

CHAPTER – I

INTRODUCTION

1.1 Background

An Investment involves the sacrifice of current rupees for future rupees. The sacrifice takes place in present and certain but the reward comes later and uncertain.

Modern Business organizations are facing significant challenges. Environmental changes are take place due to globalization, advance information technology, political and economic grouping and socio cultural shifts. Globalization has brought competition every where. The world is becoming one big market. Increasing size of organization has increased complexity and diversity.

Such changes are having far reaching impact on business environment. They are creating conditions of highly competition that creates constant disequilibrium and change. Business organization cannot effectively cope with the emerging challenges through short term horizon. They need a good investment strategic orientation for a long term future direction to achieving their goal.

Nepal is classified as a least developed country on account of low per capital income of \$ 270, low indicator of social infrastructure and low productivity in GDP. Poverty in Nepal is wide spread with above 33% of population living below the poverty line. Segment of the poor and hardcore poor barely eking out subsistence on fragile, vulnerable ecosystem; and large areas of the country lack even the most basic infrastructure. And there are wide variations in poverty levels based on rural-urban divide, geography, gender, ethnic groups and occupational castes. Combating with poverty has been the greatest challenges in the development process of the country. Economic growth is the most important factor influencing poverty. Key objectives of a country's poverty reducing strategy should be to establish conditions that facilitate private sector investment.

Investment policy is an Important ingredient of overall National Economic Development because it ensure efficient and allocation of funds to achieve the material economic well being of the society as a whole. It may reduced poverty levels and decline variation between rural-urban groups.

Commercial banks are important part of Financial Institution that plays crucial role in a process of economic growth. Banks are the heart of financial institute whose main function is collecting money and lending them as a capital. Through financial institute scattered and unorganized money formulate huge capital.

Financial Institute involve banks, saving and loan companies, credit unions etc. Especially commercial Banks play significant role for socio-economic development of nation as soon as economic life of people. Generally banks accept deposits from their customer and provide the loans to the concern people under certain term and condition. This process is necessary to supply money and capital in course of economic development

Commercial Banks formulate sound investment policy to make more effective, which eventually contribute to the economic growth of a country. The sound investment policy helps achieving the own objective of profit maximization and social welfare formulation on society.

The role of commercial banks in economy is obviously prime requisite in the formulation of bank's policy. A key factor in the development in the country is mobilization of domestic resources and their investment for productive use to the various sectors like as industry, trade, business, hydropower, agriculture and real estate.

Commercial Banks should be careful while performing the credit creation function. Banks should ensure minimum risk and maximum profit form lending. Nepalese commercial banks lag for behind fulfilling the responsibility to invest in the crucial sectors of the economy for the enlistment of the national economy. So the problem has become very serious one in developing country like Nepal, Which can be solved through formulation of sound investment policy with proper equilibrium investment arrangement. Banks are to be considered not as dealers in money but also as the leaders of economic development.

Some studied have suggested that there is a positive relation between economic development and commercial Banking function. Commercial banks occupied more capital market and flow in several sector, so its investing decision should effect on GDP and upgrade the economic status of the country. Commercial Banks formulate sound investment policy, which contribute to economic growth. By formulating sound investment policies and co-ordination and planned efforts depend the growth of particulate Banks and all over society. In this regards, commercial bank's investment policy is also a push drive to achieve priority of industries in the context of Nepal's economic development. Therefore in this list, the study of Investment policy of commercial Banks is special importance.

If some one invests some funds today; he will get financial benefit in future by mobilization of funds. The value in future increase than current value, So the expected change in price during the period and for the uncertainty involved icon cash flow, so it clear that investment is the utilization of funds today with expected additional return in future but return sometimes may be Negative also.

1.2 Rational of the study

After the restoration of democracy on 1990 in country, the government moves towards liberalization and privatization which provide broad based investing environment. So the private sector can make a meaningful contribution to economic growth. After 1990 privatization, trade liberalization, banking and financial sector reform policy adopted by the government, as a result many Banks and financial institutes are opened. The continuing through to the private sector in the process of national development has helped by operating many commercial banks, financial institute, industries under joint venture arrangement. Banks are needed for the transaction of money, capital formation and various economic activities. In this connection, bank is helpful for the extension of economy activities in an economy of the country.

Public depositary and credit creation are a main function of commercial Banks.

A deeply and thorough study of joint venture banks about what contribution in National GDP, in per capital income and poverty minimization in present situation is always necessary and acceptable. Therefore, a thesis in investment policy of commercial banks is attempted in this fieldwork.

This thesis might be somewhat limited because it is concentrated in only two commercial Banks of Nepal that is HBL and LBL.

1.3 profiles of concerned Banks

After the restoration of multiparty democracy system, many bank and financial institute have been coming up in the country. But this research is concerned taking only two commercial banks Himalayan bank limited and Lumbiny bank limited.

Himalayan Bank Ltd. (HBL)

Himalayan Bank Ltd, the commercial bank was established in 2049 BS with the beginning of a new wave of banking on Nepal. Habib Bank limited, Pakistan as the initial joint venture partner with 20% equity investment. Up to date the bank has altogether 29 branches and 46 ATM center

Capital structure of HBL

	(NPRs in million)
a. Authorize share capital	2000.00
b. Issued share capital	1216.21
c. Paid up share capital	1216.21

Shareholder pattern

a. Habib Bank Ltd, Pakistan	20.00 %
b. Employees provident Funds	14.00 %
c. N. Trading Com. pvt. Ltd.	12.71 %
d. Mutual Trading Com. Pvt. Ltd.	12.62 %
e. Aavha International pvt. Ltd.	11.38 %
f. Group of other companies	14.29 %
g. General public	15.00 %

Lumbini Bank Limited (LBL)

It is one of the domestic commercial bank established in 2055 BS. It has no foreign investment; all the shares are owned by Nepalese shareholders. Now The banks has altogether 5 branches all over the country.

Capital Structure of LBL

	(NPRs in million)
a. Authorize share capital	1600.00
b. Issued share capital	1300.00
c. Paid up share capital	1000.00

Shareholder pattern

a. Employees provident Funds	14.55 %
b. Mangal Kalas Housing com. Pvt. Ltd.	12.08 %
c. Group of other companies	39.37 %
d. General public and Employees	34.00 %

1.4 Statement of the problem

The liberalization and deregulation process of the 90s opened door for private enterprises in banking, making it more accessible and affordable to the common people. The process of opening up the banking sector began in the mid 80s. The new banking act give ground for foreign banks to enter Nepal as a joint venture. The main motives behind bringing joint ventures were to bring foreign technology and skills in Nepali banking sector. As of now, 26 commercial banks, 63 development banks and 77 finance companies are in operation. Additionally, there are 15 micro- finance institutions, 16 cooperatives and 45 non-government organizations licensed by Nepal Rastra Bank (NRB) to provide deposits and credits. The NRB data show the number of branches of financial institutions had reached 1167 by the end of the last fiscal year. High number of Banks in market they collect a lot of deposit but they suffered limited lending opportunities.

Now commercial banks have started facing the heat to rising interest rate to cope with liquidity crisis. Banks have to offer higher interest rates than another banks to attract deposit. They are also facing pressure from Nepal Rastra Bank to reduce their loan exposure in real estate up to 25 % of total deposit. There will be around 400 billion available for investment in this sector. NRB also directed commercial banks to increase their capital adequacy ratio if their liquid assets fall below 20 % of total deposit. This framework required banks to categories an additional 0.5 % of total deposits as risk weighted assets in case their liquid assets remain below 20 %. The banking sector is facing actual liquidity problem so the commercial banks mulling over hiking interest rate on lending. Since interest rate on deposit is increasing, there is pressure on the banks to increase interest rate in lending. Liquidity crunch in the market and high rate of institutional investors have forced the commercial banks to increase interest rates in deposits.

Nepalese commercial banks have not formulated their investment policy in an organize manner. There are various problems in resources mobilization by financial institute in Nepal. The major problem is poor investment climate prevailing in stringent directives; unsecured social environment etc. Commercial banks invest their funds in limited areas to achieve highest mount of profit. They are found to be more interested in investment in less risky and highly liquidity sectors like in T-Bills, development bonds, retail and consumer lending. There is an obvious hesitation to invest on long-term project and in venture capital investment. Many of them follow conservative and un-effective investment policy. As with everything in Nepal, every commercial bank has an investment in the same sector. But given the current situation of the country, it is not up to them to decide which sector they want to go into. The lust for power among political parties has made Nepal one of the most political unstable countries in the world. Now banking sector feel assured that, due to the continuation of policies, their investment won't be at risk because of sudden change in economic policies due to change in national government, this condition will lead the commercial banks to the position of uncertainty.

Currently, Nepalese economy is in dire straits. The banking sector is facing deep liquidity crisis, remittance growth- a major saving grace to domestic economy is plateauing, trade deficit is rising exponentially, foreign exchange reserves are depleting, balance of payment (BOP) is in record deficit, manufacturing sector is stagnating, agriculture sector is stagnation, inflation is high, and the list goes on and on. Flowing loan without insufficient collateral, overvaluation of goods pledge, land and building, risk averting decision regarding loan recovery and negligence in recovery of overdue loan are some of the basic lapse and the result of unsound investment policy sighted in the banks.

The main focus of this study will be towards the investment practice of commercial banks. The problems specially related to investment function of two commercial banks, Himalayan Bank ltd. and Lumbini Bank ltd.

- a. What is the relation of investment and loan & advance with total deposit and total net profit of Himalayan Bank & comparing its performance with Lumbini Bank?
- b. What is the liquidity, profitability, efficiency of asset management and risk position of HBL in compression to Lumbiny?
- c. What is the trend of deposit collection mobilization and investment of funds of two Banks?
- d. What is the effect of investment decision on profitability position and its projection?
- e. Is HBL investment policy more effective and efficient than that of LBL?

1.5 Objective of the Study

The basic objective of the study is to review the investment policy adopted by two commercial banks that is Himalayan Bank ltd. & Lumbini Bank ltd.

- a. To analyze the utilization of available funds of HBL and LBL.
- b. To evaluate the liquidity management, profitability condition and assets management of those Banks.
- c. To find out the relationship between deposit, loan and advance, total investment and out side assets.
- d. To make a comparative study of funds mobilization, trend of deposit collection, net profit and its projection.
- e. To provide suggestions to improve lending performance of HBL and LBL based on the finding of the study.

1.6 Limitation of the Study

This study will be limited by the following factors:

- a. The study will cover only the last 5 fiscal years data i.e. 2004/005 to 2008/009
- b. This study is based on secondary data.
- c. Only two Banks HBL and LBL are taken as sample for study.
- d. However there are many elements affect investment decision but this study concern only those factor, which are related with Investment.

1.7 Research Methodology

Research methodology is the procedure followed to solve about research problem systematically. Therefore, research methodology refers to the research methods used in the study, in other words; research methodology is the process of arriving at the solution of problem through planned and systematic dealing with collecting, analysis and interpretation of fact and figure.

The study is based on secondary data. The methods of analysis and research methodology is depends up on the data available from HBL and LBL financial document such as balance sheet, profit and loss a/c and related journal . The research is less descriptive but more prescriptive.

1.8 Design of the study

This study has been organized in to the following chapters:

Chapter one, introduction chapter deals with the general background of the study related subject matter. This chapter consists of the statement of the problem, objective of the study, need and important of the study and limitation of the study.

Second chapter literature review deals with review of literature. It included review of books, journals, articles and previous unpublished Master degree dissertation etc.

Chapter three deals with research methodology adopted to achieve the objectives of the study. It includes research design, population and sample, method of data analysis and research.

Chapter four is the heart of the study. This chapter deals with presentation and analysis of relevant date and information through a definite course of research methodology and drawing major findings.

The fifth chapters summarize the whole study. Moreover, it draws the conclusions and forwards the recommendation for the improvement of Investment policy management of Himalayan Bank ltd and Lumbini bank ltd.

At last, an appendix has been included according to the test of relationship between various variables of Investment decision and a bibliography has also been included.

CHAPTER – II

REVIEW OF LITERATURE

This section on review of literature to know what others have done related to investment policy of commercial banks of Nepal. Reviewing and studying process have helps to take adequate feed back to broaden the information base and inputs to project work of " Investment policy of commercial banks ". The past knowledge or previous study should not be ignored as it provides foundation to the present study. Relevant review of different authors, research scholars, etc. is provided in the following order.

2.1 Conceptual Framework

2.1.1 Commercial Banks

Commercial banks are the heart of financial system so they play an important role in the economic development of the country. They are established for profit earning motives. Commercial banks are those banks, usually in the private sector, which accept deposits on varying terms including demand deposit and lend to private sector business. It usually receives short-term and middle-term deposit and advance short-term loans. Commercial banks are those banks that pool together the saving of the community and arrange for their productive use. Commercial bank is a corporation, which accepts demand deposit subject to check and makes short-term loans to business enterprises, regardless of the scope of its other services. Commercial banks are restricted to invest their funds in corporate securities. They can't finance in fixed assets. They grant loans in the form of cash credits and overdrafts. A part from financing they also render services like collection of bills and cheques.

2.1.2 Joint venture Banks

Joint venture is the joining of two or more enterprises for the purpose of carrying out a specific operation investment, production or trade. The main purpose of the joint venture is to join economic forces in order to achieve desired goal. In order a business organization under joint venture basis, there should be at least two partners from two different sectors.

Joint venture banks are such types of institutions that deal with money and substitute of money. They collect fund form different parts in the form of deposits for advancing to others for expenditure. Joint venture banks plays major role to

search new field of lending so that they can mobilize their funds as much as possible.

2.1.3 INVESTMENT

A. Definition

“Investment in its broadest sense means the sacrifice of certain present value for future values.” He says the investment is the venture that the return is uncertain. So the banks should look for the safe and less risky investment. (*Sharpe & Alexander, 1998*)

Banks are those institutions which accept deposit from the public in term provide credit to trade, business and industry that directly makes a remarkable impact on the economic development of a country. To collect funds and convert as a good investment is a very risky job. Hence a sound investment policy is another secret of a successful bank. (*Bhalla & Tutesa, 1999*)

An investment is a commitment of money that is expected to generate additional money. Every investment entails some degree of risk, it requires a present certain sacrifice for a future uncertain benefit. (*Francis, 1999*)

In his view, investment of funds in various asset is only a part of the overall financial decision making and planning that most individuals must do. Before investing, each individual should develop an overall financial plan. Such a plan will typically include the decision of whether to purchase a house; major investment for most individuals. (*Charles, 2000*)

B. Importance of Investment Decision

Investment decision is very important because it influence the firms growth in long term, affect the risk of the firm require the large amount of funds, difficult decision to make. It is important to note that investment in the long term assets invariably require funds to be tied up in the current assets such as inventories and receivable. The firm’s investment decision generally includes expansion, acquisition, modernization and replacement of long term assets.

D) Growth: The effects of investment decisions extend into the future and have to be endured for a longer period than consequences of the current operation expenditure. A firm’s decision to invest in long term assets has a decisive influence on the rate and direction of its growth. Wrong decision can prove disastrous for the continued survival of the firm’s on the other hand inadequate investment in assets will make it difficult for the firm to complete successfully and maintain its market share.

II) Funding: Investment decision generally involve large amount of funds which make it imperative for the firm to plan its investment programmers very carefully and make an advance arrangement for procuring finances internally or externally.

III) Risk: A long term commitment of funds may also change the risk complexity of the firm. The adoption of an investment increases average gain but cause frequent fluctuations in its earnings the firm will become more risky. Thus investment decisions shape the basic character of a firm.

IV) Complexity: Investment decision is among the firms most difficult decisions. They are an assessment of future events which are difficult to predict. It is really a complex problem to correctly estimate the future cash flow of an investment uncertainty in cash flow is caused by economic, political, social and technological forces.

C. Types of Investment Decision

Investment is classified in two ways which are a follows:

- 1. I) Expansion of existing business**
- II) Expansion of new business**
- III) Replacement and modernization**

A company may add capacity to its existing product or service line to expand existing operations is known as the investment on expansion of existing business. For example, a bank may increase its branches.

A company will invest in new sectors whether to produce goods or services is known as the investment on expansion of new business. Expansion of new business is concerned with quite new business for the company. For example, if a toothpaste manufacturing company may starts to produce cream with in the firm is known expansion of new business.

Main objectives of replacement and modernization are to improve operation efficiency and reduce cost. When assets become outdated and obsolete with technological changes, the firm must decide to replace those assets with new assets. Replacement decision helps to introduce more efficient and economical assets and therefore it is also called cost-reduction investment.

- 2. I) mutually exclusive investment
- II) Independent investment
- III) Contingent investment

Mutually exclusive investment serves the same purpose and compare with each other. If one investment is undertake, others will have to be excluded. A company may for example either use a more labor intensive; semi-automatic machine precludes the acceptance of the highly automatic machine.

Independent investment serves different purposes and do not compete with each other. Depending on their profitability and availability of funds, the company can understand both investments.

Contingent investments are dependent projects; the choice of one investment necessitates undertaking one of more other investments. If a company decides to build a factory in a remote and backward area, it may have to invest in houses, roads, hospital, schools etc. for attract to work force.

D. Investment Evaluation Criteria

I) Net Present Value Method

Net present value (NPV) is the classic economic method of evaluating the investment proposals. It is one of the discounted cash flow techniques explicitly recognizing the time value of money to evaluate the investment proposals. It correctly postulates the cash flow arising at different time periods. It is calculated as follows:

$$NPV = \frac{C_t}{(1 + k)^n}$$

Where,

- NPV = net present value
- Ct = net cash flow in year's
- K = opportunity cost of capital
- N = expected life of project

II) Profitability Index

Another time adjusted method of evaluating the investment proposal is the profitability index (PI). It is the ratio of the present value of cash influence at the required rate of return, to the initial cash out flow of investment. It may be gross or net. It is calculated as follows:

$$IP = \frac{PV(C_t)}{C_o}$$

Where,

- PI = profitability index
- PV (Ct) = present value of cash flow in yr 't'
- Co = initial cash outlay

III) Internal Rate of return Method

IRR method follows discounted cash flow technique which takes into account the time value of money. IRR is defined as that rate of return at which PV of cash inflows and PV of cash outflows are equal. NPV is zero at IRR. The internal rate of return is the interest rate which equates the present value of expected future cash inflows with the cost of initial outlay. It is calculated as follows:

$$\sum_{t=0}^n \frac{CF_t}{(1 + IRR)^t} = 0$$

Method of interpolation:

$$IRR = LR + \frac{NPV_{LR}}{NPV_{LR} - NPV_{HR}} * Rate$$

Where,

- IRR = internal rate of return
- LR = low rate

HR = high rate
PV_{LR} = present value of cash inflow at low rate
PV_{HR} = present value of cash inflow at high rate

Acceptance rule: A project is considered acceptable if its IRR is greater than the rate Of return required by the firm, otherwise it is rejected.

Iv) Pay back period

The payback is one of the most popular and widely recognizing traditional methods of evaluating investment proposal. It is defined as the number of years to cover the original cost outlay in a project. It is calculated as follows:

$$\text{Payback} = \frac{\text{Initial Investment}}{\text{Annual cash in flow}}$$

Generally two methods are used to determine the investment proposal in payback period method. I) Ranking method, II) The shortest the payback period. If the payback period calculated for a project is less than the maximum payback set by the management, it will be accepted, if not, it will be rejected.

