bank.

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, $S^2 = \dfrac{1}{n_1 \, \Gamma \, n_2 \, Z \, 2}\left(\quad X_1{}^2 \, \Gamma \quad X_2{}^2 \right)$

$= \dfrac{1}{6 \, \Gamma \, 6 \, Z \, 2}(1.1774 \, \Gamma \, 0.4529)$

$= 0.203$

Now, $t = \dfrac{3.58 \, Z \, 2.59}{\sqrt{0.203 \; \dfrac{1}{6} \, \Gamma \, \dfrac{1}{6}}}$

$= -3.485$

Calculated value of t = 3.485

Tabulated value of 't' (two-tailed test) at 5% level of significance of (n₁+n₂-2) d.f. i.e. 10 d.f. is 2.306.

Decision: Since the calculated value of |t| i.e. 3.485 is greater than that of tabulated value i.e. 2.306 at 5% LOS for two tailed test. Null hypothesis rejected, i.e. there is significant difference between mean ratios of return on loan and advances of Nabil and HBL bank.

4.3 Major finding of the study

The main finding of the study are derived with the help of analysis of financial and statistical tools of Nabil and HBL bank are as follows.

1. Liquidity ratio

The liquidity position of Nabil and HBL bank reveals that:

) The current ratio of Nabil bank is less than HBL bank. It state HBL bank has better liquidity position than Nabil bank.

) The mean ratio of cash and bank balance to total deposit of Nabil bank is less than that of HBL bank. It state that liquidity position of HBL bank is better than Nabil bank.

) The mean ratio of cash and bank balance to current assets ratio of Nabil is less than that of HBL bank. HBL bank has higher consistency than Nabil, which indicates that HBL bank has utilized its fund more efficiently.

) The mean ratio of investment on government securities to current assets of HBL is higher than Nabil bank. It indicates the HBL bank invest its current assets in government securities more than Nabil bank.

) The mean ratio of loan & advance to current asset of Nabil bank is higher than that of HBL bank. It revels that Nabil provides more loan & advance than HBL bank.

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

2. Asset Management Ratio

The asset management of Nabil and HBL bank shows that:

) The mean ratio of loan & advance to total deposit of Nabil is lower than HBL bank. It indicates HBL has utilizing its deposit in loan & advance better than Nabil bank.

) The mean ratio of total investment to total deposit of Nabil is higher than that of HBL bank, which indicates that Nabil is successful in utilizing its deposit in a better way.

) The mean ratio of loan& advance to total working fund ratio of Nabil is lower than HBL bank, which indicates that it is utilizing its fund lower than HBL bank.

) Investment on government securities to total working fund ratio of Nabil is lower than HBL bank. It indicates that the investment policy of HBL is better to utilize its working fund.

) The mean ratio of investment on shares and debenture to total working fund of Nabil is higher than HBL bank.

3. Profitability Ratio

The profitability ratio of Nabil and HBL bank shows that:

) The mean ratio of return on total working fund ratio of Nabil is higher than HBL bank. Nabil bank is successful to maintain higher ratio investment return on total working fund.

) The mean ratio of return on loan & advance of Nabil is higher than HBL bank. It indicates it is successful to maintain higher return on loan & advance.

) The mean ratio of return on total working fund ratio of Nabil bank is higher than HBL bank. Nabil bank is successful to maintain higher ratio of investment return on total working fund.

) The mean ratio of total interest paid to total working fund of Nabil is lower than HBL bank, which means Nabil has paid low interest than HBL bank.

4. Risk ratio

The risk ratio of Nabil and HBL bank shows that:

) The mean ratio of liquidity risk of Nabil is lower than that of HBL bank.

) The mean ratio of credit risk ratio of Nabil is lower than that of HBL bank.

) Nabil has maintained higher mean ratio of capital risk than HBL bank.

From the above finding we can conclude that Nabil has average risk ratio. The bank should maintain risk against credit fund to earn high profit.

5. Growth Ratio

The growth ratio of Nabil and HBL bank shows that;

⟩ The growth ratio of total deposit of Nabil bank is lower than HBL bank, which indicates that the performance of HBL bank to collect deposit is better than Nabil bank.

⟩ The growth ratio of loan &advance of Nabil lower than HBL bank, which indicates that the performance of HBL to grant loan& advance is better than Nabil bank.

