## CHAPTER- I <br> INTRODUCTION

### 1.1 Background of the Study

Nepal is small landlocked, south Asian country, which is in a slow development phase. Its economy is characterized by the declining interest rate, high inflation and slow growth in per capital income, low income, low saving and low investment, along with very low growth rate, political unrest and capital inadequacy are the major barriers in the economic development process of a country. Nepal is rich in natural resources which are remained unutilized because of lack of capital. A key factor in the development of an economy is the mobilization process of domestic resources.

Banking sector plays an important role in the economic development of the country. It pools the funds scattered in the economy and mobilizes them to the productive sectors. Economic development of a country is impossible without the development of a country sectors of the economy like agriculture, trade tourism etc. of the country. Private sector also cannot make investment in huge amounts alone because per capital income of people is very low while there propensity to consume is very high. Due to low income there saving is very low and hence capital formation is very low.

The word 'investment' connotes the investment of income, saving or other collected funds. Investment is possible only when there is adequate saving. If all the incomes are consumed now for fulfilling basic needs, then there is nothing to investment. Therefore, both the saving and investment are interrelated. A distinction is often made between investments and saving, saving is defined as foregone consumption; investment is restricted to real investment of the sort that increases national output in the futures. It is always
true that all people want to invest their money in the most profitable opportunities for good return, but there is always risk associated with it.

Bank is the financial institution who collects immobilized money in the form of deposits from every corner and parts of the country and this will provide capital for the development of the industry, trade and business and other resources deficit sectors. The modern age is the business competition age. In every business financing activities is very important part. The bank can play a vital role for the financing activities in the business. The saving and investment is most necessary for the developing country, which can be managed by the banks. Capital accumulation also plays a vital role to accelerate the economic growth of the developing countries; which is quiet low with a relatively higher marginal propensity of consumption. As a result, such countries are badly trapped into the vicious circle of poverty. Therefore, the basic problem for developing countries will be to raise the level of saving and investment.

The modern age is the competitive age. Due to the competition the bank must follow the sound investment policy. Investment is the application of money for earning more money. It means the use of money at present to earn income or profit for future. Investment in financial sense is placing of money in the other for their use expecting a return or participation in expected profits. Investment means utilized for buying financial assets, for example stocks, bonds real properties, and precious items. It is the act of proper utilization of funds to be mobilized so that achievement of a high return could be ensured.

A healthy development and growth of any commercial bank depends upon its investment policy. A good investment policy attracts both borrowers and lenders, which helps to increase the quality and quantity of deposit loan and investment loan. Commercial banks are profit-making organization. Their motive is wealth maximization and giving maximum benefits to its shareholders. They collect the
money from the public and play with that money so as to gain profit and can distribute more dividends to its shareholders.

Commercial banks formulate sound investment policies, which eventually contribute to the economics of a county. The sound policies help commercial bank objective of profit maximization and social welfare. The banking sector has to play development role to boost the economy by adopting the growth oriented investment policy and building up the financial structure for future economic development. Formulation of sound investment policies and co-ordinate and planned efforts pushes forward and forces of economic growth.

Commercial banks have become the heart of financial system. They formulate sound investment policies which contribute to the economic growth of a country. They invest their funds in limited areas to achieve higher amount of profit. Now a day commercial banks do not seem to be capable to invest their funds in more profitable sector that is Treasury bill, development bond \& other securities. They keep high liquid position and flow lower funds to the productive sector, this results into lower profitability to commercial banks and ignorance to the national economic growth process. This is the main reason for crisis in the commercial banks and in the whole national economy as well.

Investment promotes economic growth and contributes to a nation's wealth. When people deposit money in the saving account of a bank, the bank may invest by lending the funds to various business firms. These firms in return may invest the money in new factories and equipment to increase their production. In addition to borrowing from banks, most companies issue stocks and bonds that they sell to investors to raise capital needed for business expansion. Government also issues bonds to obtain funds to invest its projects, such as the construction of dams, roads and schools. Nepal Rastra Bank on behalf of the Government of Nepal issues bonds, treasury bills to finance the long-term and short-term needs of the government.

### 1.1.1 Profile of the Concerned Banks

## Himalayan Bank Limited (HBL)

Himalayan Bank Limited (HBL) was incorporated in 1992 by the distinguished business personalities of Nepal in partnership with Employees Provident Fund and Habib Bank limited. It is one of the largest commercial bank operations which were commenced from January, 1993. It is the first commercial bank of Nepal with maximum share holding by the Nepalese private sectors. Beside commercial activities, the bank also offers industrials and merchant banking.

HBL has always been committed to providing a quality service to its valued customers. All customers are treated with utmost courtesy as valued clients. The bank, wherever possible, offers tailor and facilities of its clients, based on the unique needs and requirement of different clients. To further extend the reliable and efficient services to its valued customers.

## Everest Bank Limited (EBL)

A joint venture with Punjab National Bank India) has been established with objective of expending professionals banking services to various sectors of society in the kingdom of Nepal and thereby contributes in the economic development of the country. The bank had come into formal operation from $18^{\text {th }}$ October 1994. EBL is joint venture with "Punjab National Bank (PNB)", one of the largest commercial bank in India. PNB has a century old tradition of successful banking and is known for is its financial strength and has laid down modern banking system procedure. PNB is providing the top management service to EBL under technical services agreement signed between the two institutions. EBL operated with the objectives of providing the full range of quality banking services to both the business community and the common man.

### 1.2 Statement of the Problem

Currently there are 32 commercial banks operating in Nepal. There is high flow of money in the market but less investable project. Lack of sound investment policy is another reason for commercial bank not to properly utilizing its deposits that is making loan and advances or lending for a profitability projects. This condition will lead the commercial bank to the position of liquidation. They face so many difficulties to mobilize their deposits fund on the profit making investment.

The lack of knowledge financial risk, interest rate risk, management risk, business risk and purchasing risk etc. are the main problem facing by them. The problem of lending has become very serious for developing country like Nepal. This is due to lack of sound investment policy of commercial Nepalese commercial banks because they have not formulated their investment policy in an organized manner. They mainly rely upon the instructions and guide lines of NRB. They do not have clear view towards investment policy further more.

There is also lack of effective investment diversification. Banks are not serious towards research and development. Sometimes, their loan portfolio is diversified while sometimes concentrated.

Besides, it seems that the most of Nepalese commercial banks have not formulated their investment policy in an organized manner. They simply seem to be complied the instructions and guidelines issued by Nepal Rastra Bank. It seems that they do not have clear view of their investment policy. Commercial banks financial system of Nepal is still in its preliminary stage of development. Small and fast growing financial sector comprises of commercial banks and other financial institutions like development banks, finance companies, cooperatives, insurance etc. So, for development of financial services in the country is uneven commercial bank are more emphasized to be making loan in short term basis against movable merchandise. There is less interest to invest on long-term project because they are
much more safety minded. Therefore, they follow conservative loan policy, which is based on strong security.

Thus, the present study makes a modest attempt to analyze investment policy of Himalayan Bank comparing it Everest Bank Limited. The problems specially related to investment function of the joint venture banks of Nepal have been presented briefly as under.
$>$ What is the fund mobilization \& investment policy into selected banks?
$>$ What is the relationship of investment and loan and advances with total deposit and total net profit into selected banks?
> Is investment decision affect successful to utilize its available fund in the selected banks?
> Whether there is differences in the mobilization \& investment policy between two banks or not?
$>$ What is the financial performance of HBL and EBL in terms of liquidity, assets management efficiency, profitability and risk position?
> What is the trend of deposit utilization \& projection of HBL and EBL?

### 1.3 Objectives of the Study

The basic of the study is to review the investment policy adopted by Himalayan Bank and Everest Bank LTD as well as to compare it. The main objectives of this study are given below.
$>$ To make a comparative study of HBL and EBL of the financial performance in term of liquidity, assets management efficiency, profitability and risk position.
$>$ To find out the trend of deposit utilization and its projections.
> To make a comparative study of HBL and EBL on fund mobilization and investment policy.
> To find out the empirical relationship between various important variables to make the comparative study of HBL and EBL.( i.e. deposits loan \& advances, investments, net profit and outside asset of HBL and EBL).

### 1.4 Significance of the Study

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

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

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

### 1.5 Limitation of the Study

The study suffers from some limitations. The main limitations of the study have been as follows.
$>$ Although there are many other commercial bank, sample have cover only few because of unavailability of sufficient and accurate data along with other constraints.
> The study deals with certain statistical and financial tools.
> The whole study has been limited to the past five years only.
$>$ The study has been based on secondary data

### 1.6 Organization of the Study

The study is organized in the following five chapters.
Chapter - I: Introduction
Chapter - II: Review of Literature
Chapter - III: Research Methodology
Chapter - IV: Data Presentation and Analysis
Chapter - V: Summary, Conclusion \& Recommendations

The first chapter, introduction introduces the main topic of the study like general background, statement of problem, objectives and significance with limitation of the study and other introductory frame work.

The second chapter includes, Review of Literature concerning with reviews of available relevant studies. It includes the conceptual review and review of the related books, journals and the published and unpublished research works as well as thesis.

The third chapter, Research methodology, presents various financial tools and statistical tools which are used for the analysis of the presented data.

The fourth chapter, Data Presentation and Analysis, deals with the presentation and analysis of the relevant collected data.

The fifth chapter is for Summary, Conclusion and Recommendations at which total work is summarized, concluded and recommendation has been given.

## CHAPTER - II <br> REVIEW OF LITERATURE

### 2.1 Introduction

Every study is based on past knowledge. The previous study cannot be ignored because they provide the foundation to the present study. Review of Literature means reviewing research studies. It is an analytical expression on the concerned topic. Review of Literature refers to the analyzing, assessing, reevaluating and re-examining the previously written works. Thus, in the preparation of this thesis various books, articles, thesis etc has been consulted and reviewed.

### 2.2 The Commercial Bank

The most important kind of banks is the commercial bank. Besides, it is the most common kind of Bank with which almost every one of us comes so often in contact. As its very epithet suggests this bank has its connection with the commercial class of people. It collects their floating capital and finances, the temporary needs of commercial transaction. Its deposits are purely demand obligation and hence it is by mature quite incompetent to often any long-term accommodation. It has, rather need a rule amongst this class of bank not to grant permanent loan and provide capital for investment purpose. Nor does it furnish the whole fixed capital for trading purposes but it supplies as much as is occasionally needed for carrying on business or making investment in it. It has to distinguish between a genuine borrower and speculative investor as well.

Commercial banks deal with other people's money. They have to find ways of keeping their assets liquid so that they could meet the demands of their customers. In their anxiety to make profit, the banks cannot afford to lock up their funds in assets, which are not easily realizable. The depositor's confidence
could be secured only if the bank is able to meet the demand for cash promptly and fully. The banker has to keep adequate cash for this purpose.

The commercial banks in Nepal have two components in financial sector basically known as the banking sector component and non banking sector component. The other component, non-banking sector, includes co-operative, regional rural development banks, development banks, financial companies and NGOs. Banks play predominant role in under developed economy in many ways as they promote capital formation by developing banking habit of people and collection saving. People have mobilized them in productive channels. Thus, their role in the economic development is to remove the deficiency of capital by stimulating saving and investment.

Commercial bank in current year presents a new picture of innovation in practice of wider horizon and of new enterprises. The most remarkable diversification of banking function is increasing participation in medium- and long-term financial industries and other sectors; so, they are not only financial institution of agricultural, industrial and other economic activities but are more than financial institution in the sense that they help saving to create deposits and make the subsequent distribution of such accumulated funds.

### 2.3 Functions of Commercial Banks

The commercial banks in every nation of the world have key role in the pursuit of attaining the goal of rapid economic development. Commercial banks are the heart of financial sector, which occupy important place in the framework of the economy. They hold deposits of the people, government and business units. They make funds available through their lending and investing activities to borrowers like individual, business and government sector. Therefore, as they provide capital for the development of the industry, trade, business and services they contribute large portion on the economic growth of the nation commercial banks make sound
investment in various sectors of the economy, which boost the quality of investment as well as achieves, its own objectives of profit maximization. Thus, wellformulated and sound investment policies- coordinated and planned efforts accelerate the pace of economic growth.

Commercial banking as we have seen grew but of the need for a safe place of deposit when the people of London entrusted their savings to the goldsmiths. It did not take much time for them to realize that the business could be made profitable by re-lending what was receives, provided it could be returned before it was required. Gradually, they learnt that the daily payments were more than counter balanced by the daily receipts and hence there was no necessity of this stipulation. It is obvious that borrowing and lending are two leading functions of banking business. There are a few other functions as well which are now performed by these banks. They include the following:

### 2.3.1 Receiving Deposits

Deposits are received under different heads of accounts, the most important of which is the current account, others being the fixed deposit account, the saving bank account, the home safe account, etc. The first deposits received were, however, under fixed deposit account but "the goldsmith found by experience that they could take deposits withdrawal not at a fixed future date, if such deposits were on a large scale, a sufficient proportion of them would always be left untouched for a certain period to enable the holder to lend up to something like that proportion. These have become the foundation of the 'current account' on which the depositor can draw at his will".

### 2.3.2 Lending Money

The second major function of a commercial bank is to lending of money, which it receives by way of deposits. Direct loans and advances are given to all types of persons against the personal security of the borrowers of against the security of
movable and immovable properties. Loans are granted by banks in four forms i.e. overdrafts, cash credit, direct loans and discounting bills of exchange.

### 2.3.3 Agency Functions

Bankers also act as agents of their customers in various ways. They collect and pay their cheque, bills, promissory notes, coupons, dividend warrants, subscriptions, rents, income tax, insurance premier and other periodical receipts and payments. They purchase and sell on their behalf shares, stocks, debentures and bonds; etc, on the stock exchanges, and other valuables in other markets. They also act as administrators, trustees, executors and attorneys.

### 2.3.4 Miscellaneous Functions

Under miscellaneous functions may be included a number of functions performed by the bankers.
$>$ They receive their customers' valuables ornaments and jewels, documents and deeds, etc. for safe custody and also act as their referee.
$>$ They also make confidential enquiries about the creditworthiness of a prospective customer to enable their customers to enter into important business dealings with them.
$>$ They issue letters of credit of various kinds and bank drafts to their customers for the transfer of money from one place to another.

### 2.4 Concept of Investment

The development of a country is always measured by its economic indices. Therefore, every country has given emphasis on enlistment of its economy. The banks are such types of institutions, which deal with money and substitute for money. They deal with deposit, credit and credit instruments. Good circulation of credit is very much important for financial institutions and banks. Unsteady and unevenly flow of credit harms the economy and the profitability of the commercial banks. Thus to collect fund and utilize it in good investments is the prime objective of commercial banks. Diverse and safe investment of fund is the question of
stability and existence of the bank. Nowadays, the financial institutions are viewed as catalyst in the process of the economic growth. The mobilization of domestic resources is one of the key factors in the economic development of a country.

Banking industry has acquired a key position in mobilizing resources for finance and social economic development of the country. No function is more important to the economy and it constitutes than financing. "Bank assists both the flow of goods and service from the products to the consumers and financial activities of the government. Banking provides the country with a monetary system of payment and it is important part of the financial system, which makes loans to maintain and increase the level of consumption and production in the economy" (American Institute of Banking; 1972). Generally, investment means to flow cash in different sector with profit motive. In a broad sense, however, investment means to sacrifice current rupee in the present and certain for the future purpose rupees, which comes later and is uncertain. The concept of investment and profitability mentioned by different authors in their books and paper are summarized in the paragraphs that follow:

Baidya, (1997) has given his view on sound investment policy. He has said that, "A sound investment policy of a bank is such that its funds are distributed on different types of assets with good profitability on the one hand and provides maximum safety and security to the depositors and bank on the other hand, Moreover risk in banking sectors trends to be concentrated in the loan portfolio. When a bank gets into serious financial trouble its problem usually spring from significant amounts of loan that have become uncollectible due to mismanagement, illegal manipulation of loan misguided lending policy or unexpected economic downturn. So the bank investment policy must be such that it is sound \& prudent in order to protect public funds."

Shresth, (1995) in her book "Portfolio behavior of commercial bank in Nepal" explained that "The commercial banks fulfill the credit needs of various sectors and the lending policy of commercial bank is based on profit maximizing of the institution as well as the economic enhancement of country".

Pandey, (1999) has defined in this way, "In investment decision expenditure and benefits should be measured in cash. In investment analysis, cash flows are more important than accounting profit. It may also be pointed out that investment decision affects the firm's value. The firm's value will increase if investments are profitable and add to the shareholders wealth. Thus, investment should be evaluated on the basis of a criterion, which is compatible with the objectives of the shareholder's fund maximization. Investments will add to the shareholder's wealth if it yields benefit in excess on the minimum benefit as per the opportunity cost of capital".

Jones, (1991) explored that "Investment is the commitment of funds to one or more assets that will be held over some future time period. Investment is concerned with managing an investor's wealth, which is the sum of current income and present value of all future incomes".