E. Principle of good investment policy

In choosing specific investment, investor defines ideas regarding a number of features which their portfolios should possess. These features should be consistent with the investors general objectives and in additional, should afford them all the incidental conveniences and advantages which are possible in their circumstances. The following are the suggested features as the ingredients from which many successful investors compound their selection policies.

- I) principle of safety
- II) Stability of income
- III) Adequate liquidity and collateral value
- IV) Capital growth
- V) Tax status
- VI) Purchasing power stability

2.2 Review of Related Studies

Various studies have been conducted and important ones are reviewed here under:

2.2.1 Review of Books

2.2.2 Review of Articles

2.2.3 Review of research paper

2.2.4 Review of thesis

2.2.1 Review of Books

Some authors have given the meaning of investment, which are as follows:

In the words of Gitman & Joehank ¹, in their books express that, "Investment in any vehicle in to which funds can be placed with the exception that will preserve or increase in value & generate positive returns." It means that investment is the instrument, which is essential for the banks to increase profitability.

Charles p. Jones ², has defined that "Investment as the commitment of funds to one or more assets that will be hold over some future time period. Investment is concerned with the management of an investor's wealth, which is the sum of current income & present value of all income."

In the words of S.P. Singh & S. Singh³, "The investment (credit) policies of banks are conditional to great extent by the national policy framework, every bankers has to apply his own judgment for arriving at credit decision, keeping, Of course, his banker's credit policy also in mind." As per the above definition, government and central bank have to make a sound policy about the investment policies of commercial banks.

Jack Clark Francis⁴, in his book expresses that "Default risk arises because firms may eventually go bankrupt. Some default risk is no divert because it is systematically related to the business cycle, which affects almost all investments however some default risk may be diversified away in a portfolio of independent investments."

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1. Gitman & Joehank, **Fundamentals of Investment**, (4th edition, Harper & Row, N.Y. – 1990)
 2. Charles P. Jones, **Investment analysis and management**. (Bombay : Himalayan Publishing House -1991)
 3. S.P. Singh & S. Singh, **Financial Analysis for credit management in Bank**, (Vikas Publishing House ltd. New Delhi - 1993)
 4. Jack Clark Francies, **Management of Investment** (1st printing - 1993)

L.V. Chandler⁵ says in the regard " A banker seeks optimum combination of earning, liquidity and safety while formulating investment policy".

Dr. Preeti Singh⁶ has defined investment in this way, " Investment is the employment of funds with the aim of achieving additional income of growth in value." As per Dr. Singh, the investment is the key to achieve additional income for the growth of Banks."

James B. Bexley⁷, express his view as, "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 these assets." It is assumed the management should be responsible for the investment decision of banks.

Mr. Ramesh Ghimire⁸ study on "Foreign Investment in Nepal" has expressed his view that Nepal encourages foreign investment as joint venture operations with Nepalese investors or as 100 percent foreign owned enterprises. After a restoration of multi-party democracy system in 1990, Nepal has opened the door to foreign investment in practically every sector of economic activity. The new industrial policy of 1992 identifies foreign investment promotion to meet the basic needs of the people, create maximum employment opportunities and pave the way for the improvement in the balance of payment. Foreign investment is expected to supplement domestic private investment through foreign capital flows, transfer of technology, improvement in management skills and productivity and providing access to international markets. In this context, government of Nepal is encouraging foreign investments in Nepal by providing attractive facilities within a liberal and open policy.

From these definitions, it is clear that an investment means to trade current funds for some expected future stream of payment or benefits, which will exceed the current out lay an amount of return or interest that will compensate the investor. The return is expected because of uncertainty involved in expected future cash flows. The investment is the most important function of commercial banks. It is the long- term commitment of banks in the uncertain and risky environment. It is a very challenging task of commercial banks. So a bank has to be very careful while investing their funds in various sectors. The success of a bank heavily depends up on the proper management of its investable funds.

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5. L.V. chandler, The economic of **Money & Banking**,(6'th edition - 1995)
 6. Preeti Singh, **Investment Management**, (Himalayan Publishing House, Bombay, 3'rd edition - 1997)
 7. james Belxley, **Banking Management**, (Subject Publication, New Delhi, 1'edition - 2001)
 8. Ramesh Ghimire, **foreign investment in Nepal** (2005, pp-95)

2.2.2 Review of Articles

Some of the related articles published in different economic journals, magazines, newspapers and other related books are clearly show as follows;

F. Morris, in his discussion paper on "Latin America's Banking System"⁹, has concluded that most of the banks concentrated on compliance with central bank rules on reserve requirements, credit allocation and interest rates. While analyzing loan portfolio quality, operating efficiency and soundness of bank investment management has largely been overlooked.

Dr. Sunity shrestha in her article," Lending operation of commercial banks of Nepal & its impact on GDP"¹⁰ has presented with the objectives to make an analysis of contribution of commercial banks, Lending to the gross domestic product (GDP) of Nepal. She has set hypothesis that there has been positive impact of lending of commercial banks to the GDP. In research methodology, she has considered GDP as the dependent variable and various sectors of lending agriculture, industrial, commercial, service and social sectors as independent variable. A multiple regression technique has been applied to analyze the contribution. The multiple analyses have show that all the variables except service sector lending have positive impact on GDP. Thus, in conclusion she has accepted the hypothesis i.e. there has been positive impact by the lending of commercial banks in various sectors of economy except service sector investment.

Mr. Dev Lal Kishi in his article," The changing face of the banking sector & the Government of Nepal recent budgetary policy"¹¹ concluded that following an introduction of the reform in the banking sector as an integrate part of the liberal economy policy, more banks and finance companies have come up as a welcome measure of competition. However, because of poor investment policy and lack of internal central the government controlled two banks, Nepal Bank ltd and Ristriya Banijya Bank's nonperforming assets have increased substantially.

Now, Nepal Rastra Bank has awarded the management contact to foreign companies to improve the condition of nonperforming assets.

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9. F.Morris, **Latin American's Banking System** in the 1980s(World Banking Discussion Paper , page - 81, The world Bank, Washington D.C. – 1990)
 10. Dr. Sunity Shrestha, **Lending operation of commercial Bank of Nepal & its impact on GDP** (The Business voice of Nepal, The special issue of Banijya sansar, T.U. Kirtipur -1996, pp 23-27)
 11. Dev Lal Kishi, **The changing face of the Banking sector & the HMG/N recent budgeting policy**, (Nepal Bank patrika NBL – 1996, page 27-32)

The policy of giving management of professional consultant is a part of the financial sector reform policy of NRB

Mr. Ramesh Lal Shrestha in his article, "A study on Deposit & Credits of commercial Banks in Nepal"¹² concluded that the credit deposit ratio would be 51.30 % other things remaining the same in Nepal, which was the lowest under the period of review. So, he had strongly recommended that the joint venture banks should try to give more credit entering few field as far as possible, otherwise they might not be able to absorb even the total expenses.

Mr. Sunil Chopra in his articles, " Role of foreign bank in Nepal " ¹³ has conducted that the joint venture playing an increasingly dynamic and vital role in the economic development of the country that will undoubtedly increase with time.

Mr. Bodhi B. Bajracharya through his article, " Monetary policy and deposit mobilization in Nepal " ¹⁴ has concluded that the mobilization of domestic savings in one of the monetary policies in Nepal. For this purpose commercial bank stood as the vital and active financial intermediary for generating resources in the form of deposit of the private sector so far providing credit to the investor's in different aspects of the economy.

Mr. Bishowambhar Pyakuryal in his article, " Workshop on banking and National Development " ¹⁵ written "The present changing context of the economy calls for a substantial revitalization of the resources. How much they have gained over the years depends chiefly, on how far they have been able to utilize their resources in an efficient manner. Therefore the task of efficient utilization of resources is as much crucial as the mobilization. The under utilization of resources not only results in loss of income but also goes further to discourage the collection of deposit.

12. Ramesh Lal Shrestha, A Study on **Deposit & Credit of Commercial Banks in Nepal**, (Nepal Rastra bank, Samachar, NRB – 1998, page - 16)

13. Sunil Chopra, **Role of Foreign Banks in Nepal**, (Nepal Rastra Bank Samachar, NRB, Kathmandu – 1999, page - 27)

14. Bodhi B. Bajracharya, **Monetary Policy & Deposit Mobilization in Nepal**, (Rajat Jayanti Smarika, RBB, Kathmandu, 2001, page - 56)

15. Bishwombhar Pyakuryal, **Workshop on Banking & National Development**, (paper presented, NBL – 2004, page - 49)

Mr. Yubaraj khatiwada, Governor of NRB, says that the banking sector is facing liquidity crunch, not the whole economy. We will discuss with the banks and financial institutions on how to move ahead for the purpose. Whether we should adopt tight or loose monetary policy, we need to have tight policy to discourage lending in real estate and other luxurious goods but vice versa in case of productive and infrastructure development. There needs to be a balance between the two in monetary policy. The NRB has already told the banks to maintain credit and deposit ratio below 80 percent and capped the lending on real estate sector. High inflation, balance of payment deficit and huge trade deficit are major challenges the country is facing now, which directly impact on commercial banks are facing liquidity crunch. (khatiwada – kathmandu post, 2010 march)

2.2.3 Review of Research paper

In this section, researchers have published their research article about the investment policy of commercial banks.

Dr. Govinda Bahadur Thapa expresses his views in his research paper, " Financial System of Nepal "¹⁶ that the commercial Banks including foreign joint venture banks seem to be during pretty well in mobilization deposits. Likewise, loans & advance of these banks are also increasing. But compared to the high credits needs particularly by the newly emerging industries the banks still seem to lack adequate funds.

Out of commercial Banks (excluding two newly opened commercial banks) Nepal Bank ltd. & Rastriya Banijaya Bank are operating with a nominal profit or loss, the later turning towards negative from time to time. Because of non-recovery of accrued interest, the margin between interest income and interest expenses in declining. Because of these two local banks, in traditional off-Balance sheet operation, these banks have not been able to increase their income from commission and discount on the contrary, they have got heavy burden of personal and administrative overheads similarly due to accumulated overdue and defaulting loans, profit position of these banks have been seriously affected. On the other hand, the foreign venture banks have functioning is an efficient way. They are making profit year after year and have been distributing bonus to their employees and dividend to their shareholders.

At the end of these articles, he concluded that by its very nature of the public sector, the domestic banks couldn't computation with the private sector banks, so only remedy, to the problems of these banks, as the government decide, is to handover the ownership as well as the management of bank of Scotland and Rastriya Banijya limited is under process for management contract.

16. Dr. Govinda B. Thapa, **Financial System of Nepal**, (Development Vision, Patan Multiple Campus, Lalitpur vol 3, 1994), pp 29 – 37

Mr. Shiva Raj Shrestha, former Deputy Chief Officer of Nepal Rastra Bank, Banking operation Department, has given a short glimpse on the " portfolio management in commercial bank, theory and practice "¹⁷.

Mr. Shrestha highlighted following issues in the articles. The portfolio management becomes very important for both individuals as well as institutional investors. Investors would like to select a best mix of investment assets subject to following aspects:

- Higher return which is comparable with alternative opportunities available according to the risk class of investors.
- Maximum tax concession.
- Flexible investment.
- Do not hold any single security i.e. try to have a portfolio of different securities.
- Do not put all the eggs in the one basket i.e. to have a diversified investment.
- Choose such a portfolio of security, which ensure maximum return with minimum risk or lower of return but with added objectives of wealthy maximization.

According to Mr. Shrestha, the portfolio management activities of Nepalese commercial Bank at present are in growing stage. However, on the other hand, most of the banks are not doing such activities so far because of following reasons:

- Hesitation of taking risk by the clients to use such facility.
- Unawareness of the clients about the service available.
- Less developed capital market & availability of few financial instruments in the financial market.
- Lack of proper technique to run such activities in the best & successful manner.

Mr. Shrestha has presented two types of investment analysis techniques i.e. fundamental analysis and technical analysis to consider any securities such as equity, debenture, or Bond and other money and capital market instruments. He has pointed out the requirement of skilled manpower, research & analysis team and proper management information system in any commercial bank to get success in portfolio management and customer's confidence.

He said there are very limited opportunities available to the banks for exercising the portfolio management. Mr. Shrestha has concluded following points:

- The survival of the banks depends up on its own financial health & various activities.
- With the disciplined and systematic approval to the selection if appropriate countries, financial assets and the management of various risks, the portfolio manager could enhance the opportunity for each investor to earn superior returns overtime.

17. Mr. Shiva Raj Shrestha, **Portfolio Management in Commercial Bank**, Theory & Practice, (Nepal Bank Patrika, Baishakh, 2055) pp – 13

2.2.4 Review of Thesis

Several thesis works have been conducted by various students among them some research thesis are found to be relevant for this study. They are presented as below:

Mr. Rajaram Khadaka has conducted a thesis research on "A study on the investment policy of Nepal Arab Bank Ltd. in comparison to other joint venture banks of Nepal."¹⁸

The main objectives of the study was to discuss fund mobilization and investment policy of NABIL in respect to its fee-based off-Balance sheet transaction and fund based on-Balance sheet transaction in comparison to other data and to evaluate the liquidity assets management efficiency and profitability position in related fund mobilization of NABIL in comparison to other JVBs.

He has found that the liquidity position of NABIL is comparatively worse than of other JVBs. NABIL has utilized more portions of current assets as loan and advance and less portion as investment on government securities. He also light out that NABIL is comparatively less successful in on-Balance sheet utilization as well as off-Balance sheet operation than that of other JVBs, which predicted that NABIL. He has suggested the JVBs to be careful in increasing profit in real sense to maintain the confidence of shareholders, depositors and customers. He has 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.

Mr. Indra Bhadur Bohara has conducted a thesis research on " A comparative study on investment policy of joint venture banks and financial companies of Nepal "¹⁹.

The main objectives of study was to find out the liquidity portion and profitability position of above mentioned joint venture banks in comparison with finance companies and to analyze the deposit utilization trend and its future projection for next 5 years for joint venture banks and finance companies.

The researcher has found that all the selected firms have not successful been mobilization their deposits but finance companies have mobilization their deposit smoothly in comparison with JVBs. The profitability position of all finance companies was better than JVBs. The liquidity position of JVBs is comparatively better than that of finance companies. All the finance companies have maintained the higher growth rates in comparison to JVBs although finance companies have not got sufficient investment opportunities.

18. Mr. Rajaram Khadaka, A Study on **Investment Policy of NABIL in comparison to other joint venture Banks of Nepal**, master degree thesis, Shanker Dev Campus, 1998

19. Mr. Indra Bhadur Bohara, **A comparative study on Investment policy of Joint Venture Banks& Financial Companies of Nepal**, master degree thesis, Shankar Dev Campus, 2002

Mrs. Samita Acharya concluded her study about "Investment Policy of commercial Banks a comparatively study of NBBL & NIBL",²⁰ light out about liquidity position, loan and advance to total deposit and working funds between two JVBs. She found the liquidity of NBBL is comparatively better than NIBL. NBBL has maintained moderate investment policy in liquidity Position, but assets management position of NBBL is less effective in comparison to NIBL.

Researcher concluded that the profitability position of NIBL is better than NBBL. Although NBBL is able to earn high amount of return on equity, NIBL has highest return on loan and advance and total interest earned from total deposit assets ratio. NBBL has higher degree of liquidity risk and credit risk in comparison to NIBL from the risk ratio point of view.

She suggested that NBBL has not successfully collected and utilized funds amount its customer due to see growth rate total deposit, loan and advance and total investment in comparison to NIBL. If it is neglected, than it could be the main causes of liquidity crisis in bank and one of the main reasons for a bank's failure, so NIBL is strongly recommended to improve the efficiency in utilizing the deposits in loan and advance for generating the profit.

She also attend that NIBL has not invested more amounts in government security than that of NBBL. Government securities are free of risk and highly liquid in nature such as securities, so both banks are strongly recommended to invest more funds in government securities.

Ms. Jyoti Joshi 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"²¹. The main objectives of the study are:

-) To discuss fund mobilization and investment policy of EBL, NABIL and Bank of kathmandu.
-) To evaluate liquidity, efficiency, profitability and risk position.
-) To analyze the trend of deposit utilization towards loan and advance and total investment.
-) To evaluate growth ratio of loan and advance, total deposit with other financial variables.

20. Mrs. Samita Acharya, **Investment policy of Commercial Bank of Nepal**, A comparative study on Nepal Bangladesh Bank & Nepal Investment Bank, master degree thesis, Shanker Dev Campus, 2005

21. Mrs. Jyoti Joshi, **Investment Policy of Commercial Banks in Nepal**, A comparative study of Everest Bank Ltd with NABIL Bank and Bank of kathmandu, TU,2005

She has found that liquidity position of EBL is comparatively better than BOK. EBL has good deposit collection and has enough investment on government securities.

Profitability ratio of EBL is average in comparison to other commercial banks i.e. NABIL and BOK and risk position is moderate risk between NABIL and BOK. The growth ratio of EBL is high in total deposit loan and advances and net profit than BOK and NABIL. Similarly, the bank is successful in increasing its sources of fund and its mobilization than NABIL and BOK.

She recommends mobilizing EBL's idle cash and bank balance in profitable sector as loan and advance as it increase the profit. EBL has successfully invested on government securities and loan and advance but has failed to return, so it should imitate strong steps for the recovery part, which in turn can show high growth in profitability and should take more consistent liberal lending policy. The business of the bank should be customer oriented. It should strengthen and activate its marketing function, as it is an effective tool to attract and retain the customers.

Mr. Arjun Dhital has conducted his study entitled, "A study on investment policy of Standard Charter Bank Ltd in comparison to other joint venture banks. (NABIL & HBL)"²² The main objectives of study was to evaluate liquidity, assets management, efficiency, profitability and risk position of Standard Charter Bank in comparison to NABIL & HBL and to find out relationship between deposits and total investment deposit and loan advance and net profit.

He has found that the liquidity position of Standard Chartered Bank is better than NABIL and HBL. Standard Charter Bank has successfully maintains and manages assets toward different income generation activities. Income from loan and advances and total investment is the main income sources and it can affect the bank net profit. Profitability position of Standard Charter Bank is better than NABIL & HBL

He has recommended that to collect more amounts as deposit through large variety of deposit schemes like cumulative deposit scheme, prize bond scheme, gift cheques scheme, interest scheme etc. investment means use of their resource in different income sector. The banks should come forward with national priority tasks i.e. deposit collection, resource mobilization. The tasks are possible when they expand branches, more employment opportunities, service to more customers, developing skills and expertise in local staffs, satisfaction on profit earning and exchange of autonomy provided by them.

22. Mr. Arjun Dhital, **A Study on Investment Policy of Standard Charter Bank Ltd in comparison to other joint venture Banks (NABIL & HBL)** master degree thesis, Shanker Dev Campus, 2007

A policy should be formulated to enhance its income and should control its administrative expenses, try to collect cheaper fund being more profitable, so they increase net profit earning in future.

We conclude that before deciding to open the new branch they need to assess how many people have benefited from the credit facility. They should not assume that the financial institutions have mushroomed on the basis of their strong presence in some major towns but address to more innovative area and informal sector also for lending.

2.3 Research Gap

This study based on the present investment policy of commercial banks. Due to change in political situation, it affects the government policy. Government policy affects the investment policy of the banks. This study focus on loan and advance of the banks in changing situation.