⟩ The growth ratio of total investment of Nabil is higher than HBL bank. It indicates investment policy of Nabil is better than HBL bank.

⟩ The growth ratio of net profit of Nabil is lower than HBL bank, which indicates HBL is successful to earn more profit than Nabil.

From above finding, it can be conclude that HBL bank has maintained high growth ratio in total deposit, loan & advance, net profit. Nabil has higher position in investment.

6. Trend analysis

The trend analysis of Nabil and HBL bank shows that:

⟩ The trend analysis of total deposit of Nabil and HBL bank has increasing trend. From trend analysis it is forecasted that the total deposit of Nabil will be 86052.98 million in 2017. Similarly the total deposit of HBL will be 74361.07 million in 2017. The deposit collection of Nabil is better than HBL bank.

⟩ The trend analysis of loan & advance of both banks have increasing trend. The total loan & advance of Nabil will be 62419.87 million in 2017, which is highest amount than HBL bank i.e. 55233.57 million in 2017.

⟩ Total investment of both banks has increasing trend. The total investment of Nabil will be 23279.40 million in 2017. Similarly total investment of HBL bank will be 7056.04 million in 2017. It shows total investment of Nabil is greater than HBL bank.

⟩ The net profit of two banks has increasing trend. The net profit of Nabil is higher than HBL bank i.e. 1936.44 million and 1711 million respectively.

From the above finding, it can be conclude that, Nabil may use relatively large portion of their deposit to invest in potential sectors. If it able to do so, Nabil may have better position in bankin sector.

7. Test Of Hypothesis

By analyzing the test of significant difference regarding parameter of population, it has been found that:

) There is significant different between mean ratio of loan & advance to total deposit ratio Nabil and HBL bank.

) There is significant different between mean ratio of total investment to total deposit of Nabil and HBL bank.

) There is no significant different between mean ratio of government securities to current assets of Nabil and HBL bank.

) There is no significant different between mean ratio of loan & advance to current assets ratio of Nabil and HBL bank.

) There is significant different between mean ratio of return on loan & advance ratio of Nabil and HBL bank.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

In this chapter we present the summary and conclusion drawn from the analysis of preceding chapter. Then based on the finding and conclusion we recommend certain measure for further improvement. With the help of some financial and statistical tools, the researcher has tried to analysis investment policy of concerned banks. This study may be helpful for management of the concerned bank to initiate the action to achieve the desired result.

5.1 Summary

Economic development depends upon capital formation and its proper utilization. Financial institutions collect scattered savings of the country and invest them into the most desirable and high yielding sectors of the economy to fuel the process of economic development. Commercial banks are major financial institutions, which occupy an important place in the framework of every economy because they provide capital for the development of industry, trade and business and other resource banks play a vital role in the economic development of the country. They render various services to their customers which automatically facilitate their economic and their social life. Every bank formulates an investment policy statement in order to define the objectives of bank's liquidity management and investment portfolio.

Investment refers to the conversion of money into clams on money and use of fund for productive assets. It includes the savings of resources for future benefits. In terms of banking investment, it means purchasing stock, bonds, shares, treasury bills, etc. The features of investment decisions are profit, risk, speculation and wealth. Good investment policy ensures maximum amount of investment amount of investment to all sectors with proper utilization.

Investment management of a bank is guided by the investment policy adapted by the bank. The investment policy of bank helps the investment operation of the bank to be efficient and profitable by minimizing the risk. A healthy development of any bank depends upon its investment policy. A sound investment policy of a bank is such that its fund are distributed on different types of assets with good profitability on the one hand and provides maximum safety and security to the depositors and banks other the

other hand. There are five principles of sound lending policy i.e., liquidity, profitability, safety and security, stability and diversification.

Investment policy provides guidelines to handle their investment operation smoothly ensuring maximum return with minimum exposure towards risk. Main investment of the bank is lending its collected fund in different sector of economy. Lending affects the bank's profitability and liquidity, so it is one of the crucial decisions for the commercial banks. The major source of income of a bank is interest income from loans and investments. Loan and advances provided by commercial banks are the major statements for Nepalese commercial banks. So, commercial banks have to follow their policies to utilize their funds.