Cheney and Mosses, (1995) are concerned with the objective of investment and indicate that the risk is in proportion with the degree of returns. They write, "The investment objective is to increase systematically the individual wealth, defined as assets minus liabilities. The high level of desired wealth, the higher must be received. An investor seeking higher return must be willing to face higher level of risk"

### 2.5 Features of Sound Investment Policy

The main goal of commercial bank is profit. The bank collects money as a deposit from depositors and it's invested as loan. Different between the interest of deposit
and loan is called profit of bank. Profit is depends upon its sound lending procedure and invest policy. The greater the credit created by the bank, the higher will be the profitability. A sound lending and investment policy is not only pre-requisite for bank's profitability but also crucially significant for the promotion of commercial savings of a backward country like Nepal.

Baidya, has given his view on sound investment policy. He said that, "A Sound investment policy of a bank is such that its funds are distributed on different types of assets with good profitability on the one hand and provides maximum safety and security to the depositors and bank on the other hand, Moreover risk in banking sectors trends to be concentrated in the loan portfolio. When a bank gets into serious financial trouble its problem usually spring from significant amounts of loan that have become uncollectible due to mismanagement, illegal manipulation of loan misguided lending policy or unexpected economic downturn. So the bank investment policy must be such that it is sound \& prudent in order to protect public funds."

Some required features for sound lending and investment policies which most of the banks must consider could be explained as under:

### 2.5.1 Safety

It is important factor of sound investment policy of bank. The bank must be invested in safety sector. The bank loan should be granted only to reliable borrowers. It must be ensured that the reputation of the borrower is impeccable in the business community. It must not invest funds into speculative businessman who may be bankrupt at once and who may earn millions in a minute also. A good banker should know his customers and be able to judge not only his integrity but also his ability to use the bank's money to his advantage and repay it within the stipulated period.

Banks collect money from the depositors, who are general public and business person. Banks should assure the depositors the guarantee of safety of their money.

When the debtors of the banks do not repay the loans in time and it loses on its investments, the bank shall become insolvent. In this condition depositors will not be assuring of safety of their money. So banks should always pay adequate attentions to conform that the loan proposal is safe enough to advance loan. Bank should not advance loan even if it generates interest in higher rate, if the loan proposal is doubtful. By all means, the loan extended by the bank, must be safe and secured. The banker is only a custodian of deposits of the public. Hence, the banker must ensure that the advance made is not only on safe hands but also remains so, throughout the period of lending and is repaid with interest when it is due. In this way, the safety is the prime factor for the smooth operation of banks.

### 2.5.2 Liquidity

Liquidity means payable capacity of depositors demand. It is the position of the firm to meet current or short-term obligations. It is the life-blood of banking system, without which, the existence of banks is out of question. It is essential for a sound banking system. General public or customers deposit their savings at the bank in different accounts with full of confidence of repayment by the banks whenever they require. In order to retain good credit standing and trust and confidence of its customers every banks must maintain enough liquidity to meet its various obligations. . Central banks have made it obligatory on the commercial banks to keep a certain proportion of their assets in cash to endure liquidity. This provision specifies the essentiality of liquidity for a bank.

### 2.5.3 Profitability

Profit is major objective of the commercial bank, which influences the banking activities. A sound banking system should be able to earn sufficient profit. They have to pay the corporation tax like any other company, pay interest to its depositors, dividend to share holders, salaries to the staff and meet other expenses. Default risk is always high in the banking business as banks deal in loans and advances. Loan loss provisioning is maintained according to the classification of loans. Banks have to make provision for depreciation of fixed assets. Profit alone
ensures all such expenses. So unless the bank earns, it cannot operate soundly. The profit of commercial bank mainly depends on the interest rate, volume of loan, its time period and nature of investment in different sector. Commercial bank can maximize its volume of wealth through maximization of return on their investment and lending. So, they must invest their fund where they gain maximum profit and secured sector.

### 2.5.4 Purpose of Loan

Purpose of loan is very important of bank. Banks should always pay adequate attentions to confirm that the loan proposal is safe enough to advance loan. It is very important to be reminded that most of the bank failures in the world are due to shrinkage in the value of loan and advances. The substantive question a banker is; "Why is a customer in need of loan?" This is a very important question for a banker. The banker must examine is how loan proceeds will be used. Bankers allow loans and advances to the customers only for productive purposes and not for hoarding or for speculative activities. If borrower misses use the loan granted by the bank, they can never repay which affected bank will possess heavy bad debts. The business of the borrower should be a legal one and in consonance with the government's policies. If the client is involved in a business, which is against the government's policies, against the environmental policies or which may bring health hazards to the community it operates in, though the proposal may look lucrative, it must be turned down outright, as such units will finally be thrown from the market. Directives of the government with regard to any restriction, quantity, quality, quota or value wise imposition, should be kept in view. If any permit or license is required, the party should be in possession of that. Detailed information about the plane and scheme of project or activities should be examined before lending.

### 2.5.5 Diversification

'Do not put all your eggs in one basket.' this quote clarified that the important of diversification. A bank should always be careful not to grant loan to only one sector. The bank should spread the loan in various sectors, many firms and industries, and
against different securities. Hence the policy should fix a cap on all these aspect so; all banks must diversify their fund or make portfolio investment. Diversification helps to earn a good return and minimize the risk and uncertainty.

### 2.5.6 Security

When bank lends loan to their client, the loan be return bank or not there is no any guarantee. In this situation to minimize risk the bank must require collateral for security. The security must be sufficient; no compromise should be made in obtaining maximum securities from client. At the time of distress situation also, the securities must be sufficient enough to cover the bank's loan and interest. At all times, bank must be in a safe position to realize its lending. The bank must not require collateral for short term loan; it is short period loan which matures within one year or less. The strength of a business in terms of their balance sheet, financial statement, credit history and time in business as well as the relationship with the lending institution all enter into the loan approval decision process.

### 2.6 Review of Articles

In this section, effort has been made to examine and review of some related articles in different economic journals, World Bank discussion papers, newspapers and other related books.

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

Shrestha, (1997) "Lending operation of commercial banks of Nepal and its impact on GDP" has presented the objectives to make and 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 dependant variable and various sectors of lending viz. Agriculture, Industrial, Commercial, Service and general and social sectors as independent variables. A multiple regression technique has been applied to analyze the contribution.

The multiple analyses have shown that all the variables except service sector lending have positive impact on GDP. Thus, in conclusion she has accepted the hypothesis i.e., there has been positive in GDP by lending of commercial banks in various sectors of economy, except service sector investment. Likewise, Dr. Shrestha has analyzed the financial performance of commercial banks using both descriptive and diagnostic approach. In her study, she has concluded the following points:
> The structures of commercial banks shows that bank invest on the average $75 \%$ of their total deposit on the government securities and the resources.
$>$ The analysis of resources position of commercial banks showed quit high percentage of deposit as cash reserve.
$>$ Return ratio of all the banks show that most of the time foreign banks have higher risk of Nepalese banks.
$>$ The debt equity ratios of commercial banks are more then $100 \%$ in the most of the period under study period. It led to conclude that the commercial banks are highly leveraged and highly risk. Joint venture banks had higher capital adequacy ratio but has been dealing every day.
$>$ Income of analysis of the management achievement foreign banks has comparatively higher total management achievement index.
$>$ Thus comparing all the banks through the time period financial condition and performance are better in joint venture banks than local bank.

Bajracharya, (1990) article entitled "Monetary policy and deposit mobilization in Nepal", he has conducted that mobilization of domestic saving is one of the prime objectives of the monetary policy in Nepal and commercial banks and the more active financial intermediary generating resource in the form of deposits from private sector and providing credit to the investor in different sectors of the economy.

Shrestha, (1991) article, "A study of deposits and credits of commercial bank in Nepal" concluded the credit deposit ratio would be $51.30 \%$, other things remaining the same in 2004 AD , which was the lowest under the period of review. Therefore, he had strongly recommended that the commercial banks should try to give more credit earning to new field as far as possible. Otherwise, they might not be able to absorb even its total expenses.

### 2.7 Review of Earlier Studies

A number of researchers who conducted their research study on the investment policy of commercial banks. The following are the review of those studies:

Dhakal, S. (2008) conducted a study on "Investment Policy of Commercial Banks in Nepal" with the objectives that follow:
$>\quad$ To find out the relationships between total investment, loan and advances, deposit, net profit and outside assets
$>\quad$ To identify the investment priority sectors of sampled commercial banks
$>\quad$ To assess the impact of investment on profitability
$>\quad$ To analyze and forecast the trend and structure of deposit utilization and its projection for five years of commercial banks
> To provide suggestions and possible guidelines to improve investment policy and its problems

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

Shrestha, S. (2007) conducted a study on "A Comparative Analysis on investment performance of commercial banks in Nepal" with the following objectives:
$>$ To analyze the investment activities and fund mobilization with respect to fund based on-balance sheet transactions and fee based off-balance sheet transactions
$>$ To study the asset utilization system, profitability and risk position of commercial banks under study
$>$ To assess the deposit utilization trends and its projection for the future
$>$ To evaluate the growth ratios of loan and advance and total investment and respective growth rate of total deposit and net profit
$>$ To appraise the suggestion on the basis of findings for further growth of the banks under study

The study was conducted on the basis of secondary data. The research findings of the study were as follows:

The liquidity position of NIBL was stronger than NABIL and HBL. At the same time, liquidity position of NIBL was highly fluctuating, which showed that NIBL bore higher risk than other two banks. NIBL had the least investment in Government Securities, which considered the least risky asset. From the analysis of assets, management ratio of NIBL in comparison to NABIL and HBL was more successful regarding asset management and deposit mobilization. NIBL's investment on shares and debentures was high in comparison to the other two banks but its performance regarding total investment has been very poor. In the profitability analysis, none of the three banks' profitability position was clearly better. However, NABIL was slightly better profitability. Therefore, their profitability ratios were in moderate position. From the risk point of view, NABIL and NIBL were facing higher risk than HBL, but the risk level of all three banks seemed almost the same. From the analysis of growth ratios, NIBL's collection of deposit, granting of loans and advances and net profit were better but in terms of investment, HBL is better. The coefficient of correlation analysis between different variables of NABIL, NIBL and HBL revealed that NABIL was weaker regarding mobilization of deposits as loans and advances and NIBL was performing extremely well regarding earning profits from outside assets. From the trend analysis study, it was found that all banks were mobilizing their total deposits into loans and advances in increasing trend, which was the indication of efficient mobilization.

Regmi, G. (2006) conducted "A Comparative Study on Investment Policy of Everest Bank and Himalayan Bank Limited" with the objectives as given below:
$>$ To find out the relationship between total investments, deposits, loans and advances, net profit and assets and compare them.
$>$ To evaluate the liquidity, asset management, efficiency, profitability and risk portion of EBL and HBL.
$>$ To analyze the deposit utilization trend and its projection for five years of HBL and EBL
$>$ To provide package of a workable suggestions and possible guidelines to improve investment policies.

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

Joshi, J. (2005) conducted a study on "Investment Policy of Commercial Banks in Nepal: A Comparative Study of Everest Bank Limited with NABIL Bank Limited and Bank of Kathmandu" with the objectives that follow:
$>$ To discuss fund mobilization and investment policy of EBL, NABIL and BOK Ltd.
$>$ To evaluate the liquidity, efficiency and profitability and risk position
$>$ To evaluate the growth ratios of loan \& advances, total investments with other financial variables.
$>$ To analyze the trend of deposits utilization towards total investment and loan \& advances
$>$ To conduct hypothetical test to find whether there is significant difference between the various important ratios of EBL, NABIL and BOK.

The secondary data were used to conduct the study. The research findings of the study were:

The liquidity position of the EBL was better than NABIL and BOK. EBL had the highest cash and bank balance to total deposits and cash and bank balance to current assets ratio. NABIL had the lowest liquidity position. EBL had good deposit collection and made enough investment on Government Securities, but it maintained a moderate investment policy on loans and advances. From the analysis of assets management or activity ratio, it was concluded that EBL was average, or in between NABIL and BOK. The total investment of EBL was in between the other two banks. In the study, loans and advances to total deposit was higher in BOK, but total investment to total deposit was higher in NABIL. Investment on shares and debentures to total working fund ratio was higher in BOK. However, the coefficient of variation was higher in EBL. In analysis of profitability, total interest earned to total outside assets of EBL is lowest at all. However, overall analysis of profitability ratios showed that EBL was an average in comparison to other compared banks i.e., NABIL and BOK. From the viewpoint of risk ratio, EBL had higher capital risk ratio, but average of credit risk ratio of NABIL and BOK.

### 2.8 Research Gap

All the above review of thesis has been based on the research done by the previous students. Today the world has become modernized the information technology has also been advanced drastically so there is a lot of difference in the modern banking system which result in the better outcome in the management and improvement in the data's. There has been the gap of time which differentiates the research before and after. Likewise many changes have been done in this thesis to get the exact outcome of the today's scenarios of the bank and its various aspects.

Investment in different sectors is made on the basis of the directives and circulars issued by NRB as well as investment guidelines and policy of the concerned commercial bank. Commercial bank should follow these directives and circulars. Furthermore, their own investment guidelines and policies should be in line with NRB directives and circulars. So the up to data study over the change of time frame is major concerned for researcher and concerned organization as well as industry as a whole. This study covers the more recent financial data, NRB circulars and guidelines than that of studies previously conducted.

The optimum diversification of loan and advances reduced the default risk of credit. It is the major concern of shareholders to known the portfolio behavior of the bank. This study puts its effort to find out the proportion to total loan and advances disbursed to different sectors of economy and analyses the diversification of its investment.

Different financial and statistical tools have been used in this study. Among then Ratio analysis, Regression analysis, (Simple and Multiple) Test of Hypothesis are the strong financial analysis tools are used in this study, Therefore, output of this study will be fruitful to those interested Persons, Parties, Scholars, Teachers, Business man Civil society, student and government for policy making.

## CHAPTER - III

## RESEARCH METHODOLOGY

### 3.1 Introduction

Research methodology is a way to solve the research problem systematically. It may be understood as a science of studying how research is done scientifically. It is necessary for the researcher to know not only the research methods but also the methodology. The study of research methodology gives the student the necessary training in gathering materials and arranging them, participating in the field work which required, and also training in techniques for the collection of data appropriate to particular problems, in the use of statistics, questionnaires and controlled examination and in recording evidence, sorting it out and interpreting it.

### 3.2 Research Design

The research design is a conceptual structure within which research is conducted. It constitutes the blue print for the collection, measurement and analysis of data. As such the design includes an outline of what the researcher will do from writing hypothesis and its operational implementations to the final analysis of data. Research design is the plan and structure of investigation so convinced as to obtain answer to research question. It is overall operational pattern of framework of the study that stipulates what information is to be collected from which source by what procedure. Therefore, descriptive design of research is used in this study.

### 3.3 Population and Sample

Population refers to the totality of the observation, which is selected for study. Population is whole of universe where as sample is the number of representative which are going to be studies. Since new commercial banks are being incorporated every year, the number of commercial banks in Nepal has been increasing rapidly. Some have already been started and others are in the process of starting their business. Currently, however, there are 32 commercial banks functioning all over
the country and most of their stocks are traded actively in the stocks market. Therefore the total commercial banks are the population and two banks namely Himalayan Bank and Everest Bank are the sample of the study.

### 3.4 Nature and Sources of Data

The data required for the analysis are directly obtained from the P/L account and balance sheet of concerned banks' annual reports. Supplementary data and information are collected from couple of institutions and regulating authorities like NRB, security exchange board, Nepal stock exchange Ltd., Ministry and finance budget speech of different fiscal years, economic survey and national planning commission etc.

All the secondary data are compiled, processed and tabulated in the time series as per the need and objectives. Formal and informal talks with concerned authorities of the bank were also helpful at obtain the additional information of the related problem.

Likewise, various data and information are collected from the economic journals, periodicals, bulletins, magazine and other published and unpublished reports and documents fro, various sources.

### 3.5 Data Analysis Tools

To achieve the objective of this study, various financial, accounting and statistical tools have been used. The analysis of data will be done according to the pattern of data available. Due to limited time and recourses, simple analytical statistical tools such as percentage graph, Karl Pearson's coefficient of correlation and coefficient of correlation and regression, the method of least square and test of hypothesis are used in this study. Likewise, some financial tools such as ratio analysis and trend analysis have also been used for financial analysis. The methods of analysis of this study are stated below.
$>$ On the basis of research of research problem and objectives of the study data and information needed is identified and collected.
> The collected data are properly processed and arranged in the form of the table for simplicity.
$>$ Financial and statistical tools have been used for analysis and interpretation of arranged data. For this purpose, statistical tools such as Karl Pearson's coefficient of correlation, standard deviation, least square linear trend has been financial tools such a ratio analysis, growth ratio analysis and trend analysis have been used.

### 3.5.1 Financial Analysis Tools

Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the item of the balance sheet and the profit and loss account. It is the mathematical relation between balance sheet and accounting figures. Financial analysis is the starting point for making plans before using any sophisticated forecasting and planning procedure.

Among various published reports presented by the firm, four basic financial statements are the income statement, the balance sheet, the statement of retained earnings and the statement of cash flow. These statements present the statement of changes in financial position and the accounting picture of the firm. In this study, financial tools like ratio analysis and financial statement analysis have been used.

### 3.5.1.1 Ratio Analysis

Financial ratio is the mathematical relationship between two accounting figures. "Ratio analysis is a part of the whole process of analysis of financial statements of any business or industrial concern especially to take output and credit decisions." Thus, ratio analysis is used to compare a firm's financial performance and status to that of other firm's or to it overtime. The qualitative judgment regarding financial performance of a firm can be done with help of ratio analysis.