CHAPTER – III

Research Methodology

Introduction

Research is a systematized effort to gain new knowledge. It constitutes the blueprint for the collection, recording, interpretation, reporting and analysis of data. Research Methodology describes the methods & process applied in the entire subject of the study. It is a way to systematically solve the research problem. Research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objectives in view C. R. Kothari, 1989. This chapter deals with the research design, population & sample, sources of data, analysis of the data and analysis tools also.

3.1 Research Design

Research Design is the plan, procedure & strategy of investigations to obtain answer to research question and also to control variance. Research design is the arrangement of conditions for collection and analysis of data that aims to combine relevance to the research purpose with economy in procedure.

Descriptive and analytical research designs have been used to achieve the objectives of the study. Descriptive techniques have been applied to evaluate investment performance of HBL and compare it with LBL as well as some statistical and financial tools has been used to examine fact.

3.2 Population & sample

There are 27 commercial banks functioning all over the country by April 2010, in which 11 are domestic and 16 are joint-venture. However, the study of all banks in the thesis is almost impossible, so out of the total population of 26 commercial banks, two banks HBL and LBL are taken as sample to fulfill the objectives. Samples are taken from total population, which are as follows:

-) Nepal Bank Limited
-) Rastriya Banijya Bank
-) Nepal Arab Bank Ltd. (NABIL)
-) Nepal Investment Bank Ltd.
-) Standard Chartered Bank Nepal Ltd.
-) Himalayan Bank Ltd.

-) Nepal SBI Bank Ltd.
-) Nepal Bangladesh Bank Ltd.
-) Everest Bank Ltd.
-) Bank of Kathmandu Ltd.
-) Nepal Credit and Commerce Bank Ltd. (NCC)
-) Lumbini Bank Ltd.
-) Nepal Industrial & Commercial Bank Ltd.
-) Machhapuchhre Bank Ltd.
-) Kumari Bank Ltd.
-) Laxmi Bank Ltd.
-) Siddhartha Bank Ltd.
-) Agriculture Development Bank Ltd.
-) Global Bank Ltd.
-) Citizens Bank International Ltd.
-) Prime Commercial Bank Ltd.
-) Bank of Asia Nepal Ltd.
-) Sunrise Bank Ltd.
-) Development Credit Bank Ltd.
-) Nepal Merchant Bank Ltd. (NMB)
-) KIST Bank Ltd.
-) Janata Bank Nepal Ltd.

3.3 Nature and Sources of Data

This study is mainly depend on the basis of secondary data , even some primary data also collected through personal approaches, visit to the Banker responses from questionnaires distributed .

The data required relating to ' Investment ' for the analysis is obtained from bank's financial statement, Balance sheet of commercial Banks annual reports, books & journals. All the secondary data are compiled, processed and tabulated in the time series as per the need and objectives. Formal & informal talks with the concerned authorities of the bank were also helpful to obtain the additional information of the related problems. Economic journals, periodicals bulletins & magazines are also helpful to collect data & information.

3.4 Method of Data Presentation and Analysis

Data presentation and analysis are focal part of the study. Range of financial and statistical tools are used to analyze the collected data and to achieve the objectives. The analysis of the data will be done according to pattern of data available. Because of limit resources some simple analytical statistical tools such as graph, percentage, karl pearson's coefficient of correlation, regression the method of least square and test of

hypothesis are adopted. In the same way some financial tools such as ratio analysis and trend analysis have also been used for financial analysis. Extracted from financial statement and others available Information are processed and tabulated in various tables and charts under different heading according to their nature.

3.5 Tools for Analysis

To study these joint venture banks, there are follows financial tools and statistical tools are used:

3.5.1 Financial tools

Financial tools are used to examine the strength and weakness of bank, in this study financial tools like ratio analysis & financial statement analysis have been used.

3.5.1.1 Ratio Analysis

Ratio analysis is one of the most frequently used tools to evaluate the financial wealth. Thus ratio analysis is used to compare a firm's financial performance & status to that of other firm's or to it overtime. The qualitative judgment regarding financial performance of a firm can be done with the help of ratio analysis. In this study, following ratio are calculated and analyzed.

(A) Liquidity Ratio

Liquidity ratio measured the firm's ability of funds, the solvency of the firm and its ability to remain solvent in the event of adversities. It is measurement of speed with which a bank's assets can be converted in to cash to meet deposit withdrawal & other current obligation.

The following ratios are evaluated under liquidity ratio, which are directly related to investment policies of commercial banks.

1 Investment on government securities to current assets ratio:-

The ratio can be computed by investment on government securities by current assets. Investment on government securities included treasury bills and development bond etc. It can be computed as,

$$\frac{\text{Investment on Government securities}}{\text{Total current assets}}$$

2 Loans & advance to current assets ratio:-

Loan & advance are the current assets. Which is the general income to the bank; it shows the percentage of loan and advance in the total assets. It includes loan and advance, cash credit, loan and foreign bills purchased and discounted.

This ratio is computed by dividing loan & advance by current assets. It can be computed as follows,

$$\frac{\text{Loan \& advance}}{\text{Current assets}}$$

(B) Assets management Ratio

Assets management ratio measure how effectively the bank management the resources at its command, Following ratios are used under this assets management ratio. It is also called turnover ratio because it indicated the speed with which assets are being converted or turnover. The following ratios are used for assets management ratio:

1 Loan and Advance to total Deposit Ratio:-

This ratio is calculated to find out how successfully the bank are utilizing their total deposit on loan and advance for profit generating purpose. Higher ratio implies the better utilization of loan & advance out of total deposit. This is calculated as;

$$\frac{\text{Loan \& Advance}}{\text{Total Deposit}}$$

2 Total Investment to Total Deposit Ratio:

This ratio implies the utilization of firm's deposit on investment in government securities and shares, debenture of other companies and bank. This ratio can be obtained by

$$\frac{\text{Total Investment}}{\text{Total Deposit}}$$

The numerator consists of investment on government securities, investment on debenture and bond, share in subsidiary companies, share of other companies and other investment.

3 Loan and Advance to working fund Ratio:-

Loan and Advance is the major component in the total working fund (total assets) which indicates the ability of bank to canailles its deposit in the form of loan and advance to earn high return. This ratio is stated as:

$$\frac{\text{Loan and Advance}}{\text{Total working Fund}}$$

Here, the denominator includes all assets of on balance items. In other words this includes current assets, loan for development banks and other miscellaneous assets but excludes off balance items like letter of credit, letter of guarantee etc.

4 Investment on Government securities to total working fund ratio:-

This ratio shows that bank investment on government securities in comparison to the total working fund. This ratio calculated as:

$$\frac{\text{Investment on government securities}}{\text{Total working fund}}$$

5 Investment on share & Debenture to total working fund ratio:-

This ratio shows the bank investment in shares and debenture of the subsidiary and other companies. Dividing investment on shares & debenture by total working fund, this can be mentioned as,

$$\frac{\text{Investment on share \& Debenture}}{\text{Total working fund}}$$

6 Loan Loss Ratio:-

This ratio shows the possibility of loan default of a bank. It indicates how efficiently it manages its loan and advance and makes efforts for loan recovery. Higher ratio implies higher portion of non – performing loan in total loan & advance. This can be stated as;

$$\frac{\text{Total loss Provision}}{\text{Total loan \& Advance}}$$

Here, the numerator indicates the amount of provision for possible loan loss.

(C) Profitability Ratio

Profitability ratios are calculated to measure the efficiency of operation of a firm in term 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 the bank and vice versa. Profitability position can be evaluated through following different way,

1 Return on loan & advance Ratio:-

This ratio indicates how efficiently the bank has employed its resources in the form of loan & advance. This ratio is computed by dividing net profit (loss) by loan & advance. This can be computed as;

$$\frac{\text{Net Profit (Loss)}}{\text{Loan \& Advance}}$$

2 Return on Equity Ratio (ROE):-

Net worth refers to the owner's claim of a bank. The excess amount of total assets over total liabilities is known as net worth. This ratio measures how efficiently the bank has used the funds of the owners. This ratio is calculated by dividing net profit by total equity capital (net worth). This can be stated as,

$$\frac{\text{Net Profit}}{\text{Total Equity capital}}$$

Here, total equity capital includes shares holder's reserve including P/L a/c, & share capital i.e. Ordinary share and preference share capital.

3 Total Interest Earned to total outside Assets Ratio:-

This ratio measures the capital of the firm for earning interest through proper utilization of outside assets. Higher ratio shows the efficiency of using outside assets to earn interest. This ratio can be calculated following formula:-

$$\frac{\text{Total Interest Earned}}{\text{Total outside Assets}}$$

(D) Risk Ratio

Risk means uncertainty, which leads to the bank transaction of investment management. It increases effectiveness and profitability of the bank. These ratios indicate the amounts of risk associated with the various banking operations, which ultimately influence the bank's investment policy. The following two ratios are evaluated:

1 Interest Rate Risk Ratio:-

Interest rate risk ratio shows the decline in the net interest income (NII) due to the change in the interest rates charged by the banks on its deposit and loan and advance. Higher interest rates risk ratio suggest the banks to increase the interest rates on deposit and loan and advance, to increase net interest income (NII) and vice versa. This ratio is calculated as;

$$\frac{\text{Interest sensitive assets}}{\text{Interest sensitive Liabilities}}$$

-) Interest sensitive assets = Securities + variable rate loan and advance.
-) Interest Sensitive liabilities = Borrowing + total deposit excluding current deposits.

Here, the numerator includes Treasury bill, development bonds investment in debenture, mutual fund and other investment and the denominator includes borrowing from NRB and other, total deposits excluding current deposits.

2 Credit risk ratio:-

Credit risk ratio measures the possibility that loan will not be repaid or that investment will deteriorate in quality of going in to default with consequently loss to the bank, by definition, credit risk ratio is expressed as the percentage of non-performing loan to total loan and advance. It is mentioned as

$$\frac{\text{Total loan \& advance}}{\text{Total Assets}}$$

(E) Growth ratio

Growth ratios are directly related to the fund mobilization and investment management of commercial bank. It represents how well the commercial bank is maintaining its economic and financial position. To examine and analyze the expansion and growth of the banks business, following growth ratios are calculated in this study.

- a) Growth ratio of total deposit.
- b) Growth ratio of loan & advance.
- c) Growth ratio of total investments.
- d) Growth ratio of net profit.

3.5.2 Statistical Tools

To achieve the objectives of this study, some statistical tools are used such as mean, standard deviation, co-efficient of co-rrelation between different variables, trend analysis of important variable as well as hypothesis test (T- statistic), which are as follows:

1 Co-efficient of variation

The co-efficient of variation is the moat commonly used measure of relative variation. It is the relative measures of dispersion, comparable across distribution, which is defined as the ratio if the standard deviation to the mean expressed in percent. It is used in such problems where the researcher wants to compare the variability of data more than two years. It can be shown as,

$$\text{Co-efficient of variation} = \frac{\text{standard deviation}}{\text{Mean}} * 100 \%$$

2 Co- efficient of Correlation

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

- (a) Co-efficient of correlation between deposit and loan and advance
- (b) Co-efficient of correlation between deposit and total investment

The above tools analyze the relevant variable and help the bank to make approbation policies regarding deposit collection, fund utilization and profit maximization.

3 Trend Analysis

Under the topic, we analyze the trend of deposit loan and advance, investment and net profit of the HBL and LBL and make the forecast for the next 5 years. The following subtopics have presented as follows:

- a) Trend analysis of total deposit
- b) Trend analysis of loan & advance
- c) Trend analysis of total investment
- d) Trend analysis of net profit

4 Test of Hypothesis

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

- a) Test of hypothesis on loan & advance to total deposit ratio of HBL & LBL.
- b) Test of hypothesis on total investment to total deposit ratio of HBL & LBL.
- c) Test of hypothesis on Investment on Govt. securities to current assets ratio of HBL & LBL
- d) Test of hypothesis on Return on Loan and advance ratio of HBL & LBL

CHAPTER-IV

PRESENTATION AND ANALYSIS OF DATA

This is a major chapter because this chapter is dedicated to the presentation and analysis of all presented data's and evaluated each other, which is mainly related to investment management, Fund mobilization and other various aspects adopted by two Banks HBL & LBL.

4.1 Investment Policy:

Investment policy is a main guideline of every commercial bank because it decides which sector is to be selected to utilize their funds. All investment activities are controlled by investment policy and it gives direction to achieve banks objective profit maximization, wealth maximization etc, therefore this is very important to know that which banks what policy adopted in present situation to cope their challenges.

Investment policy is affected by many factors like as government fiscal and monetary policy, risk factor, competitor Investment strategy etc. But the study is concern to highlight the mainly investment policy adopted by LBL and HBL.

Mainly there are three sector selected by LBL and HBL for lending, they are as follows

- industrial and commercial
- Vehicle and machinery
- Housing and landing

The main lending sector of LBL is industrial and commercial sector. Bank invests more than 60 % of it's total deposit on commercial and industrial sector. In this sector LBL invest 2/3 loan margin against collateral securities. In the case of HBL, up to 65 % of it's total deposit invested on industrial and commercial sector, by studying cable project.

Now both banks are issued industrial & commercial loan on different sectors. LBL issued at 16 % interest rate on this sector however HBL issued at 15 % only. Industrial and commercial sector are major sources for interest income for both banks.

In case of vehicle and machinery sector, optimum 5 years hire purchase and term loan floated by both banks. In these loan banks charge only 11 % interest rate, this rate is somewhat higher than fixed deposit interest rate paid by banks to his customers.

Now a day, banks and financial institutes are attracting to invest on landing and housing activities. LBL and HBL also invested their funds on this sector. LBL invested middle term (5 years) loan at 11 % interest rate where as HBL invested on same duration at 10 % interest rate.

Both bank's total investing portion is above 70 % of core capital and both maintain 5.5 % liquidity position of total deposit.

Under this standard LBL mobilize his idle funds on retail business i.e. poultry, live stock, agricultural etc. In this business LBL's investment limit is 1 lakh to 5 lakhs and credit facility is 2 years at 17 % interest rate, but HBL not give so more priority on this domestic sector.

4.2 Financial Analysis

In this topic, evaluate and analyze those major financial performances by employing some financial tools, which are mainly related to the investment management and fund mobilization of HBL in comparison with LBL. It is notable that all types of financial ratios are not studies under this chapter. Only those ratios are calculated and analyzed which is very importance to obtain objectives. They are as follows:

4.2.1 Liquidity ratio

Commercial Bank must maintain its satisfactory liquidity position to satisfy the credit needs of the depositor, to meet demand for deposits withdrawals, pay maturity obligation in time and convert non cash-assets into cash to satisfy immediate needs with out loss to

bank and consequent impact on long run profit. To measure the liquidity position of HBL & LBL the following ratio has been calculated.

I) Investment on Govt. securities to current assets Ratio

This ratio examines that position of commercial banks current assets, which is invested on different government securities. More or less each commercial bank is invested their collected funds on different types of securities issued by government at different times to utilize their excess fund. Although government securities are not as liquid as cash and bank balance of commercial bank, but they can be easily sold in the market or converted into cash in other ways.

This ratio shows that out of total current assets, how much percentage of it has been occupied by the investment on govt. securities. It calculated by dividing investment on govt. securities by total current assets (In detail see appendix A).

Investment on Govt. Securities to Current Assets Ratio (%) (Table No. 1)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	4.64	5.04	4.09	3.82	2.64	4.05	0.92	22.72
LBL	0.00	6.49	4.34	5.10	6.84	4.55	2.74	60.22

The above table reveals that HBL has invested on government securities in decreasing trend and LBL followed fluctuating trend. LBL not invested in govt. securities in F/Y 2004/005. In overall the mean ratio of investment on government securities to current assets LBL is somewhat highest than the mean ratio of HBL i.e. 4.55% > 4.05%. By analysis of this table we concluded that both banks wants to invest their idle funds in other productive sector because the ratio show that during 5 years they not invested over 10% of their current assets on government securities.

II) Loan and advance to current assets Ratio

Loan and advance are the current assets of commercial banks which include loan and advance, cash, credit, overdraft, loan and foreign bill purchase and discount. A commercial bank should not keep its all collected fund as cash and bank balance but they invested as loan and advance to the customer because they must earn high profit by mobilization funds for long life banking. So, this ratio actually measures the extent to which the banks are successful to mobilize the total deposit on loan and advance for the purpose of profit generation.

A high ratio of loan and advance indicates better mobilization of collected deposits and vice-versa. But it should be noted that too high ratio might not be better from its liquidity point of view. This ratio is calculated by dividing loan and advance by current assets. (For detail appendix - B)

Loan & Advance to Current Assets Ratio (%)

(Table No. 2)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	52.56	48.74	53.66	53.78	56.87	53.12	2.93	5.52
LBL	72.70	76.85	72.61	69.81	74.61	73.32	2.61	3.59

The above table no. 2 shows that HBL has followed rising trend from F/Y 2006/007. HBL maintained highest ratio in F/Y 2008/009 and lowest in 2005/006. In other hand LBL has recorded rising and falling trend. It's higher ratio in F/Y 2005/006 and lowest ratio in F/Y 2007/2008.

While examining the mean ratio, LBL has maintained high ratio in comparison to HBL (i.e. 73.32% > 53.12%), coefficient of variation of HBL is higher than LBL. It indicates inconsistency of HBL's ratio in comparison to LBL.

The lower mean ratio of loan and advance to current assets of HBL reveals that its liquidity position with regard to this is less satisfactory than LBL. Loan and advance to current assets ratio of HBL and LBL are graphically shown as follows.

Loan and advance to current assets ratio of HBL & LBL.

4.2.2 Asset Management Ratio

A Commercial Bank should be able to manage its assets very well to earn high profit, to satisfy its customers and for its own existence. This ratio measures how efficiently the bank manages the resources at its commands. The following ratios are measured the assets management ratio of the HBL and LBL in comparison.

1) Loan and advance to total deposit ratio

This ratio actually measures the extent to which the banks are successful to mobilize the total deposit on loan and advance for the purpose of profit generation. The ratio is computed by dividing loan and advance by total deposit.

Loan & Advance to total deposit ratio (%)

(Table No. 3)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	58.70	54.21	59.50	59.22	63.37	59.00	3.26	5.53
LBL	78.90	78.58	62.34	63.75	78.71	72.46	8.61	11.88

The comparative table listed above shows that HBL and LBL have fluctuating trends during the study period. The highest ratio of HBL and LBL are 63.37% (F/Y 2008/09) and 78.90% (F/Y 2004/05) respectively. An average the ratio of HBL is lower than that of LBL (i.e. $59 < 72.46$). It shows that HBL seems to be weak to mobilize its total deposit as loan and advance in comparison to LBL.

On the basis of coefficient of variation, we can say that HBL's loan and advance is more consistent than that of LBL because of its lower C.V. i.e. $5.53 < 11.88$.

From the above description, it can conclude that HBL is found slightly weak in comparison to the LBL, to mobilize its total deposit as loan and advance. It should be noted that in the process of loan management of bank assets, So many factors are to consider such as risk analysis, diversification, bank credit policy, compensation policy, limits of lending power etc.

II) Total Investment to total deposit ratio

A commercial bank may mobilize its deposit by investing its funds different securities issued by government and other financial or non-financial companies. Here effort has been made to measure the extent to which the banks are successful in mobilizing the total deposit on investment.

