

# **FINANCIAL PERFORMANCE OF JOINT VENTURE BANKS**

**With reference to Everest Bank Limited and Himalayan Bank Limited**

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## DECLARATION

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I hereby declare that the work reported in this thesis entitled **“FINANCIAL PERFORMANCE OF JOINT VENTURE BANKS (with reference to Everest Bank Limited and Himalayan Bank Limited)”** submitted to Shanker Dev Campus, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Master’s Degree in Business Studies (MBS) under the supervision of Mr. Shashi Kant Mainali and Mr. Rabindra Bhattarai, Lecturers of Shanker Dev Campus.

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## ABBREVIATIONS USED

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A.D.	Anno Domini (After the death of Christ)
ATM	Automated Teller Machine
BoK	Bank of Kathmandu
CR	Current Ratio
CV	Coefficient Of Variance
EBL	Everest Bank Limited
etc	Et cetera
HBL	Himalayan Bank Limited
HMG	His Majesty's Government
JVB	Joint Venture Bank
MBS	Master's Degree in Business Studies
NABIL	Nepal Arab Bank Limited
NBBL	Nepal Bangladesh Bank Limited
NEPSE	Nepal Stock Exchange
NIB	Nepal Investment Bank
NRB	Nepal Rastra Bank
NRs	Nepalese Rupees
SCBL	Standard Chartered Bank Limited
SCT	Smart Choice Technology
SD	Standard Deviation
SEBON	Security Exchange Board of Nepal
TU	Tribhuvan University
viz.	Namely (vide licet)



# **Chapter - I**

## **INTRODUCTION**

### **1.1 Background**

In today's age of globalization, financial institutions, especially banks, work as a facilitator for developing sustainable economy by mobilizing and utilizing resources, reducing cost & risk, expanding & diversifying opportunities, increasing the allocative efficiency of resources and promoting the productivity & economic growth. With the economic liberalization initiated in the mid 1980s, Nepalese financial system witness significant developments. For instance, the financial system consists of only 2 commercial banks and few other financial institutions before liberalization. During post liberalized regime, spanning almost two decades, the financial system has reasonably well developed, diversified and enriched. As per the record of end of Ashad 2065, the Nepalese financial system consists of 25 commercial banks, 58 development banks, 5 regional rural development banks, 78 finance companies, 12 micro finances, 16 saving and credit co-operative societies (with limited banking transaction), 46 non-government organizations (micro credit transaction), 25 insurance companies, 1 employee provident fund, 1 postal bank and 1 citizen investment trust. ([http://www.nrb.org.np/red/publication/annual\\_reports\\_\(Nepali\)--2064-65-NEW.pdf](http://www.nrb.org.np/red/publication/annual_reports_(Nepali)--2064-65-NEW.pdf))

Banks play a vital role in the economic development of any country. The level of overall development of a country, be it social, cultural, political, or economical, is characterized by the level of economic growth, and the crux of the economic growth lies in the development of well managed banking system. Hence, banks can be considered as the backbone of a country's overall development.

Banks are categorized in various types according to the nature of their job viz. Central Bank, Commercial Banks, Industrial Banks, Agricultural Development Banks, Rural Development Banks, Co-operative Banks, Housing Banks, Merchant Banks, Exchange Banks etc. Amongst them, Commercial Banks are considered as the second types of banks. These kinds of banks are established to improve people's economic welfare and

provide loan facilities to agriculture, industry and commerce as well as to offer banking services to the people and the country. Commercial banks contribute significantly in the financial system of the country. They are directly related with the people and institutions. Their functions are very attractive towards people. Apart from honoring deposit and providing loans, the role of commercial bank in modern time is more vital. At present, there are 17 existing commercial banks with total 390 branches in the kingdom of Nepal.

In today's date, joint venture banks (JVBS) are the most popular banks amongst commercial banks. Joint Venture, in simple term, means a partnership or conglomerate, formed often to share risk or expertise. It is the cooperation of two or more individuals or businesses, each agreeing to share profit, loss and control in a specific enterprise. In other words, Joint Venture is an association of two or more individuals or companies engaged in a solitary business enterprise for profit without actual partnership or incorporation; also called a joint adventure.

A joint venture (often abbreviated JV) is an entity formed between two or more parties to undertake economic activity together. The parties agree to create a new entity by both contributing equity, and they then share in the revenues, expenses, and control of the enterprise.

Joint ventures are similar to partnerships, but are usually limited to one or two projects. In the financial services industry, joint ventures have been widely employed for marketing products or services that one of the parties, acting alone, would have been legally prohibited from doing. Prior to financial modernization legislation enacted in 1999, banks often formed joint ventures with life insurance companies to market annuities and insurance to bank customers.

Among the most significant benefits derived from joint ventures is that partners save money and reduce their risks through capital and resource sharing. Joint ventures also give smaller companies the chance to work with larger ones to develop, manufacture, and market new products. They also give companies of all sizes the opportunity to increase sales, gain access to wider markets, and enhance technological capabilities through research and development (R&D) underwritten by more than one party. ([http://www.en.wikipedia.org/wiki/Joint\\_venture](http://www.en.wikipedia.org/wiki/Joint_venture))

The concept of Joint Venture Banks (JVB) had been developed in Nepal during 1990 because of the inappropriate operational performance, mismanagement and imprudent leading decision taken by the commercial banks fully owned by the former HMG (Policy Paper 2002). In common parlance, JVBs in Nepal refers to foreign JVBs in which foreign parent banks purchase certain percentage of share (not exceeding to 50%), apply their international management and network.

The government's policy of allowing foreign JVBs to operate in Nepal is basically targeted to encourage local traditionally run commercial banks to enhance their banking capacity (Deepak Babu Mainali, 2000). JVBs provide many facilities through good efficiency, modernization, mechanization via computerization and prompt services. They provide many modern banking technology, such as ATM, mobile banking, Tele banking, Credit/Debit card, 365 banking etc. These types of banking services were not provided by the old commercial banks. Because of their prompt and modern services, JVBs have become more acceptable and popular these days.

In the last two decades, plenty of JVBs have been established in Nepal. For instance, Nepal Bangladesh Bank, Nepal SBI Bank, Himalayan Bank, Nabil Bank, Everest Bank and more. Taking all these banks for the study is not possible because of several constraints such as job tedious to complete, time consuming, costly, unavailability of required information etc, which may eventually affect the objective of the study. So, to avoid all these problems, this study will be conducted taking only two banks into consideration viz. Himalayan Bank Limited (HBL) and Everest Bank Limited (EBL) as the research samples.

## **1.2 Profile of the Concerned Banks**

As there has been number of commercial banks established, the research has been taken in to consideration of Everest Bank limited, Himalayan Bank Limited, NABIL Bank Limited and Nepal Investment Bank Limited.

### **1.2.1 Everest Bank Limited (EBL)**

Everest Bank Limited (EBL) was established in 1994 and started its operations with a view and objective of extending professionalized and efficient banking services to various segments of the society. EBL joined hands with Punjab National Bank (PNB),

India as its joint venture partner in 1997. PNB holds 20% equity in the bank and is the largest Public Sector Bank of India having 112 years of banking history. PNB is a technology driven bank serving over 35 billion customers through a network of over 4,500 branches spread all over the country with a total business of around INR 2178.74 billion. It is known for its strong systems and procedures and a distinct work culture.

It has the following share holding patterns.

1. Punjab National Bank (India) 20%
2. Nepalese promoters 50%
3. General public 30%

The bank's **Corporate Vision** is to evolve & position the bank as a progressive, cost effective & customer friendly institution providing comprehensive financial and related services; Integrating frontiers of technology & servicing various segments of society; Committed to excellence in serving the public & also excelling in corporate values.

The bank's **Corporate Mission** is to provide excellent professional services & improve its position as a leader in the field of financial related services; Build & maintain a team motivated & committed workforce with high work ethos; Use latest technology aided at customer satisfaction & act as an effective catalyst for socio-economic developments.

Drawing its strength from its JV partner, EBL has been steadily growing in its size and operations ever since its inception and today it has established itself as a leading private sector bank of the nation, reckoned as one of the fastest growing commercial bank of the country. The bank is providing a wide range of customer friendly banking services through its network of 23 branches (including 8 branches in the valley) covering all the 5 regions of the country and over more than 250 reputed correspondent banks across the globe. All the branches of the bank are connected with Anywhere Branch Banking System (ABBS), which enables customers to do all their transactions from any branches other than where they have their account. The bank has its branch offices in Janakpur, Jhapa, Morang, Kaski, Bara, Parsa, Rupandehi, Banke and Kailali districts outside the valley.

EBL in association with Smart Choice Technology (SCT) is providing Automated Teller Machine (ATM) service to its customers through more than 74 ATMs and over 850 Point of Sales across the country. ATM sharing arrangement with PNB has facilitated usage of EBL Debit Card at more than 1,000 PNB ATM outlets across the India at a nominal rate. Similarly, Indian tourists and businessmen having PNB cards will be able to use EBL ATM, while in Nepal.

EBL is playing a pivotal role in facilitating remittance to and from across globe. Being the first Nepalese bank to open a representative office in Delhi, India, the Nepalese in India can open account in Nepal from the designated branches of Punjab National Bank and remit their saving economically through banking channel of Nepal. The Bank is also offering Cash Management System through HDFC Bank., India for managing the funds of corporate exporting to India by collecting their fund from about 183 locations in India.

EBL, in order to help Nepalese citizens working abroad, has entered into arrangements with banks and finance companies in different countries which enables quick remittance of funds by the Nepalese citizens in countries like UAE, Kuwait, Baharain, Qatar, Saudi Arabia, Malaysia, Singapore and UK through its own web based online remittance product “Everest Remit”.

For its quality services and outstanding performance throughout the year, the bank has been conferred with “*Bank of the Year 2006, Nepal*” by the banker, a publication of financial times, London in 2006. The bank was also bestowed with the “*NICCI Excellence award*” by Nepal India chamber of commerce for its spectacular performance under finance sector.

### **1.2.2 Himalayan Bank Limited (HBL)**

Himalayan Bank Limited (HBL) was incorporated in 1992 by a few distinguished business personalities of Nepal in partnership with employee’s provident fund and Habib Bank Limited, one of the largest commercial bank of Pakistan. Banking operation commenced from January 1993. Despite the cut-throat competition in the Nepalese Banking sector, HBL has been able to maintain a lead in the primary banking activities- Loans and Deposits.

It is the first commercial bank of Nepal whose maximum shares are held by Nepalese private sector. Besides commercial banking services, the bank also offers industrial and Merchant Banking services. The promoters and their shares holding patterns of Himalayan Bank Ltd are as follows:

1. Habib Bank of Pakistan 20%
2. Nepalese Promoters 51%
3. Karmachari Sanchaya Kosh 14%
4. General Public 15%

**HBL's Vision:** Himalayan Bank Limited holds of a vision to become a Leading Bank of the country by providing premium products and services to the customers, thus ensuring attractive and substantial returns to the stakeholders of the Bank.

**HBL's Mission:** The Bank's mission is to become preferred provider of quality financial services in the country. There are two components in the mission of the Bank; Preferred Provider and Quality Financial Services; therefore we at HBL believe that the mission will be accomplished only by satisfying these two important components with the Customer at focus. The Bank always strives positioning itself in the hearts and minds of the customers.

**HBL's Objective:** To become the Bank of first choice is the main objective of the Bank.

All Branches of HBL are integrated into Globus (developed by Temenos), the single Banking software where the Bank has made substantial investments. This has helped the Bank provide services like 'Any Branch Banking Facility', Internet Banking and SMS Banking. Living up to the expectations and aspirations of the Customers and other stakeholders of being innovative, HBL very recently introduced several new products and services. Millionaire Deposit Scheme, Small Business Enterprises Loan, Pre-paid Visa Card, International Travel Quota Credit Card, Consumer Finance through Credit Card and online TOEFL, SAT, IELTS, etc. fee payment facility are some of the products and services.

HBL also has a dedicated offsite ‘Disaster Recovery Management System’. Looking at the number of Nepalese workers abroad and their need for formal money transfer channel; HBL has developed exclusive and proprietary online money transfer software-HimalRemitTM. By deputing our own staff with technical tie-ups with local exchange houses and banks, in the Middle East and Gulf region, HBL is the biggest inward remittance handling Bank in Nepal. All this only reflects that HBL has an outside-in rather than inside-out approach where Customers’ needs and wants stand first.

### **1.3 Statement of the Problem**

In Nepal, JVBs have contributed significantly to the overall economic development of the country. Yet, they are not free from problems that need to be resolved for improving their performance. The real evaluations and comparative evaluations do not seem to have been made to judge the performance of JVBs. Their profitability position and stock prices are generally considered to be yardsticks of their better performance but one can raise the question whether these are enough to reflect the overall performance of JVBs. So, to overcome the problem, regular performance of the banks should be analysed taking their financial statements and other relevant documents into account.

A comparative study of financial performance is a basic process which provides information about the profitability, liquidity, earning capacity, efficiency in operation, credit worthiness, source and use of capital, financial achievement and status of the company.

This study has aimed to get the answer of the following questions:

- Are they maintaining sufficient liquidity position?
- Are they managing and utilizing their assets (Fixed and Current)?
- Are they maintaining adequate profitability position?
- Are the growth ratios of both the sample banks consistent or not?

## **1.4 Objective of the Study**

The main objective of study is to analyse the financial performance of two JVBs viz. EBL and HBL. It includes their operation management, management of assets, analysis of strengths and weakness of the banks and the liquidity position.

Furthermore, the study will support to:

- To evaluate the liquidity and efficiency of assets management position of the concern banks
- To examine the areas on which the banks have been utilizing their assets through the analysis of their financial performance.
- To evaluate the profitability position of the concern banks
- To examine and analyze the growth rates of variable components of the banks
- To assess the fund mobilization and investment areas of the banks which would contribute to draw their core strengths and areas to be worked on

## **1.5 Significance/Justification of the Study**

Financial performance analysis is crucial to reflect and overcome the existing weakness and challenges of the institution. It helps finding out the current factors affecting the existing operation management system and also attempts to judge the current position of the institution in the market. Whereas the comparative study helps to indicate the strengths, working modality, strategy, system of operation management of the competitors and develop the strategy accordingly in the long run. Also, this study can analyze the utilization of financial, human and other available resources of the bank.

## **1.6 Scope and Limitation of the Study**

The study will be carried out for the partial fulfillment of the Master's Degree in Business Studies (MBS) level in the short span of time with certain assumptions and limited resources referring mostly secondary sources of data. Hence, the information gathered may not portray the real facts and figures.



The scope and limitations of the study are as follows:

- Secondary data will be mostly used for the analysis such as annual report, journals, bulletins available from banks and Nepal Rastra Bank (NRB), Newspapers, previous dissertations, published and unpublished articles, reports and other paper presented and Websites.
- The study period will cover only five fiscal years (2003/04 to 2007/08).
- The study will not cover the subject of whole JVBs. Only two banks, HBL and EBL will be taken into consideration due to limitation of time and cost.
- The study is concerned on comparative financial performance of selected banks only and hence it will not cover the other JVBs.
- The balance sheet, profit and loss account and accompanying notes will be considered as the subject matters of the study and they will be assumed to be correct and true.
- Only few financial and statistical tools will be used for the analysis.

## **1.7 Organisation of the Study**

The study will be organised into five different chapters. Each chapter will deal with different subject matters. The structure of the study will be as follows:

### **Chapter I: Introduction**

The first chapter of the study deals with the subject matter of the study consisting background of the study, concept and development of banks, commercial banks and joint venture banks in Nepal, statement of the problem, objective of the study, significance of the study and scope & limitation of the study.

### **Chapter II: Review of Literature**

It deals with the review of available literature. It includes conceptual framework along with the review of various books, booklets, dissertation, articles etc. written about the topic. Also, it will refer various approaches taken by other researchers and related literature on the related topic.

**Chapter III: Research Methodology**

The third chapter of the study will be research methodology dealing with the methodology used to achieve the objective of the study which includes population and sample, sources of data, procedure of data procession and financial & statistical tools using for data analysis.

**Chapter IV: Data Presentation and Analysis**

The concern of the fourth chapter of the study will be analysis, presentation and interpretation of data collected from various sources using different financial and statistical tools mentioned in chapter 3.

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

The last chapter of the study deals with the major findings, conclusions and recommendations for the respective institutions taken as sample.

## **Chapter - II**

### **REVIEW OF LITERATURE**

Review of literature is an essential part of all studies. It is a way to discover what other research in the area of our problem has uncovered. Scientific research must be based on past knowledge. The previous studies cannot be ignored because they provide the foundation to the present study. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with the past research studies.

#### **2.1 Conceptual Review**

##### **2.1.1 Investment**

The word investment sounds very good & attractive that is why every individual in the world is interested in it. In Layman's sense, there is always a return if there is investment. This may be favorable as well as unfavorable to the investor's stand point.

“Investment brings forth vision of profit, risk, speculation & wealth. For the uninformed, investing may result in disaster. 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. Two different attributes are generally involved time & risk. The sacrifice takes place in the present and is certain. The reward comes later, if at all, and the magnitude is generally uncertain.” (*Sharpe, Alexander & Baily; 2003:1*)

“Investment is employment of funds with the aim of achieving addition income or growth in value. It involves the commitment of resources that have been saved or put away from current consumption, in the hope that some benefits will accrue in the future. Investment generally involves real assets and financial assets. Whereas, real assets investment involves some kinds of tangible assets such as building, land, machinery; factory etc. and financial assets investment are pieces of paper representing an indirect claim to real assets held by someone else. Real assets are generally less liquid than financial assets.” (*Shrestha & Manandhar; 1994*)

“Investment is the current commitment of funds for a period of time to derive a future flow of funds that will compensate the investing unit for the time funds are committed, for the expected rate of inflation and also for uncertainty involved in the future flow of the funds.”(*Francis; 1986:1*)

"Investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generated positive returns."(*Gitman & Joehnk; 2000:256*)

“A banker does not prefer to invest his funds in company shares and debentures. The shares and debentures may be very easily sold on the stock exchange. But the bank will incur a loss if the market value of the securities falls. Unlike the government securities there is no maturity date for shares. The income from shares depends upon the prosperity of the company issuing the shares. If the company becomes insolvent the banker loses heavily. If a bank has certain amount of funds which can be left undisturbed for a number of years, investment in long term government securities becomes profitable proposition". (*Bhalla; 2001:549*)

### **2.1.2 Financial Performance**

Profit is one of the indicators of sound performance, which indicates the result of sound business management. "Profit earned by the firm is the main financial performance indicators of a business enterprise". (*Gupta; 2000: 21-22*). Business organization is mostly inspired to generate profit. Profit is the major indicators of a good-financial performance of the company. Financial performance is the heart of financial decision. It is the main indicator of success and failure of a firm. So, that the management should take appropriate action towards its weakness and maintain good performance in the strong areas. The main purpose of bank performance analysis is to evaluate its progress to meet the goals and objectives set forth by management and to compare the performance of the bank relative to that of similar other banks.

Effective planning and control are central to enhancing enterprises value. Financial plans may take forms, but any good plan must be related to the firms' existing strength and weaknesses. The strengths must be understood if they are to be used to proper advantage and the weaknesses must be recognized if corrective action is to be taken. The financial

manager can plan future financial requirements in accordance with the forecasting and budgeting procedures, but the plan must begin with the type of financial analysis.

A powerful and the most tested tool of financial analysis is the ratio analysis. "It is defined as the systematic use of ratio to interpret the financial statement. So that the strengths and weakness of a firm as well as its historical performance and current financial condition can be determined". (*Khan and Jain; 1999: 5.13*)

Traditional financial ratio analysis has focused on the numbers. But the world is becoming more dynamic and subject to rapid changes. It is not enough to analyze operating performance. Financial analysis must also include consideration of the strategic and economic developments to which the firm must relate for its long run success. Different sources and different analysis use different lists or combination of financial ratios for analysis. Financial statement report both on the firm's position at a point in time and on its operation over some past period. However, the real value of financial statement lies in the face that they can be used to help predict the firm's future earnings and dividends. From an investor's stand point, predicting the future is what financial statement analysis is useful both as a way to anticipate future conditions and more important, as a starting point of planning actions that will influence the future course event.

Ratio analysis is designed to determine the relative strengths and weakness of business operations. It also provides a framework for financial planning and control. Financial managers need the information provided by analysis both to evaluate the firm's past performance and to map future plans. Financial analysis concentrates on financial statement analysis, which highlights the key aspects of firms operation.

"Financial ratios can divide into four type's liquidity ratio, debt ratio, profitability ratio and coverage ratio. These ratios are helpful for managerial control and for a better understanding of what outside suppliers of capital expect in financial condition and performance." (*Van Horne; 2002:343*).

"The major functions of financial management are raising funds, investing them in assets and distributing return earned from assets to shareholders, which are respectively known as financing investing and dividend decision. While performing these functions a firm should balance cash outflow and inflow, which is known as liquidity decision." (*Pandey; 1999:5*).

"If management is to maximize the value of the firm's stock price, it must analyse the weakness and strength of the firm which is possible from the ratio analysis which help to assess the financial performance in comparing with the firm and other firm. Financial statement analysis involves a comparison of firm's performance with that of other firm in the same line of business. The analysis is used to determine the firm's financial position in order to find out current strengths and weakness and to suggest action that might be useful to firm to take advantages to its strength and correction to its weakness." (*Weston and Brigham; 1987:44*).

"Financial management in broad sense and provides a conceptual and analytical framework for decision making they also covers both acquisitions of funds as well as their allocation of funds to various uses. Their major decisions, are investment decisions, financial decisions and the dividend policy decision." (*Khan and Jain; 1999:1.16*).

A study of financial performance is a basic process which provides information, liquidity position, earning capacity, efficiency in operation, profitability, sources and uses of capital, financial achievement and status of the companies. This study mainly focused on financial performance of commercial bank, which is examined for various reasons.

There are many parties concerned with the bank i.e. shareholders, creditors, investors, governments, management, central bank, general public etc. Short-term creditors are interested in the liquidity of the bank. They examined the ability of the bank to pay the amount of interest. Long-term creditors like debenture holders, financial institutions etc. are more concerned with the bank's long-term financial strength of solvency while evaluating the financial performance business concerning with resource mobilization.