Therefore, there are many ratios; only those ratios have been covered in this study, which are related to the investment operation of the bank.

### 3.5.1.2 Types of Ratios

The outcomes of the financial analysis of the various accounting data are the several ratios which can be groups into various classes according to the financial activity or function to be evaluated. Different ratio from the analysis presents or indicated various measures of the firm financial position. Different types of ratios are of different importance to the different analyst, only those ratios have covered in this study, which are elated to investment operation of the bank.

## 1) Liquidity Ratio

Liquidity ratios are used to judge the ability of the banks to meet their short-term liabilities that are likely to mature in the short period. From them, much insight can be obtained into present cash solvency of the bank and its ability to remain solvent in the event of advertise. It is the measurement of speed with which a bank's assets can be converted into cash to meet deposit withdrawal and other current obligations. The following ratios are evaluated under liquidity ratios:

## a. Current Ratio

This ratio shows the banks short-term solvency. It shows the relationship between current assets and current liabilities. Current assets includes cash and bank balance, money at call or short notice, loans and advances, overdrafts, bill purchased and discounted and shortterm loan, bills payable, tax provision, staff bonus, dividend payable and other miscellaneous current liabilities.

$$
\text { Current Katio }=\frac{\text { Current Assets }}{\text { Current Liabities }}
$$

The widely accepted standard of current ratio is $2: 1$ but accurate standard on circumstances in case of seasonal business ratio and the nature of business.

## b. Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance are the most liquid current assets. This ratio measures the percentage of the most liquid fund with bank to immediate payment to the depositor. This ratio is computed by the dividing cash and bank balance by total deposit. This can be presented as,

$$
\text { Cash and Bank Balance to Iotal Deposit Ratio }=\frac{\text { Cash in Bank Balance }}{\text { Total Deposit }}
$$

Hence, cash and bank balance includes cash in hand, foreign cash on hand, cheque and other cash items, balance with domestic banks and balance held in foreign banks. The total deposit encompassed current deposits, saving deposits fixed deposits, money at call or short notice and other deposits.

## c. Cash and Bank Balance to Current Assets Ratio

This ratio measures the proportion of most liquid assets i.e. cash and balance among the total current assets of bank. Higher ratio shows the bank's ability to meet demand for cash. This ratio is computed by dividing cash and bank balance by current assets. This can be stated as,

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

## d. Investment on Government Securities to Current Assets Ratio

This ratio is calculated to find out the percentage of current assets invested in government securities i.e. treasury bills and development bonds. This ratio is computed by dividing investment on government securities by current assets. We can state it as,

Investment un Govt. Securites to Current Assets Katio $=\frac{\text { Investment In GovernmentSecurities }}{\text { total Current Assets }}$

## 2) Assets Management Ratio

Assets management ratio measures how efficiency the bank managers the resources at its command. The following ratios are used under this assets management ratio:

## a. Loan and Advances to Total Deposit Ratio

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

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

## b. Total Investment to Total Ratio

Investment is one of the credited to earn income. This implies the utilization of firm's deposit on investment government securities and shares debenture of other companies and bank. These ratios can be obtained by dividing total investment by total deposit. This can be mentioned as,

$$
\text { Total Investment to Total Katio }=\frac{\text { Total Investment }}{\text { Total Deposits }}
$$

The numerator consists of investment on government securities, investment on debenture and bonds, shares in other companies and other investment.

## c. Loan and Advances to Working Fund Ratio

Loan and advances is the major component in the total working fund (total assets), which indicated the ability to bank to canalized its deposits in the form of loan and advances to earn high return. This is computed by dividing loan and advances by total working fund. This is stated as,

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

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

## d. Investment on Government Securities to Working Fund Ratio

This ratio shows that banks investment on government securities in comparison total the working fund. This ratio is calculated by dividing investment in government securities by total working fund. This is presented as,

$$
\text { Investment un Govt. Securites to Working Fund Katio }=\frac{\text { Investment on Government Securities }}{\text { Iotal Working Fund }}
$$

## e. Investment on Shared and Debenture to Total Working Ratio

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

Investment on Shares and Debenture to Total Working Ratio

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

## 3) 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 bank and vice versa. Profitability position can evaluated through following different ways:

## a. Return on Loan and Advances Ratio

This ratio indicated how efficiency the bank has employed its resources in the form loan and advances. This ratio is computed by dividing net profit (loss) by loan and advances. This can be expressed as,

$$
\text { Keturn un Loan and Advance Ratio }=\frac{\text { Net Profit }}{\text { Loan and Advances }}
$$

## b. Return on Total Working Fund Ratio (ROA)

This ratio measures the overall profitability of all working funds i.e. total assets. it is also known as return and asset (ROA). A firm has to earn satisfactory return on assets or working fund for it survival. This ratio is calculated by dividing net profit (loss) by total working fund. This can be mentioned as,

$$
\mathrm{KOA}=\frac{\text { Net Profit (Loss) }}{\text { Total Working Fund }}
$$

The numerator indicated the portion of income left to the internal equities after all cost charges and expenses have been deducted.

## c. 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 jet worth. This ratio measures how to efficiency the banks have to use the funds of owners. This ratio is calculated by dividing net profit by total equity capital (net worth). This can be stated as,

$$
\text { KUE }=\frac{\text { Net Worth }}{\text { Iotal Equity Capital }}
$$

## d. Total Interest Earned to Total Outside Assets Ratio

This ratio measures the interest earning capacity of the bank through the efficient utilization of outside assets. Higher ratio implies efficient use of outside assets to earn interest. It can be mentioned as,

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

## e. Total Interest Earned to Total Working Fund Ratio

This ratio is calculated to find out the percentage of interest earned total assets (working fund). Higher ratio implied better performance of the bank its bank its term of interest,
earning on its working fund. This ratio is calculated by dividing total interest earned by total working fund.

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

## f. Interest Earned Total Operating Income Ratio

This ratio is calculated to find out the portion of interest income in total operating income of the bank. It indicates how efficient the bank mobilization of its resources (funds0 in interest bearing assets i.e. loan and advances investment etc. this ratio is calculated by dividing total earned by total operating income.

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

## g. Total Interest Paid to Total Working Fund Ratio

This ratio is calculated to find out the portion of interest income in total operating income of the bank. It indicates how efficient the bank mobilization of its resources (funds) in interest bearing assets i.e. loan and advances investment etc. this ratio if calculated by dividing total earned by total operating income.

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

## 4) Risk Ratio

Risk taking is the prime business of bank's investment management. It increases effectiveness and profitability of the bank. These ratios indicate the amount of risk associated with the various banking operations, which ultimately influences the banks investment policy. The following ratios are evaluated under this topic:

## a. Credit Risk Ratio

Credit risk ratios are measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. By definition, credit risk ratio if expressed as the percentage of non-performing loan to total loan and advances. Here dividing total loan and advances by total assets derives this ratio. This can be stated as,

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

### 3.5.2 Statistical Analysis Tools

To achieve the objectives of the study, some important statistical tools such as percentage, Mean Simple Correlation and trend analysis are in this study.

## Arithmetic Mean

Average is the typical values around which other items of distribution congregate (Gupta, 1996: 228). Arithmetic mean of a given set of observations is their sum divided by the number of observations.

Mathematically,

$$
A \cdot M=\frac{\Sigma A}{N}
$$

## Coefficient of Correlation

The coefficient of correlation and important measure to describe how one variable will is explained by another. It measures the degree of relationship between the two casually related variables. Karl Pearson's coefficient of correlation between two variable X and Y if usually devoted by r , which is the numerical measure of linear association between the variables.

Mathematically,
$r=\frac{N \sum X Y-\left(\sum X\right)\left(\sum Y\right)}{\sqrt{\left[\left\{N \sum X^{2}-\left(\sum X\right)^{2}\right\}\left\{N \sum Y^{2}-\left(\sum Y\right)^{2}\right\}\right]}}$

Where,

$$
\begin{aligned}
& \mathrm{n}=\text { no. of observations of } \mathrm{X} \text { and } \mathrm{Y} \\
& \sum \mathrm{X}=\text { sum of the observations series } \mathrm{X} \\
& \sum \mathrm{Y}=\text { sum of the observations in series } \mathrm{Y} \\
& \sum \mathrm{X}^{2}=\text { sum of the observations in series } \mathrm{X} \\
& \sum \mathrm{Y}^{2}=\text { sum of the observations in series } \mathrm{X} \\
& \sum \mathrm{XY}=\text { sum of the product of the observations on series } \mathrm{X} \text { and } \mathrm{Y}
\end{aligned}
$$

## Trend Analysis

Trend analysis is one the most important methods, which enables to find out the actual position of business cycle over a period of years. The study of the data over a long period enables us to have a general idea about the pattern of the behavior of the phenomenon under consideration this help in business forecasting and planning future operation. The trend analysis also enables us to compare two or more time series over different periods and draw important conclusion about them. The topic analysis the trend of deposits, loan and advances, investment and net profit of EBL and HBL and makes the forecast for the next five years.

1. Trend analysis of total deposits
2. Trend analysis of loan and advances
3. Trend analysis of total investments
4. Trend analysis of net profit

## CHAPTER - IV DATA PRESENTATION AND ANALYSIS

This chapter is related to the presentation and analysis of data collected from various sources. The chapter includes main two parts. The first part includes the presentation and analysis of secondary and primary data while second part includes major findings of the study.

### 4.1 Financial Analysis

In this part various financial ratios related to the investment management and the fund mobilization are studied to evaluate and analyze the performance of HBL and EBL. Study of all types of ratios was not done. Only those ratios that are important from point of view of the mobilization and investment are calculated. The important ratios that are studied for this purpose are given below:

### 4.1.1 Analysis of Liquidity Position

Liquidity ratios are used to judge the ability of a bank to meet its short-term liabilities that are likely to mature in the short period. In fact, liquidity is a pre requisite for the very survival of bank. A bank should ensure that it does not suffer from lack of liquidity and also that it is not too much highly liquid. A bank must maintain its satisfactory liquidity position to meet the demands for deposits, withdrawals, pay maturity in time, satisfy the credit needs of the community and convert non cash assets into cash to satisfy immediate need without loss to bank and consequent impact or long run profit. The following ratios are evaluated and interpreted to compare the liquidity position of HBL and EBL.

### 4.1.1.1 Current Ratio

Current ratios of HBL and EBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.1.

Table 4.1
Status of Current Ratio (Times)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 1.0596 | 1.0610 |
| $2008 / 09$ | 1.0460 | 1.0567 |
| $2009 / 10$ | 1.0537 | 1.0470 |
| $2010 / 11$ | 1.0491 | 1.0425 |
| $2011 / 12$ | 1.0485 | 1.0486 |
| Mean | 1.05138 | 1.05116 |
| S.D. | 0.00537094 | 0.00752 |
| C.V | 0.51084673 | 0.71567 |

(Source: Appendix-1.1)

The table no. 4.1 shows that the current assets of both banks have exceeded current liabilities in average in the study period from 2007/08 to 2011/12. The highest ratio is 1.0596 in F.Y. 2007/08 while the lowest ratio is 1.0460 in the F.Y 2008/09 of EBL with an average ratio of EBL with an average ratio of 1.05138 during the study period. The highest ratio of HBL is 1.0610 and the lowest is 1.0425 in F.Y 2007/08 and 2010/11 respectively. The coefficient of variation between the current ratio of EBL is $0.5108 \%$ which is comparatively lower than $0.7156 \%$ of HBL. It shows the current ratios of EBL are less homogeneous than HBL. Thus liquidity position of HBL is not satisfactory since its current ratios are less than EBL. The chart of current ratio is given in fig 4.1:-

Figure 4.1
Status of Current Ratio


### 4.1.1.2 Cash and Bank Balance to Total Deposit Ratio

This ratio measures the percentage of most liquid fund with the bank to make immediate payment to the depositors. This ratio is computed by dividing cash and bank balance by total deposit. The reason is that if a bank maintains higher ratio of cash it has to pay interest on deposits and some earning may be lost. In contrast, if the bank maintains low ratio of cash it may fail to make payment for the demands of the depositors.

Table 4.2
Cash and Bank Balance to Total Deposit Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 11.13 | 4.55 |
| $2008 / 09$ | 18.50 | 8.79 |
| $2009 / 10$ | 21.17 | 10.28 |
| $2010 / 11$ | 15.00 | 7.24 |
| $2011 / 12$ | 20.72 | 13.33 |
| Mean | 17.304 | 8.838 |
| S.D. | 4.227059 | 3.28635 |
| C.V | 24.43 | 37.18 |

(Sources: Appendix-1.2)

The table no. 4.2 shows that the cash and bank balance to total deposit ratio of EBL has in increasing trend and HBL has increased in 2009/10 after that it increased in F.Y 2011/12. Between two banks EBL has maintain highest ratio 21.17\% in F.Y 2009/10 and lowest ratio $11.13 \%$ in F.Y 2007/08. In addition, the HBL has maintained highest ratio $13.33 \%$ in F.Y 2011/12 and lowest ratio $4.55 \%$ in F.Y 2007/08 during the study period. The mean of the ratios for the study period of EBL is $17.304 \%$, C.V is $24.43 \%$, the mean of HBL is $8.84 \%$ and C.V is $37.18 \%$. It can be concluded that the ratios are variables and less consistent. The chart of the cash and bank balance to total deposit ratio is given in fig. 4.2:-

Figure 4.2
Cash and Bank Balance to Total Deposit


### 4.1.1.3 Cash and Bank Balance to Current Assets Ratio

Cash and bank balance to current assets ratio of HBL and EBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.3.

Table 4.3
Cash and Bank Balance to Current Assets Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 7.23 | 4.16 |
| $2008 / 09$ | 17.12 | 8.08 |
| $2009 / 10$ | 19.36 | 9.52 |
| $2010 / 11$ | 13.63 | 6.73 |
| $2011 / 12$ | 19.14 | 12.32 |
| Mean | 15.29 | 8.16 |
| S.D. | 5.061 | 3.049 |
| C.V | 33.10 | 37.36 |

(Source: Appendix-1.3)

The table no. 4.3 shows the cash and bank balance to current assets ratio of two banks are better as they shows the ability to mange the deposit withdrawal from the customers. EBL and HBL have increasing trend in first three years and after that it has increased to $19.14 \%$ and $12.32 \%$ respectively in Fiscal Year 2011/12. Between two banks EBL has maintained highest ratio of $19.36 \%$ in F.Y 2009/10 during the study period. The mean ratio of HBL is $8.16 \%$ and C.V $37.36 \%$ which is comparatively lower than $15.29 \%$ and $33.10 \%$ of EBL respectively.

Comparatively, EBL seems to have better position maintaining the cash and bank balance to current ratio but less consistent than HBL. In contrast, EBL and HBL may have mobilized their more funds in productive sectors.

Figure 4.3
Cash and Bank Balance to Current Assets Ratio


### 4.1.1.4 Investment on Government Securities to Current Assets Ratio

Investment on government securities to current assets ratio of EBL and HBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.4.

Table 4.4
Investment on Government Securities to Current assets (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 18.25 | 21.46 |
| $2008 / 09$ | 14.29 | 11.17 |
| $2009 / 10$ | 10.78 | 10.99 |
| $2010 / 11$ | 15.90 | 14.55 |
| $2011 / 12$ | 11.21 | 17.74 |
| Mean | 14.086 | 14.182 |
| S.D. | 3.157218 | 4.47284 |
| C.V | 22.41 | 29.46 |

(Sources: Appendix-1.4)
The table no. 4.4 shows that EBL and HBL have followed in decreasing trend. In average HBL has maintained higher ratio of investing in government securities than EBL. HBL investing higher position of current assets as government securities indicates that it wants
to invest more in other production sectors. The chart of the investment on government securities to current assets ratio is given in fig. 4.4:-

Figure 4.4
Investment on Government Securities to Current Assets


### 4.1.2 Asset Management Ratio

Asset management ratio measures the efficiency of the bank to manage its assets in profitability and satisfactory manner. A commercial bank must be able to manage its assets properly to earn high profit satisfy its customers and for its own existence. The following ratios are evaluated and interpreted under assets management ratio.

### 4.1.2.1 Loan and Advances to Total Deposit Ratio

This ratio measures the extent to which the bank is successful to mobilize its total deposit on loan and advances for the purpose of income generation. A high ratio indicates better mobilization of collected deposits and vice versa. But it should be noted that too high ratio might not be better from liquidity point of view. This ratio is calculated by dividing loans and advances by dividing loans and advances by total deposits. Loan and advances to total deposit ratio of EBL and HBL are given in table no. 4.5.

Table 4.5
Loan and Advances to Total Deposit Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 78.56 | 63.37 |
| $2008 / 09$ | 73.43 | 73.58 |
| $2009 / 10$ | 76.24 | 77.43 |
| $2010 / 11$ | 76.98 | 80.57 |
| $2011 / 12$ | 73.22 | 75.36 |
| Mean | 75.686 | 74.062 |
| S.D. | 2.31365 | 6.51793 |
| C.V | 3.05691 | 8.80064 |

(Sources: Appendix-1.5)

The table no. 4.5 reveals that the ratio of EBL have followed decreasing trend and HBL have followed increasing trend. HBL ratio has increase from $63.37 \%$ to $75.36 \%$ for the fiscal year 2007/08 to 2011/12; EBL has maintained $78.56 \%$ as a highest ratio of $73.22 \%$ as a lowest ratio in F.Y 2007/08 and 2011/12 respectively during the study period.