A high ratio is the indicator of high success to mobilize the banking fund as investment and vice-versa. The ratio is calculated by dividing total investment by total deposit. (For detail appendix-D)

Total Investment to total Deposit Ratio (%)

(Table No. 4)

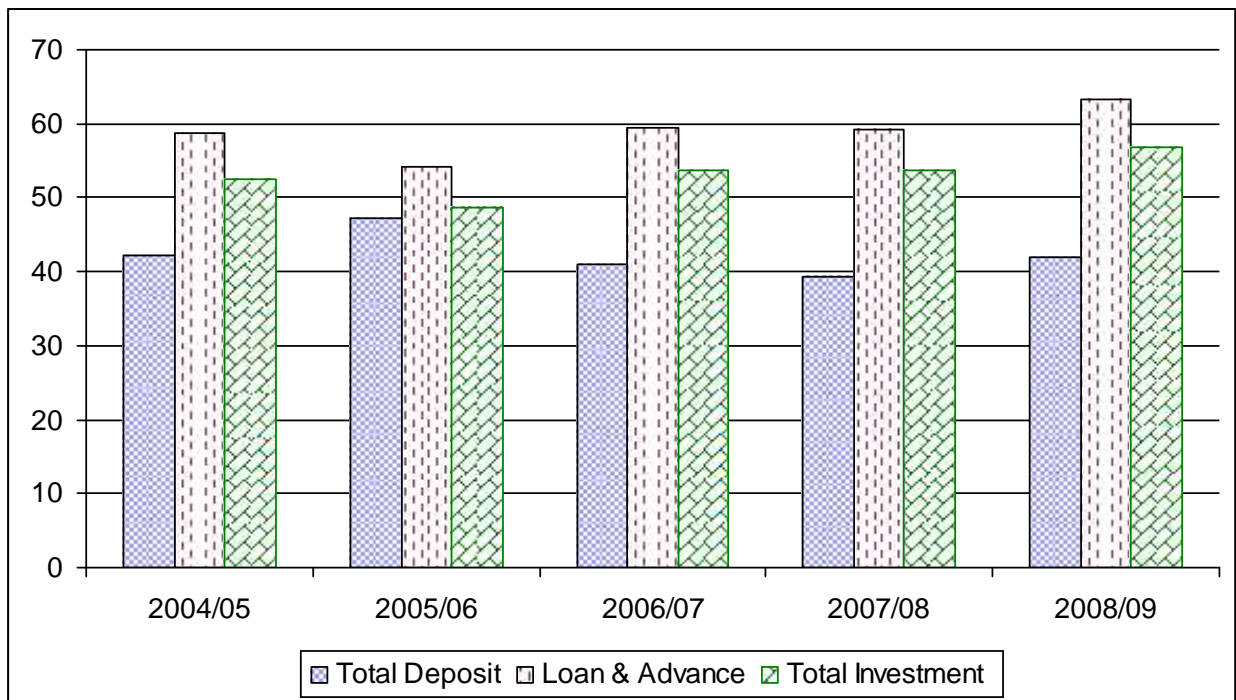
Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	42.22	47.12	41.10	39.35	41.89	42.34	2.90	6.85
LBL	14.78	13.28	14.08	14.35	14.33	14.16	0.55	3.88

Above table no. 4 found that HBL'S total investment to total deposit ratios have been fluctuating trend. It has higher ratio in F/Y 2005/06 i.e. 47.12 and lowest ratio in F/Y 2007/08 i.e. 39.35. LBL's ratio have somewhat constant trend. It has highest ratio in F/Y 2004/005 i.e. 14.78% and 13.28% lowest ratio in F/Y 2005/006.

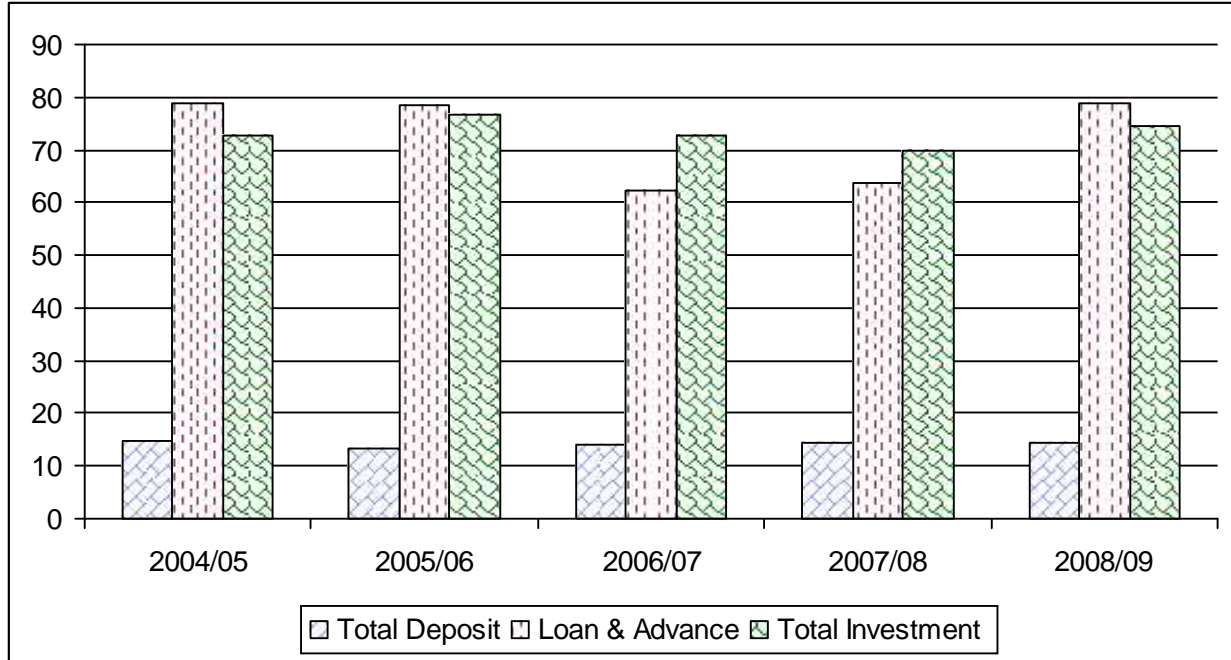
On the basis of mean ratio, HBL'S capacity to mobilize its total deposit in total investment is strong than LBL, because it's mean ratio, 42.34 % where as LBL has the 14.16%.

On the other hand observing the C.V. of ratios, we can conclude that HBL ratio during the study period have seen quite more inconsistent that of LBL because of its higher C.V. i.e. 6.85% > 3.88%, so it is clear from the above analysis that HBL is successful in utilize its resources on investment that that of LBL.

Total investment, loan & advance and total deposit of HBL



Total investment, loan & advance and total deposit of LBL



III) Loan and Advance to total working funds Ratio

Every commercial Bank's working fund should play very significant role for profit generation. The ration reflects the extent to which the banks are successful in mobilizing their total assets on loan and advance for the purpose of income generation. A high ratio indicates a better fund mobilization as loan and advance and vice-versa.

The ratio is calculated by dividing loan and advance by total working fund. The following table shows the ratio of loan and advance to total working fund.

Loan & Advance to total working funds Ratio (%)

(Table No. 5)

Banks	Fiscal Years					Mean	S.N	C.V%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	52.56	48.74	53.66	53.78	56.87	53.12	2.93	5.52
LBL	72.70	76.85	72.61	69.81	74.61	73.32	2.61	3.56

The table listed above shows that HBL follows the rising trend except starting year where as LBL ratio follows fluctuation trend. The highest and lowest ration of HBL is 56.87% on FY 2008/09 and 48.74% on FY 2005/06 respectively. Whereas LBL’s highest ratio is 76.85% on FY 2005/06 and lowest is 69.81% on FY 2007/08.

Observing the mean ratio, LBL has maintained higher ratio i.e. 73.32% than HBL i.e. 53.12%. This data reveals that HBL is weak in case of mobilize its total working funds as loan and advance however higher C.V. of HBL ratio states that its ration are less consistent than that of LBL i.e. 5.52% > 3.56%

IV) Investment on Govt. Securities to Total Working Funds Ratio

This ratio is very important to know the extent to which the banks are successful in mobilized their total working fund on different types of government securities to maximize the income. All the deposit of the bank should not be utilized in loan and advance and other credit form security and liquidity point of view. Therefore, to some extent, commercial banks seem to be interested to utilize their deposits by purchasing government securities. A high ratio indicates better mobilization of founds as investment to government securities and vice-versa. This ratio is calculated by dividing investment on government securities by total working fund (for details appendix-F)

Investment on government securities to total working funds (%) (Table No. 6)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	6.64	5.04	4.09	3.82	2.64	4.45	1.50	33.71
LBL	0.00	6.49	4.34	5.10	6.84	4.55	2.74	60.22

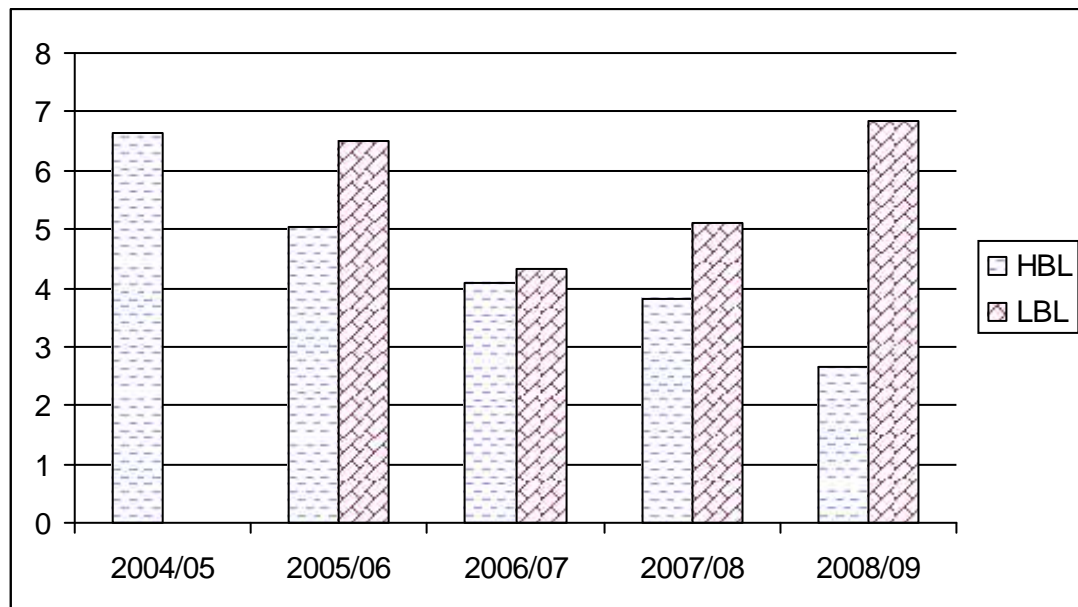
From the above comparative table it is clearly seen that HBL's investment on government Security to total working Funds ratio is quite decreasing trend during 5 year's study period. On the other hands the ratio percentage is Nil on F/Y 2004/05 in case of LBL.

Also LBL's ratio percentage to invest on government securities to total working fund is not found consistent during five years study period.

The comparison of mean ratios of HBL and LBL reveal that HBL is not so strong to mobilize their working fund as investment in government securities.

From the above analysis, It can be concluded that LBL and HBL both banks invested its certain portion of working funds on government Securities. Both banks have no certain investment policy toward government securities.

Investment on government Securities to total working fund ratio (%)



V) Investment on share & debenture to Total working fund Ratio

Investment on share and debenture to total working fund ratio reflects the extent to which the banks are successful to mobilize their total assets on purchase of share and debenture of other companies to generate incomes and utilize their excess fund. A high ratio indicates more portion of investment on share and debenture out to total working fund and vice-versa. The ratio is calculated by dividing investment on share and debenture by total working fund (for detail appendix-G)

Investment on share & debenture to total working fund Ratio (%) (Table No. 7)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	0.14	0.14	0.13	0.22	0.25	0.18	0.05	27.78
LBL	0.05	0.04	0.06	0.10	0.10	0.07	0.03	42.86

From the above table, it is calculated the ratio of investment on share and debenture to total working fund of HBL and LBL of study period.

The above comparative table shows that HBL and LBL both invested very nominal percentage of total working fund into share and debenture of other companies. In all cases, the ratio percentage is less than 0.5%. Both HBL and LBL have increasing type of ratio except F/Y 2004/05, showing the ratio may be increase in coming years.

On the basis of mean ratio, it can be stated that HBL has invested higher amount in share and debenture in comparison to LBL i.e. $0.18\% > 0.07\%$. Moreover C.V. of HBL is lower than that of LBL i.e. $27.78\% < 42.86\%$. It means investment ratios of HBL are more consistent than that of LBL. Investment on share and debenture to total working fund ratio is graphically presented as follows.

VI) Loan Loss Ratio

The loan loss occurs when a borrower fails to repay the bank loan. bank's failure in loan recovery leads to the loss of its loan. So, the control of loan loss is an important fact of bank operation and bank is greatly concerned to minimize it. A poorly administered loan portfolio usually has significant negative impact on the earnings and capital of the bank. Greater loan loss provision is required to incorporate in income statement if high loss is expected. That lead low profit and possible loss also. It indicates how efficiently the bank manages its loan and advances and makes effort for timely recovery of loan.

This ratio is derived by dividing loan loss provision by total loan and advance of the bank (For detail appendix-H)

Loan Loss Ratio (%)

(Table No 8)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	7.49	7.63	7.10	4.47	3.38	6.01	1.95	32.45
LBL	2.46	9.58	11.92	5.67	3.67	6.66	3.99	59.91

The above table shows the loan loss ratio of HBL and LBL during the study period.

The listed table shows that HBL has the ratios with decreasing trend and LBL ratio follows fluctuating trend. In case of HBL the highest ratio recorded was 7.63% in F/Y 2005/06 and lowest i.e. 3.38% in F/Y 2008/09. Similarly, LBL has highest ratio i.e. 11.92% in F/Y 2006/07 and lowest ratio i.e. 2.46% in F/Y 2004/05.

When we observe mean ratio, we found that HBL has significantly lower ratio than that of LBL i.e. 6.01 % < 6.66%, It indicated that much of its loan are still recovered in comparison of LBL.

On the other hand HBL's C.V. ratio under study period seems to be more consistent than that of LBL, because C.V. of HBL's 32.45% is lower than LBL's i.e. 59.99%.

From the above analysis, it can conclude that the performance of HBL in case of recovery of loan is higher in comparison to the LBL.

4.2.3 Profitability Ratio

The Profitability ratios are calculated to measure the operating efficiency and overall performance of the financial institution.

In the context of banks, strictly speaking no bank can survive without profit. Profit is one of the major indicators or efficient operating of a bank. The bank acquire profit by providing different services to its customers or by making investment opportunities, expanding banking transaction, financial government during the need of development funds, overcoming the future contingencies and fixing the need of internal obligation for a bank. A commercial bank must have to earn sufficient profit for meeting various objectives like to have good liquidity position hidden investment opportunities etc.

Profitability ratios are the best indicators of over all efficiency. Hear mainly those ratios are presented and analyzed which are related with profit as well as fund mobilization. Therefore the following ratios, effort has been made to measure the profit earning capacity of HBL in comparison to LBL.

I) Return on Loan and Advance Ratio

Return on loan and advance ratio measures the earning capacity of a commercial bank on its mobilization fund-based loan and advance. A high ratio indicates greater success to mobilize fund as loan and advance and vice-versa.

This ratio is calculated by dividing net profit by loan and advance (for details appendix-I). The following ratio of HBL and LBL over the study period has been tabulated below.

Return on Loan & Advance Ratio (%)

(Table No. 9)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	2.04	2.29	2.90	2.76	3.15	2.63	0.45	17.11
LBL	0.63	6.21	1.21	5.00	7.30	4.07	3.00	73.71

From the above comparative table shows that the ratios of HBL is increasing trend and the ratios of LBL is fluctuating trend, during the study period, the highest ratio of HBL is in F/Y 2008/09 i.e. 3.15% and lowest ratio is in F/Y 2004/05 i.e. 2.04%. In case of LBL, the highest and lowest ratio is 7.30% in F/Y 2008/09 and 0.63% in F/Y 2004/05 respectively.

The comparison on mean ratio, HBL has lower ratio than that of LBL (i.e. $2.63 < 4.07$).

The co-efficient of variation of HBL has also lower than LBL i.e. $17.11\% < 73.71\%$.

So, low C.V. of HBL indicates low variability of ratios than that of LBL. Thus, conclusion, It can be said that HBL seems to be failure to earn high return on its loan and advance in comparison to the LBL. Moreover, LBL's significantly high C.V. shows its less homogenous ratio during the study period. Therefore LBL with a high C.V. has indicates high risk per rupee than HBL.

II) Return on Equity Ratio (ROE)

Equity capital of any banks its owned capital. The prime objective of any bank is wealth maximization or in other words to earn high profit one thereby, maximizing return on its equity capital.

ROE is the measure role of the profitability of bank. It reflects the extent to which the bank has been successful to mobilize or utilize its equity capital. A high ratio indicates highest success to mobilize its owned capital (equity) and vice-versa. This ratio is calculated by dividing net profit by total equity capital including paid up equity capital, profit & loss a/c, various reserves, general loan loss provision etc. (For details appendix-J).

Return on Equity (ROE) (%)

(Table No 10)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	11.48	12.00	15.85	16.72	19.90	15.19	3.50	23.04
LBL	4.62	32.52	1.98	11.81	19.30	14.05	12.33	87.76

The above table shows the return on equity of HBL and LBL during the study period.

Listed table reveals that HBL has rising trend where as LBL is increasing and falling train. In case of HBL, the highest ratio i.e. 19.90% and lowest ratio 11.48% were recorded in 2008/09 and F/Y 2004|05 respectively, similarly in the case of LBL, the highest ratio i.e. 32.52% and lowest ratio i.e. 1.98% was registered in F/Y 2005|06 and F/Y 2006|07 respectively.

On the basis of mean ratio, HBL has been strong to earn higher profit to its shareholder in comparison to the LBL, which can be viewed by the higher mean ratio i.e. 15.19% > 14.05%. Likewise quite high C.V. ratio of LBL shows its inconsistency in earning the profit. The LBL's higher S.D. ratio and higher C.V. discloses their higher power with lower degree of stability.

In overall, it can be concluded that LBL has not been able to earn higher profit through the efficient utilization of its owned capital. Moreover LBL's high C.V. shows its less homogenous ratios during the study period, which shows lack of efficient investment policy for the mobilization of capital resources.

III) Total Interest Earned to total outside Assets Ratio

The main assets of commercial banks are its lending assets, which included loan and advance, investment on government securities, investment on share and debenture and other all types of investment. Thus, this ratio reflects the extent to which the banks are successful to earn interest as major income on all the outside assets. A high ratio indicates high earning on such total assets and vice-versa.

This ratio is calculated by dividing total interest earned by total outside assets (for detail appendix K).