In current scenario there is a very high competition in banking sector in Nepal but investment alternatives are decreasing due to political instability, insurgency, etc. so banks have to face many problems to survive in this type of environment. Every bank is following sound investment policy for a purposeful, safe and profitable investment. Development of trade, industry and business is the main ground of banks to conduct its activities and fulfill its profit making objectives. The sound investment policy helps all the banks to make profitable investment which in turn also helps to develop the economic condition of the country.

The basic objective of this study id to evaluate the investment policy adopted by NABIL and HBL and to suggest measures to improve the investment policy of the banks. The study is mainly based on secondary data from F.Y.2006/07 to 2011/2012. The data had been obtained from the annual reports and financial statements, various published reports and past period master's degree thesis related to this topic. Various financial and statistical tools are applied in this study to analyze and interpret the data and information. Under financial analysis, liquidity ratio, asset management ratio, profitability ratio, risk ratio, and growth rate have been used. Under statistical analysis, trend analysis and coefficient of correlation analysis have been used.

5.2 Conclusion

The above mentioned major finding led this study to the following conclusion.

- The liquidity position of Nabil is comparatively lower than HBL bank but it has highest loan & advance to current assets ratio.
- Nabil bank has highest ratio in investment to total deposit and lower in loan & advance to total deposit , loan & advance to total working fund, investment in government securities.
- Analyzing the profitability ratio, we found that return on total working fund and return on loan & advance, total interest earned to total working fund ratio of Nabil is higher than HBL bank. But , total interest paid to total working fund of Nabil lower than HBL bank.
- Liquidity risk ratio, credit risk ratio of Nabil is lower than HBL bank, whereas it is higher in case of capital risk.
- From growth ratio we found that, Nabil has lower growth rate in total deposit , loan& advance and net profit , but it has highest growth rate in total investment.
- From trend analysis, we found that total deposit, loan & advance, total investment and net profit of Nabil is better than HBL bank.
  Through the analysis and finding we can summarize that investment policy of Nabil is better in every sector and profitability ratio is also good. Similarly trend analysis shows that position of Nabil will be better in future. However liquidity position growth rate is not satisfactory and it has average risk ratio.

5.3 Recommendations

On the basis of above summary and conclusion, following recommendation are made:

- Commercial bank must maintain its satisfactory liquidity position to meet the credit need of its customer, however internal as well as external factor affect the liquidity position of the bank. As Nabil bank has maintained lower ratio of cash and bank balance to total deposit and current assets than HBL bank. Nabil is recommended to increase cash and bank balance to meet the requirement of cash for various purposes. HBL bank is able to maintain higher liquidity ratio but it should be careful that it's not more than required level.
- Profitability is the main indicator of the financial performance. In this study, profitability ratio of Nabil is good from the view of return. So HBL bank is

recommended to increase its interest earning capacity by investing more funds on loan & advance.

- Besides giving priority on government securities, HBL bank is recommended to invest its fund purchase of shares and debenture of other finance companies. Government securities offer lower interest rate than others.

- The growth ratio represent how well the commercial bank maintaining their economic and financial position; it is directly related to fund mobilization and investment. HBL bank growth ratio is better Nabil bank. Nabil bank is recommended to increase growth ratio into deposit, loan & advance, net profit.

- If bank expect high return on its investment, it has to accept risk. The risk taken by Nabil, capital risk is high whereas liquidity risk and credit risk is lower than HBL bank. The bank should not take high risk. Both bank should carefully analyze the risks to achieve higher return.

- In the light of growing competition in the banking sector, the business of the bank should be customer oriented. The bank is recommended to adopt new technology and services such as financial switch system (SWIFT), automatic teller machine (ATM) cards, visa electron debit card, international credit card, locker services, lending against goal and silver services, parking service, 24 hour services etc. The bank should involve in different kind of social and community development activities. The bank has been able to provide more personalized services and a better environment for its customer, it is an effective tool to attract and retain the customers.

- To get success in competitive banking environment, depositor's money must be utilized as loan and advances. The largest item of the bank in the asset side is loan and advances. If it is neglected, then it could be the main cause of liquidity crisis in the bank. Nabil's loan & advances to total deposit ratio and loan & advances to total working fund ratio is lower than HBL bank. To overcome this situation Nabil is strongly recommended to follow liberal lending policy and invest more and more percentage of total deposit and total working fund in loan & advances.