In average HBL has maintained higher loan and advances to total deposit ratio than EBL. It states that the position of HBL is better in this regard. But the coefficient of variation between the above ratios of EBL is $3.056 \%$ which is comparatively lower than of HBL. It shows that the loan and advances of EBL is more stable and consistent than that of HBL. From the above table, it can be concluded that EBL has strong position regarding the mobilization of total deposit on loan and advances and acquiring high profit with compare to HBL. But high ratio is not better from the point of view of liquidity as the loan and advances is not as liquid as cash and bank balance. The chart of loan and advance to deposit ratio is given in fig. 4.5:-

Figure 4.5
Loan and Advances to Total Deposit Ratio


### 4.1.2.2 Total Investment to Total Deposit Ratio

The ratio indicates the proportion of deposit utilized for the purpose of maintaining liquidity in appropriate level. A high ratio is the indicator of high success to mobilize deposits in securities and vice-versa. This ratio is calculated by dividing total deposit. Total investment to total deposit ratio of HBL and EBL from fiscal year 2007/08 to 2011/12 are given in table no. 4.6.

Table 4.6
Total Investment to Total Deposit Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 21.11 | 41.89 |
| $2008 / 09$ | 17.86 | 25.12 |
| $2009 / 10$ | 13.57 | 22.45 |
| $2010 / 11$ | 18.86 | 21.43 |
| $2011 / 12$ | 15.73 | 21.02 |
| Mean | 17.426 | 26.382 |
| S.D. | 2.89662 | 8.81511 |
| C.V | 16.6224 | 33.4134 |

(Sources: Appendix-1.6)

The table no. 4.6 reveals that investment to total deposit ratio of EBL bank are less than that of HBL. The ratios of HBL are in decreasing trend. But the EBL have in fluctuating trend. EBL and HBL have maintained the highest ratio $21.11 \%$ and $41.89 \%$ respectively in FY 2007/08 and the lowest ratio $13.57 \%$ and $21.43 \%$ in FY 2009/10 and 2010/11 respectively. The mean and S.D of EBL is $17.426 \%$ and $2.89 \%$ and that of HBL is 26.38 \% and $8.81 \%$ respectively. In average HBL has invested higher percentage of total deposit in investment in securities and shares than EBL. The chart of total investment to total deposit ratio is given in fig. 4.6:-

## Figure 4.6

Total Investment to Total Deposit Ratio


### 4.1.2.3 Loan and Advance to Total Working Fund Ratio

Loan and advances of any Commercial bank represent the major portion in the volume of total working fund. This ratio measures the volume of loan and advances in the structure of total assets. The high degree of ratio indicates the good performance of bank in mobilizing its funds by way of lending function. However its reverse side, high degree of this ratio representative of low liquidity ratio either. Granting the loan and advances always carries a certain degree of risk. This ratio also shows credit risk taken by the bank towards mobilizing its funds into different types of assets. This ratio reflects the extent to
which the banks are successful in mobilizing their total assets on loans and advances for the purpose of income generation. This ratio is computed by dividing loan and advances to total working fund ratio of HBL and EBL from fiscal year 2007/08 to 2011/12 are given in table no. 4.7.

Table 4.7
Loan and Advances to Total Working Fund Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 69.38 | 55.78 |
| $2008 / 09$ | 66.28 | 64.90 |
| $2009 / 10$ | 68.04 | 68.18 |
| $2010 / 11$ | 68.48 | 70.54 |
| $2011 / 12$ | 65.61 | 66.16 |
| Mean | 67.558 | 65.112 |
| S.D. | 1.56765 | 5.63705 |
| C.V | 2.32045 | 8.65747 |

(Sources: Appendix-1.7)

Table no. 4.7 shows that the ratio ranges of EBL from minimum $65.61 \%$ in 2011/12 to maximum $69.38 \%$ in 2007/08 and ratio ranges of HBL from the minimum $55.78 \%$ in $2007 / 08$ to maximum of $70.54 \%$ in $2010 / 11$. The mean of the ratio of EBL is $67.558 \%$, HBL is $65.112 \%$ and the coefficient of variance between the above ratios of EBL is $2.3204 \%$ that is comparatively lower than $8.65 \%$ of HBL. It shows that loan and advances of HBL are less stable and consistent than that of EBL. Above two of banks, the loan and advances of EBL are highly stable and consistent.

The chart of loan and advance to total working fund ratio is given in fig. 4.7:-

Figure 4.7
Loan and Advances to Total Working Fund Ratio


### 4.1.2.4 Investment on Government Securities to Total Working Fund Ratio

Investment on government securities to total working fund ratio of HBL and EBL from the fiscal year 2007/08 to 2011/12 are given in table no.4.8

Table 4.8
Investment on Government Securities to Total working Fund Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 17.76 | 20.65 |
| $2008 / 09$ | 13.94 | 10.71 |
| $2009 / 10$ | 10.52 | 10.45 |
| $2010 / 11$ | 15.45 | 13.71 |
| $2011 / 12$ | 10.87 | 16.85 |
| Mean | 13.708 | 14.474 |
| S.D. | 3.07102 | 4.32239 |
| C.V | 22.4031 | 29.8632 |

(Sources: Appendix-1.8)

From the table no. 4.8, the ratio of EBL has followed the fluctuating trend. The maximum ratio is $17.76 \%$ in F.Y 2007/08 and the minimum ratio is $10.52 \%$ in F.Y 2009/10. The HBL has also followed the fluctuating trend. In F.Y 2007/08, it has maximum ratio is $20.65 \%$ and $10.45 \%$ is the minimum ratio in F.Y 2009/10.

In average, HBL has maintained higher ratio of investment on government securities to total working fund ratio than EBL. Both the bank EBL and HBL are more successful in utilizing it fund in government securities but have no consistence policy on its investment government securities. The chart of investment on government securities to total working fund ratio is given in fig. 4.8:-

Figure 4.8
Investment on Government Securities to Total Working Fund Ratio


### 4.1.2.5 Investment on Shares and Debentures to Total Working Fund Ratio

Investments on shares are debentures to total working fund ratio of EBL and HBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.9.

Table 4.9
Investment on Shares and Debentures to Total Working Fund Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 0.37 | 0.25 |
| $2008 / 09$ | 0.27 | 0.24 |
| $2009 / 10$ | 0.24 | 0.18 |
| $2010 / 11$ | 0.23 | 0.19 |
| $2011 / 12$ | 0.20 | 0.16 |
| Mean | 0.262 | 0.204 |
| S.D. | 0.06535 | 0.03912 |
| C.V | 24.9409 | 19.1741 |

(Sources: Appendix-1.9)
The table no.4.9 reveals that both banks are almost reluctant to make investment on shares and debentures of other companies. Most of the ratios are in below one. The ratio of EBL and HBL has in decreasing trend. The highest ratio of EBL has $0.37 \%$ in F.Y 2007/08 and $0.20 \%$ is the minimum ratio in F.Y 2011/12. Similarly, HBL has highest ratio of $0.25 \%$ in F.Y 2007/08 and lowest of $0.16 \%$ in F.Y 2011/12.

In average, EBL has maintained higher investment on share and debenture to total working fund ratio than HBL. It states that the position of EBL is better in this regard. The co-efficient of variance between the ratios of EBL is $24.94 \%$ which is greater than $19.17 \%$ of HBL. Is means the investment ratios of HBL are stable and consistent than that if EBL. HBL has invested higher percentage of it total assets into other companies' shares and debentures. The chart of investment on share and debenture to total working fund ratio is given in fig. no. 4.9:-

Figure 4.9
Investment on Shares and debentures to Total Working Fund Ratio


### 4.1.2.6 Loan Loss Ratio

The ratio of loan loss provision to total loans and that a bank is holding. Loan loss ratios of HBL and EBL from the fiscal year 2007/08 to 2011/12 are given table no.4.10:

Table 4.10
Loan Loss Ratio

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 0.10 | 0.82 |
| $2008 / 09$ | 0.02 | 0.06 |
| $2009 / 10$ | 0.22 | 0.86 |
| $2010 / 11$ | 0.16 | 0.64 |
| $2011 / 12$ | 0.41 | 2.35 |
| Mean | 0.182 | 0.946 |
| S.D. | 0.14738 | 0.84751 |
| C.V | 80.9764 | 89.5892 |

(Sources: Appendix-1.10)

As per table no.4.10 loan loss ratio of both banks are in increasing trend. The loan loss ratio of HBL has increased from $0.82 \%$ to $2.35 \%$ for F.Y 2007/08 to 2011/12. Similarly the loan loss ratio of EBL has increased from $0.02 \%$ to $0.41 \%$ for F.Y 2008/09.The mean and S.D of EBL and HBL are $0.182 \%, 0.147 \%, 0.946 \%$ and $0.847 \%$. The C.V of EBL is $80.97 \%$ and HBL is $89.58 \%$ which indicates that the ratio is variable and not consistent with increasing trend.

From the table no.4.10 analysis, it can be concluded that the performance of EBL in terms of recovery of loan is better in comparison to HBL due to lower loan loss ratio, during the study period. The chart of Loan loss ratio is given in fig .4.10:-

Figure 4.10
Loan Loss Ratio


### 4.1.3 Profitability Ratio

Profitability ratios are calculated to measure the overall efficiency of a firm in terms of profit. It is the indicator of the financial performance of any institution. Higher the profitability ratio better will be the financial performance of bank and vice versa. Profitability positions can be viewed in different ways.

### 4.1.3.1 Return on Loan and Advances Ratio

Return in loan and advances ratio of EBL and HBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.11.

Table 4.11
Return on Loan and Advances Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 2.40 | 3.15 |
| $2008 / 09$ | 2.61 | 2.95 |
| $2009 / 10$ | 2.95 | 1.75 |
| $2010 / 11$ | 2.94 | 2.71 |
| $2011 / 12$ | 2.98 | 2.67 |
| Mean | 2.776 | 2.646 |
| S.D. | 0.25871 | 0.5371 |
| C.V | 9.31946 | 20.2987 |

(Sources: Appendix-1.11)

During the study period, the ratios of EBL are in increasing trend. It has highest ratio of $2.98 \%$ on F.Y 2011/12 and lowest of $2.40 \%$ on F.Y 2007/08. The ratio of HBL has followed in fluctuating trend. It has decreased from $3.15 \%$ to $1.75 \%$ for the F.Y 2007/08 to 2009/10.

In average ratio of EBL is $2.77 \%$ which is higher than HBL i.e. $2.646 \%$. The co-efficient of variance of EBL is $9.3194 \%$. This is lower than HBL i.e. $20.23 \%$. HBL has failed to maintain sufficient ratio as compared to EBL. The chart of return on loan and advance ratio is given in fig.no.4.11:-

Figure 4.11
Return on Loan and Advances Ratio


### 4.1.3.2 Return on Total Assets Ratio

Return on total assets ratio EBL and HBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.12

Table 4.12
Return on Total assets Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 1.66 | 1.76 |
| $2008 / 09$ | 1.73 | 1.91 |
| $2009 / 10$ | 2.01 | 1.19 |
| $2010 / 11$ | 2.01 | 1.91 |
| $2011 / 12$ | 1.95 | 1.76 |
| Mean | 1.872 | 1.706 |
| S.D. | 0.16529 | 0.29804 |
| C.V | 8.82947 | 17.4703 |

(Sources: Appendix-1.12)

According to table no. 4.12 ratio of EBL is in increasing trend. It has the highest ratio of $2.01 \%$ in F.Y2009/10 and lowest ratio of $1.66 \%$ in F.Y 2007/08 but that of HBL is fluctuating trend.

In average EBL has maintained the higher ratio than HBL, which reveals the position of the bank is good. The C.V of EBL is $8.83 \%$ which is comparatively lower than $17.47 \%$ of HBL. From the above it can be concluded that the profitability with respect to financial resources investment of bank assets is high as well as stable. The chart of return on working fund ratio is given in fig. 4.12:-

Figure 4.12
Return on Total Assets Ratio


### 4.1.3.3 Total Interest Earned to Total Working Fund Ratio (\%)

This ratio reflects the extended to which bank is successful in mobilizing its total assets to generate high income as interest. A high ratio is an indicator of high earning power of the banks total assets and vice versa. This ratio is calculating by dividing total interest income by total assets. Total interest earned to working fund ratio of EBL and HBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.13.

Table 4.13
Total Interest Earned to Total Working Fund Ratio

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 5.70 | 5.43 |
| $2008 / 09$ | 5.92 | 5.96 |
| $2009 / 10$ | 7.50 | 7.37 |
| $2010 / 11$ | 9.37 | 9.26 |
| $2011 / 12$ | 8.89 | 8.69 |
| Mean | 7.476 | 7.342 |
| S.D. | 1.67052 | 1.663 |
| C.V | 22.3451 | 22.6505 |

(Sources: Appendix-1.13)

The table no. 4.13 shows that the ratio of EBL exhibits increasing trend during the study period. The highest ratio is $9.37 \%$ in F.Y $2010 / 11$ and lowest ratio is $5.70 \%$ in F.Y 2007/08. The ratio of HBL has also in increasing trend. The highest ratio has $9.26 \%$ in F.Y 2010/11 and the lowest ratio has 5.43 in F.Y 20007/08.

In average, the mean ratio of EBL is $7.47 \%$, which is higher than $7.34 \%$ of HBL. The C.V ratio of EBL is $22.34 \%$ and HBL is $22.65 \%$.

From the above, it can be concluded that the ratio of total interest earned to total working fund of EBL is satisfactory in compare to HBL. It reveals that the bank has high earning power in comparison to HBL. The chart of total interest earned to total working fund ratio is given in fig. 4.13:

## Figure 4.13

Total Interest Earned to Total Working Fund Ratio


### 4.1.3.4 Total Interest Earned Total Operating Income Ratio (\%)

Total interest earned to total operating income ratio of HBL and EBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.14.

Table 4.14
Total Interest Earned to Total Operating Income Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 128.00 | 122.92 |
| $2008 / 09$ | 141.54 | 117.81 |
| $2009 / 10$ | 160.92 | 145.91 |
| $2010 / 11$ | 197.50 | 167.24 |
| $2011 / 12$ | 190.06 | 162.30 |
| Mean | 163.604 | 143.236 s |
| S.D. | 30.0438 | 22.3942 |
| C.V | 18.36 | 15.6345 |

(Sources: Appendix-1.14)

According to the table no.4.14 the ratio of EBL exhibits increasing trend during the study period. The ratio has increased from $128 \%$ to $197.50 \%$ in 2007/08 to 2010/11. The ratio of the HBL is also in increasing trend. It has increased from $117.81 \%$ to $167.24 \%$ in F.Y 2008/09 to 2010/11.

If the mean of the ratio are observed, it is found that HBL has lowest mean i.e. 143.23\% against the $163.60 \%$ of EBL. The C.V ratio of HBL is $15.63 \%$ that is comparatively lower than $18.36 \%$ of EBL. From the above it can be concluded that the ratios of total interest earned to total operating income of EBL is not satisfactory. The chart of total interest earned to total operating income is given in fig. 4.14:-

Figure 4.14

## Total Interest Earned to Total Operating Income Ratio



### 4.1.3.5 Total Interest Paid to Total Working Fund Ratio

Total interest paid to total working fund ratio of EBL and HBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.15

Table 4.15
Total Interest Paid to Total Working Fund Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 2.33 | 2.28 |
| $2008 / 09$ | 2.74 | 2.38 |
| $2009 / 10$ | 3.80 | 3.64 |
| $2010 / 11$ | 5.48 | 5.17 |
| $2011 / 12$ | 5.15 | 5.18 |
| Mean | 3.9 | 3.73 |
| S.D. | 1.40351 | 1.42383 |
| C.V | 35.9875 | 38.1725 |

(Sources: Appendix-1.15)

The table no. 4.15 shows that the ratios of EBL are in increasing trend for first four year and then it has decreased to $5.15 \%$ in F.Y 2011/12. The lowest ratio has $2.33 \%$ in F.Y2007/08. The ratio of HBL has also followed increasing trend. If the mean ratios are observed, it is found that the EBL has the highest of HBL. It has the mean ratio of $3.90 \%$ against the $3.73 \%$ of HBL. It means the EBL has paid higher interest in compare to HBL. The C.V ratio of EBL is $35.98 \%$ that is comparatively lower than $38.17 \%$ of HBL. It indicates the total interest paid to total working fund ratio of EBL is stable and consistent than HBL.

The chart of total interest paid to total working fund ratio is given in fig no. 4.15:-

Figure 4.15
Total Interest Paid to Total Working Fund Ratio


### 4.1.3.6 Return on Equity Ratio

Return on equity ratio of HBL and EBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.16.

Table 4.16
Return on Equity Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 20.31 | 18.85 |
| $2008 / 09$ | 25.51 | 20.80 |
| $2009 / 10$ | 27.19 | 12.92 |
| $2010 / 11$ | 27.28 | 19.87 |
| $2011 / 12$ | 26.11 | 18.68 |
| Mean | 25.28 | 18.224 |
| S.D. | 2.87623 | 3.08534 |
| C.V | 11.3775 | 16.9301 |

(Sources; Appendix-1.16)

The table no. 4.16 reveals that return on equity ratio of EBL has followed in increasing trend but that of HBL in fluctuating trend.