Shareholders are interested with the growth of the retained earning and at the same time stability in earning. Similarly, management of the bank is concerned about the overall position of the bank. Likewise, government regularity is concerned with the rate of return on the assets and also wants to see the proportion of capital structure of the bank. The general public is also interested towards the concerned matters.

Proper utilization of the bank's resources is an indicator of sound performance. How far the banks have gained over the years depend chiefly on how far they have been able to utilize their resources in an effective manner. So to increase profitability, the bank should properly utilize the resources. So financial performance analysis of the firm has different kind of indicators out of which financial statement analysis, ratio analysis, sources & uses of fund are the major indicators to measure the strength and weakness of a firm.

### **2.1.3 Market Efficiency**

Market efficiency means that the market price of a security represents the market consensus estimate of the value of the security. If the market is efficient, it uses all information available to it in setting a price. Investors who choose their information lead them to think that the security is worth at least its current market price. Those who do not purchase the stock interpret their information as a lower appraisal.

An efficient financial market exist when security price reflect all available public information about the economy about financial market and about the specific involved. The implication is that the market price of individual security adjusts very rapidly to new information. As a result security price are said to fluctuate randomly about their intrinsic value.

“A market is efficient with respect to a particular set of information if it is impossible to make abnormal profit by using this set of information to formulate buying & selling decision. That is in an efficient market investors should expect to make only normal profits and earn a normal rate of return on their investment. Test of efficiency are essential test of whether the three general type of information, past price, other public information and inside information can be used to make above average profit on investment.” (*Pandey; 1999:10*).

A market would be described as having weak form efficiency if it is impossible to make abnormal profit by using past price.

This is taken as the oldest statement of the hypothesis. It holds that present stock market price reflect all information with respect to past stock price trends and volume. Thus it asserts that past data cannot be used to predict future stock price. Weak form hypothesis approximate a random walk of the stock price, since the walk is random a knowledge of past price change does nothing to inform the analyst about whether the price in future will be higher or lower.

The semi strong hypothesis centers on how rapidly and effectively market price adjusts to new publicly available information. If the efficiency is semi strong, one cannot outperform the market by using the available information. Different financial reports and audited financial information filed with the security exchange are readily available to the investor.

This background information about corporation provides the perspective needed to evaluate new information. Financial newspapers and news service compete to deliver new information as quickly as possible so that investor can obtain information so that they can obtain the latest news quickly at minimal cost when news affect the value of security it causes reevaluation and security trading that begins immediately and affect price at once.

The strong form hypothesis is concerned with whether or not certain individual or group possess inside information that can be used to make above average profit. It holds that stock price react very quickly to all public and inside information. One obvious way to check the validity of the strongly efficient market hypothesis is to examine the profitability of trades in security made by insiders to see if the insiders access to valuable information allow them to earn statistically significant trading profit.

“Strongly efficient market hypothesis suggests that all information, public or not fully reflect in the security price. This idealistic economy situation result in a perfectly efficient market where price & value are always equal as they fluctuate randomly together in response to the arrival of new information.” (*Pandey; 1999:11*).



#### **2.1.4 Investment Environment**

Investment environment in our country is not providing favorable due to non performing character of the public limited companies. However, by definition, the investment environment refers to all internal & external forces affecting investment decisions of investors. It covers all kinds of marketable securities that they are bought and sold through the brokers' network and financial intermediaries. Thus, securities, security markets and financial institutions form the scope & coverage of investment environment. Existence of a favorable environment is the medium, which direct the pool of saving into the productive sector.

##### **2.1.4.1 Securities**

Securities are financial assets that form the part of an investor's wealth, common stocks, preferred stocks, bonds, convertibles, warrants, options, rights, futures are examples of securities. Securities represent specific claim on a stream of income and/or particular assets. Bonds and mortgage are typical debt securities, ownership securities include common stock. Preferred stock is a hybrid security that entails a mixture of both ownership and creditor ship privilege highly liquid debt securities that have short term until they mature and involve little or no risk of default are called money market securities.

There are involvement of many parties in the development of securities market in Nepal like government, SEBO/N, NEPSE, financial intermediaries, market makers, investors, brokers and the office of the company registrar.

##### **2.1.4.2 Security Markets**

“Security markets are mechanisms for channeling savings from savers to the ultimate investors who invest in real assets. They bring buyers and sellers of securities together and facilitate the flow of funds in the economy. The flotation of the shares and debentures by public limited companies, trading on mutual funds by an investment company and the auction of treasury bills by governments take place in security markets. The security markets are classified into: i) Money market and capital market ii) Primary market and secondary market.” (*Cheney & Mosses; 1993:13*).

### **Money Market and Capital Market**

In money markets, all financial assets with a term to maturity of one year or less than one year are traded. For example, treasury bills are issued and traded in money market. The main function of money market is to provide short term loans to the business loan to the government and loans to households.

The government and business organizations requiring short term funds sell securities and investors who have surplus money buy securities in this market. Financial assets traded in capital market have maturity of more than one year. For example, financial such as stocks, corporate bonds, government bonds etc. are issued and traded in the capital market.

### **Primary and Secondary Market**

The security markets consist of primary and secondary market. When firms need capital, they may sell new securities. These new securities are sold in primary markets. Investment bankers help market these new issues of stocks, bonds or other securities to the public. The issue of securities in the primary market leads to direct transfer of money from the savers to the issuer of the securities. Thus the primary market helps transfer the funds from savers to investors to make the capital available for new investments in building, equipment, stock of necessary goods. The existing securities are bought and sold in the secondary market.

#### **2.1.4.3 Valuation**

Various mathematical models have been developed to include variable that determines value which over simplify the valuation process. In reality many factors determine the market price of a common stock. These factors may change and the relationship between these factors may change No models can consider the complexities of the real world process. These models however can provide a useful framework for the analysis. Mathematical models imply precision and accuracy and it is essentially a quantitative procedure. However common stock valuation is an out. Models are useful to the analyst but are not the substitute for judgment and common sense. Models can be used in making accurate forecast. Therefore models should be viewed as tools for decision making. Finance theory indicates that the value of common stock is essentially a function of future income the stock can provide and the riskiness of the income stream.

$$V_n = f(\text{income, risk})$$

Where,  $V_n$  = Intrinsic value of the common stock in period n.

Equity management assumes that all historical and current information is not fully and correctly reflected in the current price of every stock. Hence there exist stocks that are undervalued and overvalued.

### 2.1.5 Investment Decision

Investment decision theory analyzes how to get from investors' preferences to the optimal investment decisions. Decision is made after the completion of analysis. The general model of decision making is to compare the estimate expected return and estimate requires holding period return.

$$\text{Expected return } E(\text{HPR})_1 = \frac{V_1 - P_0 + D_1}{P_n}$$

Where,

$E(\text{HPR})_1$  = Expected holding period return

$V_1$  = Value at the end over one year

$P_0$  = Price at the beginning of the year

$D_1$  = Dividend paid at the end of the year

And, the estimated required rate of return as suggested by CAPM.

$$E(r_j) = r_f + b_i[E(r_m) - r_f]$$

Where,

$E(r_j)$  = Expected required period return

$r_f$  = Risk free return

$b_i$  = Beta for the stock

$E(r_m)$  = Expected market return

The analyst should compare  $E(\text{HPR})$  and  $E(r_j)$  and if  $E(\text{HPR}) > E(r_j)$  the analyst should invest for long term and if  $E(\text{HPR}) < E(r_j)$  should invest for a short plan.

### **2.1.6 Investment Strategies**

In an extremely competitive market, exceptional performance of one investor comes at the expense of other investors. In a competitive market security price are likely to accurately reflect available information and responses very rapidly to available information, as degree of efficiency is the crucial matter of concern, which has to be addressed while going for an investment strategy. If the market is less than perfectly efficient some strategies may result in risk adjusted excess return. The degree of market efficiency has been the subject of considerable debate. The debate has resulted into two strategies:

- Passive Strategy
- Active Strategy

A passive strategy leads to earn what just the market determined, it does not try to outperform the market or earn risk adjusted excess return. Investors select stocks for investment randomly since in a perfectly efficient market the selected stock would be correctly valued. Portfolio investment could be done to reduce any uncertain risk. Investment horizon would be long term. Passive investment strategy incurs low transactional cost. The cost of trading or for acquiring and analyzing information is avoided.

An active investment strategy is pursued on the ground that market inefficiency exists. It assumes that some investors have an advantage over other. Following three advantages are possible:

- Investment Philosophy: Investment philosophy requires a commitment to a specific area of investment approach.
- Selection: Inefficiency leads to the existence of undervalued and overvalued stocks in the market.
- Timing: Use of accurate time is the basic to gain extra return. Investors who can accurately predict movement in individual security or the market can achieve superior return.

An individual has a large advantage over institution and professional investors including the following:

- If they wish individual investors can put all or most of their eggs in one basket.
- Individual have the flexibility to invest in small companies.
- Individual have the flexibility to use short sale and margin trading.
- Individual investors engage in small trades that can be executed quickly.

## **2.2 Reviews of Previous Studies**

### **2.2.1 Review of Journals and Articles**

**Haugen and Baker**, (1996) "*Commonality in the Determinants of Expected Stock Returns*" presented with evidence that the determinants of the cross section of expected stock return were stable in their identify and influence from period to period and from country. The determinants were related to risk, liquidity, price level, growth potential and stock price history. Out of sample predications of expected returns, using moving average values for the pay-offs to these firm characteristics were strongly and consistently accurate. Two findings, however, distinguished their paper form others in the contemporary literature. First, the stock with higher expected and realized rate of return was unambiguously of lower risk than the stocks with lower returns. Second, they found that the important determinants of expected stock returns were strikingly common to the major equity markets of the world. Given the nature of the texts, it was highly unlikely that those results may be attributed to bias or data snooping. Consequently, the result seems to reveal a major failure in the efficient market hypothesis.

**Sharma**, (1998) in his article "*Joint Venture Banks in Nepal Co-Existing and Crowding Out*" explained that, it would be definitely be unwise for Nepal not to let the JVBs to operate in the country and not to take advantages of them as additional means of resources mobilization as well as harbinger of new era in banking. But it will certainly be unfortunate for the country to develop the JVB s. And the most of the cost of the domestic banks .so far, one should admit frankly, no different treatment has been extended to the domestic and JVB s; at least from the government side, which is commendable. If HMG keeps on the stance of treating the domestic and JVB s; equally deposit the leathers bargaining strength and the JVBs also show their alacrity to come

forward to share the trials and the tribulations of this poor country. Both type of banks will coalesce and co-exists, complimenting each other and contributing for the nations accelerate developments. On the contrary, if the JVBs use their straight against trading in to the cumbersome path of the development along with the domestic banks and government.

**Poudel**, (2053BS) in his article "*Financial Statement Analysis: An Approach to Evaluate Bank's Performance*" explained that the balance sheet, profit and loss account and the accompanying notes are the most useful aspects of the bank. We need to understand the major characteristics of bank's balance sheet and profit and loss account. The bank's balance sheet is composed of financial claims as liabilities in the form of deposits and as assets in the form of loans. Fixed assets accounts form a small portion of the total assets. Financial innovations, which are generally contingent in nature, are considered as off-balance sheet items. Interest received on loans/advances and investments and paid on deposits are the major components of profit and loss account. The other sources of income are fee, commission, discount and service charges. The users of the financial statements of a bank need relevant, reliable and comparable information, which assist them in evaluating the financial position and performance of the bank and which is useful to them in making economic decisions. The disclosure requirement of the bank's financial statement has been expressly laid down in the concerned act. Commercial Bank Act 2031 B.S. requires the audited balance sheet and profit and loss account to be published in the leading newspaper for the information of general public.

**Bhatta**, (2003) in his article "*Financial Policies to Prevent Financial Crisis*", explained that the financial markets have become an exciting, challenging and ever changing sector in the recent years. The emergence of global financial institutions as a result of increased economic liberalization has raised a host of questions for financial planners and policy makers. The growth of financial markets has caused complexities in the management and if they are not managed and addressed properly with appropriate policies, then the end result is the financial crisis. The financial crisis which took place in Chile in 1992, Mexico in 1994, South Asian countries 1997, Russian Federation in 1998, Ecuador and Brazil in 1999 and Argentina nil the late 2001 were the result of an abrupt growth in the size of financial markets posing serious challenges to their management.

## **Policies to Prevent Financial Crisis**

The author has suggested following policies to be adopted for preventing financial crisis:

**1. Prudential Supervision:** The deterioration in banks balance sheet and foreign exchange lead to full-blown financial crisis. The supervisory system must give special emphasis on following to prevent financial crisis:

- i. Accountability of supervisors.
- ii. Adequate resources and statutory authority for prudential supervisors.
- iii. Limiting too-big-to fail (too-big-to fail is a policy in which all depositors at a big bank are fully protected if the bank fails).
- iv. Restrictions on connected lending.
- v. Stop undesirable activities of financial institutions.

**2. Accounting standards and disclosure requirements:** It is true that both markets and supervisors need enough information to stop excessive risk taking. Therefore, implementation of proper accounting standards and disclosure requirements helps to established healthy financial institutions.

**3. Legal and Judiciary system :** In many developing countries-, the legal System may not well be defined about the use of certain assets as collateral or makes attaching collateral a costly and time consuming process. Thus, an effective legal and judiciary system is required to secure the investment of the lender and other similar cases by decreasing information problem.

**4. Monetary policy and price stability:** When the countries have in past high inflation, foreign debt contracts make the financial system more fragile and thus trigger a financial crisis. Achieving price stability is a necessary condition for having sound currency and with sound currency it is easy to banks and non-financial firms and system government to raise debt in local currency.

**5. Exchange rate regimes and foreign exchange reserves:** The experiences of crisis-hit countries have also shown that economies with low amount of foreign currency reserve seemed to be more vulnerable to crisis Though, pegged/fixed exchange rate regime is an efficient mechanism for inflation control, but the same can create severe problem if the economy is dominated by substantial amount of foreign debt.

**6. Encouraging market based discipline:** Market based discipline is very much essential for a sound financial system. This can be maintained by:

- Disclosure requirement, which provides information to the markets that, assist them to' monitor financial institutions and keep them away from taking Oil too much risk.
- Having credit ratings to financial institutions. Requiring them to issue subordinated debt.

**7. Entry of Foreign Bank:** A liberalized economy with sound supervisory / regulatory infrastructure can permit foreign banks to enter in financial system. The adverse shocks in economy will not affect the functioning of these banks since their risk is diversified and their entry can encourage the adaptation of best practices in the banking industry. It is believed that these banks come with better risk management techniques and more efficient banking system

### **2.2.2 Review of Thesis**

It has found that there are no more studies performed in this topic. However, there are some which is related to this conducted for the partial fulfillment of Master's Degree in Tribhuvan University.

**Ojha (2000)**, has conducted a research on "*Financial Performance and Common Stock Pricing*". The main objectives of his research were;

- To study and examine the difference of financial performance and stock prices.
- To examine the relationship of dividends and stock price.
- To explore the signaling effects in stock price.

Nepalese stock market is in infancy stage, in general it is very new and just started to develop. Dominance of banking sector is prevalent in the market due to other industries including finance companies, insurance and manufacturing is not encouraging. Corporate



firm with long history have a relatively stable profitability parameters that the firm established after the economic liberalization of 1990. Older firms have been issuing bonus share more times than the new one. Dividend per share is relatively more stable than the dividend payout ratio. That's why payout ratio and dividend yields have been highly fluctuating. Due to lack of proper investment opportunity most of the investors have directed their saving towards the secondary stock market. There is significant positive correlation between the dividends paid and stocks prices of banking and manufacturing industries. All other industries have not a perfect correlation between the dividends paid and stock prices. There is a positive correlation between the net worth per share and stock prices of banking, airline and hotel industries, there is no perfect correlation between the net worth per share and common stock price."

**Upreti** (2001), in his thesis entitled "*A Comparative Study on Financial Performance of NGBL and HBL*", has pointed out following objectives,

- To study the present of the two joint venture banks,
- To do the comparative study about the financial performance of these banks with regard to their profitability liquidity, efficiency, and capital structure,
- To provide recommendation and to give decisive and pragmatic suggestion on the findings to improve the financial performance of NGBL and HBL.

**Major Findings of this study are as follows:**

- Return on total assets ratio in case of NGBL is found better performance by utilizing overall resources
- Return of risky assets of the both the banks is not found satisfactory. Comparatively, NGBL seems in better position in relation to risky assets,
- Interest earned to total assets ratio of both banks has found to be fluctuating throughout the study period.
- In terms of EPS, NGBL is found to better position than that of HBL.
- Liquidity position of both the bank shows that they are below the normal standard

**Joshi** (2002), conducted a study on "*A Comparative Study on Financial Performance of Nepal SBI bank ltd & Nepal Bangladesh bank Ltd.*" with the following objectives.

- to highlight various aspects of relating to financial performance of Nepal Bangladesh bank and Nepal SBI bank ltd for a period of 1996/97 to 2000/01
- to analyze financial performance through the use of appropriate financial tools
- to show the cause of change in cash position of the two banks

Through her research she has presented the following findings of the study:

- The analysis of liquidity position of these commercial banks shows different position here, the average current ratio of NSBI is great than that of NBB. Therefore, the liquidity position of SBI is in normal position.
- The turnover of the commercial banks is the main indication of income generating activities. These ratios are used to judge how efficiently the firm is using its resources. From the analysis of turnover of these two banks, NBB has better turnover than SBI in terms of loans and advances to total deposit ratio. Thus NBB has better utilization of resources income generating activities than SBI bank; which definitely lead the bank to increase in income and thus making an increment profit for the organization. Despite the fluctuating trend in the ratio of cash and bank balance to total deposit SBI bank is more efficient than NBB in cash management i.e. it is more able to keep more cash balance against its various deposits.
- The analysis of profitability of these two commercial banks is also different. The overall calculation seems to be better for NBB. Though certain ratios like dividend per share, dividend pay out ratio etc are better for SBI bank. From the calculation, NBB seems to tackle their investors more efficiently.
- Going through net profit to total deposit ratio, it can be said that NBB seems to be more successful in mobilizing its customers saving in much more productive sectors. NBB has slightly riskier debt financing position in comparison to SBI bank.

**Shrestha** (2003), conducted study on; *"A Comparative Analysis of Financial Performance of the Selected Joint Venture Banks"* had set the following objectives:

- To examine the comparative financial strengths and weakness of the selected JVBs.
- To highlight various aspects relating to financial performance of these JVBs for last five years.

The major findings of the study were as follows:

- Analysis of liquidity ratio indicates better liquidity position of the NB bank. Although liquidity position of NBL and NABIL are lower, they are still able to meet their current obligation.
- Analysis of leverage or capital structure ratio indicates that long-term debt to net worth ratio of NB bank is the highest and NABIL is the lowest. JVBs are extremely leveraged. Total debt to net worth and total asset ratio of HBL is the highest and that of NABIL has relatively lower leverage.
- Return on investment, interest earned to total assets ratio and commission and discount earned to personnel expenses ratio of NB bank is higher than NABIL bank and HBL, while return on shareholder's equity is higher in HBL and interest income to interest expense ratio is higher in NABIL bank.
- The valuation ratios used for analysis showed the following results .the PE ratio and DPR of NABIL bank is the highest and HBL is the second highest, while the MVPS to BVPS ratio of HBL is the highest and NB is the lowest. Operating profit of NABIL is higher than that of HBL and NB bank. NABIL's operating profit is 42.62% of its operating income, HBL is 33.51% and NB bank is 33.86% only.

**Ghimire** (2004), in his thesis entitled *"A Comparative Study on Financial Performance of NSBI and NGBL "*, has pointed out following objectives:

- To evaluate liquidity position of both the banks.

- To analyze comparative financial performance
- To study the comparative position of both the banks.
- To offer a package of suggestion to improve the financial performance.
- To identify the relationship between interest earned and operating profit.

Major findings of this study are as follows:

- Liquidity position, in terms of cash and bank balance to total deposit, of NGBL is found to be higher than that of NSBI
- The loan and advance ratio of NSBI is higher than NGBL which implies that NSBI is successful in utilizing the outsider's fund,
- Long term debt to total assets of NGBL is slightly higher than NSBI which implies more use of long term debt,
- Earning per share and -dividend per share ratio of NSBI is very low in comparison to NGBL.

**B.K.** (2008), in his study “*A Comparative Analysis of Financial Performance of Standard Chartered Bank Nepal and Himalayan Bank Limited*” attempted to analyze the financial performance of selected banks using various statistical and financial tools.

The specific objectives of the study were as follows:

- To analyze the financial strengths and weakness of the sample financial institution
- To evaluate its financial positions
- To analyze the banks deposit mobilization and investment procedures
- To make relevant suggestions and recommendation for their effective and efficient future performance

The major findings of the study were as follows:

- The liquidity position of SCBNL is comparatively better than HBL; SCBNL has utilized more portions of current assets as loan and advances and lesser portions in the government securities
- The profitability position of SCBNL is comparatively better than HBL

- There is significant relationship between deposit and loan and advances as well as outside assets and net profit in case of SCBNL where as there is no significant relationship between deposit and total investment in case of HBL
- SCBNL seems to be more successful in increasing its sources of fund for deposit mobilization and granting loan and advances and maintain a good investment

## **Research Gap**

There has been a lot of research works and studies undertaken to examine the financial performance of commercial banks in the past. But the purpose of this study is quite different from the previous studies in terms of the time period it covers i.e. from 2003/04 to 2007/08. This was the time where the nation faced major political and social challenges, deteriorating security situations which played pivotal role to make the economic situation of the country worse to some extent.

Moreover, the study has been conducted taking Himalayan Bank Limited and Everest Bank Limited as the samples which are the successful and fast growing joint venture financial institutions of the country. The previous studies under the similar topic had not studied taking these two banks as the samples.

At present, there are more than 25 commercial banks operating in the market; however these two banks have been very successful in maintaining their reputation despite tough competition and unfavour environmental (internal and external) factors prevailing. Both HBL and EBL have huge market share and numerous investment activities in the current financial market and have played significant role in the economic development of the country in spite of influence of various internal and external factors which play the role of change agents in the fluctuation of their annual financial performance.