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Appendix-1

Liquidity Ratio

A. Current Ratio

Calculation of Current Ratio of Nabil and HBL

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Total current assets	17589.15	22317.48	30639.43	40493.21	39456.89	38344.22
Total current liabilities	20192.69	24917.29	34098.51	48093.36	40096.77	39039.72
Ratio (times)	0.87	0.89	0.89	0.84	0.98	0.99
HBL Bank Limited						
Total current assets	14969.5	20760.13	26174.53	35195.09	39729.72	42422.22
Total current liabilities	14699.9	18342.92	24273.53	34123.78	38152.59	39152.59
Ratio (times)	1.02	1.13	1.08	1.03	1.04	1.08

B. Cash and Bank Balance to Total Deposit Ratio

Calculation of cash and bank balance to total deposit ratio of Nabil and HBL bank.

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Cash and bank balance	630.24	1399.83	2671.14	3372.51	1400.09	1429.22
Total deposit	19347.39	23342.28	39915.05	37348.26	46340.70	49250.80
Ratio (%)	3.25	5.99	8.37	9.02	3.02	2.90

HBL Bank Limited						
Cash and bank balance	1522.96	2391.42	2667.97	6164.37	7818.81	8010.20
Total deposit	13802.44	18186.25	23976.29	33322.9	36932.31	39960.32
Ratio (%)	11.03	13.14	11.13	18.49	21.17	20.04

Source: Annual report of Nabil and HBL.

C. Cash and Bank Balance to Current Assets Ratio

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Cash and bank balance	630.24	1399.83	2671.14	3372.51	1400.09	1588.08
Current assets	17589.15	22317.48	30635.51	40493.21	39456.89	40499.08
Ratio (%)	3.58	6.27	8.72	8.32	3.55	3.92
HBL Bank Limited						
Cash and bank balance	1522.96	2391.42	2667.97	6164.37	7818.81	8812.88
Current assets	14969.9	20760.13	26174.53	35195.09	39729.72	40100.00
Ratio (%)	10.17	11.51	10.19	17.51	19.68	21.97

Source: Annual report of Nabil and HBL.

D. Investment on Government Securities to Current Assets Ratio

Calculation of government securities to current assets ratio of Nabil and HBL bank

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Government securities	3448.62	4704.63	4821.60	5146.05	4354.35	4450.33
Current assets	17589.15	22317.48	30635.51	40493.21	39456.89	40200.00
Ratio (%)	19.61	21.08	15.74	12.71	11.04	11.07
HBL Bank Limited						

Government securities	2301.46	4808.35	4646.88	3706.10	7941.56	8221.56
Current assets	14969.9	20760.13	26174.53	35195.09	39729.72	49500.00
Ratio (%)	15.37	23.16	17.75	10.05	19.98	16.60

Source: Annual report of Nabil and HBL.

E. Investment on Loan and Advances to Current Assets Ratio

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Loan and advances	12922.54	15545.78	21365.05	27589.93	32268.87	42268.87
Current assets	17589.15	22317.48	30635.51	40493.21	39456.89	49881.88
Ratio (%)	73.46	69.65	69.74	68.13	81.78	84.73
HBL Bank Limited						
Loan and advances	9801.31	13664.08	18339.08	23884.73	27556.35	32800.00
Current assets	14969.9	20760.13	26174.53	35195.09	39729.72	43221.72
Ratio (%)	65.47	65.82	70.06	67.86	69.35	78.20

Source: Annual report of Nabil and HBL.

Appendix-2

Assets Management Ratio (Activity Ratio)

A Loan and Advance to Total Deposit Ratio

Calculation of Loan and Advances to Total Deposit Ratio

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Loan and advances	12922.54	15545.78	21365.05	27589.93	32268.87	43320.02
Total deposit	19347.39	23342.28	31315.05	37348.26	46340.70	51520.35
Ratio (%)	66.79	66.59	66.94	73.87	69.63	84.08
HBL Bank Limited						
Loan and advances	9801.31	13664.08	18339.08	23884.73	27556.35	31251.21
Total deposit	13802.44	18186.25	23976.29	33322.9	36932.31	40523.15
Ratio (%)	71.10	75.13	76.48	71.67	74.61	77.11

Source: Annual report of Nabil and HBL.