In average HBL has the lower mean return on equity of $18.22 \%$ against the $25.28 \%$ of HBL. The coefficient of variation of EBL is $11.37 \%$, which is comparatively lower than $16.93 \%$ of HBL. The chart is given fig. no 4.16:-

Figure 4.16
Return on Equity Ratio


### 4.1.4 Risk Ratio

Risk is always associated with return. If there is return, risk will definitely be there. Higher the risk, higher will be return and vice versa. Risk is very closely associated with investment. A bank has to take high risk if it expects to earn high return on its investment. Therefore, bank has to accept and manage high risk to get high profit.

### 4.1.4.1 Credit Risk Ratio

Bank utilizes its collected funds by providing credit to different sectors. While making investment, bank has to examine the risk involved in it to avoid of default or nonrepayment of loan. This ratio measures the risk behind making investment or granting
loan. It shows the proportion of non-performing assets in the total loan and advances of a bank. But due to unavailability of the relevant data, ratio is calculated with the help of loan and advance and total assets. Credit risk ratios of EBL and HBL from the fiscal year 2007/08 to 2011/12 are given in table no. 4.17

Table 4.17
Credit Risk Ratio (\%)

| Fiscal Year | Banks |  |
| :---: | :---: | :---: |
|  | EBL | HBL |
| $2007 / 08$ | 69.38 | 55.78 |
| $2008 / 09$ | 66.28 | 64.90 |
| $2009 / 10$ | 68.04 | 68.18 |
| $2010 / 11$ | 68.48 | 70.54 |
| $2011 / 12$ | 65.61 | 66.16 |
| Mean | 67.558 | 65.112 |
| S.D. | 1.56765 | 5.63705 |
| C.V | 2.32045 | 8.65747 |

(Sources: Appendix-1.17)

The table no.4.17 shows that the ratio of EBL is in fluctuating trend. The highest ratio of EBL is $69.38 \%$ in F.Y 2007/08 and HBL is $70.54 \%$ in F.Y 2010/11. In average, the ratio of EBL is $67.56 \%$ that is comparatively higher than $65.11 \%$ of HBL. The C.V of ratio of EBL is $2.32 \%$ that is lower than $8.65 \%$ of HBL. It indicates the CRR of EBL is less consistent than HBL. The chart of Credit risk ratio is given in fig. 4.17.

Figure 4.17
Credit Risk Ratio


### 4.1.5 Trend Analysis and Projection for Five Year

The purpose of this topic is to analyze the trend of deposit collection, utilization and net profit of HBL and EBL. To utilize deposits, a commercial bank may grant loan and advances, invest in government securities and chare debenture of other companies. Here the trend of deposit, loan and advances, total investment and net profit are forecasted for the next seven years. The projections are based on the following assumptions:
a. The main assumption is that other things will remain unchanged.
b. The forecast will be true only when the limitations of least square method are carried out.
c. The economy will remain in the present stage.
d. The bank will remain in the present stage.
e. Nepal Rastra Bank will not change it's guidelines to commercial banks.

### 4.1.5.1 Trend Analysis of Total Deposit

Under this topic, the trend values of total deposit for five years from the 2007/08 to 2011/12 have been calculated. Forecast for next five years from the 2012/13 to 2016/17 is done. The table no.4.18 shows the trend values of total deposit for 10 years from 2007/08 to 2016/17 of EBL and HBL.

Table 4.18
Trend values of Total Deposit of EBL and HBL
(Rs In '000)

| Fiscal Year | Trend Values EBL | Trend Values HBL |
| :---: | :---: | :---: |
| $2007 / 08$ | 23976299 | 31842789 |
| $2008 / / 09$ | 33322946 | 34681350 |
| $2009 / 10$ | 36932310 | 37611202 |
| $2010 / 11$ | 41127914 | 40920627 |
| $2011 / 12$ | 50006100 | 47730994 |
| $2012 / 13$ | 55032493 | 49962096 |
| $2013 / 14$ | 61018954 | 53763712 |
| $2014 / 15$ | 67005415 | 57567307 |
| $2015 / 16$ | 72991876 | 61366872 |
| $2016 / 17$ | 78978337 | 65168454 |

(Sources: Appendix-2.1)

The table no. 4.18 shows that the deposits of both banks have in the increasing trend. If other things remaining the same, the total deposits of the EBL will be Rs. 78978337 thousands in the fiscal end of 2016/17 that is the highest deposit among the study period. Similarly, the total deposit of HBL will be Rs 65168454 thousands in fiscal end of 2016/17.

From above trend analysis, it is found that the deposit collection position of HBL is not better in compare to EBL. The calculated trend values of total deposit of EBL and HBL are fitted in the trend column given in fig. 4.18

Figure 4.18
Trend Values of Total Deposit of EBL and HBL


### 4.1.5.2 Trend Analysis of Loan and Advances

Under this topic, the trend values of Loan and advances for 5 years from the 2007/08 to 2011/12 have been calculated. Forecast for next 5 years from the 20012/13 to 2016/17 is done. The table no. 4.19 shows the trend values of loan and advance for 10 year from 2007/08 to 2016/17 of EBL and HBL.

Table 4.19
Trend values of Loan and Advances of EBL and HBL
(Rs In '000)

| Fiscal Year | Trend Values EBL | Trend Values HBL |
| :---: | :---: | :---: |
| $2007 / 08$ | 18836432 | 20179613 |
| $2008 / / 09$ | 24469556 | 25519519 |
| $2009 / 10$ | 28156399 | 29123755 |
| $2010 / 11$ | 31661843 | 32968270 |
| $2011 / 12$ | 36616832 | 35968473 |
| $2012 / 13$ | 40774136 | 40459876 |
| $2013 / 14$ | 45049444 | 44362526 |
| $2014 / 15$ | 49324752 | 48265176 |
| $2015 / 16$ | 53600060 | 52167826 |
| $2016 / 17$ | 57875368 | 56070476 |

(Sources: Appendix-2.2)

The table no.4.19 shows that the loan and advances of both banks have the increasing trend. If other things remaining the same, the total loan and advances of EBL will be Rs. 57875368 thousands in end of $2016 / 17$ is the highest among the study period. Similarly the loan and advances of HBL will be Rs. 56070476 thousands for the year 2016/17.

From above analysis, it is found that the lending position of HBL is not better in compare to EBL. The calculated trend values of total loan and advances of EBL and HBL are fitted in the trend column given in fig.4.19.

Figure 4.19
Trend Values of Loan and Advances of EBL and HBL


### 4.1.5.3 Trend Analysis of Total Investment

Under this topic, the trend values of total investment for 5 years from the year 2007/08 to 2011/ 12 have been calculated. Forecast for next 5 years from 2012/13 to 2016/17 is done.

The table no. 4.20 shows the trend values of total investment for 10 years from 2007/08 to $2016 / 17$ of EBL and HBL.

Table 4.20
Trend Values of Total Investment of EBL and HBL
(Rs In '000)

| Fiscal Year | Trend Values EBL | Trend Values HBL |
| :---: | :---: | :---: |
| $2007 / 08$ | 5061158 | 13340177 |
| $2008 / / 09$ | 5950080 | 8710691 |
| $2009 / 10$ | 5009908 | 8444910 |
| $2010 / 11$ | 7745528 | 8769939 |
| $2011 / 12$ | 7865227 | 10032795 |
| $2012 / 13$ | 8547454 | 11422348 |
| $2013 / 14$ | 9287812 | 12077900 |
| $2014 / 15$ | 10028170 | 12733452 |
| $2015 / 16$ | 10768528 | 13389004 |
| $2016 / 17$ | 11708886 | 14044556 |

(Sources: Appendix-2.3)

The table no. 4.20 shows that total investment of EBL have the increasing trend but HBL have the fluctuating trend. If other things remain constant, the total investment of HBL will be 14044556 thousand in end year 2016/17. But the total investment of EBL will be increased to11708886 thousands for the year 2016/17.

From above analysis, it is found that the investment position of EBL is better in compare to HBL. The calculated trend values of total investment of EBL \& HBL are fitted in the trend column given in fig.4.20.

Figure 4.20
Trend Values of Total Investment of EBL and HBL


### 4.1.5.4 Trend Analysis of Net Profit

Under this topic, the trend values of net profit for 5 years from the year 2007/08 to 2011/12 have been calculated. Forecast for next 5 year from the year 2012/13 to 2016/17 is done. The table no.4.21 shows the trend values of net profit for 10 years from 2007/08 to $2016 / 17$ of EBL and HBL.

Table 4.21
Trend Values of Net Profit of EBL and HBL
(Rs In '000)

| Fiscal Year | Trend Values EBL | Trend Values HBL |
| :---: | :---: | :---: |
| $2007 / 08$ | 451219 | 635869 |
| $2008 / / 09$ | 638733 | 752835 |
| $2009 / 10$ | 831766 | 508798 |
| $2010 / 11$ | 931304 | 893115 |
| $2011 / 12$ | 1090564 | 958638 |
| $2012 / 13$ | 1258287 | 985597 |
| $2013 / 14$ | 1414810 | 1064179 |
| $2014 / 15$ | 1571333 | 1142761 |
| $2015 / 16$ | 1727856 | 1221343 |
| $2016 / 17$ | 1884379 | 1299925 |

(Sources: Appendix-2.4)

The table no.4.21 shows that net profit of EBL and HBL have the increasing trend. If other things remaining the same, the total net profit of EBL will be 1884379 thousands in the year 2016/17, is the highest among the study period. Similarly, the total net profit of HBL will be 1299925 thousands for the year 2016/17.

From above analysis, it is found that the net profit position of EBL is higher than HBL. The calculated trend values of net profit of EBL and HBL are fitted in the trend line given in fig. 4.21:

Figure 4.21
Trend Values of Net Profit of EBL and HBL


### 4.1.6 Test of Hypothesis

In this topic, an effort has been made to test the significance regarding the parameter of the population on the basis of sample drawn from the population.

### 4.1.6.1 Test of Hypothesis on Loan and Advances to Total Deposit Ratio of EBL and HBL

To test the level of difference between the mean ratio of loan and advance to total deposit of EBL and HBL, F test has been calculated as follows:

Null Hypothesis (H0): $1=2$ i.e. there is no significance difference between mean ratio of loan and advance to total deposit of EBL and HBL.

Alternative Hypothesis (H1): $1 \neq 2$ i.e. there is no significance difference between mean ratio of loan and advance to total deposit of EBL and HBL.

ANOVA Table

| Banks | Fiscal Year |  |  |  | Total |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: |
|  | $2007 / 08$ | $2008 / 09$ | $2009 / 2010$ | $2010 / 2011$ | $2011 / 2012$ |  |  |  |  |  |
|  | 78.56 | 73.43 | 76.24 | 76.98 | 73.22 | 378.43 |  |  |  |  |
| HBL | 63.37 | 73.58 | 77.43 | 80.57 | 75.36 | 370.31 |  |  |  |  |
| Grand Total (T) |  |  |  |  |  |  |  |  |  |  |

(Sources: Appendix-3.1)
Correlation factor (C.F.) $\quad=\mathrm{T}^{2} / \mathrm{n}$

$$
\begin{aligned}
& =(748.74)^{2} / 10 \\
& =56061.16
\end{aligned}
$$

Total Sum of square $($ SST $)=(78.56)^{2}+(73.43)^{2}+(72.64)^{2}+(76.98)^{2}+(73.22)^{2}+$ $(63.37)^{2}+(73.58)^{2}+(73.43)^{2}+(80.57)^{2}+(75.36)^{2}-\mathrm{C} . F$
$=56237.05$ - 56061.16
$=175.88$
Total Sum of Square between columns $(\mathbf{S S C})=(378.43)^{2} / 5+(370.30)^{2} / 5-56061.16$

$$
=5.11
$$

Sum of Square of Due to Error (SSE) = SST-SSC

$$
=175.88-5.11
$$

$$
=170.77
$$

## ANOVA Table

| Source of <br> variation | Sum of square | d.f. | Mean square | F ratio |
| :--- | :--- | :--- | :--- | :--- |
| Between Sample | $\mathrm{SSC}=5.11$ | $2-1=1$ | $5.11 / 1=5.11$ | $\mathrm{~F}=5.11 / 21.35$ |
| With in Sample | $\mathrm{SSE}=170.77$ | $10-2=8$ | $170.77 / 8=21.35$ | $=0.2393$ |
| Total | $\mathrm{SST}=175.88$ | $10-1=9$ |  |  |

Tabulated value, $\mathrm{F} 0.05(1,8)=5.32$

Decision:-Since, the calculated F i.e. 0.2393 is lower than tabulated F i.e. 5.32.so, H1 is rejected. In other word, there is no significance difference between mean ratio of loan and advance to total deposit of EBL and HBL

### 4.1.6.2 Test of Hypothesis on Return on Loan and Advance Ratio of EBL and HBL

To test the level of difference between the mean ratio of return on loan and advance ratio of EBL and HBL, F test has been calculated as follows:

Null hypothesis (H0): $1=2$ i.e. there is no significance difference between mean ratio of return on loan and advances of EBL and HBL.

Alternative hypothesis (H1): $1 \neq 2$ i.e. there is significance difference between mean ratio of return on loan and advance of EBL and HBL.

ANOVA Table

| Banks | Fiscal Year |  |  |  | Total |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | $2007 / 08$ | $2008 / 09$ | $2009 / 2010$ | $2010 / 2011$ | $2011 / 2012$ |  |
| EBL | 2.4 | 2.61 | 2.96 | 2.94 | 2.98 | 13.09 |
| HBL | 3.15 | 2.95 | 1.75 | 2.71 | 2.67 | 13.23 |
| Grand Total (T) |  |  |  |  |  |  |

(Sources: Appendix-3.2)
Correlation factor (C.F.) $\quad=\mathrm{T}^{2} / \mathrm{n}$
$=(26.32)^{2} / 10$
$=69.27$
Total Sum of square $(\mathbf{S S T})=(2.4)^{2}+(2.61)^{2}+(2.96)^{2}+(2.94)^{2}+(2.98)^{2}+(3.15)^{2}$
$+(2.95)^{2}+(1.75)^{2}+(2.71)^{2}+(2.67)^{2}-$ C.F
$=75.02-69.29$
$=5.73$

Total Sum of Square between columns $(\mathbf{S S C})=(13.09)^{2 / 5}+(13.23)^{2 / 5}-69.27$

$$
=0.0062
$$

$$
\begin{aligned}
\text { Sum of Square of Due to Error (SSE) } & =\text { SST-SSC } \\
& =5.73-0.0062 \\
& =5.72
\end{aligned}
$$

## ANOVA Table

| Source of <br> variation | Sum of square | d.f. | Mean square | F ratio |
| :---: | :---: | :---: | :---: | :---: |
| Between Sample | $\mathrm{SSC}=0.0062$ | $2-1=1$ | $0.0062 / 1=0.0062$ | $\mathrm{~F}=0.0062 / 0.7150$ |
| With in Sample | $\mathrm{SSE}=5.72$ | $10-2=8$ | $5.72 / 8=0.7150$ | $=0.0087$ |
| Total | $\mathrm{SST}=5.73$ | $10-1=9$ |  |  |

Tabulated value, $\operatorname{F0.05}(1,8)=5.32$

Decision:-Since calculated value of Fi.e. 0.0087 is lower than tabulated value F i.e. 5.32. Therefore, Alternative hypothesis (H1) is rejected. There is no significance difference between in mean ratio on loan and advance ratio of EBL and HBL.

### 4.1.6.3 Test of Hypothesis on Total Interest Earned to Total Assets Ratio (Total Working Fund)

To test the level of difference between the total interest earned to total assets ratio of EBL and HBL. F test has been calculated as follows:

Null hypothesis (H0): $1=2$ i.e. there is no significance difference between mean ratio of total interest earned to total working fund of EBL and HBL.

Alternative hypothesis $(\mathrm{H} 1): 1 \neq 2$ i.e. there is significance difference between mean ratio of total interest earned to total working fund of EBL and HBL.