This study, therefore, would contribute to fulfill the prevailing communication gap about the major factors influencing the financial performance of the banks for shareholders and stakeholders. Furthermore, this research would help researchers and students who aspire to gain knowledge about different tools and techniques needed to conduct similar studies in future.

## **Chapter - III**

### **RESEARCH METHODOLOGY**

This is the most sensitive part of the research and the base on which our conclusion was drawn is included. The first part of this chapter relates to the research design, where as in the second part describes the population and sample. The sources and types of data and technique applied for the collection of data are placed on third and fourth part of the chapter. The most significant aspect of the chapter, which in depth has analyzed the data analysis tool used in the research, has been included in the fifth part. Limitation of the methodology has been revealed at the end of this chapter.

#### **3.1 Research Design**

Research design in the plan, structure, and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The plan is the overall scheme or program of the research. It includes an outline of what the investigator will do from writing the hypothesis and their operational implications to the final analysis of data. The structure of the research is more specific. It is the outline, the scheme, the paradigm of the operation of the variables. When we draw diagrams that outline the variable and their relation and just a position, we build structural schemes for accomplishing operational research purposes. Strategy, as used here, is also more specific than plan. In other words, strategy implies how the research objectives will be reach and how the problems encountered in the research will be tackled.

By research design we mean an overall framework or plan for the collection and analysis of data. The research design serves as a framework for the study, guiding the collection and analysis of the data. The research design then focuses on the data collection methods, the research instruments utilized, and the sampling plan to be followed. Specifically speaking, research design describes the general plan for collecting, analyzing and evaluating data after identifying what the researcher wants to know and what has to be dealt with in order to obtain the required information. The research design is an organized approach and not a collection of loose, unrelated parts.

It is an integrated system that guides the researcher in formulating, implementing and controlling the study. Useful research design can produce the answer to the proposed research questions. The research design is thus an integrated frame that guides the researcher in planning and executing the research works.

### **3.2 Population and Sample**

This study has been totally confined to the commercial banks listed in the Nepal stock exchange (NEPSE). As on the record on November 2009, the total number of banks listed in the NEPSE are 23 ([www.nepalstock.com](http://www.nepalstock.com)). The names of the listed commercial banks are as follows:

- |                                  |                                      |
|----------------------------------|--------------------------------------|
| 1. Nabil Bank Ltd.               | 13. Lumbini Bank Ltd.                |
| 2. Nepal Investment Bank Ltd.    | 14. Nepal Credit and Com. Bank       |
| 3. Standard Chartered Bank Ltd.  | 15. Siddhartha Bank Ltd.             |
| 4. Himalayan Bank Ltd.           | 16. NMB Bank Ltd.                    |
| 5. Nepal SBI Bank Ltd.           | 17. Bank of Asia Nepal Ltd.          |
| 6. Nepal Bangladesh Bank Ltd.    | 18. Citizens Bank International Ltd. |
| 7. Everest Bank Ltd.             | 19. Kist Bank Ltd.                   |
| 8. Bank of Kathmandu             | 20. DCBL Bank Ltd.                   |
| 9. Nepal Industrial and Co. Bank | 21. Global Bank Ltd.                 |
| 10. Machhapuchhre Bank           | 22. Prime Commercial Bank Ltd.       |
| 11. Laxmi Bank Ltd.              | 23. Sunrise Bank Ltd.                |
| 12. Kumari Bank Ltd.             |                                      |

This study has been limited to the commercial banking sector, which has a large impact on the total performance. Total no. of commercial banks listed in the NEPSE is 23 which totally form the population of the study. The banks included in the study are two in number. The selection is based as stratified random sampling. A total effort has been exerted to overcome the sampling error, so that the result of the study can be representative.

The banks included in the study are:

- a) Everest Bank Ltd
- b) Himalayan Bank Ltd.

### **3.3 Nature and Sources of Data**

This study mainly based on secondary data of the concerned banks, Nepal Rastra Bank, SEBO, and different library are the providers of the data. The review of literature of the proposed study was based on the text books, official publications, journals, unpublished thesis, web site etc. The necessary data and information at macro level have been collected from relevant institutions and authorities such as NRB Ministry of Finance, NEPSE, SEBO and their respective publications similarly the required micro level data derived from annual reports of selected banks, SEBO and NEPSE. In addition to above, supplementary data and information were collected from different library such as library of Shankar Dev Campus, T.U. Central library, SEBO etc. The major sources of data and information are as follows;

- NRB Economic Report,
- NRB Non-Banking Financial Statistics
- NRB Banking and Financial Statistics
- NRB Economic Survey
- Ministry of Finance
- Annual Reports of Concern Commercial Banks (from 2003/04 to 2007/08)
- Annual Report of SEBO Nepal
- Trading Report of NEPSE
- Journal of Finance
- Journal of Business
- Previous Research Studies, Dissertation and Articles on the Subject
- Various Text Books
- Different Library
- Different Website Related to study



### **3.4 Methods of Analysis**

To achieve the objective of the study, various financial 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 resources, simple analytical statistical tools such as percentage, graph, Karl Pearson's coefficient of correlation are used in this study. Likewise, some financial tools such as ratio analysis and trend analysis have also been used for financial analysis.

The various calculated results obtained through financial and statistical tools are tabulated under the different headings. Then they are compared with each other to interpret the results.

#### **3.4.1 Financial Tools**

Financial tools are used to examine the strength and weakness of banks. In this study financial tools like ratio analysis and financial statement analysis have been used.

##### **3.4.1.1 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 to it overtime. The qualitative judgment regarding financial performance of a firm can be done with the help of ratio analysis.

##### **A. Liquidity Ratios**

Liquidity ratios are used to judge the ability of banks to meet its 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 adversities. It is measurement of speed with which a bank's assets can be converted into cash to meet deposit withdrawal and other current obligations.

### **i) Current Ratio**

The current ratio is the ratio of total current assets and current liabilities. It shows the relationship between current assets and current liabilities.

Mathematically it is represented as:

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

Where,

Current assets include cash and bank balance, money at call or short-term notice, loans and advances, investment in government securities and other interest receivable and miscellaneous current assets where as current liabilities include deposits and other accounts of short-term loan, bills payable, tax provision, staff bonus, dividend payable and miscellaneous current liabilities.

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

### **ii) Cash and Bank Balance to Total Deposit Ratio**

Cash and bank balance are the most liquid current assets of a firm, cash and bank balance to total deposit ratio measures the percentage of most liquid assets to pay depositors immediately. This ratio is computed dividing the amount of cash and bank balance by the total deposits. It can be presented as,

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

Where, total deposits consist of deposits on current account; saving account; fixed account, money at call and other deposits.

### **iii) Cash and Bank Balance to Current Assets Ratio**

This ratio measures the percentages of liquid assets i.e. cash and Bank balance among the current assets of a firm. Higher ratio shows the higher capacity of firms to meet the cash demand.

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

Hence, cash and banks balance includes cash in hand, foreign cash and foreign banks.

#### **iv) Investment on Government Securities to Current Asset Ratio**

This ratio is used to find the percentage of current assets invested on government securities, treasury bills and development bonds. This ratio can be calculated dividing the amount of investment on government securities by the total amount of current assets and can be stated as follows:

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

#### **v) Loan and Advances to Current Assets Ratio**

Bank's major earning source is loan. Loans are also taken as current assets as most of them are maturing within a period of one year and represent short term disbursement. A Bank should not allocate all funds in loan and advances so it must maintain in an appropriate level. In order to calculate the proportion of loan and advances to total current assets, the ratio is obtained by dividing loan and advances by current assets.

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

### **B. Assets Management Ratios (Activity Ratios)**

Asset management ratio is here used to indicate how efficiently the selected banks have arranged and invested their limited resources. The following financial ratios related to investment policy is calculated under asset management ratio and interpretations are made by these calculations.

#### **i) Loan and Advances to Total Deposit Ratio**

This ratio is calculated to find out how successfully the selected banks and finance companies are utilizing their total collections/deposits on loan and advances for the purpose of earning profit.

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

**ii) Total Investment to Total Deposit Ratio**

Investment is one of the major sources of earning money. This ratio includes how properly firms' deposits have been invested on government securities and shares and debentures of other companies. This ratio can be computed dividing total amount of investment by total amount deposit collection, which can be shown as:

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

**iii) Loan and Advances to Total Working Fund Ratio**

The main element of total working fund is loan and advances. This ratio indicates the ability of selected banks and finance companies in terms of earning high profit from loan and advances. Loan and advances amount by total working fund. That is formulizing as;

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

Where, total working fund include total amount of assets given balance sheet which refers to current assets, net fixed assets, total loans for development banks and other sundry assets except off balance sheet items i.e., letter of credit, letter of guarantee etc.

**iv) Investment on Government Securities to Total Working Fund Ratio**

Investment on government securities to working fund ratio shows how much part of total investment is there on government securities in percentage. It can be obtained by;

$$\text{Investment on Government Securities} = \frac{\text{Investment on Govt. Securities}}{\text{Total Working Fund}}$$

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

Investment on shares and debentures to total working fund ratio shows the investment of Banks and finance companies on the shares and debentures of obtained dividing on shares and debentures by total working fund. That can be calculated as;

$$\begin{array}{l} \text{Investment on Shares and Debentures to} \\ \text{Total Working Fund Ratio} \end{array} = \frac{\text{Investment on Share \& Debenture}}{\text{Total Working Fund}}$$

### **C. Profitability Ratios**

Profitability ratios are calculated to measure the efficiency of operation of a firm on term of profit. It is the indicator of the financial performance of any institution. This implies that higher the profitability ratio, better the financial performance of the bank and vice versa. Profitability position can be evaluated through following different way.

#### **i) Return on Total Assets**

This ratio establishes the relationship between net profit and total assets. This ratio is also called 'profit to assets ratio'. It is calculated dividing return on net profit/loss by total working fund and can expressed as:

$$\text{Return on Total Assets} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

#### **ii) Total Interested Earned to Total Outside Assets**

This ratio shows the relationship between interests earned amount and total outside assets borrowed by the Bank. Total interest earned is that amount which is earned investing in different sectors by the Bank in an accounting year. Whereas, total outsiders assets include loans (short term as well as long term), borrowings and bond amounts. This ratio is calculated as follows;

$$\text{Total Interested Earned to Total Outside Assets} = \frac{\text{Total Interested Earned}}{\text{Total Outside Assets}}$$

#### **iii) Return on Loan and Advances Ratio**

Return on loan and advances ratio shows how efficiency of the Banks and finance companies have utilized their resources to earn good return from provided loan and advances. This ratio is computed to divide net profit/loss by the total amount of loan and advances. It can be mentioned as;

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

#### **iv) Total Interest Earned to Total Working Fund Ratio**

Total interest earned to total working fund is calculated to find out the percentage of interest earned to total assets. Higher the ratio indicates the better performance of

financial institutions in the form of interest earning on the better working fund. This ratio is calculated dividing total interest earned from investment by total working fund and is mentioned as below;

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

**v) Total Interest Paid to Total Working Fund Ratio**

This ratio measures the percentage of total interest expenses against total working fund. A high ratio indicates higher interest expenses on total working fund and vice-versa. This ratio is calculated by dividing total interest paid by total working fund.

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

**vi) Return on Equity Ratio (ROE)**

The ratio measures how efficiently the banks have used the funds of the owners. The ratio is calculated by dividing net profit by total equity capital (net worth). This can be started as,

$$\text{Return on Equity Ratio (ROE)} = \frac{\text{Net Profit}}{\text{Total Equity Capital}}$$

**vii) Analysis of Growth Rate**

Growth rates of various variables are calculated for this analysis. These Growth rates are directly related to fund mobilization, investment and loan & advances management of commercial banks. It represents how well the bank is maintaining its economic position. To examine and analyze following growth ratios are calculated under this study.

- Growth rate of total deposits
- Growth rate of loan & advances
- Growth rate of total investment
- Growth rate of net profit

To evaluate the growth ratio of total deposit as well as total credit growth ratio is examined. For this calculation, following formula is used

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

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

Where,

$D_n$  = Total amount in  $n^{\text{th}}$  year

$D_0$  = Total amount in initial year

$g$  = Growth rate

$n$  = Total number of year

### 3.4.2 Statistical Tools

Statistical tools help to find out the trends of financial position of the bank. It also analyzes the relationship between variables and helps banks to make appropriate investment policy regarding to profit maximization and deposit collection, fund utilization through providing loan & advances or investment on other companies. Ranges of statistical tools are also used to analyze the collected data and to achieve the objectives of the study. Simple analytical tools such as standard deviation, Karl Pearson's coefficient of correlation, trend analysis adopted which are as follows:

#### I. Arithmetic Mean (X):

Average is statistical constants, which enable us to comprehend in a single effort of the whole. It represents the entire data by a single value. It provides the gist and gives the bird's eye view of the huge mass of unwieldy numerical data. It is calculated as:

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

Where,

$\bar{X}$  = Arithmetic Mean

$N$  = Numbers of observation

$\sum x$  = Sum of observation

## II. Standard Deviation (S.D.)

The standard deviation is the square root of mean squared deviations from the arithmetic mean and is denoted by S.D. or  $\sigma$  (Shrestha, 1991:43). It is used as absolute measure of dispersion or variability. It is calculated as:

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{N}}$$

Where,

$\sigma$  = Standard Deviation

## III. Coefficient of variation (C.V.)

The co-efficient of variation (C.V.) is the relative measure based on the standard deviation and is defined as the ratio of the standard deviation to the mean expressed in percentage (*Shrestha, 1991*) it is independent of units. Hence, it is a suitable measure for comparing variability of two series with same or different units. A series with smaller C.V. is said to be less variable or more consistent or more homogeneous or more uniform or more stable than the other and vice versa. It is calculated as:

$$C.V = \frac{\sigma}{\bar{X}}$$

Where,

$\sigma$  = Standard deviation

$\bar{X}$  = Mean

## IV. Correlation Coefficient (r)

Correlation Coefficient is the important tool to analyze the degree of relationship between two or more variables. It is used to describe the degree to which one variable is linearly related to other variables. It refers to the closeness of the relationship between two or more variables. In other words, it is an analysis of covariance between two or more variables.

It is the statistical measure of the relationship. If any, between series of numbers representing data of any kind, from returns to test scores. If two series move in opposite direction, they are positively correlated; if the series move in opposite direction, they are negatively correlated.



The degree of correlation is measured by the correlation coefficient, which ranges from +1 for perfectly correlated series to -1 for perfectly negatively correlated series. Symbolically, correlation coefficient can be expressed as follows:

$$\text{Correlation Coefficient (Simply, } r) = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Correlation analysis describes the relationship between variables i.e. positive or negative. It helps to determine the following.

- A positive or negative relationship exists.
- The relationship is significant or insignificant.
- Establish cause and effect relation if any.

The statistical tool-correlation analysis is used in the study to measure the relationship between variables in determining within the relationship is significant or not. For the purpose decision making interpretation are based on the following terms.

When,  $r = 1$ , then is perfect positive correlation.

When,  $r = -1$ , then is perfect negative correlation.

When,  $r = 0$ , then is no correlation.

When, 'r' lies between 0.7 to 0.999 (-0.7 to -0.999), then is high degree of positive (or negative) correlation.

When, 'r' lies between 0.5 to 0.6999 there is moderate degree of correlation.

When, 'r' is less than 0.5, there is low degree of correlation.

## V. Coefficient of Determination ( $r^2$ )

The coefficient of determination is the measure of the degree of linear association or correlation between two variables, one of which happens to be independent and the other dependent variable. It measures the percentage of total variation in dependent variable explained by independent variables. The coefficient of determination can have a value ranging from 0 to 1.

Coefficient of determination =  $r^2$

## **VI. Probable Error (P.E.)**

The probable error of the Coefficient of correlation helps in interpreting its value. With the help of probable error, it is possible to determine the reliability of the value of the coefficient in so far as it depends on the conditions of random sampling. The probable error of the coefficient of correlation is obtained as follows:

$$P.E. = 0.6745 \times \frac{1-r^2}{\sqrt{N}} \quad 0.6745$$

Where,

r = Correlation coefficient

N = Number of pairs of observations

If the value of 'r' is less than the probable error, there is no evidence of correlation, i.e., the value of 'r' is not at all significant. Then, if the value of 'r' is more than six times of the probable error, the coefficient of correlation is practically certain, i.e. the value of 'r' is significant.

Here, the researcher has been calculating the correlation coefficient between total deposits and total loan & advances as well as total loan & advances and net profit. This relationship result helps the management for policy formulation in the coming days.

## **VII. Trend Analysis**

Trend analysis or Time series analysis enables us to forecast the future behavior of the variables under study, changes in the values of different variables and past behavior of a variable. In the data related to time span, there are three components of time series like secular trend or long term fluctuation, short term or periodic variations and random or irregular fluctuation, in this study, time series of loan disbursement and collection are shown in the figures. The experts to deal with variants, which changes, in value with time are, used time series. Variations of such quantities are analyzed by presenting on the graphs.

$$Y = a + b.X$$

The above trend equation can be calculated using following two normal equations:

$$\sum Y = na + b\sum X \dots\dots\dots (i)$$

$$\sum XY = a \sum X + b\sum X^2 \dots\dots\dots (ii)$$

Where,

Y = Variable

X = Time span

### **3.5 Limitation of the Research Methodology**

To carry out the research work, various financial and statistical tools are used. Similarly, descriptive as well as analytical analysis of credit management has been carried out however these tools and techniques have some limitations.

For research purpose, the six-year data are used in analyzing the financial and statistical tools, which may mislead the research work, as it is not sufficient to make projections for future regarding the performance of the bank. As far as the financial tools concerned, only ratio and trend analysis has been carried out to know the performance of the bank however there are various financial tools to measure the financial performance of the bank. With regard to statistical tools, the researcher carried out different statistical tools to make the result more concise but it may not be the valid measurement. Although, there were certain limitations during the research work, it is not so crucial that it can weaken the basic findings of the study.

## **Chapter - IV**

### **DATA PRESENTATION AND ANALYSIS**

After the introduction of financial performance, here is given the major and utmost important findings. This is analytical chapter, where the researcher has analyzed and evaluated those major financial items, which mainly effect the financial management and fund mobilization.

#### **4.1 Financial Tools**

Financial analysis is the process of identifying the financial strength and weakness of the organization presenting the relationship between the items of balance sheet. For the purpose of this study, ratio analysis has been mainly used any with the help of it, data can be analyzed.

Various financial ratios related to the financial management and the fund mobilization are presented and discussed to evaluate and analyze the performance of two banks EBL and HBL. Financial ratios are calculated and data will be analyzed with the help of those ratios. Some important financial ratios are only calculated from the point of view of the fund mobilization and financial analysis. The ratio's are designed and calculated to highlight the relationship between financial items and figures. It is a kind of mathematical relationship and procedure dividing one item by another. All these calculations are based on financial statements of concerned Banks. The important and needed financial ratios, which are to be calculated for the purpose of these studies, are mentioned below.

##### **4.1.1 Liquidity Ratio**

Raito analysis express quantitative relation of two mathematical variables as it is a financial tool. Ratio is taken to judge an accounting figure in relation to the other accounting balances. There are different types of ratios used to measure a firm's financial position. Liquidity ratio presents liquidity position of a firm. Liquidity position is calculated taking relation to the different portfolios of the firm. It may vary based on nature of business. In this study following ratios are mentioned of the concerned financial institutions.

### i) Current Ratio

Current ratio measures short term liabilities maturing before one year. This is a broad measurement tool to analyze liquidity position of a financial institution. It indicates Bank's ability to discharge current obligation.

**Table 1**  
**Current Ratio (Times)**

<b>Fiscal Years</b>	<b>EBL</b>	<b>HBL</b>
2003/04	0.971	0.854
2004/05	0.9688	0.993
2005/06	1.0226	1.098
2006/07	0.981	1.103
2007/08	0.946	1.446
<b>Mean</b>	<b>0.98</b>	<b>1.10</b>
<b>S.D.</b>	<b>0.03</b>	<b>0.22</b>
<b>C.V.</b>	<b>2.87%</b>	<b>19.92%</b>

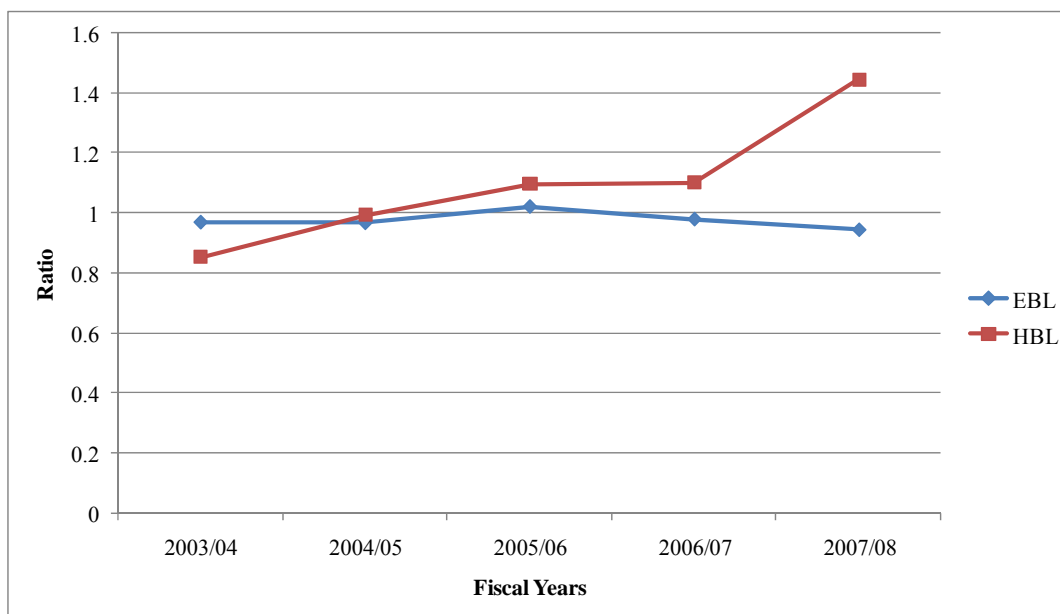
Source: Appendix No. 1 (i)

As shown in the table 1, HBL has the highest current ratio in F/Y 2007/08 i.e. 1.446 and the lowest in F/Y 2003/2004 i.e. 0.854. Similarly, EBL has a high current ratio of 1.0226 in F/Y 2005/06 and a low of 0.946 in F/Y 2007/08. Analyzing the As shown in the Table 4.1, it can be said that EBL and HBL have not been able to maintain the standard current ratio of 2:1 though it HBL has maintained adequate current assets to meet its short term obligations. On the other hand, EBL failed to maintain the sufficient level of current assets; however it can be said that the performance of both the banks is not satisfactory.