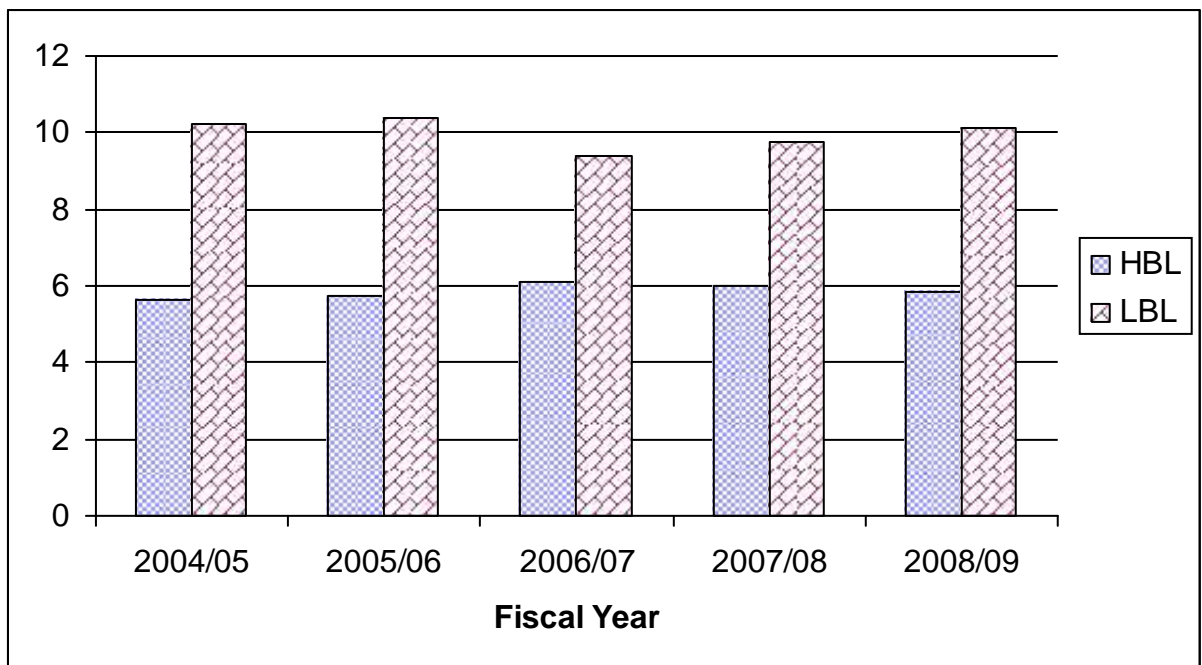
The following table exhibits the ratio of total interest earned to total outside assets of HBL and LBL during the study period.

Total Interest Earned to total outside Assets Ratio (%) (Table No 11)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	5.61	5.75	6.10	6.00	5.86	5.86	0.19	3.24
LBL	10.21	10.39	9.40	9.75	10.10	9.97	0.39	3.91

The above comparative table reveals that HBL and LBL both have fluctuation trend in there ratios during the study period. HBL's highest ratio is 6.10% and lowest ratio is 5.61% in the F/Y 2006/07 and 2004/05 respectively. Similarly, LBL's highest ratio is 10.39% and lowest ratio is 9.40% in F/Y 2005/06 and 2006/07 respectively. On the other hand, when median ratios are observed, HBL seems to have earned lower amount of interest on their outside assets in comparison to LBL i.e. 5.86 % < 9.97%. From the comparison of C.V. of ratios of both banks we can say that HBL has been somewhat stable in terms of earning the interests on its total outside assets i.e. 3.24 % < 3.9%.

From the above analysis, it can be concluded that LBL has effectively used its fund to earn high interest income in comparison to HBL. Total interest earned to total outside assets ratios of HBL and LBL are graphically presented as follows.



4.2.4 Risk Ratios

The possibility of risk makes bank's investment a challenging task. Bank has to take risk to get return on investment. The risk taken is satisfied by the increase in profit. A bank has to take high risk if it expects high return on its investment. So, the banks operating for high profit have to accept the risk and manage it efficiently. Through following ratios, efforts have been made to measure the level of risk essential in the HBL and LBL comparatively.

I) Investment Rate Risk Ratio

Interest rate charged by a bank on lending and deposit is a major source of income and expenditure. Depending upon the interest rates, the banks can make investment to maximize their income interest rate structure of a bank affect its assets and liability portfolios. Moreover, a bank's profitability depends upon the interest charged by bank. There is higher degree of risk related with interest rate. The possibility of loss due to change in interest rate is known as interest rate risk. The assets returns and values versus the liability loss and valued may change at different magnitude because of change in market interest rate.

Interest rate risk (IRR) is computed by dividing interest sensitive assets (short term securities + variable term loan) by dividing interest sensitive liabilities (borrowing + deposit, excluding current deposit). (For details appendix-L).

Interest Rate Risk Ratio (%)

(Table No 12)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	85.84	76.27	64.83	73.21	70.81	74.19	7.75	10.45
LBL	90.21	90.24	84.40	77.48	90.92	86.65	5.76	6.65

The above comparative table reveals that both banks have fluctuating trend on interest rate risk ratio. In case of HBL, its lowest ratio is 64.83% in F/Y 2006/07 and the highest ratio is 85.84% in F/Y 2004/05.

Whereas the LBL has maintained the highest ratio 90.92% in F/Y 2008/09 and lowest ratio 77.48% in F/Y 2007/08. The mean ratios show that LBL has higher interest rate risk ratio i.e. 86.65% in comparison to HBL i.e. 74.19%. The C.V. of HBL is higher than LBL i.e. 10.45% > 6.65%. It indicates that LBL's IRR ratios are more consistent than that of HBL.

From the above analysis, it can be said that both banks are higher interest rate risk, which shows that its interest rate ratios are decreasing.

II) Credit Risk Ratio

Bank utilizes its collected fund in providing credit to different sector. While making investment, bank examines the credit risk involved in the project. There is risk of default or non-payment of loan.

The ratio is calculated by dividing total loan and advance by total assets. The following table shows the credit risk ratio of HBL and LBL. (For details appendix-M)

Credit Risk Ratio (%)

(Table No 13)

Banks	Fiscal Years					Mean	S.D.	C.V.%
	2004/05	2005/06	2006/07	2007/08	2008/09			
HBL	50.21	46.59	51.54	51.85	54.75	50.99	2.96	5.80
LBL	68.29	72.27	70.05	67.32	72.98	70.18	2.45	3.49

The above table shows that both banks have been fluctuating trend. In case of HBL, its ratio reached to 51.85% in F/Y 2007/08 and lowest ratio i.e. 46.59% in F/Y 2005/06. The ratio of LBL has reached to 72.98% in F/Y 2008/09 and lowest ratio i.e. 67.32% in F/Y 2007/08.

The mean ratio of HBL is lower than that of LBL i.e. 50.99% < 70.18%. It shows that HBL has bearded less risk on its total assets of loan and advance in comparison to LBL.

Similarly, C.V. of LBL is lower than HBL which shows that LBL risk ratios are less variable than that of HBL. From the above analysis, it can be concluded that the degree of credit risk in LBL is higher and its risk ratios are less variable.

4.2.5 Growth Ratio

Here, those growth ratios are analyzed and interpreted which are directly related to the fund mobilization and investment management of a commercial bank. Growth ratios represent how well the commercial banks are maintaining their economic and financial position. The ratios can be calculated dividing the last period figure by the first period figure. The high ratio generally indicates better performance of a bank and vice-versa.

Under this topic four types of growth ratio are studied which are as follows:

- a) Growth ratio of total deposit
- b) Growth ratio of loan and advance
- c) Growth ratio of total investment
- d) Growth ratio of Net profit

a) Growth ratio of total deposit

Growth Ratios of Total Deposit (%)

(Table No 14)

Banks	Total Deposit (Rs. in Thousand)					Growth Rate (%)
	Fiscal Years					
	2004/05	2005/06	2006/07	2007/08	2008/09	
HBL	22010333	24814012	26490852	30048418	31842789	9.67
LBL	377760	4031221	4786440	6024598	5703734	97.12

The comparative table listed above reveals that the growth ratios of deposit in case of HBL are very lower than the LBL. The growth ratio of HBL's deposit is 9.67% whereas the same of the LBL is 97.12%. It indicates HBL's poor performance to collect greater deposit year by year in compare to LBL.

b) Growth ratio of Loan & Advance

Growth Ratios of Loan & Advances (%)

(Table No 15)

Banks	Loan & Advance (Rs. in Thousand)					Growth Rate (%)
	Fiscal Years					
	2004/05	2005/06	2006/07	2007/08	2008/09	
HBL	12919631	13451168	15761977	17793724	20179995	11.79
LBL	2980398	3167724	2983895	3840687	4489494	10.78

From the analysis of growth ratios of loan and advances, we can conclude that in case of HBL are somewhat higher (only 1%) than LBL. It indicates the HBL is few successful in utilizing its collection fund as loan and advances in comparison to LBL.

c) Growth ratio of Total Investment

Growth Ratios of Total Investments (%)

(Table No 16)

Banks	Total Investments (Rs. in Thousand)					Growth Rate (%)
	Fiscal Years					
	2004/05	2005/06	2006/07	2007/08	2008/09	
HBL	9292103	11692342	10889031	11822985	13340177	9.46
LBL	558188	535185	673720	864337	817471	10.00

When we observe growth ratios of total investment, we can conclude that both banks total investment growth ratios are increasing equally i.e. 9.46 and 10.00. The LBL rate is somewhat (only 0.54%) higher than HBL.

Therefore from the above analysis it can be concluding that both banks performance is better in case of total investment.

d) Growth ratio of Net profit

Growth Ratios of Net Profit (%)

(Table No 17)

Banks	Net Profit (Rs. in Thousand)					Growth Rate (%)
	Fiscal Years					
	2004/05	2005/06	2006/07	2007/08	2008/09	
HBL	263052	308277	457458	491823	635869	24.69
LBL	18640	196773	806063	192404	327649	104.76

From the above table we can make comparative study on growth ratios of net profit of HBL and LBL. HBL seems to be poor to maintain higher growth ratio than that of LBL. HBL's growth of net profit is 24.69% is very lower than that of LBL's i.e. 104.76%.

Therefore, the above table shows that LBL's performance is better in increasing net profit in compare of HBL.

Finally, from the above analysis, it can be concluded that during the study period, HBL has failed to maintain higher growth ratios on total deposit, total investment and net profit.

Thus, HBL should emphasize on improving performance in terms of collecting deposit, growth on total investment and profitability.

4.3 Statistical Analysis

In this topic some statistical tools such as co-efficient of correlation analysis between different variables, trend analysis of deposit, loan and advance, investments and net profit as well as hypothesis test (t-statistics) are used to achieve the objectives of the study. They are presented below:

4.3.1 Co-efficient of Correlation Analysis:

Under this topic, Karl Pearson's co-efficient of correlation has been used to find out the relationship between deposit and loan & advance, deposit and total investment and net profit and total outside assets.

a) Co-efficient of Correlation Between Deposit and loan and Advances:

Deposit have played very important role in performance of a commercial bank and similarly loan and advances are very important to mobilize the collected deposits. Co-efficient of correlation between deposit and loan and advances measures the degree of relationship between these two variables. In this analysis, deposit is independent variable (X) and loan and advances are dependent variable (Y). The main objective of computing 'r' between these two variables is to justify whether deposits are significantly used as loan and advances in proper way or not.

The following table shows the value of 'r' "r²" P. Er. and 6P.Er. between those variable of HBL and LBL during the study period. (Details calculation in appendix N(I) & N(II))

Co-relation between deposit and loan & advance (Table No 18)

Banks	Evaluation Criteria			
	r	r²	P. Er.	6P.Er.
HBL	0.975	0.951	0.0148	0.0888
LBL	0.8054	0.6487	0.1060	0.636

From the above table, in case of HBL, it is found that co-efficient of correlation between deposit and loan and advance is 0.975. It shows positive relationship between these two variables. Moreover, we consider the value of co-efficient of determination (r^2), which is 0.951 and it means 95.10% of the variation in the dependent variable (loan & advance) has been explained by the independent variable (deposit). Similarly, considering the value of 'r' is significant. In other words, there is significant relationship between deposits and loan and advance in case of HBL.

Likewise, in case of the LBL, the karl persons co-efficient of correlation between deposit (independent variables) and loan and advance (dependent) is 0.8054 which indicates positive correlation between these two variables. Similarly, the value of co-efficient of determination (r^2) is found 0.6487, which shows that 64.87% in the dependent variable (loan & advances) has been explained by the independent variable (deposit). More over, by application of probable error, the value of $r = 0.8054$ is more than six times of probable error i.e. 0.636, which means, the relationship between deposits and loan and advances is significant. In other words, the LBL is successful to mobilize their funds in proper way in loan and advance.

Lastly, we can draw a conclusion from the above analysis that in both HBL and LBL, there is positive relationship between deposits and loan and advances. The relationship is significant and the value ' r^2 ' shows high percent in the dependent variable. This indicates that HBL & LBL are successful to mobilize their deposits in proper way as loan and advances.

b) Co-efficient of Correlation between Deposit and loan and Investment:

The co-efficient of correlation between deposit and investment measure the degree of relationship between these two variables. In correlation analysis, deposit is independent variable (X) and total investment is dependent variable (Y). The purpose of computing

co-efficient of correlation is to justify whether the deposit are significantly used in proper way or not and whether there is any relationship between these two variables.

The following table shows the co-efficient of correlation between deposits and total investment i.e. P.Er., 6P.Er. and Co-efficient of determination (r^2) of HBL and LBL during the study period. (Details calculation in Appendix O (I) & O (II))

Co-relation between deposit and total Investment

(Table No 19)

Banks	Evaluation Criteria			
	r	r²	P.Er	6p.Er.
HBL	0.8901	0.7923	0.0626	0.3756
LBL	0.5431	0.2950	0.2127	1.2762

From the above table, in case of HBL, it is found that co-efficient of correlation between deposit (independent) and total investment (dependent) value of 'r' is 0.8901. It shows positive relationship between these two variables. Moreover, we consider the value of Co-efficient of determination (r^2). Which is 0.7923 and it means 79.23% of the variation in the dependent variable (total investment) has been explained by the independent variable (deposits). Similarly, considering the value of 'r' is i.e. 0.8901 and comparing it with 6 P.Er. i.e. 0.3756, we can find that 'r' is higher than the value of 6P.Er, which reveals that the value of 'r' is significant. In other words, there is significant positive relationship between deposit and total investment in case of HBL.

Likewise, in case of the LBL the Karl person's Co-efficient of correlation between deposit (independent variables) and total investment (dependent variables) is 0.5431, which indicates positive correlation between these two variables. Similarly, the value of Co-efficient of determination (r^2) is found 0.2950, which shown that 29.50% in the dependent variable (total Investment) has been explained by the independent variable (deposit). Moreover, by applying of probable error, the value of $r=0.5431$ is less than six

times of probable error (1.2762) which means that the relationship between deposits and loan and advance is not significant.

From the above analysis, the conclusion can be drawn that in case of HBL, there is positive relationship between deposit and total investment and LBL has significant negative relationship between deposit and total Investment because 'r' is less than 6 times of P.Er.

Lastly, it can be said that LBL has followed the policy of minimization the investment of their deposit. Whereas HBL has no certain investment policy to invest their deposit

4.3.2 Trend analysis and projection for next five years:

The objectives of this analysis are to analyze the trend of deposit collection, its utilization and net profit of HBL and LBL. To utilize deposits, a commercial bank may grant loan and advance and invest some of the funds in government securities and shares and debentures of other companies. The topic analyzes the trend of deposit, loan and advances, total investment and net profit are forecasting for next five years. The projections are based on the following assumption.

The main assumption is that other things will remain unchanged.

- The bank will run in present stage.
- The forest will be true only when the limitation of last square method is carried out.
- Nepal Rastra Bank will not change its guidelines to commercial banks.
- The economy will remain in the present stage.

(I) Trend Analysis to total Deposit

The trend values of deposit of HBL and LBL for five years from 2005 to 2009 are given below and forecast for next five years 2010 to 2014 is done. (For detail appendix-P (I) & (II))

The following table shows the trend values of total deposit for 10 years from 2005 to 2014 of HBL and LBL.

$$Y_{\text{HBL}} = 27041.28 + 2489.93 X$$

$$Y_{\text{LBL}} = 4864.72 + 584.56 X$$

(Table No 20)

Trend value of total deposit of HBL and LBL (2005-2014) (Rs. in Million)

Years	Trend value of HBL	Trend value of LBL
2005	22061.42	3695.60
2006	24551.35	4280.16
2007	27041.28	4864.72
2008	29531.21	5449.28
2009	32021.14	6033.84
2010	34511.07	6618.40
2011	37001.00	7202.96
2012	39490.93	7787.52
2013	41980.86	8372.08
2014	44470.79	8956.64

From the above comparative table, it is clear that total deposits of both banks (HBL & LBL) are in increasing trend. Other things remaining the same, total deposits of HBL, in 2014 will be Rs. 44470.79 millions, which is the higher under study period. Similarly the same of the LBL will be Rs.8956.64 millions.

From the above trend analysis, it is quite obvious that HBL's deposit collection position is better than LBL. The above calculated trend value of total deposit of HBL & LBL are fitted in the trend lines as follows.

Trend value of total Deposit of HBL & LBL

(II) Trend Analysis of loan and advance.

Here, the trend value of loan and advances of HBL & LBL have been calculated for five years from 2005 to 2014. The forecast for next five years till 2014 has also been done. The following table shows that trend value of ten years from 2005 to 2014 of HBL & LBL (Details calculation in Appendix Q (I) & (II))

$$Y_{\text{HBL}} = 16021.30 + 1886.33 X$$

$$Y_{\text{LBL}} = 3292.44 + 269.12 X$$

(Table No 21)

Trend values of loan and Advances of HBL & LBL (2005-2014) (Rs in Million)

Years	Trend value of HBL	Trend value of LBL
2005	12248.64	2754.20
2006	14134.97	3023.32
2007	16021.30	3292.44

2008	17907.63	3561.56
2009	19793.96	3830.68
2010	21680.29	4099.80
2011	23566.62	4368.92
2012	25452.95	4638.04
2013	27339.28	4907.16
2014	29225.61	5176.28

The above comparative table makes clear that loan and advances of both banks (HBL & LBL) are in increasing trend other things remaining the same, the loan and advances of HBL, in F/Y 2014 will be Rs. 29225.61 million, which is the highest under the study period. Similarly, the same of the LBL will be Rs. 5176.28 millions.

From above trend analysis, it is clear that HBL's utilization of deposit in term of loan and advances is comparatively better than that of the LBL. The above calculated trend values of loan and advances of HBL & LBL are fitted in the trend lines as follows.

Trend value of loan & advance of HBL & LBL

(III) Trend Analysis of Total Investment

Under this topic an attempt has been made to analyze total investment of HBL and LBL from five years from 2005 to 2009 and forecast of the same for next five years till 2014.

The following table shows that trend values of total investment of HBL and LBL for ten years i.e. 2005 to 2014 (details calculation in Appendix R (I) & (II))

$$Y_{\text{HBL}} = 11407.33 + 822.68 X$$

$$Y_{\text{LBL}} = 689.78 + 84.77 X$$

(Table No 22)

Trend values of total of investment of HBL & LBL (2005-2014) (Rs in Million)

Years	Trend value of HBL	Trend value of LBL
2005	9761.97	520.24
2006	10584.65	605.01
2007	11407.33	689.78
2008	12230.01	774.55
2009	13052.69	859.32
2010	13875.37	944.09
2011	14698.05	1028.86
2012	15520.73	1113.63
2013	16343.41	1198.40
2014	17166.09	1283.17

From the above comparative table of trend values of total investment, it has been found that the expected amounts of both banks are in increasing trend. Other things remaining the same the total investment of HBL, in F/Y 2014 will be 17166.09 Million, which is the highest under the study period. Similarly, the same of the LBL will be Rs. 1283.23 Million. The regression line of investment on time period indicates that investment has positive relationship with the time period and thus in each year, the investment of both banks are increasing train.