ANOVA Table

|  | Fiscal Year |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Banks | $2007 / 08$ | $2008 / 09$ | $2009 / 10$ | $2010 / 11$ | $2011 / 12$ |  |
| EBL | 5.70 | 5.92 | 7.50 | 9.37 | 8.89 | 36.71 |
| HBL | 5.43 | 5.96 | 7.37 | 9.26 | 8.69 | 74.09 |
| Grand Total (T) |  |  |  |  |  |  |

(Sources: Appendix-3.3)

$$
\begin{aligned}
\text { Correlation factor (C.F.) } & =\mathrm{T}^{2} / \mathrm{n} \\
& =(74.09)^{2} / 10 \\
& =548.93
\end{aligned}
$$

Total Sum of square (SST) =
$(5.70)^{2}+(5.92)^{2}+(7.50)^{2}+(9.37)^{2}+(8.89)^{2}+(5.43)^{2}+(5.96)^{2}+(7.37)^{2}+(9.26)^{2}+$ $(8.69)^{2}-\mathrm{C} . \mathrm{F}$
$=571.20-548.93$
$=22.27$

Total Sum of Square between columns $(\mathbf{S S C})=(37.38)^{\mathbf{2} / 5}+(36.71)^{\mathbf{2} / 5}-548.93$

$$
=0.047
$$

Sum of Square of Due to Error (SSE) = SST-SSC

$$
\begin{aligned}
& =22.27-0.047 \\
& =22.22
\end{aligned}
$$

## ANOVA Table

| Source of <br> variation | Sum of square | d.f. | Mean square | F ratio |
| :---: | :---: | :---: | :---: | :---: |
| Between Sample | $\mathrm{SSC}=0.047$ | $2-1=1$ | $0.047 / 1=0.047$ | $\mathrm{~F}=0.047 / 2.775$ |
| With in Sample | $\mathrm{SSE}=22.22$ | $10-2=8$ | $22.22 / 8=2.7775$ |  |
| Total | $\mathrm{SST}=22.27$ | $10-1=9$ |  |  |

Tabulated value, $\mathrm{F} 0.05(1,8)=5.32$

## Decision:

Since, calculated value of F i.e. 0.0169 is higher than tabulated F i.e. 5.32. Therefore, Alternative hypothesis (H1) is rejected. There is significance difference between mean ratio of total interest earned to total working fund of EBL and HBL.

### 4.2 Major Findings of the Study

From the analysis of data following findings can be made:

1. The mean liquidity ratio of EBL and HBL is approximately equal i.e. 1.05138 and 1.05116, which indicates that both bank is succeed to maintain its ideal liquidity position. Both banks have good rate of stability and consistence but in comparison, EBL has the high rate of stability and consistency.
2. The mean cash reserve ratio of EBL is greater than HBL, which indicates that EBL has maintained sufficient cash reserve. And coefficient of variance of HBL and EBL are little bite similar with each other which are 37.18 and 24.43 respectively.
3. The mean ratio of cash and bank balance to current assets of EBL is higher than HBL i.e. 15.29 and 8.16 respectively, which indicated that EBL have capacity to manage the deposit withdrawal from the customers.
4. The mean ratio of investment on government securities to current assets ratio of EBL is higher than HBL, which indicates that EBL is, succeed it invest its deposits to government securities. As we know that "high shows that EBL is more stable and more consistent than HBL.
5. The mean ratio of loan and advances to total deposit ratio of EBL is higher than HBL, which indicates that EBL has strong position in mobilizing its deposits to loan and advances but the coefficient of variance of EBL is less than HBL i.e.3.056and 8.80 respectively, which means that EBL is more stable and more consistent in comparison on HBL.
6. The mean ratio of total investment to total deposit ratio of HBL is higher than EBL, which indicates that HBL invest its deposit in a profitable sector, and gets higher
percentage of return. The coefficient of variance of EBL is less than HBL, which indicates that EBL is able to maintain its stability and consistency more than HBL.
7. The average ratio of loans and advances to total working fund ratio of EBL is higher than that of HBL i.e.67.558 and 65.12.
8. The mean ratio of investment in government securities to total working fund of HBL is higher than that of EBL i.e. 13.71 and 14.47, which shows that EBL has maintained higher working fund than that of HBL. It states that EBL's position is better than HBL. The ratio of HBL are highly variable and consistence than that of EBL.
9. The mean ratio of investment in government securities to total working fund of HBL is higher than that of EBL, which shows that HBL is succeed in investing its working fund in government securities in comparison to EBL. Moreover EBL is high variable and high consistent than that of HBL.
10. The mean ratio of investment in shares and debenture to total working fund of EBL is higher than HBL i.e. 0.262 and 0.204 . Both banks have the mean less than equity, which shows that both banks are reluctant to invest their working fund in share and debenture of others company.
11. The mean ratio of loan loss of HBL is higher than EBL, which shows the higher proportion of inactive loan and advances of HBL with less coefficient of variance EBL is less variable and stable in regard to HBL i.e. 80.97 and 89.58 respectively.
12. The mean ratio of return on loan and advances of EBL is higher than that of HBL. This indicates that EBL is failed in gaining adequate returns on loan and advances than that of HBL. This shows that EBL has been sanctioning loan advances in profitable sector.
13. The mean ratio of return on working fund of EBL is 1.872 which is higher than that of HBL which is 1.706 , which means that EBL is succeeded in taking better return on its total working fund in comparison to HBL.
14. The mean ratio of total interest earned to total working fund ratio of EBL is higher than that of HBL which are 7.476 and 7.342 respectively, which means that EBL is succeeded to achieve better return in comparison to HBL.
15. The mean ratio of total interest earned to total operating income ratio of EBL is higher than that of HBL, which means that EBL is succeeded to achieve better return in total operating returning comparison to HBL. The standard deviation of EBL and HBL are 30.0438 and 22.39 respectively.
16. The mean ratio of credit risk ratio of EBL is higher than that of HBL, which means that there is a higher risk and HBL is more stable and more consistent than EBL.
17. The deposits of both two banks have the increasing trend. The total deposit of EBL and HBL will be Rs. 78978337 thousands and Rs. 65168454 thousands respectively, at the end of F.Y 2016/17. It states that the collection of EBL is far better in comparison to HBL.
18. The loans and advances of both banks have the increasing trend. The total loans and advances of EBL and HBL will be Rs. 57875368 thousands and Rs. 56070476 thousands respectively, at the end of F.Y 2016/17. It states that the lending position of EBL is little bit better in comparison to HBL.
19. The investments of EBL is in increasing trend but the HBL I is in decreasing trend. The total investment of EBL and HBL is respectively Rs. 11708886 thousands and Rs. 14044556 thousands at the end of F.Y. 2016/17. It states that the investment position of EBL is far better than HBL.
20. The net profits of both banks have the increasing trend. The total net profit of EBL and HBL will be Rs. 1884379 thousands and Rs. 1299925 thousands respectively at the end of F.Y 2016/17. This indicates that the position of EBL is better in comparison to HBL.
21. Since the Null hypothesis is accepted, there is a little bit difference between loans and advances to total deposits ratios of EBL and HBL.
22. Since the alternative hypothesis is accepted, there is significance difference between the return on loan and advances of the two banks.
23. Since the Alternative hypothesis is accepted, there is significance difference between mean ratio of total interest earned to total working fund ratio of EBL and HBL.

## CHAPTER - V

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this chapter summary, conclusion and recommendations developed from the comparative analysis of various aspects of the investment of commercial banks by using some important financial as well as statistical tools are included. After completing the basic analysis required for the study the final and the most important task of the researcher is to be summarized the study and recommend for the further importance. This would be meaningful to the top management of the bank to initiate the action and achieve the desired result. The findings of the study are summarized, concluded and some of the recommendations are drawn as below:

### 5.1 Summary

Economic development can be defined as process whereby an economy's real national income is carried on from a lower to a higher over a long period of time. The process of economic development is impossible without the development of different sectors of the economy like agriculture, industry, trade, tourism etc, of the country. These sectors need continuous flow of financial resources for development. In this regard, the network of well-organized financial system of the country has a great bear. They collect financial resources from the public and use these funds to provide loans and advances and overdrafts or to make investments in different securities. In the way, financial institutions provide savers highly liquid divisible assets at a lower risk while the investors get a large pool of resources.

Commercial banks are major financial institutions which occupy quite an important place in the framework of every country. The not only collect the scattered saving from individual by accepting deposits but also provides various types of loan. And they themselves invest in various shares and debentures of other companies. A healthy development of any bank depends heavily upon its investment policy.

In this study, the word investment conceptualized the investment of saving or other collected fund. The term investment covers a wide range of activities. It is commonly known fact that investment is possible only when there is adequate saving. The amount of saving of typical household in Nepal is small because they prefer to spend saving on commodities rather than on financial assets. If all the income and saving are consumed to the problem of hand to mouth and to other basic needs, then is no existence of investment. Therefore, both saving and investment are interrelated.

In general sense, investment means to pay out money to get more. But in the broadest sense, investment means the sacrifice of current money for future money. Investment is the management of surplus resources in such a way as to make it for providing benefits to the suppliers of the funds by letting the third party to use such resources. Investment involves uses of funds to long term assets that would yield benefits in the future. In other words, investment means to trade money for expected money for future stream of payment or benefits that will exceed the current cash outflow which is the benefits to the investors for sacrificing the time and commitment or due to certainty and risk factors. Financial institutions must be able to mobilize their deposits in profitable, secured and marketable sector so that they can earn good return to their investment.

A key factor in the development of the country is the mobilization of domestic resources and their investment for productive use to the various sectors. To make it more effective, commercial banks formulae sound investment policies, which eventually contribute to the economic development of a country? The sound policies help commercial bank to maximize quality and quantity of investment and thereby, achieve their own objective of profit maximization and social welfare.

Investment has to undergo various types of risk, e.g. Business risk, possibility if being weak in earning power of investment due to competition, uncontrollable casts, and change in market demand etc. market risk possibility of strong change in market price and collateral, value of securities and real properties. All the investor does not achieve
success. Therefore, simply making an investment is not sufficient. One should follow sound investment policy.
Thus, investment is one of the most important functions of commercial bank, which is the long term commitment of bank in the risky and environment. Bank has to be very cautions while investing their funds in various sectors which may or may not be able to pay their loan, so it is challenging jog for commercial bank. Especially, investment management of bank is guided by the investment policy adopted by the bank. The investment policy of the bank helps the investment operation of the bank to be efficient and profitable by minimizing the interest risk.

Banks which serve as a repository of the cash resources of the public and as purveyors of finance for trade and industry play a vital role in the economic and financial life of a country. Unlike other joint stock companies, banks generally obtain a very large proportion of their working capital from the depositors rather than from the share holders. Therefore, it should wisely and carefully use its collected fund and pay due consideration while formulating investment policy regarding loan and investment. Investment policy should ensure minimum risk and maximum profit from lending.

The basic objective of this study is to find out position of HBL on fund mobilization and investment policy in comparison to EBL. The subsidiary objectives determined to achieve the foresaid objectives are: to evaluate the liquidity, profitability, risk portion, assets management efficiency and investment practices of HBL in comparison to EBL; to analyze relationship between various important variables of HBL i.e. investment, loans and advances, total deposit and net profit in comparison to EBL; to provide suggestion for improving the investment policy of HBL in comparison to EBL on the basis of findings of the analysis.

To achieve these objectives, an appropriate research mythology has been developed which include the analysis of time series and test of hypothesis.

### 5.2 Conclusion

From the study it is found that the role of banking sector is very crucial in the sustainable development of least development countries. The major sources of financial resources to industries in the least developed countries are the commercial banks. In a situation when government commercial banks were unable to supply credit timely and carry capital market activates private joint venture commercial banks have contributed a lot.

The overall performance of joint venture commercial banks is satisfactory and they are running in profit. The analysis of liquidity position of the banks under study is found to be satisfactory. HBL has lower liquidity position than that of EBL. The lending and investment activates of both the banks are not satisfactory. The profitability position of EBL is higher than that of HBL. In case of trend analysis, both the banks have increasing trend value in total deposit, loan and advances, total investment and net profit. The increasing ratio of EBL is higher which shows the proficiency of HBL in those aspects. The commercial banks have to prove that they can really contribute to the national economy, are efficient and viable agencies for mobilization of saving and its canalization into productive sectors, are professionally managed and competent enough to ensure adequate rate of return investment and are strategically well planned to be competitive with other agencies and are trust worthy.

### 5.3 Recommendations

On the basis of analysis and finding of the study, following recommendations can be advised to overcome weakness, inefficiency and to improve present fund mobilization and investment of HBL and EBL.

1. Current ratio of these sample banks are not sufficient to achieve standard ratio i.e. $2: 1$, so it is recommended to both banks to maintain required current ratio. They need to maintain the current mean ratio for the proper management of their liquidity position.
2. The liquidity position of the bank may be affected by external as well as internal factors. The affecting factor may be interest rate, supply as demand position of loan and advance as well as savings investment situation, central banks directives, the leading policies, capacity of management, strategic planning and funds flow situation. As HBL has maintained lower cash and bankers to total deposit and current assets ratios, HBL is recommended to increase each and bank balance to meet current obligation and loan demand.
3. To get success is competitive banking environment, depositors money must be utilized as loan and advance. Negligence in administering this asset could be the main cause of liquidity crisis in the bank and one of the main reasons of bank failure. It has found from the study that EBL has greater ratios at all, because its large portion of fund invested as loan and advances and negligence to invest on other sector. HBL have not properly used their existing fund as loan and advances to over come this situation, HBL is strongly recommended to follow liberal lending policy.
4. As bank of private sector commercial banks cannot keep this eyes closed from the profit motive. They should be careful is increasing is a real sense to maintain the confidence of shareholders, depositors and it's all customers. EBL has high earning capacity, but HBL's profitability position is worse than that of other two banks. So HBL is strongly recommended to utilize risk assets and shareholders fund to gain highest profit margin. Similarly, it should reduce its expenses and should try to collect cheaper fund being more profitable
5. Out of working fund, HBL has not invested its more funds as total investment in comparison to EBL. Through, the percentage of invested by all these banks have very nominal. So, it is recommended to these banks to invest their more funds in different types of companies' in different areas.
6. Portfolio condition of these banks should be examined carefully from time to time and attention should be made to maintain equilibrium in the portfolio condition as far as possible. So it can be said, "All eggs should not be kept in the same basket". The bank should make continuous efforts to explore new competitive and high yielding investment opportunities to optimize their investment portfolio.
7. In terms of recovery of the loan of HBL is worse in comparison to EBL. The loan loss ratio is comparatively high that makes negative impact on profit. It may be facing a lot of problems on recovering loans. It has large non-performing assets as loan unrecovered. Therefore it is recommended to apply recovery act that would help to realize overdue loan in time.
8. The projected oriented approach has to be encouraged in lending business of the bank, in which, security 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 fund and to repay loans timely. So, it is recommended to all three banks should followed project oriented approach for the efficient performances. Because the chance of loan can be minimize by the project oriented approach.
9. Most of the joint venture banks have focused their banking services especially to big clients such as multinational companies, large-scale industries, manufactures and exporters of garments and carpets. So, small depositors and entrepreneurs for promoting and mobilizing small investors' funds and to attract depositors through variety of deposit schemes and facilities like cumulative deposit scheme, prize bonds scheme, gift cheque scheme, recurring deposit scheme (life insurance), monthly interest scheme etc. should be provided.
10. EBL Bank is taken as the one of the most leading commercial bank in Nepal. It is the one of the most successful bank in Nepal with widest network than any other joint venture banks in Nepal. Today is the world of competition; the competition is growing day by day in the banking sector. It mobilizes its deposits and other funds to profitable, secured and marketable sector so that it can earn a handsome profit as well as it should be secured and can be converted onto cash whenever needed.

An 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. EBL Bank limited has achieved a remarkable success in banking sector in terms of market share and profitability compared to joint venture banks because of its reliable and professional services. EBL Bank is the innovator in
introducing many new products such as credit cards, Tele Banking, Any branch Banking, ATM, E-banking, 24 hours Banking correspondent network. Due to their prompt and quality services HBL Bank has achieved its remarkable success in banking Sector and has proved its high status on the eye of public. EBL Bank has been improving its performance from very beginning since its establishment.

The bank is recognized as a premier financial institution in Nepal in term of its range and quality banking services, human capital, asset quality and income. After two decades of operation the bank has clearly exhibited that through consistently keeping its philosophy and its customer at the core of its business it stands today as the premier bank in the kingdom, poised to be the Bank of $1^{\text {st }}$ choice to all its stakeholders, going forward. HBL Bank today is full service bank in every sense, able to meet the entire large range of financial requirements of its customers. To achieve its mission, EBL Bank has set its values of Customer Focused, Result Oriented, Innovative, Synergistic and Professional (CRISP).

## BIBLIOGRAPHY

## Books:

Baidhya, S. (1967). Banking Management. Kathmandu: Monitor Nepal
Bajracharya, B.B. (2047). Monitory Policy and Deposit Mobilization in Nepal. Kathmandu: Rajat Jayanti Simarika RBB,

Bajracharya, S. \& Bhattarai, R. (2004). Corporate Financial Management. Kathmandu:

Bhalla, V.K. (1983). Investment Management. New Delhi: S. Chand and Company.

Cheney, J.M \& Moses, E.A. (1999). Fundamentals of Investments. St. Paul: West Publishing Company.

Morris, F. (1990). Latin Americas Banking System in the 1980's. Washington D.C.: The World Bank Decision Paper.

Pandey, I.M. (1999). Financial Management. New Delhi: Vikas Publishing House Pvt. Ltd.

Shrestha, M.S. (2009).Fundamentals of Banking. Kathmandu: Anamnagar-32, Buddha Academic Publishers and Distributors Pvt. Ltd,

Shrestha, S. \& Silwal, D.P. (2057). Statistical Methods in Management. Kathmandu: Taleju Pustak Bitarak.

Sharpe, W.J. \& Alexander, G.J. (1996). Investments. New Delhi: Prentice Hall Pvt. Ltd.

Wolf, H.K. \& Pant, P.R. (1999). Social Science Research and Thesis Writing. Kathmandu: Buddha Academic Enterprises Pvt. Ltd.