B. Total Investment to Total Deposit Ratio

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Total investment	6178.53	8945.31	9939.71	10826.37	13600.91	15229.13
Total deposit	19347.39	23342.28	31915.05	37348.26	46340.70	50183.15
Ratio (%)	31.93	38.32	31.14	28.97	29.34	30.34

HBL Bank Limited						
Total investment	4200.51	4984.31	5059.57	5948.49	5008.30	5028.20
Total deposit	13802.44	18186.25	23976.29	33322.9	36932.33	40152.51
Ratio (%)	30.43	27.40	21.10	17.85	13.56	12.52

Source: Annual report of Nabil and HBL.

C. Loan and Advances to Total Working Fund

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Total investment	12922.54	15545.78	21365.05	27589.93	32268.87	49873.11
Total deposit	22329.97	27253.39	37132.75	43867.39	52079.72	67394.21
Ratio (%)	57.87	57.04	57.53	62.98	61.96	74.00
HBL Bank Limited						
Total investment	9801.30	13664.08	18339.08	23884.67	27556.35	30112.35
Total deposit	15959.28	21432.57	27149.34	36916.84	41382.76	59620.72
Ratio (%)	61.41	63.75	67.54	64.69	66.58	50.50

Source: Annual report of Nabil and HBL.

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

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Investment on government securities	3448.62	4704.63	4821.60	5146.05	4354.35	5023.25
Total working fund	22329.97	27253.39	37132.75	43867.39	52079.72	63201.87
Ratio (%)	15.44	17.26	12.98	11.73	8.39	7.94
HBL Bank Limited						
Investment on government	2301.46	4808.35	4808.35	3706.10	7941.56	8015.15

securities						
Total working fund	15959.28	21432.57	21432.57	36916.84	41382.76	52301.87
Ratio (%)	14.42	22.43	22.43	10.03	19.19	15.32

Source: Annual report of Nabil and HBL.

E. Investment on Shares and Debenture to Working Fund Ratio

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Investment on shares and debentures	104.19	286.95	323.23	354.93	346.85	359.75
Working fund	23329.97	27253.39	37132.75	43867.39	52079.72	61560.55
Ratio (%)	0.44	1.05	0.87	0.81	0.67	0.58
HBL Bank Limited						
Investment on shares and debentures	19.88	19.88	101.15	102.03	102.03	103.01
Working fund	15959.28	21432.57	27149.34	36916.84	41382.76	51520.67
Ratio (%)	0.13	0.093	0.37	0.27	0.25	0.20

Source: Annual report of Nabil and HBL.

Appendix-3

Profitability Ratio

A. Return on Total Working Fund Ratio

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Net profit	635.26	673.59	746.46	1031.05	1138.57	1205.85
Total working fund	23329.97	27253.39	37132.75	43867.39	52079.72	65038.15
Ratio (%)	2.73	2.47	2.01	2.35	2.18	1.85
HBL Bank Limited						
Net profit	237.29	296.40	451.21	638.73	831.76	1025.75
Total working fund	15959.28	21432.57	27149.34	36916.84	41382.76	50012.86
Ratio (%)	1.48	1.38	1.59	1.73	2.00	2.05

Source: Annual report of Nabil and HBL.

B. Return on Loan and Advances Ratio

Calculation of Return on Loans and Advances Ratio of Nabil and HBL

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Net profit	635.26	673.59	746.46	1031.46	1138.50	1258.41
Loan and advances	12922.54	15545.78	21365.05	27589.93	32268.87	40028.78
Ratio (%)	2.82	4.33	3.49	3.74	3.52	3.14

HBL Bank Limited						
Net profit	273.29	296.40	431.21	638.73	831.76	1022.52
Loan and advances	9801.30	13664.68	18339.08	23884.67	27556.35	29352.25
Ratio (%)	2.78	2.17	2.35	2.67	3.01	3.48

Source: Annual report of Nabil and HBL.

C. Total Interest Earned to Total Working Fund Calculation

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Total interest earned	1309.99	1587.75	1978.69	2798.48	4047.72	6102.71
Working fund	23329.97	27253.39	37132.75	43867.39	52079.73	63514.67
Ratio (%)	5.61	5.83	5.32	6.38	7.77	9.60
HBL Bank Limited						
Total interest earned	903.41	1144.40	1548.65	2186.81	3102.45	4023.23
Working fund	15959.28	21432.57	27149.34	36916.84	41382.76	52169.16
Ratio (%)	5.66	5.33	5.70	5.92	7.49	7.71

Source: Annual report of Nabil and HBL.