From above trend analysis, it is clear that HBL'S total investment is comparatively better than that of LBL. The above calculated trend values of total investment of HBL & LBL are fitted in the trend line, which are given as follows.

Trend value of Total investment of HBL & LBL

(IV) Trend Analysis of Net Profit

Under this topic, effort has been made to analysis the net profit of HBL and LBL for five years from 2005 to 2009 and forecast of the same for next five years from 2010 to 2014.

The following table shows that trend value of net profit of HBL and LBL for ten years i.e. 2005 to 2014. (Details calculated in appendix-S (I) & (II))

$$Y_{\text{HBL}} = 431.30 + 92.92 X$$

$$Y_{\text{LBL}} = 219.22 + 61.36 X$$

(Table No 23)

Trend values of net profit of HBL and LBL (2005-2014)

(Rs in Million)

Years	Trend value of HBL	Trend value of LBL
2005	245.46	94.50
2006	338.38	157.86
2007	431.30	219.22

2008	524.22	280.58
2009	617.14	341.94
2010	710.06	403.30
2011	802.98	464.66
2012	895.90	526.02
2013	988.82	587.38
2014	1081.74	648.74

The above comparative table shows that the trend values of net profit of HBL and LBL is increasing trend. The Net profit of HBL in F/Y 2014 will be Rs. 1081.74 Million. Similarly, the net profit of LBL in F/Y 2014 will be Rs. 648.74 Million. The above calculated trend values of both banks are fitted in the trend line given as following:

Trend values of Net Profit of HBL & LBL

4.3.3 Test of Hypothesis:

It is an assumption about the population, which may or not be true: to determine whether it is true or not by taking or not by taking some sample with followed some procedure is called testing of hypothesis. The test of hypothetical discloses the fact whether the difference between the computed statistic and hypothetical parameter is significant. The following steps have been followed in the test of hypothesis.

- (i) Formula hypothesis
 - Null Hypothesis
 - Alternative hypothesis
- (ii) Computing the test statistical
- (iii) Fixing the level of significance
- (iv) Finding criteria region
- (v) Deciding two-tailed or one-tailed test
- (vi) Making decision.

In the following lines, some of the main hypothesis is tests are calculated and decisions are made.

1) Test of hypothesis on loan and advance to total deposit ratio of HBL and LBL.

Here, mean ratio of loan and advance to total deposit of HBL and LBL are taken and carried out t-test of significance difference. Let, loan and advance to total deposit ratios of HBL and LBL are x and y respectively.

Hypothesis test on loan and advances to total deposit ratio

(Table No 24)

S.N.	Year	HBL			LBL		
		X	X=(x-59)	X ²	Y	Y=(y-72.46)	Y ²
1	2004/05	58.70	-0.3	0.09	78.90	6.44	41.47
2	2005/06	54.21	-4.79	22.94	78.58	6.12	37.45
3	2006/07	59.50	0.50	0.25	62.34	-10.12	104.41
4	2007/08	59.22	0.22	0.05	63.75	-8.71	75.86
5	2008/09	63.38	4.38	19.18	78.71	6.25	39.06
		295.01	x X0.01	x ² X42.51	362.28	y XZ0.02	y ² X296.25

We know that,

$$\begin{aligned}
 S^2 &= \frac{1}{n_1} \sum x^2 - \frac{x^2}{n_1} \quad \Gamma \quad \frac{1}{n_2} \sum y^2 - \frac{y^2}{n_2} \\
 &= \frac{1}{5} \sum 42.51 - \frac{0.01^2}{5} \quad \Gamma \quad \frac{1}{5} \sum 296.25 - \frac{Z0.02^2}{5} \\
 &= \frac{1}{5} \sum 42.51 - Z0.00 \quad \Gamma \quad 296.25 - Z0.00* \\
 &= \frac{1}{5} \times 338.76 \\
 &= 42.34
 \end{aligned}$$

Here, Null Hypothesis (H0): $\bar{x} = \bar{y}$

There is no significant difference between mean ratio of loan and advance to total deposit of HBL & LBL.

Alternative Hypothesis (Hi): $\bar{x} \neq \bar{y}$ (Two tailed test) i.e. There is significant different between mean ratios of total deposit of HBL and LBL.

Under H₀, the test-statistical is:

$$\begin{aligned}
 t &= \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \text{ with } \dots \text{ d.f. } = n_1 + n_2 - 2 \\
 &= \frac{59 - 72.46}{\sqrt{42.34 \left(\frac{1}{5} + \frac{1}{5} \right)}} \\
 &= \frac{-13.46}{4.12} \\
 &= -3.27 \\
 \dots /t &= 3.27
 \end{aligned}$$

Calculated value of $|t| = 3.27$

Tabulated value of "t" (two tailed test) 5% level of (n_1+n_2-2) i.e. 8 d.f. is 2.306

Decision, since the calculated value of "t" i.e. 3.27 is greater than tabulated value of "t" i.e. 2.306, H₀ is rejected. In other words, there is significant difference between mean ratio of loan and advance to total deposit of HBL and LBL.

(ii) Test of hypothesis of total investment to total deposit of HBL & LBL.

Here, mean ratio of total investment to total deposit of HBL and LBL are taken and carried out t-test of significance difference. Let, total investment to total deposit ratios of HBL and LBL are x and y respectively.

Hypothesis test on total investment to total deposit of HBL and LB (Table No 25)

S.N.	Year	HBL			LBL		
		X	X=(x-59)	X ²	Y	Y=(y-14.16)	Y ²
1	2004/05	42.22	-0.12	0.01	14.78	0.62	0.38
2	2005/06	47.12	4.78	22.85	13.28	-0.88	0.77
3	2006/07	41.10	-1.24	1.54	14.08	-0.08	0.01
4	2007/08	39.35	-2.99	8.94	14.35	0.19	0.04
5	2008/09	41.89	-0.45	0.20	14.33	0.17	0.03
		211.68	x X Z0.02	x ² X33.54	70.82	y X Z0.02	y ² X1.23

We know that,

$$\begin{aligned}
 s^2 &= \frac{1}{n_1 + n_2 - 2} \left(\sum x^2 - \frac{x^2}{n_1} \right) + \frac{1}{n_1 + n_2 - 2} \left(\sum y^2 - \frac{y^2}{n_2} \right) \\
 &= \frac{1}{5 + 5 - 2} \left(33.54 - \frac{0.02^2}{5} \right) + \frac{1}{5 + 5 - 2} \left(1.23 - \frac{0.02^2}{5} \right) \\
 &= \frac{1}{8} \left(33.54 - 0.0008 + 1.23 - 0.0008 \right) \\
 &= \frac{1}{8} \times 34.77 \\
 &= 4.35
 \end{aligned}$$

Here,

Null hypothesis (H₀): $\bar{x} = \bar{y}$

I.e. There is no significant different between mean ratios of total investment to total deposit of HBL and LBL.

Alternative Hypothesis (H₁): $\bar{x} \neq \bar{y}$ (Two-tailed test) i.e. There is significant different between mean ratios of total investment to total deposit of HBL and LBL.

Under H0, the test-statistic is:

$$\begin{aligned}
 t &= \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \text{ with } \dots \text{ d.f. } n_1 + n_2 - 2 \\
 &= \frac{42.34 - 14.16}{\sqrt{4.35 \left(\frac{1}{5} + \frac{1}{5} \right)}} \\
 &= \frac{28.18}{1.32} \\
 &= 21.35 \\
 &\dots / t / X 21.35
 \end{aligned}$$

Calculated value of $t = 21.35$

Tabulated value of "t" (Two tailed test) 5% level of $(n_1 + n_2 - 2)$ i.e. 8 d.f. is 2.306

Decision,

Since the calculated value of "t" i.e. 21.35 is greater than tabulated value of "t" i.e. 2.306, H0 is rejected. In other words, there is significant difference between mean ratio of total investment to total deposit of HBL and LBL.

(III) Test of hypothesis on Investment on Government securities to current assets ratios of HBL and LBL.

Here, mean ratio of investment on government securities to current assets of HBL and LBL are taken and carried out t-test of significance difference. Let, Investment on government securities to current assets ratio of HBL and LBL be x and y respectively.

Hypothesis test on investment on govt. securities to current assets ratio (Table No 25)

S.N.	Year	HBL			LBL		
		X	X=(x-4.05)	X ²	Y	Y=(y-4.55)	Y ²
1	2004/05	4.64	0.59	0.35	0.00	-4.55	20.70
2	2005/06	5.04	0.99	0.98	6.49	1.94	3.76
3	2006/07	4.09	0.04	0.00	4.34	-0.21	0.04
4	2007/08	3.82	-0.23	0.05	5.10	0.55	0.30
5	2008/09	2.64	-1.41	1.99	6.84	2.29	5.24
		20.23	x XZ0.02	x ² X3.37	22.77	y XZ0.02	y ² X30.04

$$\bar{x} = \frac{\sum x}{n_1} = \frac{20.23}{5} = 4.05$$

$$\bar{y} = \frac{\sum y}{n_2} = \frac{22.77}{5} = 4.55$$

We know that,

$$S^2 = \frac{1}{n_1} \sum x^2 - \frac{(\sum x)^2}{n_1} + \frac{1}{n_2} \sum y^2 - \frac{(\sum y)^2}{n_2}$$

$$= \frac{1}{5} \sum x^2 - \frac{(20.23)^2}{5} + \frac{1}{5} \sum y^2 - \frac{(22.77)^2}{5}$$

$$= \frac{1}{5} [3.37 + 0.00 + 30.04 + 0.00] - \frac{(20.23)^2}{5} + \frac{1}{5} [5.24 + 3.76 + 0.04 + 0.30 + 5.24] - \frac{(22.77)^2}{5}$$

$$= \frac{1}{5} [33.41] - \frac{(20.23)^2}{5} + \frac{1}{5} [14.58] - \frac{(22.77)^2}{5}$$

$$= 4.18$$

Here,

Null Hypothesis (H_0): $\bar{x} = \bar{y}$

I.e. There is no significant difference between mean ratios of investment on government securities to current assets ratio of HBL and LBL.

Alternative Hypothesis (H_1): $\bar{x} \neq \bar{y}$ (Two-tailed test)

I.e. there is significant difference between mean ratios of investment on government securities to current assets ratio of HBL and LBL.

Under H_0 , the test-statistic is:

$$\begin{aligned} t &= \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \text{ with } \dots \text{ d.f. } n_1 \text{ } \Gamma \text{ } n_2 \text{ } Z2 \\ &= \frac{4.05 - 4.55}{\sqrt{4.18 \left(\frac{1}{5} + \frac{1}{5} \right)}} \\ &= \frac{-0.50}{1.29} \\ &= -0.39 \\ &\dots / t / X 0.39 \end{aligned}$$

Calculated value of $|t| = 0.39$

Tabulated value of "t" (two-tail test) 5% Level for (n_1+n_2-2) d.f. i.e. 8 d.f. is 2.306

Decision,

Since the calculated value of "t" i.e. 0.39 is less than tabulated value of "t" i.e. 2.306. H_0 is accepted. In other words, There is no significant difference between mean ratios of investment on government securities to current assets ratio of HBL and LBL.

(IV) Test of Hypothesis on Return on loan and advance ratio of HBL and LBL.

Here, mean ratio of total return on loan and advance of HBL and LBL are taken and carried out t-test of significance difference. Let, Return on loan and advance ratios of HBL and LBL be x and y respectively.

Hypothesis test of return on loan and advance ratio

(Table No 27)

S.N.	Year	HBL			LBL		
		X	X=(x-2.63)	X ²	Y	Y=(y-4.07)	Y ²
1	2004/05	2.04	-0.59	0.35	0.63	-3.44	11.83
2	2005/06	2.29	-0.34	0.12	6.21	2.14	4.58
3	2006/07	2.90	0.27	0.07	1.21	-2.86	8.18
4	2007/08	2.76	0.13	0.02	5.00	0.93	0.86
5	2008/09	3.15	0.52	0.27	7.30	3.23	10.43
		13.14	x X Z 0.01	x ² X 0.83	20.35	y X 0	y ² X 35.88

$$\bar{x} = \frac{\sum x}{n_1} = \frac{13.14}{5} = 2.63$$

$$\bar{y} = \frac{\sum y}{n_2} = \frac{20.35}{5} = 4.07$$

We know that,

$$S^2 = \frac{1}{n_1 + n_2 - 2} \left[\sum x^2 - \frac{(\sum x)^2}{n_1} + \sum y^2 - \frac{(\sum y)^2}{n_2} \right]$$

$$= \frac{1}{5 + 5 - 2} \left[0.83 - \frac{(13.14)^2}{5} + 35.88 - \frac{(20.35)^2}{5} \right]$$

$$= \frac{1}{8} [0.83 - 33.80 + 35.88 - 82.00]$$

$$= \frac{1}{8} \times 36.71$$

$$= 4.59$$

Here,

Null Hypothesis (H_0): $\bar{x} \sim \bar{y}$

I.e. There is no significant different between mean ratios of return on loan and advances ratio of HBL and LBL.

Alternative Hypothesis (H_1): $\bar{x} \neq \bar{y}$ (Two-tailed test)

I.e. there is significant different between mean ratios of return on loan and advances ratio of HBL and LBL.

Under, H_0 the test-statistic is:

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \text{ with } \dots \text{ d.f. } n_1 + n_2 - 2$$

$$= \frac{2.63 - 4.07}{\sqrt{4.59 \left(\frac{1}{5} + \frac{1}{5} \right)}}$$

$$= \frac{-1.44}{1.35}$$

$$= -1.07$$

$$\dots / t / \pm 1.07$$

Calculated value of $|t| = 1.07$

Tabulated value of "t" (two – tailed test) 5% level for (n_1+n_2-2) d.f. i.e. 8 d.f. is 2.306

Decision,

Since the calculated value of "t" i.e. 1.07 is less than tabulated value of "t" i.e. 2.306, H_0 is accepted. In other words, there is no significant different between mean ratios of return on loan and advance ratio of HBL and LBL.

4.4 Major Finding of the study:

The preceding chapter have discussed and explored the facts and matters for the various parts of the study. Analytical part, which is the heart of the study, makes an analysis of various aspects of the investment policy of commercial banks by using some of important financial as well as statistical tools.

Having completed the basic analysis required for the study, the final and most important task of the researcher is to enlist finding issues and gaps to the study and give suggestions for further improvement. This would be meaningful to the top level management of the banks to initiate action and achieve the desire result. The objective of the researcher is only to point errors and mistakes but also to correct them and give directions for further growth and improvement.

4.4.1 Major Finding of Primary Data

The opinions of financial executives and investors were summarized as follows.

- Nepalese banking system is in dire straits. They are facing acute liquidity crisis, therefore Nepal Rastra Bank (NRB) is planning to inject liquidity problem through repo. It is noted that NRB has injected around Rs.12 billion through repo to manage liquidity crunch.
- Liquidity crunch in the market and high rate of institutional investors have forced the commercial banks to increase interest rates in deposits. While interest rate on deposits is increasing, commercial banks should hike interest rate on lending. It is noted that institutional depositors have been demanding 9.75 % return as interest.
- Majority financial executives says that Increasing lending of cooperatives an financial institutions in unproductive sector, money going to India as insurance premium, decreasing remittance inflow, rising trade deficit, manufacturing and agricultural sector's productivity is declining are the major causes of liquidity crisis.
- Some financial executive says that they are ready to put the money in hydropower sector but the government should come up with some policy to guarantee their investment.

- Majority financial executive feel some problems with central bank's restrictive about bank and financial institutions should limit their loan exposure on real estate and housing sector at 25 % on total deposit.
- Most of the financial executives felt that Nepalese investors do not have enough knowledge about investment policy; most of financial communities are unknown about the investment strategy. They are dominating the investment decision.
- Majority of the respondents felt that investors are not interested to invest Risky Project because of passive investment strategy. Other felt that it was also due to mismanagement. Some attributed to higher interest rate.
- Some executive say that in present competitive situation they are only focus to increasing public deposit by offering several program like woman saving a/c, child saving a/c, student saving a/c, senior civilian a/c etc. They feel investment is not so difficulty than fund collection.
- Most of the investors felt that they do not like higher risk, so they are performing there banking services in urban areas, especially in kathmandu valley. They don't providing banking facilities to the rural areas because they don't want to take risk. Some investors thought that they are profit oriented only. Therefore a larger section of the populace is still outside the purview of banking system. Less then one-third of the national population has access to finance. The challenges of next decade are to bring these people into organized banking networks.
- Most of the financial executives and investors felt that the political environment highly affects the capital market. At present the world economy is highly turning toward recession. Because of political transaction period investors are applying wait & see strategy. During last 2 decades after 1990, Nepal changes above 18 central governments.

- Most of the financial executive and investors both reply it is necessary to give investment priority to the rural area of the country.
- Most of the investors highlighted on share, debenture, bond and government securities where as few of them suggested on loan and advance industries, treasury bills, share in subsidiary companies.
- Some executive say that bank and financial institute hold 88% capital market of Nepal. If they highlighted their investment in genuine sector like as Hydro power, Trekking industries, productive industries, loan and building (housing) sector they able to give meaning full contribution for economy development.
- As per Nepal's commitment to liberalization, it is now open to foreign banks, which, initially, would be allowed to carry out "wholesale banking". No foreign bank has approached the central bank for opening their branches yet. But if politics becomes stable and investment climate improves, foreign banks will set up their branches, in that scenario; will the local banks be able to compete with the international banks?

4.4.2 Major finding of secondary data study

The major finding of the study is derived on the basic of analysis of financial and statistical data of HBL and LBL, which are given by heading wise as below.

a) Liquidity Ratio

- The mean ratio of investment on government securities to current assets of LBL is higher than HBL. (LBL 4.55 % and HBL 4.05 %) However, LBL seem to have more variable ratio than HBL.
- The mean ratio of loan and advance to current assets of HBL is 53.12 % which is lower than that of LBL (73.32 %). Both banks ratios are less uniform.

b) Assets Management Ratios

The assets management ratios of HBL and LBL reveal that:

- LBL mobilized 72.46 % of total deposit as loan and advance, whereas HBL mobilized only 59 % of its total deposit as loan and advance. Likewise, LBL's ratios seen to be more variable than that of the HBL.
- HBL and LBL utilize 42.34 % and 14.16 % of total deposit in investment respectively. The ratio of HBL is 3 times higher than that of LBL. And the variability of ratios of HBL is higher than that of LBL.
- The mean ratio of loan and advance to total working funds of LBL is 73.32 % which is higher than HBL (53.12%). Whereas, HBL's ratio due less uniform in comparison to LBL.
- The mean ratio of investment on govt. securities to total working fund of both banks is like equally, HBL 4.45 % and LBL 4.55 %. On the other hand, HBL's ratios are declining train where as LBL's ratios are fluctuation train.
- The mean ratio of investment on share and debenture to total working fund ratio of HBL is 0.18 %, which is higher than LBL (0.07 %) and HBL have more consistent than LBL ratio.
- The average loan loss ratio of LBL is slightly higher than HBL. HBL has 6.01 % and LBL has 6.66 %, However, HBL's ratios are more consistent than that of LBL

c) Profitability Ratios

The profitability ratios of HBL and LBL reveal that:

- The mean ratio of return on loan and advance of HBL is 2.63 % which is lower than that of LBL, 4.07 %. Similarly LBL's return on loan and advance has been found less uniform than HBL.
- The mean ratio of return on equity (ROE) of HBL is 15.19 % and the same ratio of LBL is 14.05 %. And HBL's ratio has been more consistent than LBL.