## Articles

Shrestha, R.L. (2045). A Study on Deposit and Credit of Commercial Banks in Nepal. NRB Samachar

Shrestha, S. (2002). Portfolio Behavior of Commercial Banks in Nepal. Kathmandu: the Business Voice of Nepal (In Special Issue of Banijya Sansar).

Himalayan Bank Ltd. ( FY 2007/08 to FY 2011/2012). Annual Report.
Everest Bank Ltd. ( FY 2007/08 to FY 2011/2012). Annual Report.

## Thesis

Basnet, M. (2008). A Comparative Study on Investment Policy of Nabil Bank Ltd \& Himalayan Bank Ltd. An Unpublished Master's Degree Thesis, Shanker Dev Campus.

Dhakal, S. (2008). Investment Policy of Commercial Bank in Nepal, An Unpublished Master's Degree Thesis, Shanker Dev Campus.

Joshi, J. (2005). Investment Policy of Commercial Bank in Nepal: A comparative study of Everest Bank Limited with Nabil Bank Limited and Bank of Kathmandu Limited. An Unpublished Master's Degree Thesis, Shanker Dev Campus.

Maharjan, H. (2010). A Comparative Study on Investment Policy of Everest Bank Ltd \& Himalayan Bank Ltd. An Unpublished Master's Degree Thesis, Shanker Dev Campus.

Regmi, G. (2006). A Comparative Study on Investment Policy of Everest Bank Ltd \& Himalayan Bank Ltd. An Unpublished Master's Degree Thesis, Shanker Dev Campus.

Shrestha, S. (2007). A Comparative Analysis on Investment Performance of Commercial Bank in Nepal, An Unpublished Master's Degree Thesis, Shanker Dev Campus.

Shrestha, S. (2011). A Comparative Study on Investment Policy of Laxmi Bank Ltd \& Kumari Bank Ltd. An Unpublished Master's Degree Thesis, Shanker Dev Campus.

Websites:
www.nrb.org.np
www.everestbank.com
www.himalayanbank.com

## APPENDICES

## Appendix -1.1

## Current Ratio

Everest bank Ltd.

|  |  | In'000"' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Current Assets <br> (Rs.) | Current Liabilities <br> (Rs.) | Ratio <br> (Times) |
| $2007 / 08$ | 26412615 | 24928105 | 1.0596 |
| $2008 / 09$ | 35997525 | 34413224 | 1.0460 |
| $2009 / 10$ | 40383479 | 38333623 | 1.0537 |
| $2010 / 11$ | 44924483 | 42822666 | 1.0491 |
| $2011 / 12$ | 54137908 | 51635826 | 1.0485 |

## Himalayan Bank Itd.

|  | In"000'' |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Current Assets <br> (Rs.) | Current Liabilities <br> (Rs.) | Ratio <br> (Times) |
| $2007 / 08$ | 34804369 | 32802540 | 1.0610 |
| $2008 / 09$ | 37723166 | 35700442 | 1.0567 |
| $2009 / 10$ | 40600869 | 38777919 | 1.0470 |
| $2010 / 11$ | 44035567 | 42240726 | 1.0425 |
| $2011 / 12$ | 51623912 | 49232418 | 1.0486 |

## Appendix - 1.2

## Cash and Bank Balance to Total Deposit Ratio

## Everest Bank Ltd.

|  |  | In'000'' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Cash \& Bank <br> Balance (Rs.) | Total Deposit <br> (Rs.) | Ratio <br> $(\%)$ |
| $2007 / 08$ | 2667972 | 23976299 | 11.13 |
| $2008 / 09$ | 6164371 | 33322946 | 18.50 |
| $2009 / 10$ | 7818815 | 36932310 | 21.17 |
| $2010 / 11$ | 6122863 | 41127914 | 15.00 |
| $2011 / 12$ | 10363306 | 50006100 | 20.72 |

Himalayan Bank Itd.

|  |  | In'000'' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Cash \& Bank <br> Balance (Rs.) | Total Deposit <br> (Rs.) | Ratio <br> $(\%)$ |
| $2007 / 08$ | 1448143 | 31842789 | 4.55 |
| $2008 / 09$ | 3048527 | 34681345 | 8.79 |
| $2009 / 10$ | 3866491 | 37611202 | 10.28 |
| $2010 / 11$ | 2964651 | 40920627 | 7.24 |
| $2011 / 12$ | 6362296 | 47730994 | 13.33 |

## Appendix - 1.3

## Cash and Bank Balance to Current Assets

## Everest Bank Ltd.

|  | In'000"' |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Cash \& Bank <br> Balance (Rs.) | Current Assets <br> (Rs.) | Ratio <br> $(\%)$ |
| $2007 / 08$ | 1927281 | 26412615 | 7.23 |
| $2008 / 09$ | 6164371 | 35997525 | 17.12 |
| $2009 / 10$ | 7818815 | 40383479 | 19.36 |
| $2010 / 11$ | 6122863 | 44924483 | 13.63 |
| $2011 / 12$ | 10363306 | 54137908 | 19.14 |

Himalayan Bank Itd.

|  | In'000"' |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Cash \& Bank <br> Balance (Rs.) | Current Assets <br> (Rs.) | Ratio <br> $(\%)$ |
| $2007 / 08$ | 1448143 | 34804369 | 4.16 |
| $2008 / 09$ | 3048527 | 37723166 | 8.08 |
| $2009 / 10$ | 3866491 | 40600869 | 9.52 |
| $2010 / 11$ | 2964651 | 44035567 | 6.73 |
| $2011 / 12$ | 6362296 | 51623912 | 12.32 |

## Appendix - 1.4

## Investment on Government Securities to Current Assets ratio

## Everest Bank Ltd.

| In'000"' |  |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Investment in Government <br> Securities (Rs.) | Current Assets <br> (Rs.) | Ratio <br> $(\%)$ |
| $2007 / 08$ | 4821605 | 26412615 | 18.25 |
| $2008 / 09$ | 5146046 | 35997525 | 14.29 |
| $2009 / 10$ | 4354353 | 40383479 | 10.78 |
| $2010 / 11$ | 7145018 | 44924483 | 15.90 |
| $2011 / 12$ | 6068876 | 54137908 | 11.21 |

Himalayan Bank Itd.

|  | In'000"' |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Investment in Government <br> Securities (Rs.) | Current assets <br> (Rs.) | Ratio <br> $(\%)$ |
| $2007 / 08$ | 7471668 | 34804369 | 21.46 |
| $2008 / 09$ | 4212300 | 37723166 | 11.17 |
| $2009 / 10$ | 4465372 | 40600869 | 10.99 |
| $2010 / 11$ | 6407363 | 44035567 | 14.55 |
| $2011 / 12$ | 9162223 | 51623912 | 17.74 |

## Appendix - 1.5

## Loan and Advances to Total Deposit Ratio

## Everest Bank Ltd.

|  | In'000"' |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Loan \& Advances <br> (Rs.) | Total Deposit <br> (Rs.) | Ratio <br> $(\%)$ |
| $2007 / 08$ | 18836432 | 23976299 | 78.56 |
| $2008 / 09$ | 24469556 | 33322946 | 73.43 |
| $2009 / 10$ | 28156399 | 36932310 | 76.24 |
| $2010 / 11$ | 31661843 | 41127914 | 76.98 |
| $2011 / 12$ | 36616832 | 50006100 | 73.22 |

Himalayan Bank Ltd.

|  | In"000"' |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Loan \& Advances <br> (Rs.) | Total Deposits <br> (Rs.) | Ratio <br> $(\%)$ |
| $2007 / 08$ | 20179613 | 31842789 | 63.37 |
| $2008 / 09$ | 25519519 | 3468135 | 735.83 |
| $2009 / 10$ | 29123755 | 37611202 | 77.43 |
| $2010 / 11$ | 32968270 | 40920627 | 80.57 |
| $2011 / 12$ | 35968473 | 47730994 | 75.36 |

## Appendix - 1.6

## Total Investment to Total Deposit Ratio

## Everest Bank Ltd.

|  |  | In"000"' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Total Investment <br> $($ Rs. $)$ | Total Deposit <br> (Rs.) | Ratio <br> $(\%)$ |
| $2007 / 08$ | 5061158 | 23976299 | 21.11 |
| $2008 / 09$ | 5950080 | 33322946 | 17.86 |
| $2009 / 10$ | 5009908 | 36932310 | 13.57 |
| $2010 / 11$ | 7745528 | 41127914 | 18.83 |
| $2011 / 12$ | 7865227 | 50006100 | 15.73 |

Himalayan Bank Itd.

|  |  | In'000"' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Total Investment <br> $($ Rs. $)$ | Total Deposit <br> (Rs.) | Ratio <br> $(\%)$ |
| $2007 / 08$ | 13340177 | 31842789 | 41.89 |
| $2008 / 09$ | 8710691 | 34681345 | 25.12 |
| $2009 / 10$ | 8444910 | 37611202 | 22.45 |
| $2010 / 11$ | 8769939 | 40920627 | 21.43 |
| $2011 / 12$ | 10032795 | 47730994 | 21.02 |

## Appendix - 1.7

## Loan and Advances to Total Working Fund Ratio

## Everest Bank Ltd.

|  | In'000"' |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Loan \& Advances <br> (Rs.) | Total Working <br> Fund (Rs.) | Ratio <br> (Times) |
| $2007 / 08$ | 18836432 | 27149343 | 69.38 |
| $2008 / 09$ | 24469556 | 36916849 | 66.28 |
| $2009 / 10$ | 28156399 | 41382761 | 68.04 |
| $2010 / 11$ | 31661843 | 46236212 | 68.48 |
| $2011 / 12$ | 36616832 | 55813129 | 65.61 |

Himalayan Bank Ltd.

|  | In"000"' |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Loan \& Advances <br> (Rs.) | Total Working <br> Fund (Rs.) | Ratio <br> (Times) |
| $2007 / 08$ | 20179613 | 36175532 | 55.78 |
| $2008 / 09$ | 25519519 | 39320322 | 64.90 |
| $2009 / 10$ | 29123755 | 42717125 | 68.18 |
| $2010 / 11$ | 32968270 | 46736204 | 70.54 |
| $2011 / 12$ | 35968473 | 54364428 | 66.16 |

## Appendix - 1.8

Investment on Government Securities to Total Working Fund Ratio

## Everest Bank Ltd.

| In'000'' |  |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Investment on Government <br> Securities (Rs.) | Total Working <br> Fund (Rs.) | Ratio |
| $2007 / 08$ | 4821605 | 27149343 | 17.76 |
| $2008 / 09$ | 5146046 | 36916849 | 13.94 |
| $2009 / 10$ | 4354353 | 41382761 | 10.52 |
| $2010 / 11$ | 7145018 | 46236212 | 15.45 |
| $2011 / 12$ | 6068876 | 55813129 | 10.87 |

Himalayan Bank Ltd.

| In'000'' |  |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Investment on Government <br> Securities(Rs.) | Total Working <br> Fund (Rs.) | Ratio |
| $2007 / 08$ | 7471668 | 36175532 | 20.65 |
| $2008 / 09$ | 4212300 | 39320322 | 10.71 |
| $2009 / 10$ | 4465372 | 42717125 | 10.45 |
| $2010 / 11$ | 6407363 | 46736204 | 13.71 |
| $2011 / 12$ | 9162223 | 54364428 | 16.85 |

## Appendix - 1.9

Investment on Share and Debenture to Total Working Fund Ratio

## Everest Bank Ltd.

In"000"

| Fiscal Year | Investment on Share <br> and Debenture(Rs.) | Total Working <br> Fund (Rs.) | Ratio |
| :---: | :---: | :---: | :---: |
| $2007 / 08$ | 99552 | 27149343 | 0.37 |
| $2008 / 09$ | 100435 | 36916849 | 0.27 |
| $2009 / 10$ | 100435 | 41382761 | 0.24 |
| $2010 / 11$ | 107976 | 46236212 | 0.23 |
| $2011 / 12$ | 109176 | 55813129 | 0.20 |

Himalayan Bank Ltd.

|  | In'000"' |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Investment on Share <br> and Debenture(Rs.) | Total Working <br> Fund (Rs.) | Ratio |
| $2007 / 08$ | 89558 | 36175532 | 0.25 |
| $2008 / 09$ | 93883 | 39320322 | 0.24 |
| $2009 / 10$ | 78882 | 42717125 | 0.18 |
| $2010 / 11$ | 88787 | 46736204 | 0.19 |
| $2011 / 12$ | 88787 | 54364428 | 0.16 |

## Appendix - 1.10

## Loan Loss Ratio

## Everest Bank Ltd.

|  |  | In'000'' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Loan Loss Provision | Loan \& Advance | Ratio (\%) |
| $2007 / 08$ | 18999 | 18836432 | 0.10 |
| $2008 / 09$ | 5549 | 24469556 | 0.02 |
| $2009 / 10$ | 61849 | 28156399 | 0.22 |
| $2010 / 11$ | 52215 | 31661843 | 0.16 |
| $2011 / 12$ | 150249 | 36616832 | 0.41 |

## Himalayan Bank Ltd.

|  |  | In'000'' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Loan Loss Provision | Loan \& Advance | Ratio (\%) |
| $2007 / 08$ | 166058 | 20179613 | 0.82 |
| $2008 / 09$ | 14966 | 25519519 | 0.06 |
| $2009 / 10$ | 250655 | 29123755 | 0.86 |
| $2010 / 11$ | 211971 | 32968270 | 0.64 |
| $2011 / 12$ | 846246 | 35968473 | 2.35 |

## Appendix - 1.11

## Return on Loan and Advances Ratio

## Everest Bank Ltd.

|  |  | In'000'" |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Net Profit | Loan \& Advance | Ratio (\%) |
| $2007 / 08$ | 451219 | 18836432 | 2.40 |
| $2008 / 09$ | 638733 | 24469556 | 2.61 |
| $2009 / 10$ | 831766 | 28156399 | 2.95 |
| $2010 / 11$ | 931304 | 31661843 | 2.94 |
| $2011 / 12$ | 1090564 | 36616832 | 2.98 |

Himalayan Bank Ltd.

|  |  | In'000'' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Net Profit | Loan \& Advance | Ratio (\%) |
| $2007 / 08$ | 635869 | 20179613 | 3.15 |
| $2008 / 09$ | 752835 | 25519519 | 2.95 |
| $2009 / 10$ | 508798 | 29123755 | 1.75 |
| $2010 / 11$ | 893115 | 32968270 | 2.71 |
| $2011 / 12$ | 958638 | 35968473 | 2.67 |

## Appendix - 1.12

## Return on Working Fund Ratio

## Everest Bank Ltd.

| In'000'" |  |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Net Profit | Total Working Fund (Rs.) | Ratio (\%) |
| $2007 / 08$ | 451219 | 27149343 | 1.66 |
| $2008 / 09$ | 638733 | 36916849 | 1.73 |
| $2009 / 10$ | 831766 | 41382761 | 2.01 |
| $2010 / 11$ | 931304 | 46236212 | 2.01 |
| $2011 / 12$ | 1090564 | 55813129 | 1.95 |

Himalayan Bank Ltd.

|  |  | In'000"' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Net Profit | Total Working Fund (Rs.) | Ratio (\%) |
| $2007 / 08$ | 635869 | 36175532 | 1.76 |
| $2008 / 09$ | 752835 | 39320322 | 1.91 |
| $2009 / 10$ | 508798 | 42717125 | 1.19 |
| $2010 / 11$ | 893115 | 46736204 | 1.91 |
| $2011 / 12$ | 958638 | 54364428 | 1.76 |

## Appendix - 1.13

Total Interest Earned to Total Working Fund Ratio

Everest Bank Ltd.

| Fiscal Year | Interest Earned | Total Working Fund (Rs.) | Ratio (\%) |
| :---: | :---: | :---: | :---: |
| $2007 / 08$ | 1548657 | 27149343 | 5.70 |
| $2008 / 09$ | 2186815 | 36916849 | 5.92 |
| $2009 / 10$ | 3102451 | 41382761 | 7.50 |
| $2010 / 11$ | 4331026 | 46236212 | 9.37 |
| $2011 / 12$ | 4959998 | 55813129 | 8.89 |

Himalayan Bank Ltd.

|  |  | In'000'' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Interest Earned | Total Working Fund (Rs.) | Ratio (\%) |
| $2007 / 08$ | 1963647 | 36175532 | 5.43 |
| $2008 / 09$ | 2342198 | 39320322 | 5.96 |
| $2009 / 10$ | 3148605 | 42717125 | 7.37 |
| $2010 / 11$ | 4326141 | 46736204 | 9.26 |
| $2011 / 12$ | 4724887 | 54364428 | 8.69 |

## Appendix - 1.14

Total Interest Earned to Total Operating Income Ratio

Everest Bank Ltd.

| In'000' |  |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Interest Earned | Operating Income (Rs.) | Ratio (\%) |
| $2007 / 08$ | 1548657 | 1209898 | 128.00 |
| $2008 / 09$ | 2186815 | 1544966 | 141.54 |
| $2009 / 10$ | 3102451 | 1927976 | 160.92 |
| $2010 / 11$ | 4331026 | 2192940 | 197.50 |
| $2011 / 12$ | 4959998 | 2609735 | 190.06 |

Himalayan Bank Ltd.