The average mean ratio of HBL is higher than EBL; i.e.  $1.10 > 0.98$ . This shows that HBL's liquidity position is better than that of EBL. The lower degree of standard deviation and coefficient of variation suggest that both the banks have maintained consistency in their ratios. However, as per the conventional rule, current ratio should be 2:1 but for banks, any current ratio above 1 also considered healthy and sound.

In order to bring about consistency in this research, cheques subject to clearing have been excluded from cash and bank balance and included in other assets.

**Figure 1**  
**Current Ratio**



## ii) Cash and Bank Balance to Total Deposit Ratio

Cash and Bank balance consist of cash on hand, foreign currencies, cheques as well as other cash items and balance with domestic Banks. This ratio measures the availability of Banks liquid or immediate funds to meet it unanticipated calls on all types of deposits.

As higher ratio indicates the higher ability to meet their deposits and vice versa. The following table shows the cash and Bank balance to total deposit ratio of two banks during the study period.

**Table 2**  
**Cash and Bank Balance to Total Deposit Ratio**

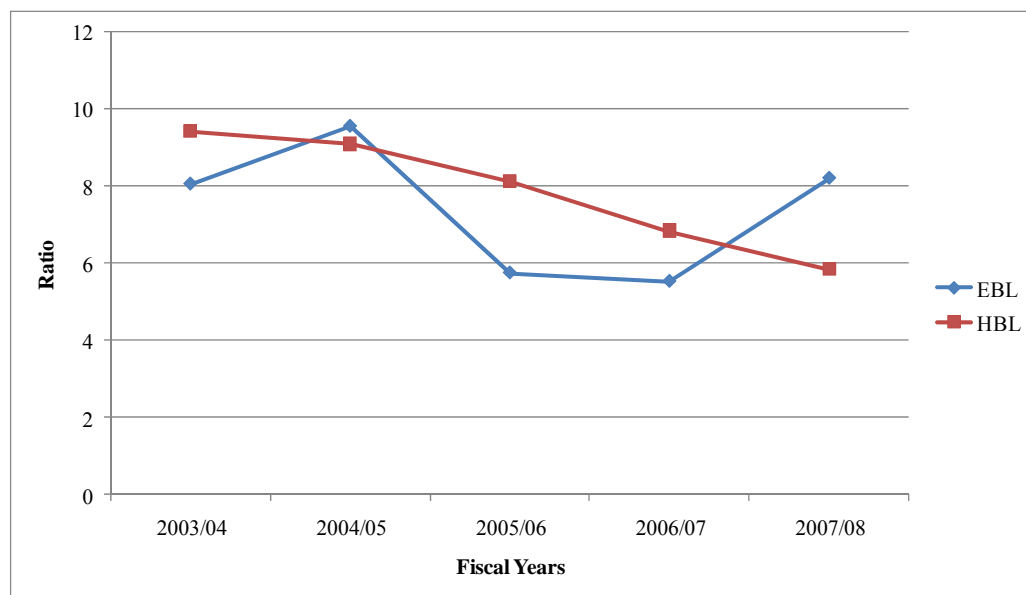
Fiscal Years	EBL	HBL
2003/04	8.06	9.42
2004/05	9.56	9.092
2005/06	5.75	8.12
2006/07	5.53	6.84
2007/08	8.21	5.85
<b>Mean</b>	<b>7.42</b>	<b>7.86</b>
<b>S.D.</b>	<b>1.73</b>	<b>1.51</b>
<b>C.V.</b>	<b>23.31%</b>	<b>19.18%</b>

Source: Appendix No. 1 (ii)

As shown in the table 2, the cash and bank balance to total deposit of EBL is in fluctuating trend & HBL has decreasing trend during the study period. EBL had a high ratio of 9.56% in F/Y 2004/05 and a low ratio of 5.53% in F/Y 2006/07. Similarly, HBL has a high of 9.42% in F/Y 2003/04 and a low of 5.85% in F/Y 2007/08. The averages mean ratio of HBL is slightly higher than EBL i.e., 7.86% > 7.42%. This shows, HBL readiness to meet customer requirement better than EBL. The C.V. of HBL of is slightly lower than that of EBL i.e. 19.18% < 23.31%. On its basis, it can be concluded that EBL ratios are more consistent than that of HBL.

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

**Figure 2**  
**Cash and Bank Balance to Total Deposit**



### iii) Cash and Bank Balance to Current Assets Ratio

This ratio examines the bank's liquidity capacity on the basis of its most liquid assets i.e. cash and bank balance. This ratio reveals the ability of the bank to make the quick payment to its customer's deposits. A high ratio indicates the sound ability to meet their

daily cash requirement of their customers deposit and vice-versa. In this ratio both higher and lower ratio are not desirable because if a bank maintains higher ratio of cash, it has to pay interest on deposit and some earnings may be lost and if a bank maintains lower ratio of cash, it may fail to make the payment for presented cheques by its customers. So, sufficient and appropriate cash reserves should be maintained properly.

**Table 3**  
**Cash & Bank Balance to Current Assets Ratio (%)**

<b>Fiscal Years</b>	<b>EBL</b>	<b>HBL</b>
2003/04	8.85	12.14
2004/05	10.07	10.76
2005/06	5.529	9.45
2006/07	5.94	7.42
2007/08	9.18	6.33
<b>Mean</b>	<b>7.91</b>	<b>9.22</b>
<b>S.D.</b>	<b>2.04</b>	<b>2.37</b>
<b>C.V.</b>	<b>25.83%</b>	<b>25.75%</b>

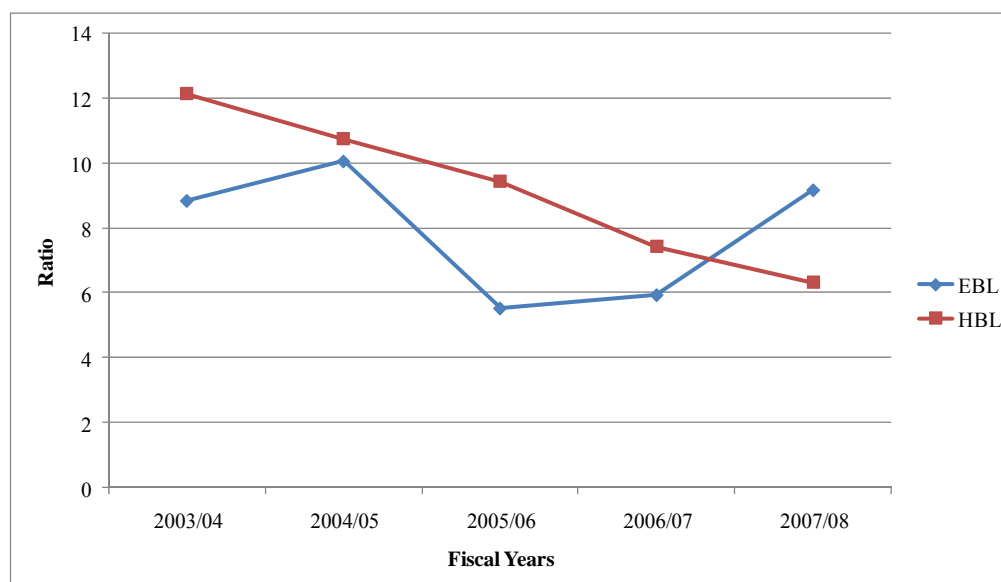
Source: Appendix No. 1 (iii)

The above table shows that the cash and bank balance to current assets of EBL is in fluctuating trend & HBL has decreasing trend during the study period. EBL has maintained a high ratio of 10.07% in F/Y 2004/05, and a low ratio of 5.529% in 2005/06. Similarly, HBL has a high of 12.14% in F/Y 2003/04 anticipating higher cash requirement depositors in this F/Y. It has a low ratio of 6.33% in F/Y 2007/08.

The average mean ratio of HBL is slightly higher than EBL. The C.V. of HBL is greater than that of EBL i.e., 9.22% > 7.91%. It shows HBL ratios are less consistent than that of EBL. The above table does not show any significant difference between the CBs with regards to meeting customer's daily cash requirement. Both have fared well in meeting their depositor's daily cash requirement and investing the surplus fund in other productive areas.



**Figure 3**  
**Cash and Bank to Current Assets**



**iv) Investment on Government Securities to Current Assets Ratio (%)**

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

**Table 4**  
**Investment on Government Securities to Current Assets Ratio**

Fiscal Years	EBL	HBL
2003/04	38.52	20.54
2004/05	39.56	18.45
2005/06	37.28	25.65
2006/07	40.22	22.22
2007/08	32.27	23.24
<b>Mean</b>	<b>37.57</b>	<b>22.02</b>
<b>S.D.</b>	<b>3.16</b>	<b>2.72</b>
<b>C.V.</b>	<b>8.42%</b>	<b>12.36%</b>

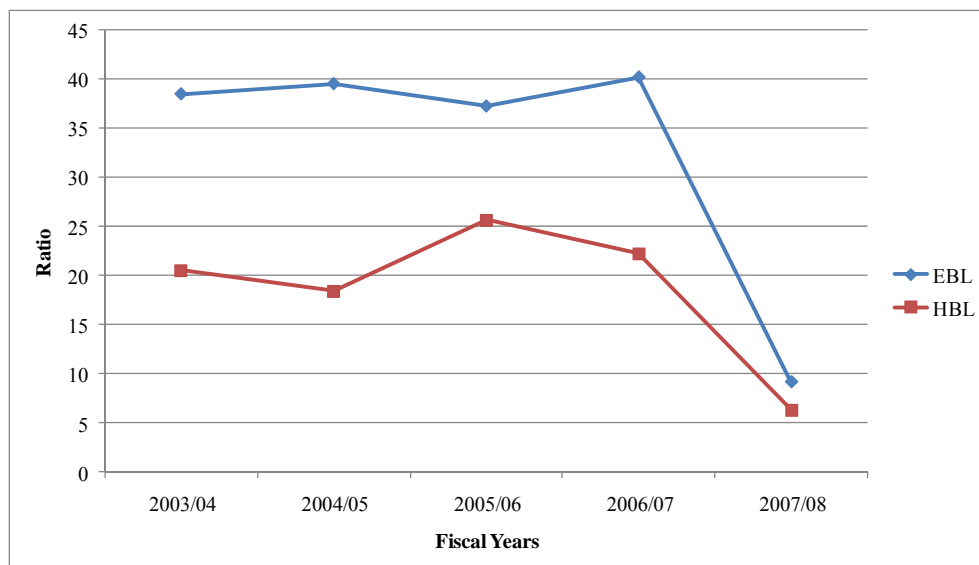
Source: Appendix No. 1 (iv)

As shown in the table 4, the investment on government securities to current assets of EBL and HBL has a fluctuating trend. EBL has maintained the high ratio of 40.22% in F/Y 2006/07, and low ratio of 32.27 in F/Y 2007/08. Similarly, HBL has a high of 25.65% in F/Y 2005/06, and low ratio of 18.45% in F/Y 2004/05. Never the less, EBL have tried to maintain consistency from F/Y 2004/05 onwards.

It is evident that the average mean ratio of EBL is higher than that of HBL i.e. 37.57%>22.02%. This shows that a greater portion of current assets of EBL comprises of government securities. In addition, EBL investments in government securities to current assets have an increasing trend over the years. From the point of view of C.V. EBL ratios have been more consistent.

EBL has been more consistent in its ratio post F/Y 2005/06. From the above analysis, it is clear that HBL has made lesser investment in government securities as it has injected more funds on other productive sectors. The reason behind EBL higher ratio could be attributed to more deposit collection and unavailability of other secured and profitable investment sectors.

**Figure 4**  
**Investment on Government Securities to Current Assets**



#### 4.1.2 Asset Management Ratio

Asset management ratio measures how effectively a firm is managing its assets. These ratios are designed to answer this question: "Does the total amount of each type of asset as regard on the balance sheet seem reasonable, too high or too low, in the view of current assets and operating levels?" Either a company or a Bank must borrow or obtain fund from other Source to acquire assets. If it has too many assets, its interest expenses will be too high and hence its profits will be depressed and on the other hand, if assets are too low, profitable sales may be lost. Following ratio need to be calculated under this study.

##### i) Loan and Advances to Total Deposit Ratio

This ratio helps us showing the relationship between loans and advances which are granted and the total deposited collected by the bank. A high ratio indicates better mobilization of collected deposit and vice-versa. It should be noted that too high ratio may not be better from liquidity point of view.

**Table 5**  
**Loan & Advances to Total Deposit Ratio**

<b>Fiscal Years</b>	<b>EBL</b>	<b>HBL</b>
2003/04	30.36	51.62
2004/05	30.3	58.7
2005/06	42.12	54.21
2006/07	38.75	59.5
2007/08	42.61	56.57
<b>Mean</b>	<b>36.83</b>	<b>56.12</b>
<b>S.D.</b>	<b>6.12</b>	<b>3.25</b>
<b>C.V.</b>	<b>16.60%</b>	<b>5.79%</b>

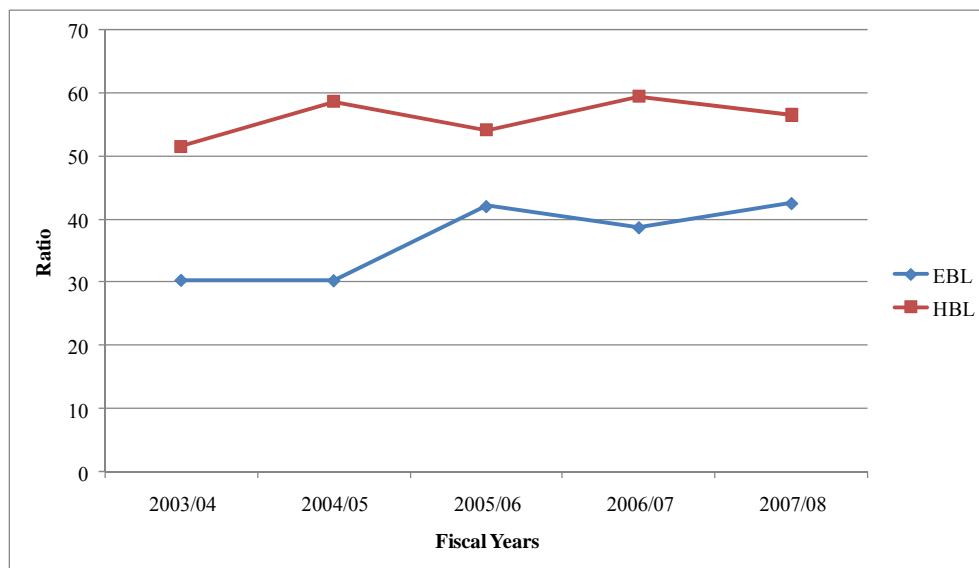
Source: Appendix No. 1 (v)

As shown in the table 5, the loan and advances to total deposit of both the banks have a fluctuating trend. EBL had a high ratio of 42.61% in F/Y 2007/08 and a low ratio of 30.30% in F/Y 2004/05. Accordingly, HBL had a high of 59.50% in F/Y 2006/07 and a low of 51.62% 2003/04. The mean ratio of HBL is higher than that of EBL i.e.

56.12% > 36.83%. HBL seems to be strong in terms of mobilization of its total deposits as loan and advances when compared to EBL.

In terms of C.V., both seem to be nearly consistent. It can be concluded that, HBL has been more successful in mobilizing its total deposits as loan and advances than EBL. On the contrary, a high ratio should not be perceived as a better state of affairs from the point of view of liquidity, as loan and advance are not as liquid as cash and bank balance and other investment. In portfolio management of bank various factors such as availability of funds, liquidity requirements, central bank norms etc. needs to be taken into account.

**Figure 5**  
**Loan & Advances to Total Deposit Ratio**



#### ii) Total Investment to Total Deposit Ratio

A commercial bank may mobilize its deposit by investment its fund in different securities issued by government and other financial or non-financial companies. Now efforts has been made to measure the extend, to which the bank are successful in mobilizing the total deposit on investment. In the process of portfolio management of banks various factors such as availability of fund, liquidity requirements, central bank norms etc are to be considered in general. A high ratio is the indicator of high success to mobilize the banking fund as investment and vice-versa. Total investment includes

investment on government securities, priority deprive sector, loan to industries and business houses, personal loans etc.

**Table 6**  
**Total Investment to Total Deposit Ratio**

<b>Fiscal Years</b>	<b>EBL</b>	<b>HBL</b>
2003/04	54.47	48.44
2004/05	53.68	42.22
2005/06	50.18	47.2
2006/07	55.71	41.1
2007/08	55.1	39.35
<b>Mean</b>	<b>53.83</b>	<b>43.66</b>
<b>S.D.</b>	<b>2.17</b>	<b>3.96</b>
<b>C.V.</b>	<b>4.04%</b>	<b>9.06%</b>

Source: Appendix No. 1 (vi)

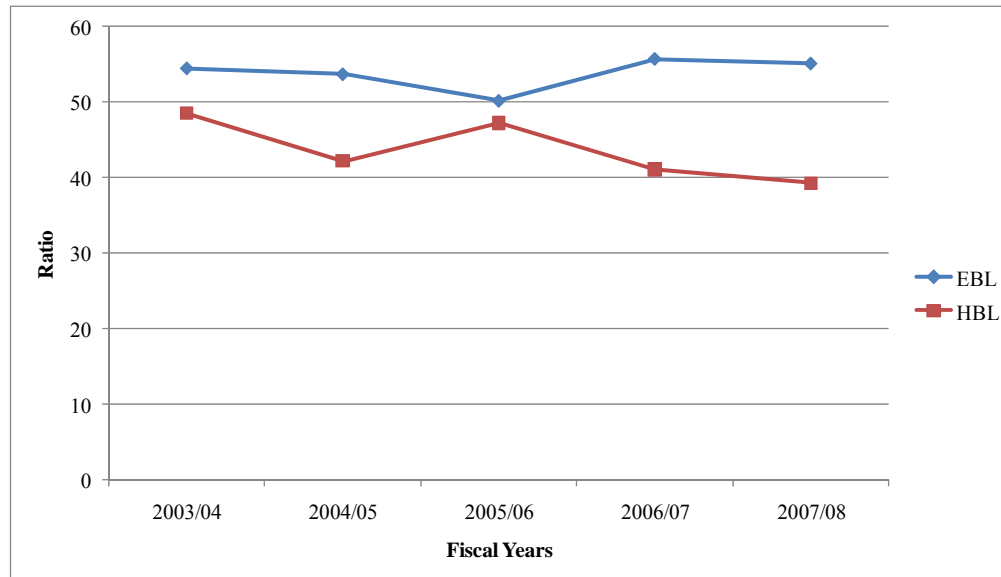
As shown in the table 6, a highly fluctuating trend in total Investment to total deposit of EBL and HBL. EBL has a high ratio of 55.71% in F/Y 2006/07 and a low ratio of 50.18% in F/Y 2005/06. On the other hand, HBL has a high ratio of 48.44% in F/Y 2003/04 and a low ratio of 39.35% in F/Y2003/04.

EBL has a high mean ratio than HBL i.e., 53.83%>43.66%. From mean ratio perspective, EBL has been more successful in mobilization of deposits on various forms of investment.

From C.V. viewpoint, both the sample banks have been inconsistent, with EBL being little better in terms of consistency than HBL.

In conclusion, the above analysis reveals that EBL has been more successful in mobilizing its resource on various forms of investment. What is worth mentioning is that Interest on Treasury Bills, Inter bank lending and placements are at an all time low level, so EBL has not done itself justice by investing in low yield less risky and risk free assets.

**Figure 6**  
**Total Investment to Total Deposit Ratio**



### iii) Loan and Advances to Fixed Deposit Ratio

A commercial bank's fixed deposit play significant role in profit generation through fund mobilization. This ratio reflects the extent to which the banks are successful in mobilizing their fixed deposit on loan and advances for the purpose of income generation. A high ratio indicates a better mobilization of fund as loan & advances and vice-versa.

**Table 7**  
**Loan & Advances to Fixed Deposit Ratio**

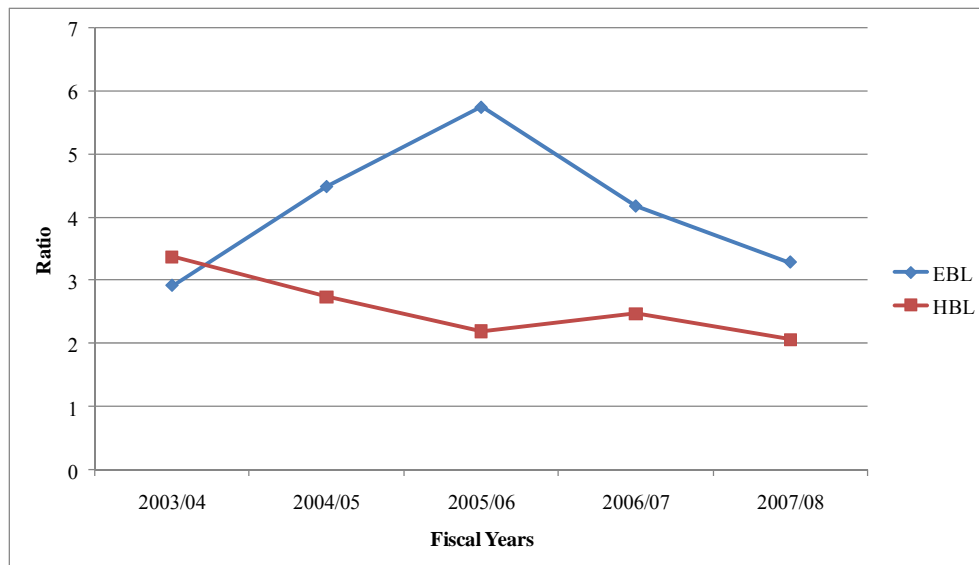
Fiscal Years	EBL	HBL
2003/04	2.92	3.38
2004/05	4.49	2.74
2005/06	5.75	2.2
2006/07	4.18	2.48
2007/08	3.29	2.07
<b>Mean</b>	<b>4.13</b>	<b>2.57</b>
<b>S.D.</b>	<b>1.11</b>	<b>0.52</b>
<b>C.V.</b>	<b>26.90%</b>	<b>20.19%</b>

Source: Appendix No. 1 (vii)

As shown in the table 7, a fluctuating trend of loan and advances to fixed deposit of EBL and HBL. EBL has maintained highest ratio of 5.75% in F/Y 2005/06 and a low ratio of 2.92% in F/Y 2003/04. Similarly, HBL has maintained a high ratio of 3.38% in F/Y 2003/04 and a low ratio of 2.07% in F/Y 2007/08.