D. Total Interest Paid to Total Working Fund

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Total interest paid	357.16	555.71	758.43	11536.28	1960.10	2019.51
Total working fund	23329.97	27253.39	37132.75	43867.39	52079.72	63092.12
Ratio (%)	1.53	2.03	2.04	2.62	3.76	3.20
HBL Bank Limited						
Total interest paid	401.39	517.16	632.61	1012.87	1572.79	2039.54

Total working fund	15959.28	21432.57	27149.34	36916.84	41382.76	59230.16
Ratio (%)	2.52	2.41	2.33	2.74	3.80	3.44

Source: Annual report of Nabil and HBL.

Risk Ratios

A. Liquidity Risk Ratio

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Cash and bank balance	630.23	1399.82	2671.14	3372.51	1400.09	2001.15
Total deposit	19347.36	23342.28	31915.05	37348.26	46340.70	58760.80
Ratio (%)	3.25	5.99	8.36	9.02	3.202	3.40
HBL Bank Limited						
Cash and bank balance	1552.96	2391.42	2667.97	6164.37	6164.37	7192.25
Total deposit	13802.44	18186.25	23976.29	33322.9	33322.9	4012.70
Ratio (%)	11.25	13.15	11.12	18.49	18.49	17.97

Source: Annual report of Nabil and HBL.

B. Credit Risk Ratio

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Loan and advance	12922.54	15545.78	21365.05	27589.93	32268.87	43125.76
Total assets	23329.97	27253.39	37132.75	43867.39	52079.72	65291.39
Ratio (%)	57.87	57.04	57.53	62.98	61.96	66.05
HBL Bank Limited						

Loan and advance	9801.30	13664.08	18339.08	23884.67	27556.35	30151.21
Total assets	15959.28	21432.57	27149.34	36916.84	41382.76	53986.15
Ratio (%)	61.41	63.75	67.54	64.69	66.58	55.85

Source: Annual report of Nabil and HBL.

C. Calculation Capital Risk Ratio

Particulars	Fiscal year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nabil Bank						
Capital	1874.99	2057.04	2439.19	3130.23	3254.57	3912.62
Risk weighted assets	16976.36	19166.76	27010.56	34816.50	41822.66	53230.54
Ratio (%)	11.04	10.73	9.03	8.99	7.78	7.35
HBL Bank Limited						
Capital	932.8	1201.51	1921.23	2203.62	2509.99	2713.39
Risk weighted assets	11291.13	14976.73	21039.87	22003.84	27499.89	30115.98
Ratio (%)	8.26	8.02	9.13	10.01	9.12	9.00

Source: Annual report of Nabil and HBL.