|  |  | In'000'' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Interest Earned | Operating Income (Rs.) | Ratio (\%) |
| $2007 / 08$ | 1963647 | 1597495 | 122.92 |
| $2008 / 09$ | 2342198 | 1988048 | 117.81 |
| $2009 / 10$ | 3148605 | 2157958 | 145.91 |
| $2010 / 11$ | 4326141 | 2586744 | 167.24 |
| $2011 / 12$ | 4724887 | 2911213 | 162.30 |

## Appendix - 1.15

## Total Interest Paid to Total Working Fund Ratio

## Everest Bank Ltd

In'000"

| Fiscal Year | Total Interest Expenses | Total Working Fund | Ratio (\%) |
| :---: | :---: | :---: | :---: |
| $2007 / 08$ | 632609 | 27149343 | 2.33 |
| $2008 / 09$ | 1012874 | 36916849 | 2.74 |
| $2009 / 10$ | 1572790 | 41382761 | 3.80 |
| $2010 / 11$ | 2535876 | 46236212 | 5.48 |
| $2011 / 12$ | 2873335 | 55813129 | 5.15 |

Himalayan Bank Ltd.

| In'"000"' |  |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Total Interest Expenses | Total Working Fund (Rs.) | Ratio (\%) |
| $2007 / 08$ | 823745 | 36175532 | 2.28 |
| $2008 / 09$ | 934778 | 39320322 | 2.38 |
| $2009 / 10$ | 1553531 | 42717125 | 3.64 |
| $2010 / 11$ | 2414807 | 46736204 | 5.17 |
| $2011 / 12$ | 2816441 | 54364428 | 5.18 |

## Appendix - 1.16

## Return on Equity

## Everest Bank Ltd.

|  | In'000"' |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Net Profit | Equity (Rs.) | Ratio (\%) |
| $2007 / 08$ | 451219 | 2221238 | 20.31 |
| $2008 / 09$ | 638733 | 2503625 | 25.51 |
| $2009 / 10$ | 831766 | 3059138 | 27.19 |
| $2010 / 11$ | 931304 | 3413546 | 27.28 |
| $2011 / 12$ | 1090564 | 4177303 | 26.11 |

Himalayan Bank Ltd.

|  | In'"000'" |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Net Profit | Equity (Rs.) | Ratio (\%) |
| $2007 / 08$ | 635869 | 3372992 | 18.85 |
| $2008 / 09$ | 752835 | 3619881 | 20.80 |
| $2009 / 10$ | 508798 | 3939205 | 12.92 |
| $2010 / 11$ | 893115 | 4495478 | 19.87 |
| $2011 / 12$ | 958638 | 5132010 | 18.68 |

## Appendix - 1.17

Credit Risk Ratio

Everest Bank Ltd.

| In'000"' |  |  |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Loan \& Advance | Total Working Fund (Rs.) | Ratio (\%) |
| $2007 / 08$ | 18836432 | 27149343 | 69.38 |
| $2008 / 09$ | 24469556 | 36916849 | 66.28 |
| $2009 / 10$ | 28156399 | 41382761 | 68.04 |
| $2010 / 11$ | 31661843 | 46236212 | 68.48 |
| $2011 / 12$ | 36616832 | 55813129 | 65.61 |

## Himalayan Bank Ltd.

|  |  | In'000'' |  |
| :---: | :---: | :---: | :---: |
| Fiscal Year | Loan \& Advance | Total Working Fund (Rs.) | Ratio (\%) |
| $2007 / 08$ | 20179613 | 36175532 | 55.78 |
| $2008 / 09$ | 25519519 | 39320322 | 64.90 |
| $2009 / 10$ | 29123755 | 42717125 | 68.18 |
| $2010 / 11$ | 32968270 | 46736204 | 70.54 |
| $2011 / 12$ | 35968473 | 54364428 | 66.16 |

## Appendix -2

## Statistical Ratio

Trend Analysis
Sample of Calculation of Co-efficient and Trend Values of Deposit of EBL
(Rs. In '000')

| Fiscal Year | Base Year (X) | Total Deposit (Y) | X $^{\mathbf{2}}$ | XY |
| :---: | :---: | :---: | :---: | :---: |
| $2007 / 08$ | 2008 | 23976299 | 4032064 | 48144408390 |
| $2008 / 09$ | 2009 | 33322946 | 4036081 | 66945798510 |
| $2009 / 10$ | 2010 | 36932310 | 4040100 | 74233943100 |
| $2010 / 11$ | 2011 | 41127914 | 4044121 | 82708235050 |
| $2011 / 12$ | 2012 | 50006100 | 4048144 | 100612273200 |
| Total | 10050 | 185365569 | 20200510 | 372644658300 |

Here, $\mathrm{N}=5$,
a- Coefficient $=\frac{\Sigma \mathrm{Y}}{N}-\frac{\mathrm{b}_{2} \mathrm{X}}{\mathrm{N}}=-11995713500$
b- Coefficient $=\frac{N L X Y-\sum X_{2} Y}{N E X^{2}-(2 X]^{2}} \quad=5986461$
Now, equation becomes $\mathrm{Y}=\mathrm{a}+\mathrm{bX}$
Where Y is the predicted values for deposits,
X is the base Fiscal year.
Predicted value of deposits for the year 2012/13

$$
=-11995713500+5986461 \times 2013=55032493
$$

Similarly, predicted values of the deposits for the year

2012/13 = 55032493
2013/14 = 61018954
$2014 / 15=67005415$
2015/16 = 72991876
2016/17 = 78978337

The trend coefficient and the prediction values for the entire variable have been calculated in the similar manner

## Appendix - 2.1

## Trend of Total Deposit

| Fiscal Year | Year | EBL | HBL | $\mathrm{X} \times \mathrm{Y}^{\mathbf{1}}$ | $\mathrm{X} \times \mathrm{Y}^{\mathbf{2}}$ | $\mathrm{X}^{\mathbf{2}}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $(\mathrm{X})$ | $\mathrm{Y}^{\mathbf{1}}$ | $\mathrm{Y}^{\mathbf{2}}$ |  |  |  |
| $2007 / 08$ | 2008 | 23976299 | 31842789 | 48144408390 | 63940320310 | 4032064 |
| $2008 / 09$ | 2009 | 33322946 | 34681350 | 66945798510 | 69674832150 | 4036081 |
| $2009 / 10$ | 2010 | 36932310 | 37611202 | 74233943100 | 75598516020 | 4040100 |
| $2010 / 11$ | 2011 | 41127914 | 40920627 | 82708235050 | 82291380900 | 4044121 |
| $2011 / 12$ | 2012 | 50006100 | 47730994 | 100612273200 | 96034759930 | 4048144 |
| Total | 10050 | 185365569 | 192786962 | 372644658300 | 387539809300 | 20200510 |

## Trend Values

|  | EBL | HBL |
| :--- | :--- | :--- |
| $\mathbf{a}=$ | -11995713500 | -7602594288 |
| $\mathbf{b}=$ | 5986461 | 3801568 |

## Predicted Values for:

| Fiscal Year | Base Year | EBL | HBL |
| :---: | :---: | :---: | :---: |
| $2012 / 13$ | 2013 | 55032493 | 49962096 |
| $2013 / 14$ | 2014 | 61018954 | 53763712 |
| $2014 / 15$ | 2015 | 67005415 | 57567307 |
| $2015 / 16$ | 2016 | 72991876 | 61366872 |
| $2016 / 17$ | 2017 | 78978337 | 65168452 |

## Appendix - 2.2

Trend of Loan and Advances

| Fiscal <br> Year | Year | EBL | HBL | $\mathrm{X} \times \mathrm{Y}^{\mathbf{1}}$ | $\mathrm{X} \times \mathrm{Y}^{\mathbf{2}}$ | $\mathrm{X}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $(\mathrm{X})$ | $\mathrm{Y}^{\mathbf{1}}$ | $\mathrm{Y}^{\mathbf{2}}$ |  |  |  |
| $2007 / 08$ | 2008 | 18836432 | 20179613 | 37823555460 | 40520662900 | 4032064 |
| $2008 / 09$ | 2009 | 24469556 | 25519519 | 49159338000 | 51268713670 | 4036081 |
| $2009 / 10$ | 2010 | 28156399 | 29123755 | 56594361990 | 58538747550 | 4040100 |
| $2010 / 11$ | 2011 | 31661843 | 32968270 | 63671966270 | 66299190970 | 4044121 |
| $2011 / 12$ | 2012 | 36616832 | 35968473 | 73673065980 | 72368567680 | 4048144 |
| Total | 10050 | 139741062 | 143759630 | 280922287700 | 288995882800 | 20200510 |

Trend Values

|  | EBL | HBL |
| :---: | :---: | :---: |
| $\mathbf{a}=$ | -8565420868 | -7815574574 |
| $\mathbf{b}=$ | 4275308 | 3902650 |

## Predicted Values for:

| Fiscal Year | Base Year | EBL | HBL |
| :---: | :---: | :---: | :---: |
| $2012 / 13$ | 2013 | 40774136 | 40459876 |
| $2013 / 14$ | 2014 | 45049444 | 44362526 |
| $2014 / 15$ | 2015 | 49324752 | 48265176 |
| $2015 / 16$ | 2016 | 53600060 | 52167826 |
| $2016 / 17$ | 2017 | 57875368 | 56070476 |

## Appendix - 2.3

Trend of Total Investment:

| Fiscal <br> Year | Year | EBL | HBL | $\mathrm{X} \times \mathrm{Y}^{\mathbf{1}}$ | $\mathrm{X} \times \mathrm{Y}^{\mathbf{2}}$ | $\mathrm{X}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $(\mathrm{X})$ | $\mathrm{Y}^{\mathbf{1}}$ | $\mathrm{Y}^{\mathbf{2}}$ |  |  |  |
| $2007 / 08$ | 2008 | 5061158 | 13340177 | 10162805260 | 26787075420 | 4032064 |
| $2008 / 09$ | 2009 | 5950080 | 8710691 | 11953710720 | 17499778220 | 4036081 |
| $2009 / 10$ | 2010 | 5009908 | 8444910 | 10069915080 | 16974269100 | 4040100 |
| $2010 / 11$ | 2011 | 7745528 | 8769939 | 15576256810 | 17636347330 | 4044121 |
| $2011 / 12$ | 2012 | 7865227 | 10032795 | 15824836720 | 20185983540 | 4048144 |
| Total | 10050 | 31631901 | 49298512 | 63587524900 | 99083453600 | 20200510 |

## Trend Values

|  | EBL | HBL |
| :---: | :---: | :---: |
| $\mathbf{a}=$ | -1481793200 | -1308203828 |
| $\mathbf{b}=$ | 740358 | 655552 |

## Predicted Values for:

| Fiscal Year | Base Year | EBL | HBL |
| :---: | :---: | :---: | :---: |
| $2012 / 13$ | 2013 | 8547454 | 11422348 |
| $2013 / 14$ | 2014 | 9287812 | 12077900 |
| $2014 / 15$ | 2015 | 10028170 | 12733452 |
| $2015 / 16$ | 2016 | 10768528 | 13389004 |
| $2016 / 17$ | 2017 | 11708886 | 14044556 |

## Appendix - 2.4

## Trend of Profit

| Fiscal Year | Year | EBL | HBL | $\mathrm{X} \times \mathrm{Y}^{1}$ | $\mathrm{X} \times \mathrm{Y}^{\mathbf{2}}$ | $\mathrm{X}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $(\mathrm{X})$ | $\mathrm{Y}^{\mathbf{1}}$ | $\mathrm{Y}^{\mathbf{2}}$ |  |  |  |
| $2007 / 8$ | 2008 | 451219 | 635869 | 906047752 | 1276824952 | 4032064 |
| $2008 / 9$ | 2009 | 638733 | 752835 | 1283214597 | 1512445515 | 4036081 |
| $2009 / 10$ | 2010 | 831766 | 508798 | 1671849660 | 1022683980 | 4040100 |
| $2010 / 11$ | 2011 | 931304 | 893115 | 1872852344 | 1796054265 | 4044121 |
| $2011 / 12$ | 2012 | 1090564 | 958638 | 2194214768 | 1928779656 | 4048144 |
| Total | 10050 | 3943589 | 3749255 | 7928179121 | 7536788368 | 20200510 |

## Trend Values

|  | EBL | HBL |
| :--- | :--- | :--- |
| $\mathbf{a}=$ | -313822512 | -157199969 |
| $\mathbf{b}=$ | 156523 | 78582 |

## Predicted Values for:

| Fiscal Year | Base Year | EBL | HBL |
| :---: | :---: | :---: | :---: |
| $2012 / 13$ | 2013 | 1258287 | 985597 |
| $2013 / 14$ | 2014 | 1414810 | 1064179 |
| $2014 / 15$ | 2015 | 1571333 | 1142761 |
| $2015 / 16$ | 2016 | 1727856 | 1221343 |
| $2016 / 17$ | 2017 | 1884379 | 1299925 |

$$
\text { Appendix - } 3
$$

## Sample Hypothesis Testing

Appendix -3.1
Loan and Advances to Total Deposit Ratio
ANOVA Table:

| Banks | Fiscal Year |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $2007 / 08$ | $2008 / 09$ | $2009 / 2010$ | $2010 / 2011$ | $2011 / 2012$ |  |
|  | 78.56 | 73.43 | 76.24 | 76.98 | 73.22 | 378.43 |
| HBL | 63.37 | 73.58 | 77.43 | 80.57 | 75.36 | 370.31 |
| Grand Total (T) |  |  |  |  |  |  |

Correlation factor (C.F.) $\quad=\mathrm{T}^{2} / \mathrm{n}$

$$
\begin{aligned}
& =(748.74)^{2} / 10 \\
& =56061.16
\end{aligned}
$$

Total Sum of square $(\mathbf{S S T})=$
$(78.56)^{2}+(73.43)^{2}+(72.64)^{2}+(76.98)^{2}+(73.22)^{2}+(63.37)^{2}+(73.58)^{2}+(73.43)^{2}+$ $(80.57)^{2}+(75.36)^{2}-$ C.F
$=56237.05$ - 56061.16
$=175.88$

Total Sum of Square between columns $(\mathbf{S S C})=(378.43)^{2} / 5+(370.30)^{2} / 5-56061.16$

$$
=5.11
$$

Sum of Square of Due to Error (SSE) = SST-SSC

$$
=175.88-5.11
$$

$$
=170.77
$$

## Decisions:

H0: Accept
H1: Reject

## Appendix - 3.2

## Return on Loan and Advances Ratio

 ANOVA Table:| Banks | Fiscal Year |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $2007 / 08$ | $2008 / 09$ | $2009 / 2010$ | $2010 / 2011$ | $2011 / 2012$ |  |
| EBL | 2.4 | 2.61 | 2.96 | 2.94 | 2.98 | 13.09 |
| HBL | 3.15 | 2.95 | 1.75 | 2.71 | 2.67 | 13.23 |
| Grand Total (T) |  |  |  |  |  | 26.32 |

Correlation factor (C.F.) $\quad=\mathrm{T}^{2} / \mathrm{n}$
$=(26.32)^{2} / 10$
$=69.27$

Total Sum of square (SST) =
$(2.4)^{2}+(2.61)^{2}+(2.96)^{2}+(2.94)^{2}+(2.98)^{2}+(3.15)^{2}+(2.95)^{2}+(1.75)^{2}+(2.71)^{2}+$ (2.67) ${ }^{2}$ - C.F
$=75.02-69.29$
$=5.73$
Total Sum of Square between columns $(\mathbf{S S C})=(13.09)^{2 / 5}+(13.23)^{2 / 5}-69.27$

$$
=0.0062
$$

Sum of Square of Due to Error (SSE) = SST-SSC

$$
\begin{aligned}
& =5.73-0.0062 \\
& =5.72
\end{aligned}
$$

## Decisions:

H0: Accept
H1: Reject

## Appendix -3.3

Total Interest Earned to Total Assets Ratio (Total Working Fund)
ANOVA Table:

| Banks | Fiscal Year |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $2007 / 08$ | $2008 / 09$ | $2009 / 2010$ | $2010 / 2011$ | $2011 / 2012$ |  |
|  | 5.70 | 5.92 | 7.50 | 9.37 | 8.89 | 37.38 |
| HBL | 5.43 | 5.96 | 7.37 | 9.26 | 8.69 | 36.71 |
| Grand Total (T) |  |  |  |  |  |  |

Correlation factor (C.F.) $\quad=\mathrm{T}^{2} / \mathrm{n}$
$=(74.09)^{2} / 10$
$=548.93$
Total Sum of square (SST) =
$(5.70)^{2}+(5.92)^{2}+(7.50)^{2}+(9.37)^{2}+(8.89)^{2}+(5.43)^{2}(5.96)^{2}+(7.37)^{2}+(9.26)^{2}+$ (8.69) ${ }^{2}$ - C.F
$=571.20-548.93$
$=22.27$
Total Sum of Square between columns $(\mathbf{S S C})=(37.38)^{2 / 5}+(36.71)^{2 / 5}-548.93$

$$
=0.047
$$

Sum of Square of Due to Error (SSE) = SST-SSC

$$
\begin{aligned}
& =22.27-0.047 \\
& =22.22
\end{aligned}
$$

## Decisions:

H0: Accept
H1: Reject