- The average ratio of total interest earned to total outside of HBL has been found lower than LBL ratio. During study period, HBL's average ratio is 5.86 % and LBL's found 9.97 %.

d) Risk Ratios

The risk ratios of HBL and LBL reveal that:

- The average credit interest rate risk ratio of LBL is higher than HBL. LBL has 86.65 %, whereas HBL 74.19 %. The ratio of HBL is less consistent than that of LBL.
- The average interest risk ratio of HBL is 50.99 % which is lower than LBL (70.18 %). On the other hand, HBL's ratios are more valuable than LBL and less uniform in comparison to LBL.

e) Growth Ratios

The growth ratio of HBL and LBL reveal that:

- Growth ratio of total deposit of HBL is lower than that of LBL i.e. 9.67 % < 97.12%. We say that the total deposit of LBL increase by 97.12 % whereas total deposit of HBL increased only 9.67 % per year during study period.
- The growth ratio of loan and advance of HBL is higher than that of LBL i.e. 11.79% > 10.78%
- The growth ratio of total investment of HBL is lower than of LBL i.e. 9.46% < 10.00%
- Similarly, growth ratio of net profit of HBL is lower than that of LBL i.e. 24.69 % < 104.76%.

f) Co-efficient of correlation Analysis:

Co-efficient of correlation analysis between different variables of HBL and LBL reveals that:

- Co-efficient of correlation between deposit and loan and advance of HBL has been found somewhat higher than LBL. Both banks have positive value and near to 1. The

value of 'r' of HBL and LBL are 0.975 and 0.8054 respectively. In case of both HBL and LBL, It has been found that there is positive relationship between deposit and loan and advance. In other words the relationship is significant.

- Co-efficient of correlation between deposit and total Investment of HBL has been found higher than that of LBL and both banks has positive relationship. The value of 'r' of HBL (0.8901) is higher than that of LBL (0.5431). In case of both HBL and LBL It has been found that there is significant relationship between deposit and investment.

g) Trend Analysis

Trend Analysis of deposit, loan and advance, total investment, net profit and projection for Next five years of HBL and LBL reveals that:

- Trend value of total deposit of HBL and LBL are found increasing train. In case of HBL, the highest trend value in F/Y 2014 is Rs. 44470.79 Million. Whereas, the same of the LBL is Rs. 8956.64 Millions respectively.
- Trend value of loan and advance of HBL and LBL has been seen to be in increasing train. In case of HBL, the highest trend value in F/Y 2014 is Rs. 29225.61 Million. Whereas, the same of the LBL is Rs. 5176.28 Million.
- Trend value of total investment of HBL and LBL are highest trend value in F/Y 2014 is Rs. 17166.09 Million while, the same of the LBL is Rs. 1283.17 Million. The train values of total investment of both banks are seen increasing train.
- Trend values of net profit of HBL and LBL are found increasing. In case of HBL, the highest trend value in F/Y 2014 is Rs. 1081.74 Million while the same of the LBL is Rs. 648.74 Million in the same study period.

h) Test of Hypothesis

From the test of significance regarding the parameter of the population, it has been found that:

- There is significant difference between mean ratios of loan and advance to total deposit of HBL and LBL.
- There is significant difference between mean ratio of total investment to total deposit of HBL and LBL.
- There is no significant difference between mean ratio of investment of government securities to current assets ratio of HBL and LBL.
- There is no significant difference between mean ratio of return on loan and advance ratio of HBL and LBL.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter deals with the summary, conclusion and recommendation derived from the study of investment policy of commercial bank. This chapter consists mainly two sections, the first section draws the conclusion from the finding of the study and the second section gives recommendation to solve the problem observed on the basis of the conclusion.

5.1 summary

Banking sector plays an important role in the economic development. Commercial banks are one of the vital aspects of this sector, which deals in the process of canalized the available resources in the needed sector. Financial institutions are necessity to collect scattered saving and put them into productive channels. Absence of such institutions, saving and lending activity is impossible. A healthy development of any commercial bank depends upon its investment policy. A good investment policy attracts both borrowers and lenders, which helps to increase the volume of quality deposit, loans and investment.

In this study, the word investment is conceptualized as the investment of income, savings or other collected funds. Investment policy is a one fact of the overall spectrum of policies that guide bank's investment operations and it ensures efficient allocation of fund to achieve the sustainable economic development of the nation.

The objective of commercial banks is to earn more profit by investing of granting loan and advance into profitable and marketable sector. The income and profit of the bank depends upon its lending procedure, lending policy and investment of its fund in different securities. The greater the credit created by the bank, the higher will be the profitability. A sound lending and investing policy is not significant for the promotion of commercial saving of a backward country like Nepal.

Major finding from secondary data of HBL and LBL are summarizing as follows:

The liquidity position of LBL is comparatively better than HBL; HBL manages the resource more efficiently than LBL. The profit of LBL is higher than HBL. The amount of risk associated with the various banking operation of LBL is higher than HBL. The power of expansion and growth of the bank business HBL is higher than LBL. Co-efficient of correlation between deposit and loan and advance of HBL has been found slightly higher than LBL; Co-efficient of correlation between deposit and total investment of HBL has been found higher than that of LBL. Trend analysis of deposit, loan and advance, total investment and net profit of both banks are found increasing trend.

5.2 Conclusion

The conclusion derived from the comparative study of the investment policy of Himalayan bank Ltd. and Lumbini Bank ltd. reveals that:

- (i) As shown the liquidity position of both bank have satisfactory. Investment on government securities to current assets ratio and loan and advance to current assets ratio. So we can conclude that LBL has maintained moderate investment policy in liquidity position.
- (ii) The analysis of asset management, included loan and advance to total deposit, loan and advance to total working funds, investment on government securities to total working funds, & loan loss ratios are higher in LBL in comparison to HBL but HBL's capacity to mobilize its deposit on total investment and investment on share and debenture to total working funds are so good than LBL. Finally it can be concluded that assets management position of LBL is more effective in comparison to HBL.
- (iii) From this study it can be concluded that the profitability position of LBL is better than HBL. It has highest return on loan and advances ratio and total interest earned to total out side assets ratio. Where HBL has not maintained better position in comparison but HBL is able to earn high amount of return on equity.

- (iv) From the risk ratio point of views, it can be concluded that LBL has higher degree of interest rate risk and credit risk in comparison of HBL.
- (v) From this study, we can be concluded that HBL can not successfully collected and utilized fund amount its customer due to see growth rate of total deposit, total investment and Net profit in comparison with LBL. Beside this, HBL is succeeded to increase loan and advance in comparison to LBL.
- (vi) From the study, we can be concluded that both HBL and LBL, there is positive relationship between deposit and loan and advance. So the relationship is significant. The both banks are successful to mobilize there deposit in proper way as loan and advance. Where as, relation between deposit and total investment is positive relation in case of HBL but incase of LBL is no significant different between deposit and total investment.
- (vii) From the study, it can be concluded that the trend value of total deposit, loan and advance, total investment and Net profit all are in increasing trend of both banks HBL and LBL. Increasing ratio of HBL is some what high in comparison to LBL.
- (viii) The hypothesis test on loan and advance to total deposit ratio and total investment to total deposit ratio shows that there is significant different between mean ratio of loan and advance to total deposit and total investment to total deposit of HBL and LBL. Where as, hypothesis test on investment on government securities to current assets and return on loan and advance ratio shows that there is no significant different between mean ratio of them for both banks HBL and LBL.

5.3 Recommendations

On the base of analysis and the finding of the study following recommendations can advanced to overcome efficiency and weakness and to improve fund mobilization and investment policy of HBL and LBL.

- (i) The main sources of funds in commercial banks are collecting deposit from public. Without enough funds no Banks can do any activities. It has found that HBL'S deposit collections ratios are comparatively lower than that of LBL. So, it is

recommended to HBL to increase cash and bank balance to meet current obligations and fulfill loan demand.

- (ii) HBL has weak to invest there collected deposit in loan and advance also in government securities which is risk less sector. So HBL strongly recommended increasing this program. But total investment ratio is satisfactory level of HBL.
- (iii) HBL has not properly used their working funds as loan and advance. The largest item of every bank in the assets side is loan and advance. If it is neglected, it could be the main causes of liquidity crisis and one of the main resources of a banks failure. So HBL should care to improve the efficiency in utilize idle funds for generating the profit.
- (iv) Commercial banks must mobilize its funds in different sector. Such as to purchase share and debenture of other financial and non-financial companies. It has been found that LBL's investment on share and debenture to working fund ratios are three times lower than that of HBL. So it is recommended to LBL as well as HBL.
- (v) Loan default in commercial bank is a result of various i.e. political influences, lack of the necessary skill of project appraisal, improper collateral evaluation, irregular supervision and lack of entrepreneurship attitude. Political and administrative factor are highly prevailing in Nepalese investment environment commercial banks should take this function with purely business attitude. The project oriented approach has to be encouraged in lending business of the banks, in which, securities is not necessary, risk is high but the project is important from the point of view of national economy. The project should be allowed to make them capable to generate their own funds and to repay loans timely. The chance of loan loss in the project oriented approach can then be minimized.
- (vi) Profit is essential for the survival and growth of banks but over the study period, HBL and LBL are seen unable to earn a satisfactory level of profit. In this context, both the banks are recommended to earn more profit and adopt various measures to improve its profitability.

- (vii) Portfolio management is very important for each and every investor's. Forming the efficient and optional portfolio can minimize the risk. Both banks HBL and LBL have not able to increasing total investment in every year. So portfolio conditions of HBL as well as LBL should be examines carefully from time to time and alternation should be made to maintain equilibrium in the portfolio condition as for as possible.
- (viii) Recovery of loan has been most challenging tasks these days. So, HBL and LBL are suggested to implement a sound collection policy including procedures. The policy should ensure rapid identification of delinquent loans, immediate contact with borrower and continual follow up until a loan is recovered and legal procedure if necessary.
- (ix) Interest rate charged by a bank is major source of income and expenditure. Depending upon the interest rates, the banks can make investment to maximize their income. There is higher degree of risk related with interest rate. The possibility of loss due to change in interest rate is known as interest rate risk. So both banks should keep interest rate while forming investment policy to get maximum profit.
- (x) Portfolio management is very important for each and every investor's. Forming the efficient and optimal portfolios can minimize the risk. Both banks have been increasing total investment in every year. So, portfolio conditions of HBL a well as LBL should be examine carefully from time to time and alternation should be made to maintain equilibrium in the portfolio of loans and investment and make continuous efforts to explore new, competitive and high yielding investment opportunities to optimize the return.
- (xi) In the light of growing competition in the banking sector, the business of bank should be customer oriented. The bank is recommended to adopt new technology and services or innovator in introducing many new products such as SWIFT, ATM card, international credit card, locker services, lending against fold and silver services, 24 hours service, holiday banking etc. the bank should involve in different

kind of social and community development activities, so the bank attract and retain the customers.

Research Questionnaire

(A survey on investment policy)

Thanks you for accepting to complete questionnaires. Your opinion and surjection are precious to my research. I would like to insure that all your answer and suggestions would be kept confidently.

General Information:-

Name:

Address:

Sex:

Age:

Education:

Occupation:

- 1) Do you think that Nepalese investors are unknown about the investment strategy and practice?
 - a) Yes
 - b) No
- 2) Do you think that Nepalese investors are not so interested in investment policy?
 - a) Yes
 - b) No
- 3) Do you think that Nepalese investors have adequate knowledge about investment policy adopted by commercial banks?
 - a) Yes
 - b) No
 - c) Don't know

If 'Yes' indicate the level

Minimum					Maximum
1	2	3	4	5	

- 4) Indicate the level of risk in investing in current situation.
 - a) High
 - b) Moderate
 - c) Less
 - d) No Risk
- 5) What are the sectors of investment that commercial banks should invest the fund collected through deposit?
 - a)
 - b)
 - c)
 - d)
- 6) Do you think it is necessary to give investment priority to the rural area of the country?
 - a) Yes (Why?)
 - b) No (Why?)
- 7) In your opinion, what may be the reason behind for not providing banking facility to the rural areas?
 - a) Don't want to take risks.
 - b) They are profit oriented only.
 - c) Lack of infrastructure.
 - d) Other
- 8) Commercial banks have increasing the interest rate on the clients deposit, Why?
 - a) No enough deposit or liquidity.
 - b) To encourage the public deposit.
 - c) Have enough investment opportunities.
 - d) Others
- 9) Which of the following, do you think, affects the investment?
 - a) Political Environment
 - b) Economic

c) Management

d) Inflation

10) What effect is you feel over the deposit and investment by the political change.

a)

b)

c)

d)

Thank you, for your opinion and suggestion.

Dharma Prasad Mishra

M.B.S.

Makawanpur Multiple Campus.

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Appendix - A

Investment on Govt. securities to current Asset Ratio of HBL (Rs in Thousands)

F.Y.	Investment on Govt. sec.	current Assets	Ratio (times)
2004/005	1140674	24581818	4.64
2005/006	1389985	27599062	5.04
2006/007	1202147	29373640	4.09
2007/008	1265286	33084074	3.82
2008/009	935842	35486844	2.84

LBL

F.Y.	Investment on Govt. sec.	current Assets	Ratio (times)
2004/005	-	4099716	-
2005/006	267601	4121922	6.49
2006/007	178329	4109749	4.34
2007/008	280521	5501437	5.10
2008/009	411341	6017281	6.84

Appendix -B

Loan & Advance to current Assets Ratio of HBL (Rs in Thousands)

F.Y.	Loan & advance	current Assets	Ratio (times)
2004/005	12919631	24581818	52.56
2005/006	13451168	27599062	48.74
2006/007	15761977	29373640	53.66
2007/008	17793724	33084074	53.78
2008/009	20179995	35486844	56.87

LBL

F.Y.	Loan & advance	current Assets	Ratio (times)
2004/005	2980398	4099716	72.70
2005/006	3167724	4121922	76.85
2006/007	2983895	4109749	72.61
2007/008	3840687	5501437	69.81
2008/009	4489494	6017281	74.61

Appendix -C

Loan & Advance to total Deposit Ratio of HBL (Rs in Thousands)

F.Y.	loan & advance	Total Deposit	Ratio (times)
2004/005	12919631	22010333	58.70
2005/006	13451168	24814012	54.21
2006/007	15761977	26490852	59.50
2007/008	17793724	30048418	59.22
2008/009	20179995	31842789	63.37

LBL

F.Y.	Loan & advance	Total Deposit	Ratio (times)
2004/005	2980398	3777605.22	78.90
2005/006	3167724	4031221.00	78.58
2006/007	2983895	4786440.20	62.34
2007/008	3840687	6024598.41	63.75
2008/009	4489494	5703733.80	78.71

Appendix -D

Total Investment to Total Deposit Ratio of HBL (Rs in Thousands)

F.Y.	Total Investment	Total Deposit	Ratio (times)
2004/005	9292103	22010333	42.22
2005/006	11692342	24814012	47.12
2006/007	10889031	26490852	41.10
2007/008	11822985	30048418	39.35
2008/009	13340177	31842789	41.89

LBL

F.Y.	Total Investment	Total Deposit	Ratio (times)
2004/005	558188	3777605.22	14.78
2005/006	535185	4031221.00	13.28
2006/007	673720	4786440.20	14.08
2007/008	864337	6024598.41	14.35
2008/009	817471	5703733.80	14.33

Appendix -E

Loan & Advance to total Working Fund Ratio of HBL

(Rs. in Thousands)

F.Y.	Loan & Advance	Total Working Fund	Ratio (times)
2004/005	12919631	24581818	52.56
2005/006	13451168	27599062	48.74
2006/007	15761977	29373640	53.66
2007/008	17793724	33084074	53.78
2008/009	20179995	35486844	56.87

LBL

F.Y.	Loan & Advance	Total Working Fund	Ratio (times)
2004/005	2980398	4099716	72.70
2005/006	3167724	4121922	76.85
2006/007	2983895	4109749	72.61
2007/008	3840687	5501437	69.81
2008/009	4489494	7017281	74.61

Appendix -F

Investment on Government Securities to Total working Funds Ratio

HBL

(Rs. in thousands)

F.Y.	Investment on Govt. Securities	Total Working Fund	Ratio (times)
2004/005	1140674	24581818	6.64
2005/006	1389985	27599062	5.04
2006/007	1202147	29373640	4.09
2007/008	1265286	33084074	3.82
2008/009	935842	35486844	2.64

LBL

F.Y.	Investment on Govt. Securities	Total Working Fund	Ratio (times)
2004/005	-	4099716	0
2005/006	267601	4121922	6.49
2006/007	178329	4109749	4.34
2007/008	280521	5501437	5.10
2008/009	411341	6017281	6.84

Appendix -G
Investment on share and debenture to total working fund Ratio
HBL (Rs. in thousands)

F.Y.	Investment on share and debenture	Total Working Fund	Ratio (times)
2004/005	34266	24581818	0.14
2005/006	39909	27599062	0.14
2006/007	38567	29373640	0.13
2007/008	73424	33084074	0.22
2008/009	89558	35486844	0.25

LBL

F.Y.	loan	current Assets	Ratio (times)
2004/005	2065	4099716	0.05
2005/006	1820	4121922	0.04
2006/007	2358	4109749	0.06
2007/008	5359	5501437	0.10
2008/009	5877	6017281	0.10

Appendix -H

Loan loss Ratio of HBL
(Rs. in thousands)

F.Y.	loan loss provision	loan & Advance	Ratio (times)
2004/005	967762	12919631	7.49
2005/006	1026648	13451168	7.63
2006/007	1119417	15761977	7.10
2007/008	795727	17793724	4.47
2008/009	682474	20179995	3.38

LBL

F.Y.	loan loss provision	loan & Advance	Ratio (times)
2004/005	73375	2980398	2.46
2005/006	303412	3167724	9.58
2006/007	355593	2983895	11.92
2007/008	217859	3840687	5.67
2008/009	164928	4489494	3.67

Appendix -I
Return on loan and Advance
HBL

(Rs. in thousands)

F.Y.	Net profit (Rs.)	loan & Advance	Ratio (times)
2004/005	263052	12919631	2.04
2005/006	308277	13451168	2.29
2006/007	457458	15761977	2.90
2007/008	491823	17793724	2.76
2008/009	635869	20179995	3.15

LBL

F.Y.	Net profit (Rs.)	loan & Advance	Ratio (times)
2004/005	18640	2980398	0.63
2005/006	196773	3167724	6.21
2006/007	36063	2983895	1.21
2007/008	192404	3840687	5.00
2008/009	327649	4486494	7.30

Appendix -J

Return on Equity
HBL

(Rs. in thousands)

F.Y.	Net profit (Rs)	Equity capital	Ratio (times)
2004/005	263052	2291928	11.48
2005/006	308277	2568395	12.00
2006/007	457458	2885593	15.85
2007/008	491823	2942226	16.72
2008/009	635869	3195466	19.90