EBL also has a high average ratio of loan and advances to total working fund than HBL i.e. 4.13%>2.57%. It reveals the strength of EBL in mobilizing its total assets as loan and advances.

**Figure 7**  
**Loan and Advances to Fixed Deposit**



#### **iv) Loan and Advance to Saving Deposit Ratio**

Loan and advances are also included in the current assets of commercial bank because generally they provide short-term loan, advance, overdraft, and cash credit.

In the present study loan and advance represent to local and foreign bills discounted purchased and loan, cash credit and overdraft in local currency as well as inconvertible foreign currency. To make high profit by mobilizing its fund in the best way, a commercial bank should not keep its all collected funds as cash and bank balance but they should be invested as loan and advance to the customers. If sufficient loan and

advances cannot be granted, it should pay interest on those unutilized deposit funds and may lose some earning. But high loan and advances may also be harmful to keep the bank in most liquid position because they can only be collected at the time of maturity only.

**Table 8**  
**Loan & Advances to Saving Deposit Ratio**

<b>Fiscal Years</b>	<b>EBL</b>	<b>HBL</b>
2003/04	0.54	1
2004/05	0.5	1.1
2005/06	0.62	1.05
2006/07	0.61	1.08
2007/08	0.69	1.08
Mean	<b>0.59</b>	<b>1.06</b>
S.D.	<b>0.07</b>	<b>0.04</b>
C.V.	<b>12.49%</b>	<b>3.67%</b>

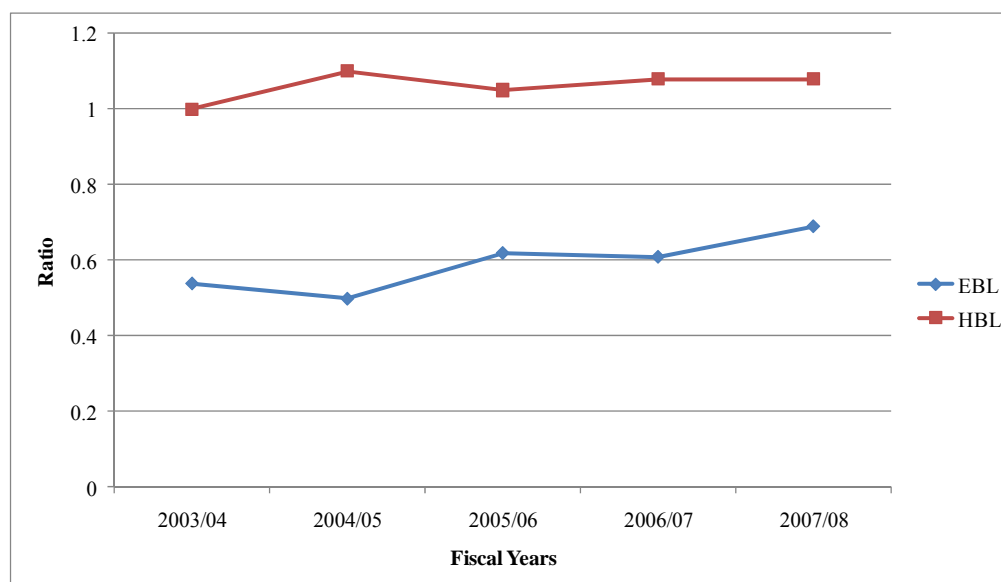
Source: Appendix No. 1 (viii)

As shown in the table 8, favorable fluctuated trend of loan and advances of EBL during the study period. The average mean ratio of HBL is higher compared to EBL i.e. 1.06%>0.59%. HBL has experienced an increasing trend of loan and advances up to F/Y 2007/08. EBL had a high ratio of 0.69% in 2007/08 and a low ratio of 0.50% in F/Y 2004/05. Similarly HBL has experienced a high ratio of 1.08% in F/Y 2006/07 and 2007/08 and a low of 1% in F/Y 2003/04.

The above analysis reveals that HBL has been more successful in identifying profitable investment sectors and increasing its earning. The same does not hold true for EBL, whose efforts seems to be more focused on investing in risk free assets, rather than increasing its loan and advances volume and subsequent earnings from it.



**Figure 8**  
**Loan & Advances to Saving Deposit Ratio**



**v) Fixed Deposit to Total Deposit Ratio**

It is the ratio, which shows the percentage of fixed deposit on total deposit. Fixed deposit is one of the major Source of fund, which bears cost at a certain rate and has certain maturity. Hence, this ratio shows the percentage of total deposit, which bears cost at a fixed rate and calculated by dividing fixed deposit by total deposit ratio for the entire period of the study.

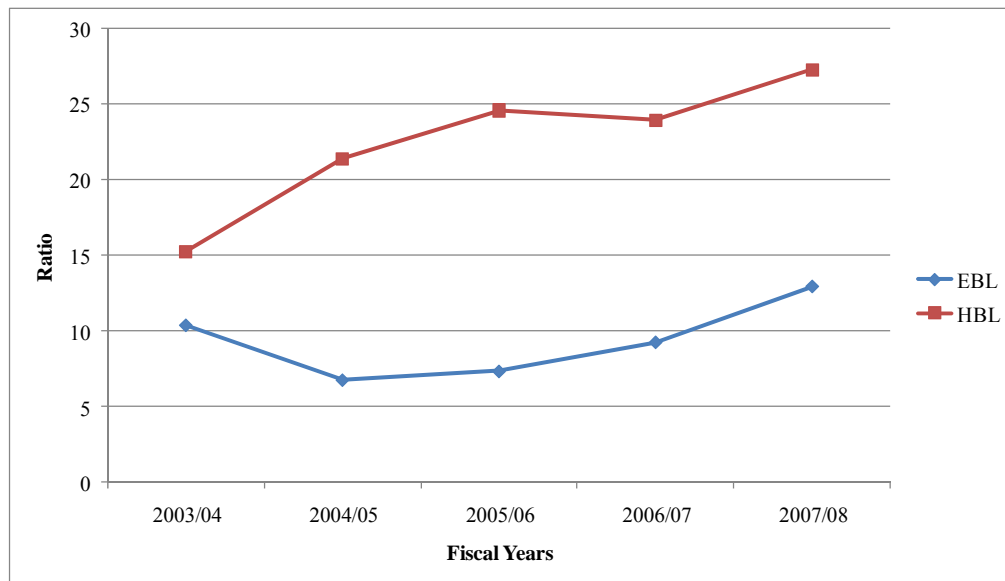
**Table 9**  
**Fixed Deposit to Total Deposit Ratio**

Fiscal Years	EBL	HBL
2003/04	10.39	15.26
2004/05	6.75	21.4
2005/06	7.33	24.61
2006/07	9.26	23.97
2007/08	12.97	27.29
<b>Mean</b>	<b>9.34</b>	<b>22.51</b>
<b>S.D.</b>	<b>2.50</b>	<b>4.56</b>
<b>C.V.</b>	<b>26.78%</b>	<b>20.26%</b>

Source: Appendix No. 1 (ix)

As shown in the table 9, the amount of fixed deposit to total deposit and their ratios of EBL and HBL along with their average standard deviation and C.V of ratios. HBL has a higher fixed deposit to total deposit ratio than EBL. If the total deposit of HBL is 100 then fixed deposit will 22.51. The average fixed deposit to total deposit ratios of HBL and EBL are 22.51 and 9.34. It clearly states that HBL has the maximum fixed charge bearing deposit than EBL. From viewpoint of cost minimizing more is not favorable other hand, from viewpoint of liquidity greater portion of fixed deposit may be termed as favorable one.

**Figure 9**  
**Fixed Deposit to Total Deposit Ratio**



#### **vi) Saving Deposit to Total Deposit Ratio**

It is the ratio which shows the proportion of saving deposit on total deposit. Saving deposit is one of the major Source of fund which bears cost at a certain rate and has no certain maturity. Though termed as current liabilities, it should not be paid back any time. Hence, this ratio shows the proportion of total deposit which bears cost at a saving rate and calculated by dividing saving deposit by total deposit ratio for the entire period of the study.

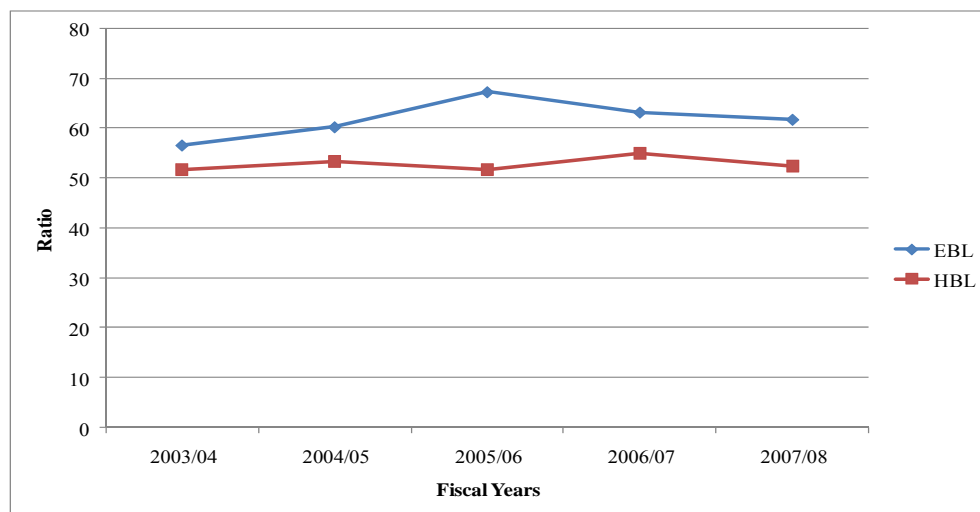
**Table 10**  
**Saving Deposit to Total Deposit Ratio**

<b>Fiscal Years</b>	<b>EBL</b>	<b>HBL</b>
2003/04	56.69	51.75
2004/05	60.35	53.43
2005/06	67.4	51.79
2006/07	63.3	55.05
2007/08	61.85	52.53
<b>Mean</b>	<b>61.92</b>	<b>52.91</b>
<b>S.D.</b>	<b>3.93</b>	<b>1.38</b>
<b>C.V.</b>	<b>6.35%</b>	<b>2.60%</b>

Source: Appendix No. 1 (x)

As shown in the table 10, the amount of saving deposit to total deposit and their ratios of EBL and HBL along with their average standard deviation and C.V of ratios. EBL has a higher saving deposit to total deposit ratio than HBL. If the total deposit of EBL is 100 than saving deposit will 61.92. The average saving deposit to total deposit ratios of EBL and HBL are 61.92 and 52.91 respectively. It clearly states that EBL has the maximum saving charge bearing deposit than HBL. From viewpoint of cost minimizing more is not favorable other hand, from viewpoint of liquidity greater portion of saving deposit may be termed as favorable one.

**Figure 10:**  
**Saving Deposit to Total Deposit Ratio**



### 4.1.3 Profitability Ratios

The main objective of commercial bank is to earn profit by providing different types of banking services to its customers. To meet various objectives like maintaining good position, meet fixed internal obligations, overcome the future contingencies, grab hidden investment in need of development funds etc. In conclusion commercial Banks have to earn sufficient profit.

Of course, the profitability ratios are the best indicators of overall efficiency. Here, mainly those major ratios are presented and analyzed, through which the effort has been made to measure the profit earning capacity.

#### i) Return on Total Working Fund Ratio

This ratio establishes the relationship between net profit and total assets. This ratio is also called 'profit to assets ratio'.

**Table 11**  
**Return on Total Working Fund Ratio (%)**

<b>Fiscal Years</b>	<b>EBL</b>	<b>HBL</b>
2003/04	2.424	0.88
2004/05	2.27	1.02
2005/06	2.46	1.06
2006/07	2.55	1.5
2007/08	2.42	1.43
<b>Mean</b>	<b>2.42</b>	<b>1.18</b>
<b>S.D.</b>	<b>0.10</b>	<b>0.27</b>
<b>C.V.</b>	<b>4.17%</b>	<b>23.05%</b>

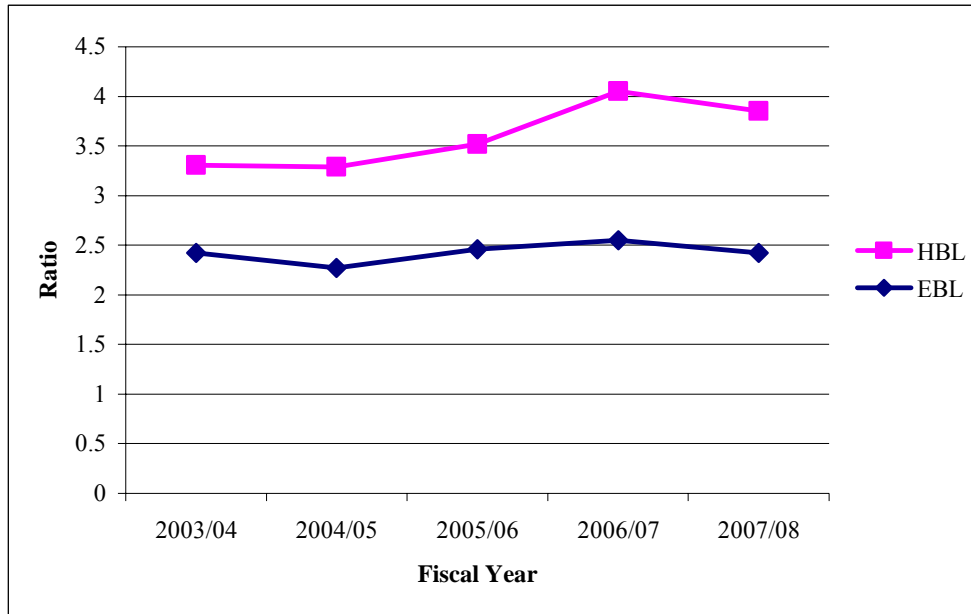
Source: Appendix No. 1 (xi)

As shown in the table 11, the ratio of return on total working fund is fluctuated in case of EBL and increasing trend in case of HBL during the study period. EBL has had a high ratio of 2.55% in F/Y 2006/07 and a low ratio of 2.27% in F/Y 2004/05. Similarly, HBL has had a high of 1.50% and a low of 0.88% in F/Y 2006/07 and 2003/04 respectively.

EBL has a slightly high mean ratio than HBL i.e.,  $2.42 > 1.18$ . It reveals that EBL has been able to earn high profit on total working fund in comparison to HBL.

From the viewpoint of C.V., EBL ratios are less consistent than HBL i.e. 4.17% < 23.05%. Both banks need to exert more effort in mobilizing its working assets more efficiently.

**Figure 11**  
**Return on Total Working Fund Ratio**



**ii) Total Interested Earned to Total Outside Assets Ratio**

This ratio shows the relationship between interests earned amount and total outside assets borrowed by the bank. Total interest earned is that amount which is earned investing in different sectors by the bank in an accounting year whereas total outside assets include loans (short term as well as long term), borrowings and bond amounts.

**Table 12**  
**Total Interest Earned to Total Outside Assets Ratio (%)**

Fiscal Years	EBL	HBL
2003/04	14.9	5.71
2004/05	5.86	5.61
2005/06	5.93	5.75
2006/07	5.46	6.1
2007/08	5.87	6.1
<b>Mean</b>	<b>7.60</b>	<b>5.85</b>
<b>S.D.</b>	<b>4.08</b>	<b>0.23</b>
<b>C.V.</b>	<b>53.69%</b>	<b>3.93%</b>

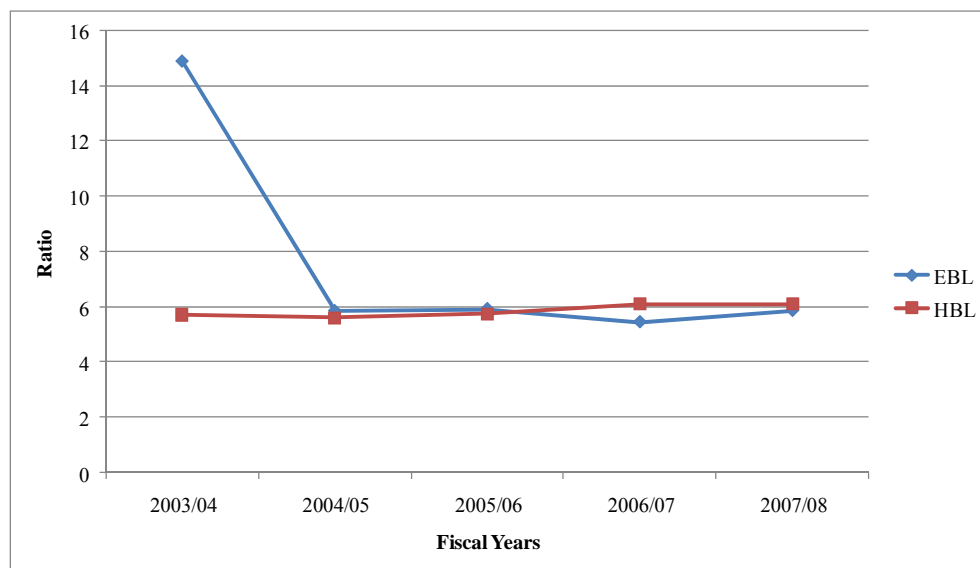
Source: Appendix No. 1 (xii)

The above table reflects a fluctuated trend in Interest earned to total outside assets in case of EBL and HBL during the study period. EBL has recorded a high ratio of 14.90% in F/Y 2003/04 and a low ratio of 5.46% in F/Y 2006/07. HBL has had a high ratio of 6.10% in FY 2006/07 and 2007/08 and a low ratio of 5.61% in F/Y 2004/05.

In case of mean ratio, EBL has a higher ratio than HBL i.e. 7.60%>5.85%. It is clear that EBL has earned higher amount of interest on its outside assets in comparison to HBL. The C.V. of HBL is lower than EBL i.e. 3.93%<53.69%. This indicates that HBL ratios are more stable than EBL.

From the above analysis, it can be concluded that HBL seems to be more successful in earning high interest on its outside assets than EBL.

**Figure 12**  
**Total Interest Earned to Total Outside Assets Ratio**



### iii) Return on Loan and Advances Ratio

Return on loan and advances ratio shows how efficiency of the banks has utilized their resource to earn good return from provided loan and advances. This ratio is computed to divide net profit or loss by the total amount of loan and advances.

**Table 13**  
**Return on Loan and Advances Ratio (%)**

<b>Fiscal Years</b>	<b>EBL</b>	<b>HBL</b>
2003/04	8.9	1.96
2004/05	8.41	2.03
2005/06	6.62	2.3
2006/07	7.37	2.9
2007/08	6.6	2.89
<b>Mean</b>	<b>7.58</b>	<b>2.42</b>
<b>S.D.</b>	<b>1.04</b>	<b>0.46</b>
<b>C.V.</b>	<b>13.77%</b>	<b>18.85%</b>

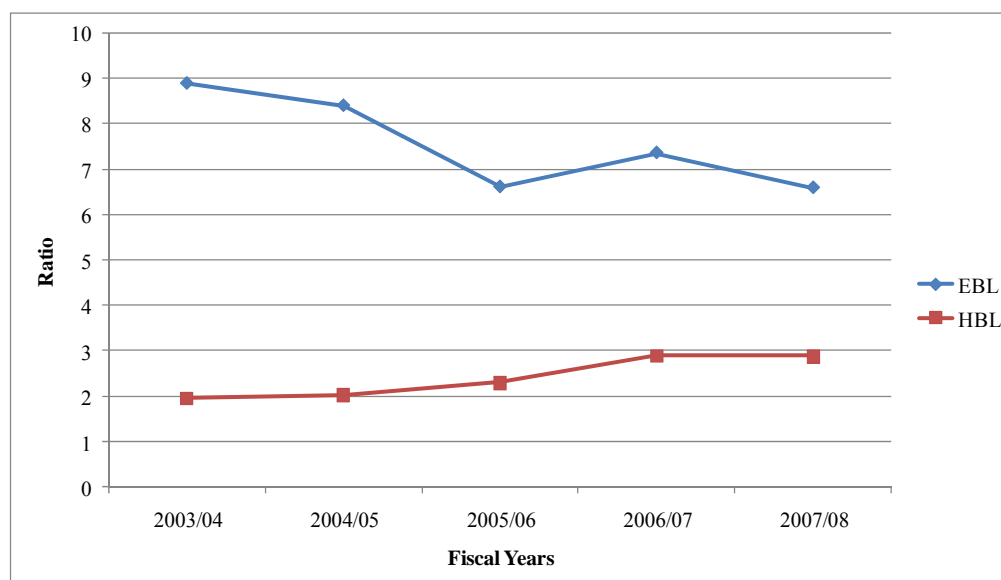
Source: Appendix No. 1 (xiii)

The above table shows that the ratio of return on loan and advances of EBL are better than HBL in all F/Y, through they have a fluctuating trend. EBL ratios have witnessed a decreasing trend up to F/Y 2005/06, thereafter they have an increasing trend. EBL has recorded a high ratio of 8.90% in F/Y 2003/04, and a low ratio of 6.60% in F/Y 2007/08. Similarly, HBL recorded a high of 2.90% in F/Y 2005/06 and a low of 1.96% in F/Y 2003/04.