<div align="center">**Appendix-5**</div>

A. Growth Ratio of Total Deposit

Calculation of Growth Ratio

Let,

Dn = Variable in 5th year

Do = Variable in initial year

n = No. of period study

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

Nabil Bank

$D_{2011/12} = D_{2006/07}\ (1+g)^{6-1}$

$46340.70 = 19347.39\ (1+g)^{6-1}$

$2.3951 = (1+g)^{5}$

$1+g = (2.3951)^{1/5}$

$g = (2.3951)^{1/5} - 1$

$= 19.09\%$

HBL bank

$D_{2011/12} = D_{2006/07}\ (1+g)^{6-1}$

$27499.89 = 11291.13\ (1+g)^{6-1}$

$$1+g = \left[\frac{27499.89}{11291.13}\right]^{1/5}$$

$g = 19.48\%$

Growth Ratio of Loan and Advances

Nabil Bank

$D_{2010/11} = D_{2006/07} (1+g)^{6-1}$

$32589.93 = 12922.54 (1+g)^{6-1}$

$$g = \left[\frac{32589.93}{12922.54} \right]^{1/5} Z1$$

$= 20.32\%$

HBL Bank

$D_{2011/12} = D_{2006/07} (1+g)^{6-1}$

$27556.35 = 9801.30 (1+g)^{6-1}$

$$g = \left[\frac{27556.35}{9801.30} \right]^{1/5} Z1$$

$= 22.97\%$

Nabil Bank

$D_n = D_0 (1+g)^{n-1}$

$13600.91 = 6178.53 (1+g)^{6-1}$

$$g = \left(\frac{13600.91}{6178.53}\right)^{1/5} Z1$$

$= 17.09\%$

HBL Bank

$D_n = D_0 (1+g)^{n-1}$

$5008.30 = 4200.51 (1+g)^{6-1}$

$$g = \left(\frac{5008.30}{4200.51}\right)^{1/5} Z1$$

$= 19.23\%$

Nabil Bank

$D_n = D_0 (1+g)^{n-1}$

$1138.50 = 635.26 (1+g)^{6-1}$

$$g = \left[\frac{1138.50}{635.26}\right]^{1/5} - 1$$

= 12.38 %

HBL Bank

$D_n = D_0 (1+g)^{n-1}$

$831.76 = 273.29 (1+g)^{6-1}$

$$g = \left[\frac{831.76}{273.29}\right]^{1/5} - 1$$

= 24.93%

Appendix-9

Trend Analysis

Sample Calculation of Trend Analysis Trend Analysis of Total Deposit

Nabil Bank

Rs. in million

Year (t)	Total deposit (y)	x = t- 2008	x^2	xy	Yc = a + bx
2006/07	19347.39	-2	4	-38694.78	18060.18
2007/08	23342.28	-1	1	-23342.28	24799.46
2008/09	31915.05	0	0	0	31658.74
2009/10	3734826	1	1	37348.26	38458.02
2010/11	46340.70	2	4	92681.4	45257.14
2011/12	4950.20	3	9	14850.6	52056.23
N = 6	ϕy = 158293.68	ϕx = 0	ϕx^2 = 19	ϕxy = 67992.88	

$$a = \frac{y}{N} \text{ X} \frac{158293.68}{6} = 31658.74$$

$$b = \frac{xy}{x^2} \text{ X} \frac{67992.88}{19} = 6799.28$$

Project rend value of total deposit for next five years

Year (t)	x = t − 2008	Yc = a + bx
2012/13	4	58855.86

2013/14	5	65655.14
2014/15	6	72454.42
2015/16	7	79253.70
2016/17	8	86052.98

HBL Bank

Year (t)	Total deposit (y)	x = t- 2008	x^2	xy	Yc = a + bx
2006/07	13802.44	-2	4	-27604.88	12964.77
2007/08	18186.25	-1	1	-18186.25	19104.4
2008/09	23976.29	0	0	0	25244.03
2009/10	33322.9	1	1	33322.9	31383.66
2010/11	36932.31	2	4	73864.62	37523.29
2011/12	3960.34	3	9	11881.02	43662.92
N = 5	$\phi y =$	$\phi x = 0$	$\phi x^2 = 19$	$\phi xy =$	

$$a = \frac{y}{N} \, X \frac{126220.19}{6} = 25244.03$$

$$b = \frac{xy}{x^2} \, X \frac{61396.39}{19} = 6139.63$$

Project rend value of total deposit for next five years

Year (t)	x = t – 2008	Yc = a + bx
2012/13	4	49802.55
2013/14	5	55942.18
2014/15	6	62081.81
2015/16	7	68221.44
2016/17	8	74361.07

Trend analysis of loans advances, total investment and net profit are calculated accordingly.

Calculation of Hypothesis on Loan and Advances to Total Deposit Ratio of Nabil and HBL Bank

Fiscal year	Nabil			HBL		
	X_1	$x_1 (X_1 - \overline{X}_1)$	x_1^2	X_2	$x_2 (X_2 - \overline{X}_2)$	x_2^2
2006/07	66.79	-1.974	3.8966	71.10	-2.698	7.2792
2007/08	66.59	-2.174	4.7262	75.13	1.332	1.7742
2008/09	66.94	-1.824	3.3269	76.48	-2.682	7.1931
2009/10	73.87	5.106	26.0712	71.67	-2.128	4.5283
2010/11	69.63	0.866	0.7499	74.61	0.812	0.6593
2011/12	84.08	1.316	1.7318	77.11	3.312	10.96
N = 6	ϕX_1 = 343.82	ϕx_1 = 0		ϕx_2 =	ϕx_2 = 0	

Here,

$$\overline{X}_1 = \frac{x_1}{n} \qquad\qquad\qquad \overline{X}_2 = \frac{x_2}{n}$$

$$= \frac{343.82}{6} \qquad\qquad\qquad = \frac{368.99}{6}$$

$$= 68.764 \qquad\qquad\qquad = 73.798$$

Test of significance of different between (other ratios) Nabil and HBL bank are calculated accordingly.