LBL

F.Y.	Net profit (Rs)	Equity capital	Ratio (times)
2004/005	18640	403512	4.26
2005/006	196773	604991	32.52
2006/007	36063	1822070	1.98
2007/008	192404	1629665	11.81
2008/009	327649	1697726	19.30

Appendix -K

Total Interest Earned to Total outside Assets Ratio

HBL

(Rs. in thousands)

F.Y.	Total Interest Earned	Total outside assets	Ratio (times)
2004/005	1245895	22211734	5.61
2005/006	1446468	25143510	5.75
2006/007	1626474	26651008	6.10
2007/008	1775583	29616709	6.00
2008/009	1963647	33520172	5.86

LBL

F.Y.	Total Interest Earned	Total outside assets	Ratio (times)
2004/005	361240	3538585	10.21
2005/006	384598	3702908	10.39
2006/007	343821	3657615	9.40
2007/008	458649	4705024	9.75
2008/009	535801	5306965	10.10

Appendix -L

Interest Rate Risk Ratio

HBL

(Rs. in thousands)

F.Y.	Investment Sensitive Assets	Investment Sensitive liabilities	Ratio (times)
2004/005	4558550	5310276	85.84
2005/006	5002069	6558219	76.27
2006/007	5669613	8745713	64.83
2007/008	9098190	12427765	73.21
2008/009	10876032	15359797	70.81

LBL

F.Y.	Investment Sensitive Assets	Investment Sensitive liabilities	Ratio (times)
2004/005	1138045	1261602	90.21
2005/006	1854293	2054837	90.24
2006/007	3229924	3826944	84.40
2007/008	4659767	6014115	77.48
2008/009	7244619	7968340	90.92

Appendix -M

Credit Risk Ratio

HBL

(Rs. in thousands)

F.Y.	loan & Advance	Total Assets	Ratio (times)
2004/005	12919631	25729787	50.21
2005/006	13451168	18871343	46.59
2006/007	15761977	30579808	51.54
2007/008	17793724	34314868	51.85
2008/009	20179995	36858006	54.75

LBL

F.Y.	loan & Advance	Total Assets	Ratio (times)
2004/005	2980398	4364205	68.29
2005/006	3167724	4382948	72.27
2006/007	2983895	4259343	70.05
2007/008	3840687	5705026	67.32
2008/009	4489494	6151478	72.98

APPENDIX - N (I)

Correlation between total deposit and loan & advance

HBL

(Rs. in Millions)

F.Y.	Deposit (x)	Loan & Advance (y)	X=(x-27041.28)	Y=(y-16021.30)
2004/005	22010.33	12919.63	- 5030.95	- 3101.67
2005/006	24814.01	13451.17	- 2227.27	- 2570.13
2006/007	26490.85	15761.98	- 550.43	- 259.32
2007/008	30048.42	17793.72	3007.14	1772.42
2008/009	31842.79	20180.00	4801.51	4158.70
Total	135206.40	80106.50		
N=5	X=27041.20	Y=16021.30		

X ²	Y ²	XY
25310457.90	9620356.79	15604346.69
4960731.65	6605568.22	5724373.45
302973.18	67246.86	142737.51
9042890.98	3141472.66	5329915.08
23054498.28	17294785.69	19968039.64
X ² =62671551.99	Y ² X36729430.22	xy X46769412.37

Now,

We have

N=5

$$x^2 \text{ X}62671551.99$$

$$y^2 \text{ X}36729430.22$$

$$xy \text{ X}46769412.37$$

Correlation of Coefficient can be calculated by using the following formula.

$$\begin{aligned}
 r &= \frac{xy}{\sqrt{x^2} \cdot \sqrt{y^2}} \\
 &= \frac{46769412.37}{\sqrt{62671551.99} \sqrt{36729430.22}} \\
 &= \frac{46769412.37}{7916.54 \mid 6060.48} \\
 &= \frac{46769412.37}{47978032.34}
 \end{aligned}$$

$$\dots r = 0.975$$

$$r^2 = 0.951$$

Calculation of Probable error,

$$\begin{aligned}
 \text{P.Er.} &= 0.6745 \frac{1Zr^2}{\sqrt{N}} \\
 &= 0.6745 \frac{1Z0.951}{\sqrt{5}}
 \end{aligned}$$

$$= 0.6745 \frac{0.049}{2.2361}$$

$$= 0.0148$$

$$6\text{P.Er.} = 6 \times 0.0148$$

$$= 0.0888$$

APPENDIX - N (II)

Correlation between total deposit and loan & advance

LBL

(Rs. in Millions)

F.Y.	Deposit (x)	Loan & Advance (y)	X=(x-4864.72)	Y=(y-3492.94)
2004/005	3777.61	2980.40	- 1087.11	- 512.04
2005/006	4031.22	3167.72	- 833.50	- 324.72
2006/007	4786.44	2983.90	- 78.28	- 508.54
2007/008	6024.60	3840.69	1159.88	348.25
2008/009	5703.73	4489.49	839.01	997.05
Total	24323.60	17462.2		
N=5	X=4864.72	Y= 3492.44		

X^2	Y^2	XY
1181808.15	262184.96	556643.80
694722.25	105443.08	270654.12
6127.76	258612.93	39808.51
1345321.61	121278.06	403928.21
703937.78	994108.70	836534.92
$X^2=3931917.55$	Y^2 X1741627.73	xy X2107569.56

Now,

We have

N=5

x^2 X3931917.55

y^2 X1741627.73

xy X2107569.56

Correlation of Coefficient can be calculated by using the following formula.

$$\begin{aligned}
 r &= \frac{xy}{\sqrt{x^2} \cdot \sqrt{y^2}} \\
 &= \frac{2107569.56}{\sqrt{3931917.55} \sqrt{1741627.73}} \\
 &= \frac{2107569.56}{1982.91 \mid 1319.71} \\
 &= \frac{2107569.56}{6866.16}
 \end{aligned}$$

$$\dots r = 0.8054$$

$$r^2 = 0.6487$$

Calculation of Probable error,

$$\begin{aligned}
 \text{P.Er.} &= 0.6745 \frac{1Zr^2}{\sqrt{N}} \\
 &= 0.6745 \frac{1Z0.6487}{\sqrt{5}} \\
 &= 0.6745 \frac{0.3513}{2.2361} \\
 &= 0.1060 \\
 6\text{P.Er.} &= 6 \times 0.1060 \\
 &= 0.636
 \end{aligned}$$

APPENDIX - O (I)

Correlation between total deposit and total Investment

HBL

(Rs. in Millions)

F.Y.	Deposit (x)	Investment (y)	X=(x-27041.28)	Y=(y-11407.33)
2004/005	22010.33	9292.10	- 5030.95	-2115.23
2005/006	24814.01	11692.34	- 2227.27	285.01
2006/007	26490.85	10889.03	- 550.43	-518.30
2007/008	30048.42	11822.99	3007.14	415.66
2008/009	31842.79	13340.18	4801.51	1932.85
Total	135206.40	57036.64		
N=5	X= 27041.28	Y= 11407.33		

X ²	Y ²	XY
25310457.90	4474197.95	10641616.37
4960731.65	81230.70	- 634794.22
302973.18	268634.89	285287.87
9042890.98	172773.24	1249947.81
23054498.28	3735909.12	9280598.60
X ² =62671551.99	Y ² X8732745.90	xy X20822656.43

Now,

We have

N=5

x^2 X62671551.99

y^2 X8732745.90

xy X20822656.43

Correlation of Coefficient can be calculated by using the following formula.

$$\begin{aligned}
 r &= \frac{xy}{\sqrt{x^2} \cdot \sqrt{y^2}} \\
 &= \frac{20822656.43}{\sqrt{62671551.99} \sqrt{8732745.90}} \\
 &= \frac{20822656.43}{7916.54 \mid 2955.12} \\
 &= \frac{20822656.43}{2339432568}
 \end{aligned}$$

$$\dots r = 0.8901$$

$$r^2 = 0.7923$$

Calculation of Probable error,

$$\begin{aligned}
 \text{P.Er.} &= 0.6745 \frac{1 Z r^2}{\sqrt{N}} \\
 &= 0.6745 \frac{1 Z 0.7923}{\sqrt{5}} \\
 &= 0.6745 \frac{0.2077}{2.261}
 \end{aligned}$$

$$\dots \text{P.Er.} = 0.1060$$

$$\begin{aligned}
 6\text{P.Er.} &= 6 \times 0.0626 \\
 &= 0.3756
 \end{aligned}$$

APPENDIX - O (II)

Correlation between total deposit and total Investment

LBL

(Rs. in Millions)

F.Y.	Deposit (x)	Investment (y)	X=(x-4864.72)	Y=(y-11407.33)
2004/005	3777.61	558.19	- 1087.11	- 131.59
2005/006	4031.22	535.19	- 833.50	- 154.59
2006/007	4786.44	673.72	- 78.28	- 16.06
2007/008	6024.60	864.34	1159.88	174.56
2008/009	5703.73	817.47	839.01	127.69
Total	24323.60	3448.91		
N=5	X= 4864.72	Y= 689.78		

X²	Y²	XY
1181808.15	17315.93	143052.80
694722.25	23898.07	128850.77
6127.76	257.92	1257.18
1345321.61	30471.19	30471.19
703937.78	16304.74	16304.74
X ² = 3931917.55	Y ² X 88247.85	xy X 319936.68

Now,

We have

N=5

x^2 X3931917.55

y^2 X88247.85

xy X319936.68

Correlation of Coefficient can be calculated by using the following formula.

$$\begin{aligned}
 r &= \frac{xy}{\sqrt{x^2} \cdot \sqrt{y^2}} \\
 &= \frac{319936.68}{\sqrt{3931917.55} \sqrt{88247.85}} \\
 &= \frac{319936.68}{1982.91 \mid 297.07} \\
 &= \frac{319936.68}{589063.07}
 \end{aligned}$$

$$\dots r = 0.5431$$

$$r^2 = 0.2950$$

Calculation of Probable error,

$$\begin{aligned}
 P.Er. &= 0.6745 \frac{1Zr^2}{\sqrt{N}} \\
 &= 0.6745 \frac{1Z0.2950}{\sqrt{5}} \\
 &= 0.6745 \frac{0.705}{2.2361}
 \end{aligned}$$

$$\dots P.Er. = 0.2127$$

$$6P.Er. = 6 \times 0.2127$$

$$= 1.2762$$

APPENDIX - P (I)

Trend Value of Total Deposit of HBL

(Rs in Millions)

Years (t)	Total Deposit (y)	X (t- 2007)	X²	XY	YC = a+bx YC=27041.28+2489.93x
2005	22010.33	-2	4	-44020.7	22061.42
2006	24814.01	-1	1	-24814.01	24551.35
2007	26490.85	0	0	0	27041.28
2008	30048.42	1	1	30048.42	29531.21
2009	31842.79	2	4	63685.58	32021.14
N=5	y X135206.40	x =0	x X10	xy =24899.29	

Now,

$$a = \frac{y}{N} \times \frac{135206.40}{5} \times 27041.28$$

$$b = \frac{xy}{x^2} \times \frac{24899.33}{10} \times 2489.93$$

Trend Value of Total Deposits of HBL (2010-2014)

Year (t)	X=(t-2007)	Trend Value YC=(27041.28+2489.93x)
2010	3	34511.07
2011	4	37001.00
2012	5	39490.93
2013	6	41980.86
2014	7	44470.79

APPENDIX - P (II)

Trend Value of Total Deposit of LBL

(Rs in Millions)

Years (t)	Total Deposit (y)	X (t-2007)	X²	XY	YC = a+bx YC=(4864.72+584.56x)
2005	3777.61	-2	4	-7555.22	3695.60
2006	4031.22	-1	1	-4031.22	4280.16
2007	4786.44	0	0	0	4862.72
2008	6024.60	1	1	6024.60	5449.28
2009	5703.73	2	4	11407.46	6033.84
N=5	$\Sigma y = 24323.6$	$\Sigma x = 0$	$\Sigma x^2 = 10$	$\Sigma xy = 5845.62$	

Now,

$$a = \frac{\Sigma y}{N} = \frac{24323.60}{5} = 4864.72$$

$$b = \frac{\Sigma xy}{\Sigma x^2} = \frac{5845.62}{10} = 584.56$$

Trend Value of Total Deposits of LBL (2010-2014)

Year (t)	X=(t-2007)	Trend Value YC=(4864.72+584.56x)
2010	3	6618.40
2011	4	7202.96
2012	5	7787.52
2013	6	8372.08
2014	7	8956.64

APPENDIX - Q (I)

Trend Value of Loan and Advance of HBL

(Rs in Millions)

Years (t)	Loan & Advance (y)	X (t-2007)	X²	XY	YC = a+bx YC=(16021.30+1886.33x)
2005	12919.63	-2	4	-25839.26	12248.64
2006	13451.17	-1	1	-13451.17	14134.97
2007	15761.98	0	0	0	16021.30
2008	17793.72	1	1	17793.72	17907.63
2009	20180.00	2	4	40360.00	19793.96
N=5	$\sum y = 80106.50$	$\sum x = 0$	$\sum x^2 = 10$	$\sum xy = 18863.29$	

Now

$$a = \frac{\sum y}{N} - X \frac{\sum yx}{\sum x^2} = \frac{80106.50}{5} - X \frac{18863.29}{10} = 16021.30$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{18863.29}{10} = 1886.33$$

Trend Value of Total Deposits of HBL (2010-2014)

Year (t)	X=(t-2007)	Trend Value YC=(16021.30+1886.33x)
2010	3	21680.29
2011	4	23566.62
2012	5	25452.95
2013	6	27339.28
2014	7	29225.61

APPENDIX - Q (II)

Trend values of loan and advances of LBL

(Rs. in Millions)

Years (t)	Loan & Advance (y)	X (t-2007)	X²	XY	YC = a+bx YC=(3292.44+269.12x)
2005	2980.40	-2	4	-5960.80	2754.20
2006	3167.72	-1	1	-3167.72	3023.32
2007	2983.90	0	0	0	3292.44
2008	2840.69	1	1	2840.69	3561.56
2009	4489.49	2	4	8978.98	3830.68
N=5	Y X16462.20	x X0	x ² X10	xy X2691.15	

Now

$$a = \frac{y}{N} \times \frac{16462.20}{5} = 3292.44$$

$$b = \frac{xy}{x^2} \times \frac{2691.15}{10} = 269.12$$

Trend Value of loan and advance of LBL (2010-2014)

Year (t)	X = (t-2007)	Trend Value YC=(3292.44+269.12x)
2010	3	4099.80
2011	4	4368.92
2012	5	4638.04
2013	6	4907.16
2014	7	5176.28

APPENDIX-R (I)

Trend value of Total Investment of HBL

(Rs. in Millions)

Years (t)	Loan & Advance (y)	X (t-2007)	X²	XY	YC = a+bx YC=11407.33+822.68x
2005	9292.10	-2	4	-18584.20	9761.97
2006	11692.34	-1	1	-11692.34	10584.65
2007	10889.03	0	0	0	11407.33
2008	11822.99	1	1	11822.99	12230.01
2009	13340.18	2	4	26680.36	13052.69
N=5	y X57036.64	x X0	x ² X10	xy X8226.81	

Now

$$a = \frac{y}{N} \times \frac{57036.64}{5} \times 11407.33$$

$$b = \frac{xy}{x^2} \times \frac{8226.81}{10} \times 822.68$$

Trend value of Total Investment of HBL (2010-2014)

Years (t)	X=(t-2007)	Trend Value (YC=11407.33 + 822.68x)
2010	3	13875.37
2011	4	14698.05
2012	5	15520.73
2013	6	16343.40
2014	7	17166.09

APPENDIX-R (II)

Trend value of Total Investment of LBL

(Rs. in Millions)

Years (t)	Loan & Advance (y)	X (t-2007)	X²	XY	YC = a+bx (YC=689.78 + 84.77x)
2005	558.19	-2	4	-1116.38	520.24
2006	535.19	-1	1	-535.19	605.01
2007	673.72	0	0	0	689.78
2008	864.34	1	1	864.34	774.55
2009	817.47	2	4	1634.94	859.32
N=5	y X3448.91	x X0	x ² X10	xy X847.70	

Now

$$a = \frac{y}{N} \times \frac{3448.90}{5} \times 689.78$$

$$b = \frac{xy}{x^2} \times \frac{847.71}{10} \times 84.77$$

Trend value of Total Investment of LBL (2010-2014)

Years (t)	X=(t-2007)	Trend Value (YC=689.78 + 84.77x)
2010	3	944.09
2011	4	1028.86
2012	5	1113.63
2013	6	1198.40
2014	7	1283.17

APPENDIX-S (I)

Trend value of Net Profit of LBL

(Rs. in Millions)

Years (t)	Loan & Advance (y)	X (t-2007)	X²	XY	YC = a+bx (YC=219.22 + 61.36x)
2005	18.64	-2	4	-37.28	96.50
2006	196.77	-1	1	-196.77	157.86
2007	360.63	0	0	0	219.22
2008	192.40	1	1	192.40	280.58
2009	327.65	2	4	655.30	341.94
N=5	y X1096.09	x X0	x ² X10	xy X613.65	

Now

$$a = \frac{y}{N} \times \frac{1096.09}{5} \times 219.22$$

$$b = \frac{xy}{x^2} \times \frac{613.65}{10} \times 61.36$$

Trend value of Net profit of LBL (2010-2014)

Years (t)	X=(t-2007)	Trend Value (YC=219.22 + 61.36x)
2010	3	403.30
2011	4	464.66
2012	5	526.02
2013	6	587.38
2014	7	648.74

APPENDIX-S (II)

Trend values of Net Profit of HBL

(Rs. in Millions)

Years (t)	Loan & Advance (y)	X (t-2007)	X²	XY	YC = a+bx YC=431.30 + 92.92x
2005	263.05	-2	4	-526.10	245.46
2006	308.28	-1	1	-308.28	338.38
2007	487.46	0	0	0	431.30
2008	491.82	1	1	491.82	524.22
2009	635.87	2	4	1271.74	617.14
N=5	y X 2156.48	x X 0	x ² X 10	xy X 929.08	

Now

$$a = \frac{y}{N} \times \frac{2156.48}{5} \times 431.30$$

$$b = \frac{xy}{x^2} \times \frac{929.18}{10} \times 92.92$$

Trend value of Net Profit of HBL (2010-2014)

Years (t)	X=(t-2006)	Trend Value (YC=431.30 + 92.92x)
2010	3	710.06
2011	4	802.98
2012	5	895.90
2013	6	988.82
2014	7	1081.74

APPENDIX-T

Sample Calculation of Growth Rate of HBL

D_n = Total deposit of the nth year

D_0 = Total deposit of the initial year

N = Total No. of year

Here,

$$D \frac{2008}{2009} \times 31842789$$

$$D \frac{2004}{2005} \times 22010333$$

$$N = 5$$

Now, we have

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

$$\text{Or } D \frac{2008}{2009} \times D \frac{2004}{2005} (1 + g)^{5-1}$$

$$\text{Or } 31842789 \times 22010333 (1 + g)^4$$

$$\text{Or } (1 + g)^4 \times \frac{31842789}{22010333}$$

$$1. \text{ Or } 1 + g \times (1.44672)^{\frac{1}{4}}$$

$$\text{Or } 1 + g \times 1.09672$$

$$\text{Or } g \times 0.09672 \times 9.67\%$$