The comparison of mean ratio reveals that EBL has a higher ratio than HBL i.e.,  $7.58\% > 2.42\%$ . This shows that EBL has been more successful in maintaining its higher return on loan and advances than HBL.

C.V. of EBL is significantly lower than HBL i.e.  $13.77\% < 18.85\%$ . It proves that HBL has higher variability of ratio than EBL. In conclusion, it can be said that HBL profit earning capacity by utilizing available resource is weaker compared to EBL, but nevertheless HBL is making significant improvements in this regard.

**Figure 13**  
**Return on Loan and Advances Ratio**



**iv) Total Interest Earned to Total Working Fund Ratio**

To respect the earning capacity of a commercial bank in its total working fund (total assets), total interest earned to total working fund ratio is very helpful. In other words, this ratio reflects the extent to which the banks are successful in mobilizing their assets to generate high income. A high ratio is an indicator of high earning power of the bank on its working fund and vice-versa.

**Table 14**  
**Total Interest Earned to Total Working Fund Ratio (%)**

Fiscal Years	EBL	HBL
2003/04	4.81	4.96
2004/05	4.41	4.84
2005/06	4.83	5.01
2006/07	4.61	5.32
2007/08	4.94	5.17
<b>Mean</b>	<b>4.72</b>	<b>5.06</b>
<b>S.D.</b>	<b>0.21</b>	<b>0.19</b>
<b>C.V.</b>	<b>4.45%</b>	<b>3.71%</b>

Source: Appendix No. 1 (xiv)

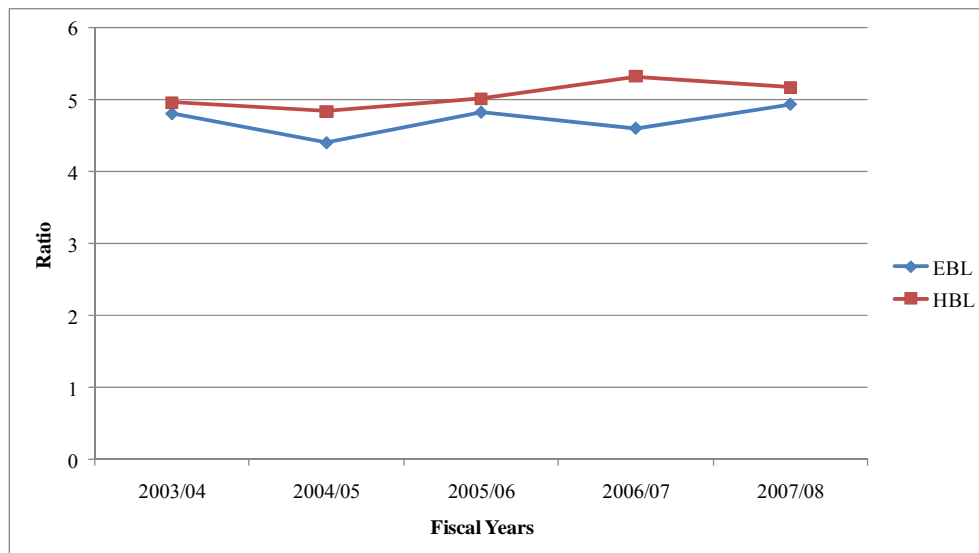


The above table reflects a fluctuated trend in interest earning ratio of EBL and HBL. EBL has had a high ratio of 4.94% in F/Y 2007/08 and a low ratio of 4.41% in F/Y 2004/05. Similarly, HBL has experienced a high of 5.32% in F/Y 2005/06 and a low of 4.84% in F/Y 2004/05.

The average Interest earning ratio of EBL is 4.72% whereas the same for HBL is 5.06%. This reflects that HBL has been stronger in terms of interest earning power with respect to total working fund than EBL.

From the above analysis, we can conclude that HBL has been able to earn high interest on its total assets i.e., it has been more successful in mobilizing its assets to generate high income. The decreasing trend of interest earning ratio with respect to total working fund is a matter of concern, and both the banks need to look for ways to improve upon their interest earnings.

**Figure 14**  
**Total Interest Earned to Total Working Fund Ratio**



#### **v) Total Interest Paid to Total Working Fund Ratio**

Total interest paid is that amount which is paid to the lenders as well as bond holders. To operate the business a bank raises the fund through the different source. They are; i) issuing share and debenture ii) taking loan etc. It is called capital gearing i.e. higher the capital gearing the larger the interest paid amount is and vice-versa. Generally, this ratio

is considering good as lower it is. This ratio reveals the relationship between total interests paid amount and total employed.

**Table 15**  
**Total Interest Paid to Total Working Fund Ratio (%)**

<b>Fiscal Years</b>	<b>EBL</b>	<b>HBL</b>
2003/04	1.22	2.31
2004/05	1.2	1.91
2005/06	1.16	1.95
2006/07	1.2	2.12
2007/08	1.44	2.24
<b>Mean</b>	<b>1.24</b>	<b>2.11</b>
<b>S.D.</b>	<b>0.11</b>	<b>0.18</b>
<b>C.V.</b>	<b>8.98%</b>	<b>8.31%</b>

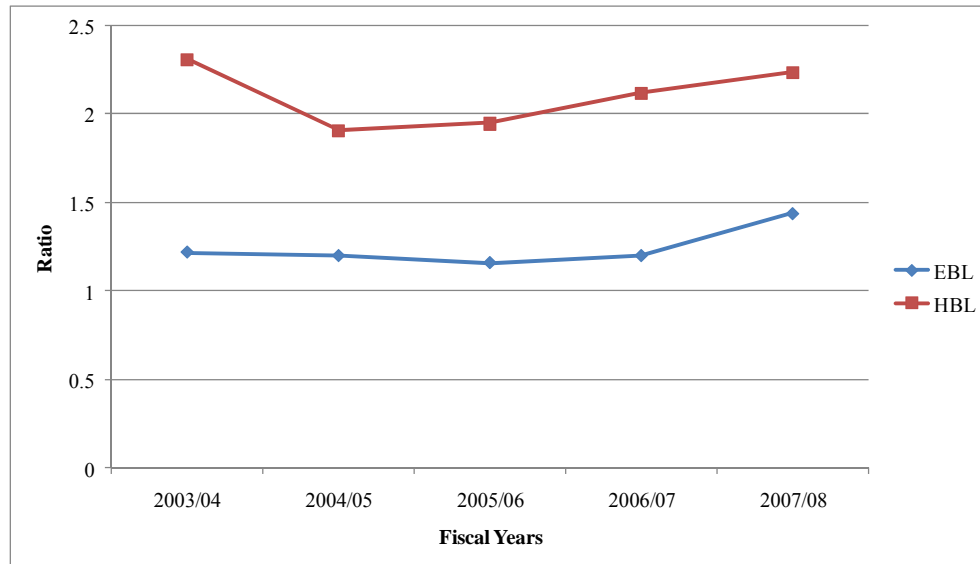
Source: Appendix No. 1 (xv)

The above table shows a fluctuated trend in total Interest paid to total working fund ratio of EBL and HBL. The decrease in Interest expenses can be attributed to an all time low interest rate offered by banks on deposits, lower interest rates on inter-bank taking, and bank borrowings.

The average ratio of EBL with regards to total interest paid to total working fund ratio is slightly lower than that of HBL i.e. 1.24%<2.11%. In terms of C.V., EBL ratios are more stable than that of HBL.

Overall, we can say that HBL is in a better position form interest payment point of view that EBL. HBL seems to have collected its funds from cheaper Source than EBL.

**Figure 15**  
**Total Interest Paid to Total Working Fund Ratio**



#### 4.1.4 Growth Ratios

Growth ratio measures the increment and decrement of present year's figure in comparison to previous year's figure. Growth rate analysis of the banks involves analysis of growth in deposits, loans, investments and net profit. The rate of growth is self explanatory for the performance of a bank. Growth analysis ascertains how much growth in deposit liability is supported by growth in assets. The analysis also concerns which asset portfolio has significant increment corresponding to the increment in deposit liability and investment policy.

**Table 16**  
**Growth Ratio of Total Deposit (Rs. in Millions)**

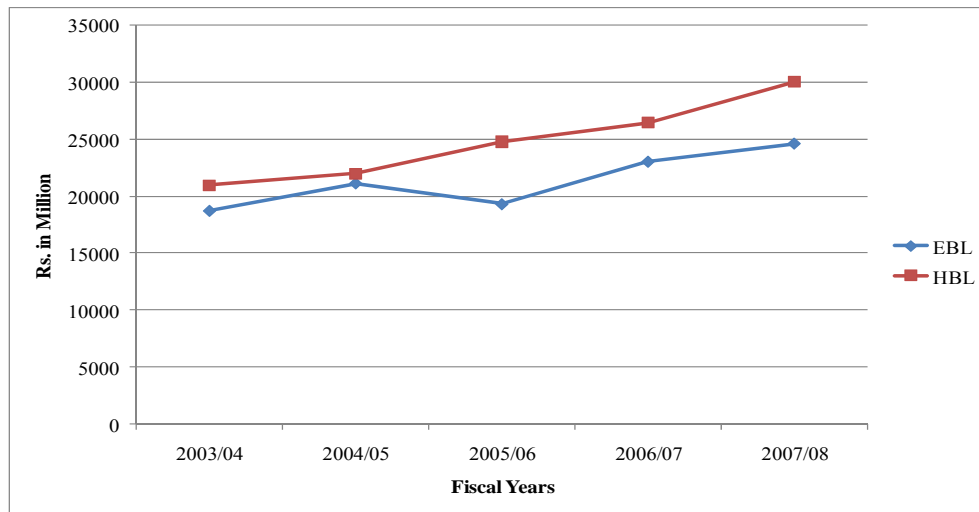
Fiscal Years	EBL	HBL
2003/04	18756	21007
2004/05	21161	22010
2005/06	19335	24814
2006/07	23061	26490
2007/08	24647	30048
<b>Growth Rates (%)</b>	<b>7.06%</b>	<b>9.36%</b>

Source: Appendix No. 1 (xvi)

The above table shows the growth rate of deposits of both the banks is in increasing trend. The average growth rate of deposits of HBL are significantly higher than EBL i.e. 9.36%>7.06%. This indicates EBL dismal performance in collecting more deposits.

On the contrary, HBL has been successful in increasing its deposit year after year. This is a solid proof of its high quality service, security, and credibility in the mind of depositors.

**Figure 16**  
**Growth Ratio of Total Deposit**



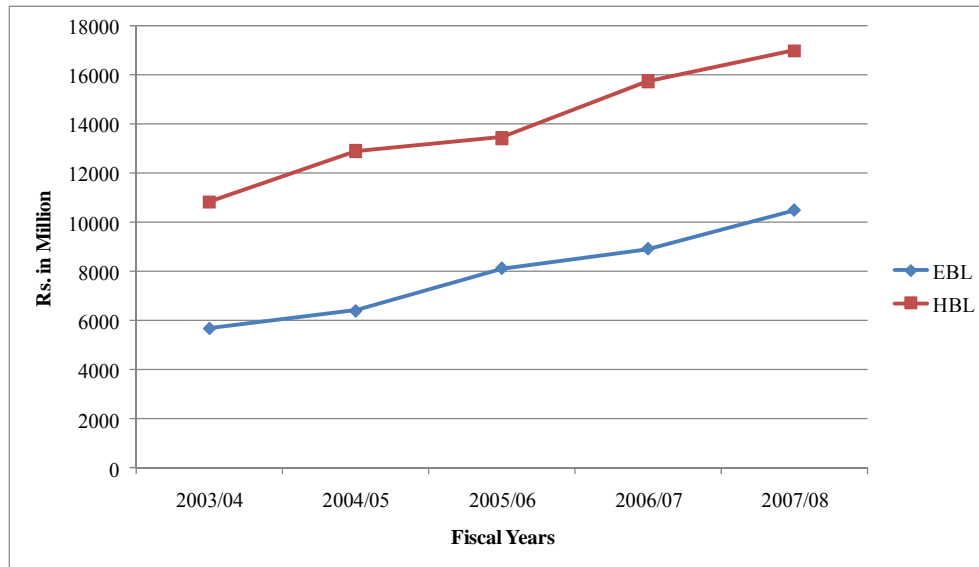
**Table 17**  
**Growth Ratio of Loan and Advances (Rs. in Millions)**

Fiscal Years	EBL	HBL
2003/04	5696	10845
2004/05	6410	12920
2005/06	8143	13451
2006/07	8935	15762
2007/08	10502	16998
<b>Growth Rates (%)</b>	<b>16.53%</b>	<b>13.18%</b>

Source: Appendix No. 1 (xvii)

The above table shows the growth rate of total loan and advances of both the banks are in increasing trend. The average growth rate of total loan and advances of EBL is better than HBL i.e. 16.53%>13.18%. This ratio can be misleading in the sense that the ratio of loan and advance to current assets, total deposits, and total working fund of HBL is comparatively less than that of EBL.

**Figure 17**  
**Growth Ratio of Loan and Advances**



**Table 18**  
**Growth Ratio of Total Investment (Rs. in Millions)**

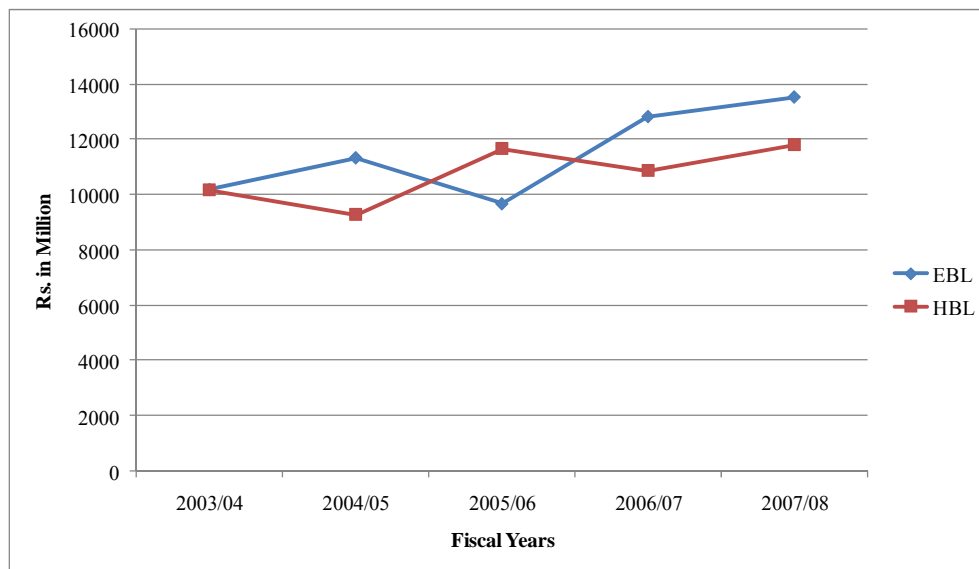
Fiscal Years	EBL	HBL
2003/04	10216	10175
2004/05	11360	9292
2005/06	9702	11692
2006/07	12847	10889
2007/08	13553	11823
<b>Growth Rates (%)</b>	<b>7.32%</b>	<b>3.82%</b>

Source: Appendix No. 1 (xviii)

The above table shows the growth rate of total investment of HBL is in a fluctuating trend but growth rate of total investment of EBL is in highly increasing trend except in FY 2005/06.

EBL has been successful in increasing its investment year after year. The average growth ratio of investment of EBL seems to be higher than HBL i.e., 7.32% > 3.82%. This is due to a massive growth in EBL investment. However, we must not discount the fact that EBL investment to total working fund is far greater than HBL.

**Figure 18**  
**Growth Ratio of Total Investment**



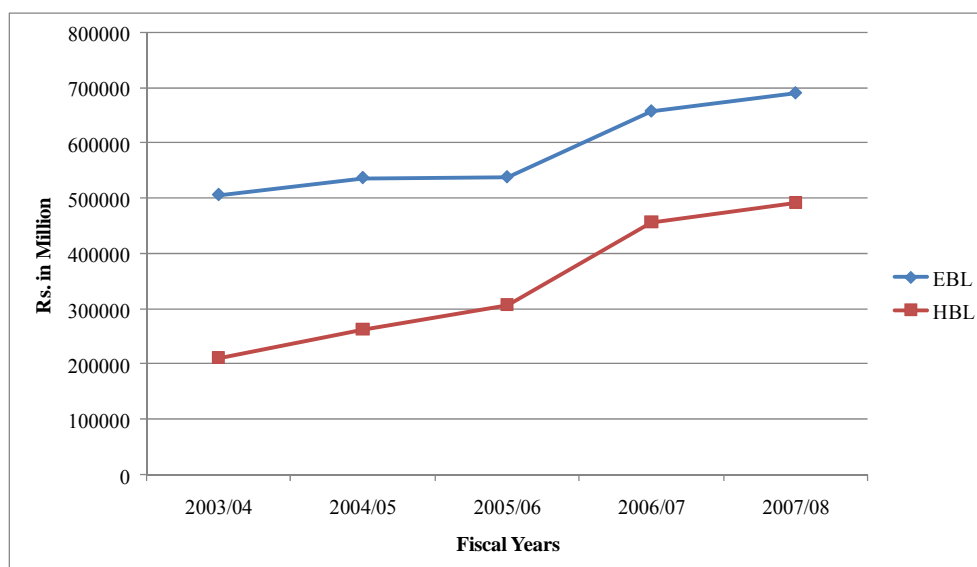
**Table 19**  
**Growth Ratio of Net Profit (Rs. in Millions)**

Fiscal Years	EBL	HBL
2003/04	506932	212132
2004/05	537800	263052
2005/06	539204	308277
2006/07	658756	457458
2007/08	691668	491823
<b>Growth Rates (%)</b>	<b>8.08%</b>	<b>23.43%</b>

Source: Appendix No. 1 (xix)

The above table shows the growth rate of net profit of both the banks has in increasing trend. The mean growth rate of HBL is higher than EBL i.e., 23.43% > 8.08%.

**Figure 19**  
**Growth Ratio of Net Profit**



## 4.2 Statistical Tools

### 4.2.1.1 Co-efficient of Correlation (r) Analysis:

Correlation analysis is the statistical tool that can be used to describe the degree to which one variable is linearly related to another. It interprets and identifies the relationship between two or more variables whether they are positively correlated or negatively correlated. This statistical tool helps to analyze the relationship between these variables and aids the selected banks to prepare appropriate investment policy relating to deposit collection, fund utilization (loan and advances and investment) and profit maximization.

This study attempts to find out relationship between the following variables:

- i) Co-efficient of co-relation between total deposit and loan and advances
- ii) Co-efficient of correlation between total deposit and total investment
- iii) Co-efficient of correlation between total outside assets and net profit

#### 4.2.1.2 Correlation between Total Deposit and Total Investment

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

The following table shows the value of  $r$ ,  $r^2$ , P.E. & 6P.E. of EBL and HBL during the study period.

**Table 20**  
**Correlation between Total Deposit and Total Investment**

Banks	Evaluation Criterion			
	$r$	$r^2$	P.E.	6 P.E.
EBL	0.9786	0.9576	0.0128	0.0768
HBL	0.7870	0.6194	0.1148	0.6889

Source: Appendix No. 2 (i)

The coefficient of correlation 'r' between total deposits and total investment in case of EBL is 0.9786, which indicates a positive correlation between deposits and total investment. Coefficient of determination ( $r^2$ ) is 0.9576. This means 95.76% of variation of the dependent variable has been explained by independent variable. The value of 'r' i.e. 0.9786 is also greater than six times P.E. This states that there exists a significant relationship between deposits and total investment.

The coefficient of correlation 'r' between total deposits and total investment in case of HBL is 0.7870, which indicates a positive relationship between the two variables. The coefficient of determination ( $r^2$ ) is 0.6194. This indicates that 61.94% of the variation of the dependent variable has been explained by independent variable. which further states that there is a significant relationship between deposits and total investment.

In conclusion, it can be said that both the banks show significant relationship between total deposits and total investment.



#### 4.2.1.3 Correlation between Total Deposit and Loan & Advances

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

The following table shows the value of r,  $r^2$ , P.E. and 6P.E. between total deposits and loan and advances of EBL and HBL during the study period.

**Table 21**  
**Correlation between Total Deposit and Loan & Advances**

Banks	Evaluation Criterion			
	r	$r^2$	P.E.	6 P.E.
EBL	0.8257	0.6818	0.0960	0.5758
HBL	0.9584	0.9185	0.0246	0.1476

Source: Appendix No. 2 (ii)

In the above table the coefficient of correlation between deposit and loan and advance in case of EBL is 0.8257. This indicates that there is a positive relationship between deposit and loan and advances. The calculated value of ( $r^2$ ) or coefficient of determination is 0.6818. This means 68.18% of variation of the dependent variable (loan and advances) has been explained by the independent variable (deposit). When the value of 'r' i.e., 0.8257 is compared with six times the probably error or 6P.E. i.e., 0.5758, we can say that there is significant relationship between deposits and loan advances because 'r' is greater than six times P.E. i.e.  $0.8257 > 0.5758$ . The coefficient of correlation V between deposits and loan and advances in case of HBL is 0.9584, which gives us an indication of higher positive correlation between them.

Similarly, the value of coefficient of determination ( $r^2$ ) is found to be 0.9185. This shows that 91.85% variation of dependent variable (loan and advances) has been explained by the independent variable (deposits). The value of 'r' is greater than six times P.E. i.e.  $0.9584 > 0.1476$ . This further shows that the value of 'r' is significant. In other words, there is significant relationship between deposit and loan and advances.

From the above analysis, we can conclude that both the banks show positive relationship between deposits and loan and advance. The relationship is highly significant in case of EBL and HBL and the value of ( $r^2$ ) shows higher percentage of dependency. Further, the increase in loan and advance is due to effective mobilization of deposits, and other factors have marginal role in increase in loan and advances.

#### 4.2.1.4 Correlation between Total Outside Assets and Net Profit

Coefficient of correlation 'r' between total outside asset and net profit measures the degree of relationship between these two variables. The main objective of calculating coefficient of correlation between outside asset and net profit is to justify whether the net profit is significantly correlated with total outside assets or not.

The following shows the value of r,  $r^2$ , P.E. & 6P.E. of EBL and HBL during the study period.

**Table 22**  
**Correlation between Total Outside Assets and Net Profit**

Banks	Evaluation Criterion			
	r	$r^2$	P.E.	6 P.E.
EBL	0.8308	0.6903	0.0934	0.5605
HBL	0.9565	0.9149	0.0257	0.1540

Source: Appendix No. 2 (iii)

The coefficient of correlation 'r' between total outside assets and net profit in case of EBL is 0.8308, which indicates a positive correlation between outside assets and net profit. Coefficient of determination ( $r^2$ ) is 0.6903. This means 69.03% of variation of the dependent variable has been explained by independent variable. The value of 'r' i.e. 0.8308 is also greater than six times P.E. This states that there exists a significant relationship between outside assets and net profit.

The coefficient of correlation 'r' between total outside assets and net profit in case of HBL is 0.9565, which indicates a positive relationship between the two variables. The value of  $r^2$  is 0.9149 which indicates that 91.49% of the variation of the dependent variable has been explained by independent variable. Moreover 'r' is greater than six times P.E., which further states that there is significant relationship between outside assets and net profit.

In conclusion, it can be said that both the banks show significant relationship between total outside assets and net profit.

#### 4.2.2 Trend Analysis

Trend analysis, present or future analysis, is utilized to see the movement of upward or downward by the help of given numerical values of some specified period of time. That time period may of five years, ten years etc.

Here, trend analysis of deposit, loan & advance, investment and net profit of the banks are done. The forecast is made for the next five years. These are based on the following assumptions:

- The main assumption is that other things are remaining the same.
- The forecast will be true only when a limitation of least square method is carried out.
- The bank will run is present position.
- The economy will remains in the present stage.
- Nepal Rastra Bank will not change its guideline to commercial Banks.

##### 4.2.2.1 Analysis of Trend Value on Total Deposit

Under this topic, an effort has been made to calculate the trend values of total deposit of EBL and HBL for five years from F/Y 2003/04 to 2007/08 and forecast for next five years till F/Y 2012/13. This following table shows the trend values of 10 years from 2003/04 to 2012/13.

**Table 23**  
**Trend Values of Total Deposit of EBL and HBL**

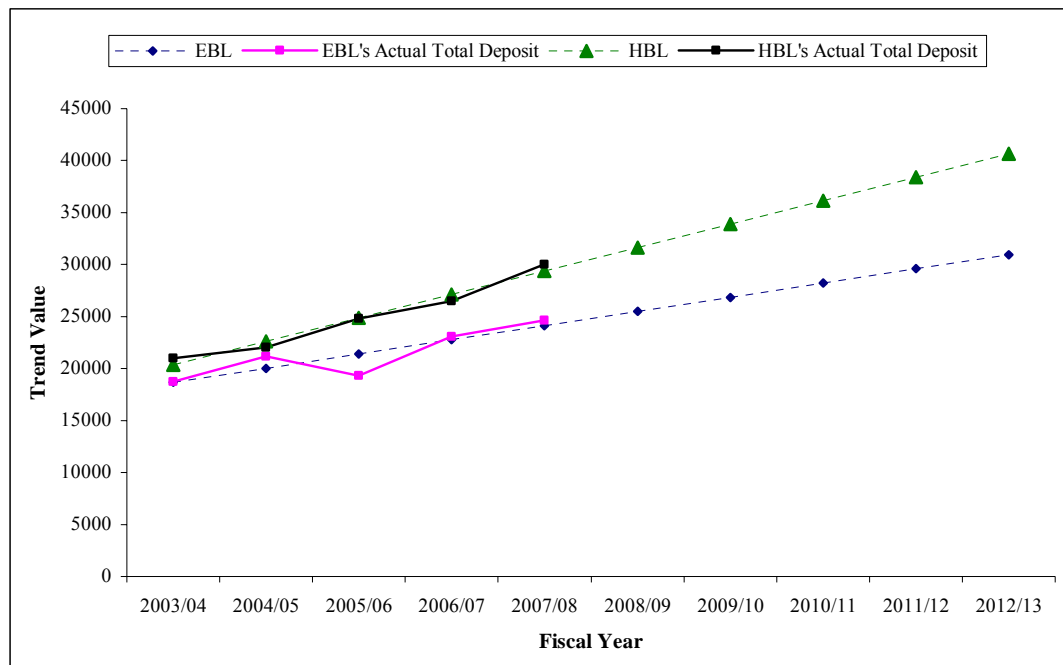
*Rs. in Million*

Years	EBL		HBL	
	Trend Value	Actual Value	Trend Value	Actual Value
2003/04	18655.6	18756	20361.68	21007
2004/05	20023.8	21161	22618.54	22010
2005/06	21392	19335	24875.40	24814
2006/07	22760.2	23061	27132.26	26491
2007/08	24128.4	24647	29389.12	30048
2008/09	25496.6		31645.98	
2009/10	26864.8		33902.84	
2010/11	28233		36159.70	
2011/12	29601		38416.56	
2012/13	30969.4		40673.42	

Source: Appendix No.3 (i & ii)

From the above comparative table it is clear that a trend value of EBL is in an increasing trend. If other things remained constant the total deposit of EBL is predicted to be Rs. 30969.4 million and that of HBL to be less than deposit of EBL by the end of F/Y 2012/2013 i.e. Rs. 40673.42 million. It also shows that EBL deposit collection is proportionately much better than HBL from F/Y 2002/2003 onwards. The trend values of total deposit of both EBL and HBL are fitted in the trend lines given in figure no. 20.

**Figure 20**  
**Trend Values of Total Deposit of EBL and HBL**



#### 4.2.2.2 Analysis of Trend Value on Loan & Advances

Under this topic, an effort has been made to calculate the trend values of loan & advances of EBL and HBL for five years from F/Y 2003/04 to 2007/08 and forecast for next five years till F/Y 2012/13. Table 24 shows the trend values of 10 years from 2003/04 to 2012/13.

**Table 24**  
**Trend Values of Loan & Advances of EBL and HBL**

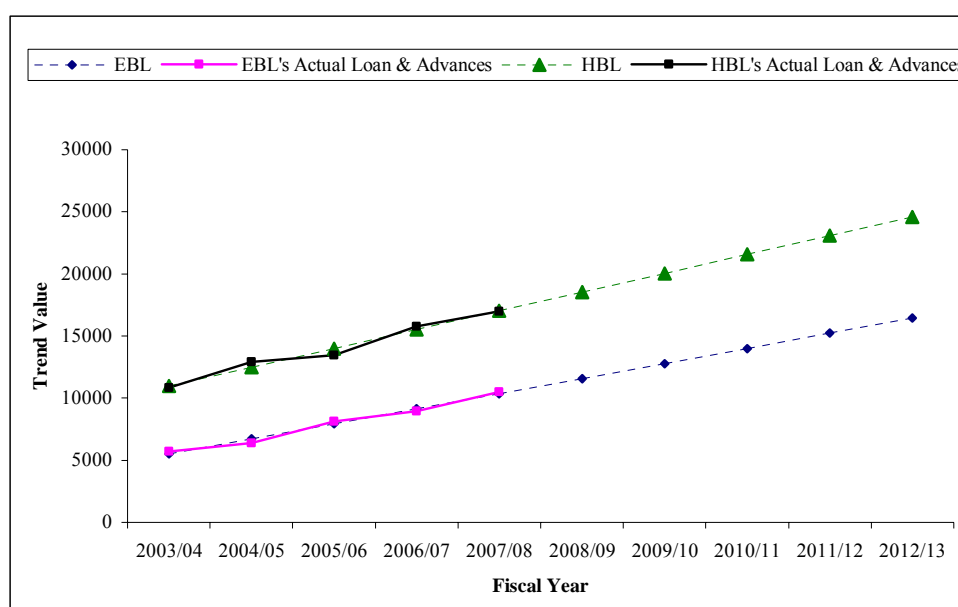
*Rs. in Million*

Years	EBL		HBL	
	Trend Value	Actual Value	Trend Value	Actual Value
2003/04	5509.6	5696	10965.60	10845
2004/05	6723.5	6410	12480.40	12920
2005/06	7937.4	8143	13995.20	13451
2006/07	9151.3	8935	15510.00	15762
2007/08	10365.2	10503	17024.80	16998
2008/09	11579.1		18539.60	
2009/10	12793		20054.40	
2010/11	14006.9		21569.20	
2011/12	15220.8		23084.00	
2012/13	16434.7		24598.80	

Source: Appendix No.3 (iii & iv)

The above table clearly shows that the loan and advance of both the banks are in an increasing trend. Assuming that other things will remain constant, the loan and advances of EBL at the end of F/Y 2012/2013 is predicted to be Rs. 16434.7 million. Similarly, the projection for HBL at the end of F/Y 2012/2013 is Rs 24598.80 million. The trend analysis shows that HBL's loan & advances in relation to EBL is comparatively higher throughout the trend projection period which has been shown in Figure 21.

**Figure 21**  
**Trend Values of Loan & Advances of EBL and HBL**



#### 4.2.2.3 Analysis of Trend Value of Total Investment

Under this topic, an attempt has been made to analyze total investment of EBL and HBL for five years i.e. F/Y 2003/04 to 2007/08 and forecast is made for next five years till F/Y 2012/13.

**Table 25**  
**Trend Values of Total Investment of EBL and HBL**

*Rs. in Million*

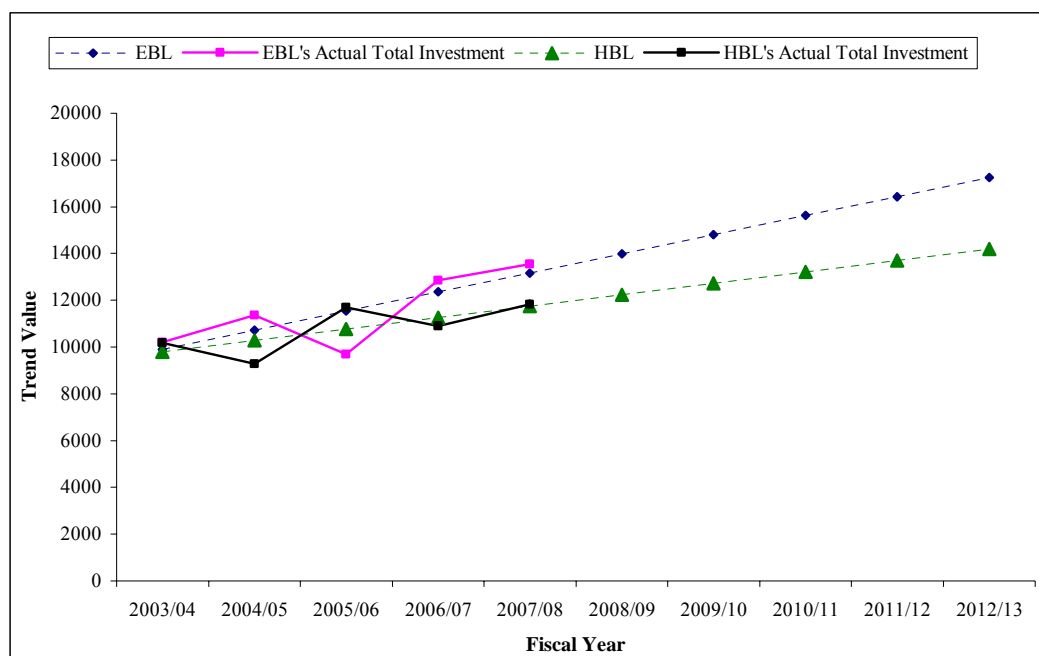
Years	EBL		HBL	
	Trend Value	Actual Value	Trend Value	Actual Value
2003/04	9903.60	10216	9795.60	10175
2004/05	10719.80	11360	10284.90	9292
2005/06	11536.00	9703	10774.20	11692
2006/07	12352.20	12848	11263.50	10889
2007/08	13168.40	13553	11752.80	11823
2008/09	13984.60		12242.10	
2009/10	14800.80		12731.40	
2010/11	15617.00		13220.70	
2011/12	16433.20		13710.00	
2012/13	17249.40		14199.30	

Source: Appendix No.3 (v & vi)

From the above table it is clear that the trend value of both the banks are in an increasing trend. If other things remain uncharged total investment of EBL is predicted to be Rs. 15617 in F/Y 2012/2013 and that of HBL to be Rs. 13220.70 million. These values are highest under the review period.

The above table reveals that EBL total investment is higher than that of HBL throughout the trend projection period. It can be said that both EBL and HBL have followed the policy of maximizing their investment. The above calculated trend values of EBL and HBL are fitted in the trend line given in figure.

**Figure 22**  
**Trend Values of Total Investment of EBL and HBL**



#### 4.2.2.4 Analysis of Trend Value of Net Profit

Under this, an attempt has been made to analyze net profit of EBL and HBL for 5 years i.e. F/Y 2003/04 to 2007/08 and forecast is made for next five years till F/Y 2012/13.

**Table 26**  
**Trend Values of Net Profit of EBL and HBL**

*Rs. in Million*

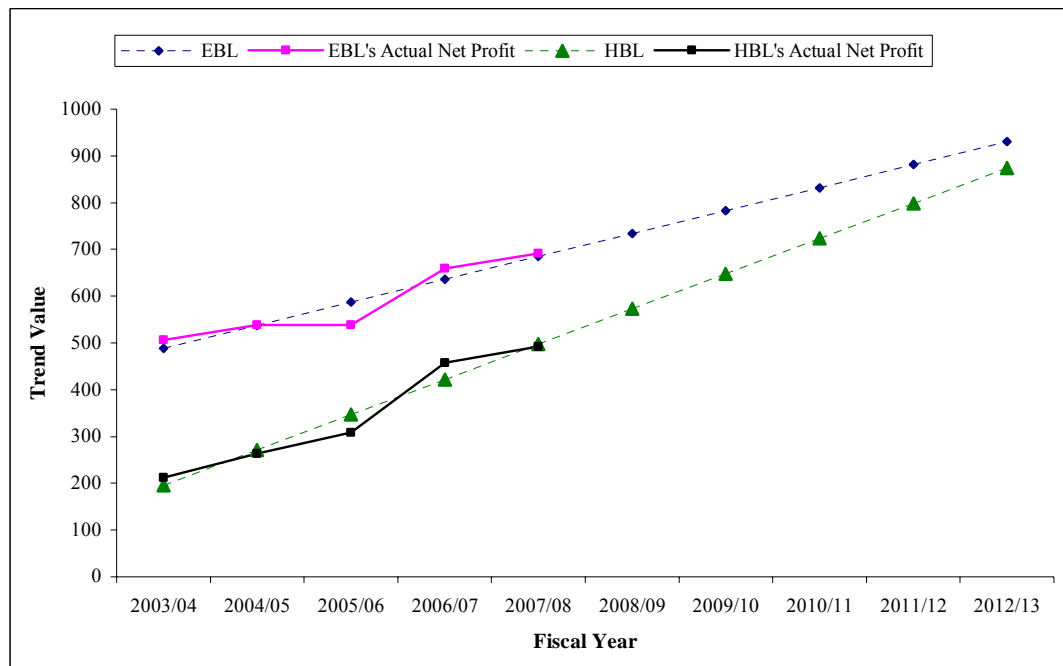
Years	EBL		HBL	
	Trend Value	Actual Value	Trend Value	Actual Value
2003/04	488.79	507	195.79	212
2004/05	537.83	538	271.17	263
2005/06	586.87	539	346.55	308
2006/07	635.91	659	421.93	457
2007/08	684.95	692	497.31	492
2008/09	733.99		572.69	
2009/10	783.03		648.07	
2010/11	832.07		723.45	
2011/12	881.11		798.83	
2012/13	930.15		874.21	

Source: Appendix No.3 (vii & viii)

From the above comparative table it is clear that the trend value of net profit of both the banks are in increasing trend. Other things remaining the same the trend value of both the banks are in increasing trend. The trend value of EBL will be highest in F/Y 2012/2013 i.e. Rs. 930.15 million. In case of HBL net profit will be Rs 874.21 million in F/Y 2012/2013, which is the highest under the review period.

EBL's net profit is higher than that of HBL through the review period. It can be said that both the banks have followed the policy of maximizing their net profit. However, we can draw a conclusion that EBL has utilized its fund better than HBL to earn higher amounts of profit. The above calculated trend values of net profit of EBL and HBL are fitted in the trend line given in figure.

**Figure 23**  
**Trend Values of Net Profit of EBL and HBL**





### **4.3 Major Findings of the Study**

Having completed the basic analysis required for this study, the final and the most important task of the researcher is to enlist the findings. This will give meaning to the desired result. A comprehensive summary of the major findings of this study is presented below.

The main findings of the study derived from the analysis of financial data of EBL and HBL are given below.

#### **Liquidity Ratio**

The liquidity position of EBL and HBL reveals that:

- From the analysis of current ratio it is found that the mean ratio of HBL is slightly higher than EBL. The ratio of HBL is consistent. The mean current ratio of HBL is greater than 1 and EBL mean current ratio is less than 1.
- The mean ratio of cash and bank balance to current assets of HBL is slightly higher than EBL. This shows HBL greater capacity to meet its customer's daily cash requirement than EBL. The ratios of EBL are less variable and more consistent than HBL.
- The mean ratio of cash and bank balance to total deposits of HBL is slightly higher than EBL. HBL has better liquidity position than EBL because of high percentage of liquid assets. This shows HBL readiness to meet its customer requirement. On the contrary, a high liquidity also indicates the ability of the bank to mobilize its current assets. The ratios of EBL are more consistent than HBL.
- The mean ratio of investment in government securities to current assets of EBL is higher than HBL. This shows that EBL has invested more of its fund in government securities than HBL. The ratios of EBL are less variable and more consistent than HBL.

From the above findings, we can conclude that the liquidity position of HBL is comparatively better than EBL. It has the highest cash and bank balance to total deposit, cash and bank balance to current assets. HBL is in a better position to meet its daily cash requirement. HBL has a higher current ratio, which justifies that it is also capable enough to meet its current obligations. EBL mean investment in government securities is better than HBL. The higher degree of variability in investment in government securities of EBL during the study period shows lack of concrete policy of the bank in this regard.

### **Asset Management Ratio**

The asset management ratio of EBL and HBL reveals that:

- The mean ratio of loan and advances to total deposit ratio of HBL is higher than EBL. In terms of consistency both have been stable in their ratios.
- The mean ratio of total investment to total deposits of EBL is higher than HBL. The ratios of EBL are more consistent and less variable than HBL.
- The mean ratio of loan and advances to fixed deposit of EBL is higher than HBL. The ratios of EBL are less variable and more consistent than HBL.
- HBL has been more successful in identifying profitable investment sectors and increasing its earning. The same does not hold true for EBL, whose efforts seems to be more focused on investing in risk free assets, rather than increasing its loan and advances volume and subsequent earnings from it.
- HBL has a higher fixed deposit to total deposit ratio than EBL. HBL has the maximum fixed charge bearing deposit than EBL. From viewpoint of cost minimizing more is not favorable other hand, from viewpoint of liquidity greater portion of fixed deposit may be termed as favorable one.

EBL has a higher saving deposit to total deposit ratio than HBL. If the total deposit of EBL is 1 then saving deposit will be 61.92. The average saving deposit to total deposit ratios of EBL and HBL are 61.92 and 52.91. It clearly states that EBL has the maximum saving charge bearing deposit than HBL. From viewpoint of cost minimizing more is not favorable other hand, from viewpoint of liquidity greater portion of saving deposit may be termed as favorable one.

From the above findings we can conclude that HBL has been more successful in mobilization of its investment to total deposits, saving deposit to total deposit ratio. On the other hand, EBL appears to be stronger in mobilization of total investment to total deposits. Both the banks have successfully managed their assets towards different income generation activities.

### **Profitability Ratios**

The profitability ratios of EBL and HBL reveal that,

- The mean ratio of return on total working fund of EBL is slightly higher than HBL. The ratios of EBL are less consistent and more variable than HBL.
- The mean ratio of total interest earned to total working fund of EBL is higher than HBL. EBL ratios are more stable and less variable than HBL.
- The mean ratio of return on total loan and advances of EBL has been found to be significantly greater than HBL. The ratios of EBL are less variable and more consistent than HBL.
- The mean ratio of total interest earned to total outside assets of HBL is higher than EBL. The ratios of EBL are more consistent than HBL.
- The mean ratio of total interest paid to total working fund ratio of EBL is lower than HBL. However, HBL ratios are more variable than EBL ratios.

On the basis of above, we can conclude that EBL has been more successful in maintaining its higher return on loan and advances and total working fund. On the other hand, HBL has been more successful in term of earning power with respect to total working fund. HBL has been more successful in mobilization of its funds in interest bearing assets to earn higher total outside assets than EBL. HBL is in a better position than EBL from interest payment point of view. HBL has paid higher interest than EBL, whereas the latter seems to have collected its funds from cheaper Source than HBL.

## **Growth Ratios**

The growth ratio of EBL and HBL reveals that,

- The average growth rate of deposits of HBL are significantly higher than EBL
- EBL ratios were highly variable than HBL. The growth rate of total loan and advances of both the banks are in increasing trend. The average growth rate of total loan and advances of EBL is better than HBL
- The growth rate of total investment of HBL is in a fluctuating trend but growth rate of total investment of EBL is in highly increasing trend except in FY 2005/06.
- The growth rate of net profit of both the banks has in increasing trend. The mean growth rate of HBL is higher than EBL i.e.,  $23.43\% > 8.08\%$ .

This ratio can be misleading in the sense that the ratio of loan and advance to current assets, total deposits, and total working fund of HBL is comparatively less than that of EBL.

## **Co-efficient of Correlation Analysis**

Co-efficient of correlation analysis between different variables of EBL and HBL reveals that;

- The co-efficient of correlation between deposits and total investment of HBL is slightly higher than EBL.
- HBL is slightly higher than EBL of coefficient of correlation between deposits and loan and advances.
- The co-efficient of correlation between total outside assets and net profit HBL of is slightly higher than EBL

In conclusion, we can say that there is a significant relationship between deposit and total investment, total deposit and loan & advances and total outside assets and net profit in case of EBL. In case of HBL, there exists a significant relationship between deposits and total investment, deposit and loan and advances and total outside assets and net profit.

### **Trend Analysis and Projection for Next Five Years**

The trend analysis of deposits, loan and advances, total investment and net profit and its projection for next five years of EBL and HBL reveals that:

- The deposits of both the banks have an increasing trend. The total deposit of EBL is predicted to be Rs. 116537.91 million and that of HBL to be Rs. 40673.42 million at the end of F/Y 2012/2013. The deposit collection of EBL is much better than HBL.
- The loan and advance of both the banks have an increasing trend. The total loan and advance of EBL is predicted to be Rs. 164346.26 million and that of HBL to be Rs. 245991.52 million at the end of F/Y 2012/2013. The loan and advances of HBL is much better compared to EBL.
- The total investments of both the bank have an increasing trend. The total investment of EBL is projected at Rs. 18044.78 million and that of HBL at Rs. 14198.78 million by the end of F/Y 2012/2013. EBL seems to have a much-focused policy with regards to total investment than HBL.
- The net profits of both the banks are in an increasing trend. The net profit of EBL and HBL is predicted at Rs. 930.15 million and Rs. 874.21 million respectively by the end of F/Y 2012/2013. The position of EBL with regard to utilization of the fund to earn profit is better than HBL.

## **Chapter - V**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

This chapter is an accomplished specific and indicative enclose which contains summary and conclusion of finding and recommendations. Brief introduction to all chapters of the study and genuine information of the present situation under the topic of the study is defined on summary. Conclusions are analysis of applicable data by using various financial and statistical tools, which presents strengths, weakness, opportunities and threats of the CBs. And suggestions are obtainable in recommendation, which is arranged on the based from finding and conclusions.

#### **5.1 Summary**

The development of any country depends upon its economic development. Economic development demands transformation of savings or invertible resources into the actual investment formation is the prerequisite in setting the overall pace of the development of a country. It is the financial institutions that transfer funds from surplus spending units to deficit units.

The evolution of the organized financial system in Nepal has a more recent history than in other countries of the world. In Nepalese content, the history of development of modern banks started from the establishment of Nepal bank limited in 1937 A.D. Nowadays there are 21 CBs operating in Nepal financial market which is in increasing due to the country moved towards economic liberalization, financial scenario has changed, and foreign banks were invited to operate in Nepal. For the better performance of CBs, successful formulation & effective implementation of investment policy is the prime requisite. Nowadays there is a very high competition in the banking industries but very less opportunity to make investment. The opportunities are hidden. Thus these CBs should take initiative action in search of the new opportunities. So that, they can easily survive in this competitive banking business world & earn profit. A bank manager its investment has a lot to do with the economic health of the country because the bank loans support the growth of new business & trade empowering the economic activities of the country.

Banking sector plays an important role in the economic development of the country. Commercial banks are one of the vital aspects of this sector which deals in the process of channeling the available resources in the needed sector. It plays the role of agent between the deficit and surplus of financial resources. Financial institutions like banks are a necessity to collect scattered saving and put them into productive channels. In the absence of such institution it is possible that the saving will not be safely and profitably utilized within the economy. It will be diverted abroad into unproductive sectors.

The primary objectives of the study is to analyze the overall performance of EBL and HBL, however other objectives are to examine the overall performance of EBL and HBL in terms of liquidity, activity, profitability, leverage and capital adequacy ratio, to study the achievement of EBL and HBL, to evaluate the effectiveness of collection of deposit and their utilization to examine the causes of gap existing between deposits and loan, investment etc, to provide suggestion and recommendation for the improvement of future performance and maximum utilization of deposit.

At last but not least we can conclude that financial analysis is done to determine the banks financial position in order to identify its current strength and weaknesses and to suggestion that might enable the firm to take advantage of its strengths and correct its weaknesses. The study is about the financial performance of the EBL and HBL based on its financial data of five years. By using financial and statistical tools, the overall financial performance of the bank has tried to analyze. The various ratios have revealed the financial condition of the bank over the five years. Income and expenditure analysis has showed the percentage share of each income and expenses head. Correlation analysis helps to establish the relationship between two variables which can be useful to know how one variable affect the another variable. Likewise trend analysis is used to find out the trend of some very important elements like total deposit, loan and advance, net profit, net worth, EBL and HBL and investment on the basis of the past data of the bank. This can be used in predicting the value of these elements.

Analyzing the credit sector and the bank guarantee, the bank is trying to avoid unnecessary risk, thus categorizing itself as risk avert bank. By mobilizing its funds more in loans and advances, the bank could have increased its profit. But from the tabulated figures, it is evident that EBL and HBL had preferred to invest in secured sectors like

government securities and shares and debentures than in lending. From which various findings have shown in above chapter from that finding conclusion have been drawn which are presented as below.

## **5.2 Conclusion**

This study reveals that the current ratio of HBL is greater than 1 and EBL current ratio is less than 1, which should be considered satisfactory for HBL but not satisfactory for EBL. The liquidity position of HBL is better than EBL. The cash and bank balance of HBL with respect to deposits is greater than EBL. This puts, HBL in a better position with respect to meeting customer requirement than EBL. In contrast, a high ratio of non-earning cash and bank balance is an indication of bank's unavailability to invest its fund in income generation areas. The cash and bank balance of HBL with respect to current assets is higher than EBL. This shows greater capacity of HBL to meet its customer's cash requirement but that does not mean EBL cannot meet its daily customer cash requirement. HBL needs to invest its funds in more productive sectors. EBL mean investment in government securities is better than HBL. The higher degree of variability in investment in government securities of EBL during the study period shows lack of concrete policy of the bank in this regard.

HBL has been more successful in mobilization of its investment to total deposits, saving deposit to total deposit ratio. On the other hand, EBL appears to be stronger in mobilization of total investment to total deposits. Both the banks have successfully managed their assets towards different income generation activities.

EBL has been more successful in maintaining its higher return on loan and advances and total working fund. On the other hand, HBL has been more successful in term of earning power with respect to total working fund. HBL has been more successful in mobilization of its funds in interest bearing assets to earn higher total outside assets than EBL. HBL is in a better position than EBL from interest payment point of view. HBL has paid higher interest than EBL, whereas the latter seems to have collected its funds from cheaper sources than HBL.



The average growth rate of deposits of HBL is significantly higher than EBL. EBL ratios were highly variable than HBL. The growth rate of total loan and advances of both the banks are in increasing trend. The average growth rate of total loan and advances of EBL is better than HBL. The growth rate of total investment of HBL is in a fluctuating trend but growth rate of total investment of EBL is in highly increasing trend except in FY 2004/05. The growth rate of net profit of both the banks has in increasing trend. The mean growth rate of HBL is higher than EBL i.e.,  $23.43\% > 8.08\%$ . This ratio can be misleading in the sense that the ratio of loan and advance to current assets, total deposits, and total working fund of HBL is comparatively less than that of EBL.

There is a significant relationship between deposit and total investment, total deposit and loan & advances and total outside assets and net profit in case of EBL. In case of HBL, there exists a significant relationship between deposits and total investment, deposit and loan and advances and total outside assets and net profit.

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

### **5.3 Recommendation**

On the basis of analysis, findings, following recommendations are made. The banks can make use of these recommendations to overcome their weakness, inefficiency and improve their present fund mobilization and their overall financial analysis.

- Current ratio of the bank is found below the standard. So it is recommended that the bank should increase the current assets to meet the short-term obligation of the bank. Otherwise, there may arise question to the creditworthiness of the bank at any point of time.
- Cash and bank balance of total deposit ratio of the bank were fluctuation order. Since it is the most liquid assets some provisions regarding on this should be made to have consistency. It is recommended to have moderate level of cash and bank balance to meet unanticipated calls on current Savings call and other deposits.

- The proportion of saving deposit to the total deposit is very low. It is recommended to increase the saving deposits of the bank to moderate the risk and return in the current situation.
- The banks should be very careful in increasing profit in a real sense to maintain the confidence of shareholders, depositors and its all customers. HBL is strongly recommended to gain highest profit margin. Also it should reduce its expense. Profitability position of EBL is satisfactory and should try to maximize it.
- The main source of commercial banks is collecting deposit from public who don't need that fund recently. So, it is recommended to collect more amounts as deposits through large variety of deposits schemes and facilities, like cumulative deposit scheme, prize bonds scheme, gift, cheques scheme, recurring deposit scheme (life insurance), monthly interest scheme, house building scheme, direct finance housing scheme, education loan scheme and many others.
- It is recommended to adopt innovative approach to marketing. In the light of growing competition in the banking sector, the business of the bank should be customer oriented. It should strength and activates its marketing function as it is an effectively tools to attract and retain the customers for the purpose, the bank should develop an innovative approach to bank marketing and formulate new strategies of serving customers in a more convenient and satisfactory way be optimally utilizing the modern technology and offering new facilities to the customers at competitive prices. The bank is also required to explore the new market areas. For this purpose, it is recommended to form a strong marketing department in its central level, which deals with the banking products, places, prices and promotion.
- Integrated and speedy development of the country is possible only when competitive banking services reaches nooks and corners of the country. EBL and HBL have shown not more interest to open branches in rural areas. Both the banks are recommended to expand their branches and banking services and facilities in rural areas and communities to accelerate their economic development. NRB should implement policies to encourage banks, which provide extensive services while disincentive sings those who are not responsive to the banking needs of the community, including the underprivileged.

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## Appendix 1: Ratio Analysis

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### (i) Current Ratio (Times)

#### EBL

Fiscal Year	2003/04	2004/05	2005/06	2006/07	2007/08
Current Assets	17084	20093	19322	21472	22025
Current Liabilities	17594	20740	18895	21888	23283
<b>Ratio</b>	<b>0.971</b>	<b>0.9688</b>	<b>1.0226</b>	<b>0.981</b>	<b>0.946</b>

#### HBL

Fiscal Year	2003/04	2004/05	2005/06	2006/07	2007/08
Current Assets	16297	18602	21326	23153	27776
Current Liabilities	19083	18733	19423	20991	19209
<b>Ratio</b>	<b>0.854</b>	<b>0.993</b>	<b>1.098</b>	<b>1.103</b>	<b>1.446</b>

### (ii) Cash and Bank balance to Total Deposit Ratio (%)

#### EBL

Fiscal Year	2003/04	2004/05	2005/06	2006/07	2007/08
Cash & Bank Balance	1512	2023	1111	1276	2021
Total Deposit	18756	21161	19335	23061	24647
<b>Ratio</b>	<b>8.06</b>	<b>9.56</b>	<b>5.75</b>	<b>5.53</b>	<b>8.21</b>

#### HBL

Fiscal Year	2003/04	2004/05	2005/06	2006/07	2007/08
Current Assets	1979	2001	2014	1717	1757
Current Liabilities	21007	22010	24814	26491	30048
<b>Ratio</b>	<b>9.42</b>	<b>9.092</b>	<b>8.12</b>	<b>6.84</b>	<b>5.85</b>

### (iii) : Cash and Bank Balance to Current Assets Ratio (%)

#### EBL

Fiscal Year	2003/04	2004/05	2005/06	2006/07	2007/08
Cash & Bank Balance	1512	2023	1111	1276	2021
Current Assets	17084	20094	19323	21472	22026
<b>Ratio</b>	<b>8.85</b>	<b>10.07</b>	<b>5.529</b>	<b>5.94</b>	<b>9.18</b>

**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Cash & Bank Balance	1979	2001	2014	1717	1758
Current Assets	16297	18602	21326	23153	27776
<b>Ratio</b>	<b>12.14</b>	<b>10.76</b>	<b>9.45</b>	<b>7.42</b>	<b>6.33</b>

**(iv) Investment on Government Securities to Current Assets Ratio (%)****EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Investment on Govt. Securities	6581	7948	7203	8636	7108
Current Assets	1708	20094	19323	21472	22026
<b>Ratio</b>	<b>38.52</b>	<b>39.56</b>	<b>37.28</b>	<b>40.22</b>	<b>32.27</b>

**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Investment on Govt. Securities	3347	3432	5470	5144	6455
Current Assets	16297	18602	21326	23153	27775
<b>Ratio</b>	<b>20.54</b>	<b>18.45</b>	<b>25.65</b>	<b>22.22</b>	<b>23.24</b>

**(v) Loan and Advances to Total Deposit Ratio (%)****EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Loan and Advances	5696	6410	8143	8935	10503
Total Deposit	18756	21161	19335	23061	24647
<b>Ratio</b>	<b>30.36</b>	<b>30.30</b>	<b>42.12</b>	<b>38.75</b>	<b>42.61</b>

**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Loan and Advances	10845	12920	13451	15762	16998
Total Deposit	21007	22010	24814	26491	30048
<b>Ratio</b>	<b>51.62</b>	<b>58.70</b>	<b>54.21</b>	<b>59.50</b>	<b>56.57</b>

**(vi) : Total Investment to Total Deposit Ratio (%)**

**EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Total Investment	10216	11360	9703	12848	13553
Total Deposit	18756	21161	19335	23061	24647
<b>Ratio</b>	<b>54.47</b>	<b>53.68</b>	<b>50.18</b>	<b>55.71</b>	<b>55.10</b>

**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Total Investment	10175	9292	11692	10889	11823
Total Deposit	21007	22010	24814	26497	30048
<b>Ratio</b>	<b>48.44</b>	<b>42.22</b>	<b>47.20</b>	<b>41.10</b>	<b>39.35</b>

**(vii) : Loan and Advances to Fixed Deposit Ratio**

**EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Loan and Advances	5696	6410	8143	8935	10503
Fixed Deposit	1949	1428	1416	2136	3196
<b>Ratio</b>	<b>2.92</b>	<b>4.49</b>	<b>5.75</b>	<b>4.18</b>	<b>3.29</b>

**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Loan and Advances	10845	12920	13451	15762	16998
Fixed Deposit	3205	4710	6107	6350	8201
<b>Ratio</b>	<b>3.38</b>	<b>2.74</b>	<b>2.20</b>	<b>2.48</b>	<b>2.07</b>

**(viii) : Loan and Advances to Saving Deposit Ratio**

**EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Loan and Advances	5696	6410	8143	8935	10503
Saving Deposit	10633	12772	13031	14598	15244
<b>Ratio</b>	<b>0.54</b>	<b>0.50</b>	<b>0.62</b>	<b>0.61</b>	<b>0.69</b>



**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Loan and Advances	10845	12920	13451	15762	16998
Saving Deposit	10871	11760	12852	14583	15785
<b>Ratio</b>	<b>1.00</b>	<b>1.10</b>	<b>1.05</b>	<b>1.08</b>	<b>1.08</b>

**(ix): Fixed Deposit to Total Deposit Ratio (%)****EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Fixed Deposit	1949	1428	1416	2136	3196
Total Deposit	18756	21161	19335	23061	24647
<b>Ratio</b>	<b>10.39</b>	<b>6.75</b>	<b>7.33</b>	<b>9.26</b>	<b>12.97</b>

**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Fixed Deposit	3205	4710	6107	6350	8201
Total Deposit	21007	22010	24814	26497	30048
<b>Ratio</b>	<b>15.26</b>	<b>21.40</b>	<b>24.61</b>	<b>23.97</b>	<b>27.29</b>

**(x): Saving Deposit to Total Deposit Ratio (%)****EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Saving Deposit	10633	12772	13031	14598	15244
Total Deposit	18756	21161	19335	23061	24647
<b>Ratio</b>	<b>56.69</b>	<b>60.35</b>	<b>67.40</b>	<b>63.30</b>	<b>61.85</b>

**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Saving Deposit	10871	11760	12852	14583	15785
Total Deposit	21007	22010	24814	26497	30048
<b>Ratio</b>	<b>51.75</b>	<b>53.43</b>	<b>51.79</b>	<b>55.05</b>	<b>52.53</b>

**(xi): Return Total Working Fund Ratio (%)**

**EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Net Profit	507	538	539	659	692
Total Working Fund	20911	23642	21894	25776	28597
<b>Ratio</b>	<b>2.424</b>	<b>2.27</b>	<b>2.46</b>	<b>2.55</b>	<b>2.42</b>

**HLB**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Net Profit	212	263	308	457	492
Total Working Fund	24198	25730	28871	30580	34316
<b>Ratio</b>	<b>0.88</b>	<b>1.02</b>	<b>1.06</b>	<b>1.50</b>	<b>1.43</b>

**(xii) Total Interest Earned to Total Outside Assets Ratio (%)**

**EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Total Interest Earned	1001	1042	1059	1190	1412
Total Outside Assets	6722	17771	17846	21783	24056
<b>Ratio</b>	<b>14.90</b>	<b>5.86</b>	<b>5.93</b>	<b>5.46</b>	<b>5.87</b>

**HLB**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Total Interest Earned	1201	1246	1446	1626	1776
Total Outside Assets	21020	22212	25144	26651	29617
<b>Ratio</b>	<b>5.71</b>	<b>5.61</b>	<b>5.75</b>	<b>6.10</b>	<b>6.10</b>

**(xiii) Return on Loan and Advances (%)**

**EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Net Profit	507	538	539	659	692
Loan and Advances	5696	6410	8143	8935	10503
<b>Ratio</b>	<b>8.9</b>	<b>8.41</b>	<b>6.62</b>	<b>7.37</b>	<b>6.6</b>

**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Net Profit	212	263	308	457	492
Loan and Advances	10845	12920	13451	15762	16998
<b>Ratio</b>	<b>1.96</b>	<b>2.03</b>	<b>2.30</b>	<b>2.90</b>	<b>2.89</b>

**(xiv) Total Interest Earned to Total Working Fund Ratio (%)****EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Total Interest Earned	1001	1042	1059	1190	1412
Total Working Fund	20911	23642	21894	25776	28597
<b>Ratio</b>	<b>4.81</b>	<b>4.41</b>	<b>4.83</b>	<b>4.61</b>	<b>4.94</b>

**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Total Interest Earned	1201	1246	1446	1626	1776
Total Working Fund	24198	25730	28871	30580	34316
<b>Ratio</b>	<b>4.96</b>	<b>4.84</b>	<b>5.01</b>	<b>5.32</b>	<b>5.17</b>

**(xv) Total Interest Paid to Total Working Fund Ratio (%)****EBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Total Interest Paid	255	276	254	303	413
Total Working Fund	20911	23642	21894	25776	28597
<b>Ratio</b>	<b>1.22</b>	<b>1.2</b>	<b>1.16</b>	<b>1.20</b>	<b>1.44</b>

**HBL**

<b>Fiscal Year</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
Total Interest Paid	554	492	562	649	167
Total Working Fund	24198	25730	28871	30580	34316
<b>Ratio</b>	<b>2.31</b>	<b>1.91</b>	<b>1.95</b>	<b>2.12</b>	<b>2.24</b>

## Growth Rate

As per the formulae,

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

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

Where,

$D_n$  = Total amount in  $n^{\text{th}}$  year

$D_0$  = Total amount in initial year

$g$  = Growth rate

$n$  = Total Number of Year

### (xvi) Growth Rate of Total Deposit

FY	$D_n=2007/08$	$D_0=2003/04$	$n$	Growth Rate
EBL	24647	18756	5	0.0706
HBL	30048	21007	5	0.0936

### (xvii) Growth Rate of Loan and Advances

FY	$D_n=2007/08$	$D_0=2003/04$	$n$	Growth Rate
EBL	10503	5696	5	0.1653
HBL	16998	10845	5	0.1189

### (xviii) Growth Ratio of Total Investment

FY	$D_n=2007/08$	$D_0=2003/04$	$n$	Growth Rate
EBL	13553	10216	5	0.0732
HBL	11823	10175	5	0.0382

### (xix) Growth Ratio of Net Profit

FY	$D_n=2007/08$	$D_0=2003/04$	$n$	Growth Rate
EBL	692	507	5	0.0808
HBL	492	212	5	0.2343

## Appendix 2: Correlation Analysis

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### (i) Correlation between Total Deposit and Total Investment

#### Calculation of Correlation between Total Deposit and Total Investment of EBL

FY	Deposit (X)	Total Investment (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2003/04	18756	10216	351787536	104366656	191611296
2004/05	21161	11360	447787921	129049600	240388960
2005/06	19335	9702	373842225	94128804	187588170
2006/07	23061	12847	531809721	165045409	296264667
2007/08	24647	13553	607474609	183683809	334040791
Total	106960	57678	2312702012	676274278	1249893884

Now, we have

$$\begin{aligned}n &= 5 & \sum X &= 106960 \\ \sum Y &= 57678 & \sum X^2 &= 2312702012 \\ \sum Y^2 &= 676274278 & \sum XY &= 1249893884\end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

$$\text{Correlation coefficient (simply, } r) = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Correlation of coefficient (r) = 0.9786

Coefficient of determination ( $r^2$ ) = 0.9576

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}\text{P.Er.} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.0128\end{aligned}$$

Now,

$$\begin{aligned}6 \text{ P.Er.} &= 6 \times 0.0128 \\ &= 0.0768\end{aligned}$$

### Calculation of Correlation between Total Deposit and Total Investment of HBL

FY	Deposit (X)	Total Investment (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2003/04	21007	10175	441294049	103530625	213746225
2004/05	22010	9292	484440100	86341264	204516920
2005/06	24814	11692	615734596	136702864	290125288
2006/07	26490	10889	701720100	118570321	288449610
2007/08	30048	11823	902882304	139783329	355257504
Total	124369	53871	3146071149	584928403	1352095547

Now, we have

$$\begin{aligned}
 n &= 5 & \sum X &= 124369 \\
 \sum Y &= 53871 & \sum X^2 &= 3146071149 \\
 \sum Y^2 &= 584928403 & \sum XY &= 1352095547
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

$$\text{Correlation coefficient (simply, } r) = \frac{n \sum xy - \sum x \sum y}{\sqrt{\left[ n \sum x^2 - (\sum x)^2 \right] \left[ n \sum y^2 - (\sum y)^2 \right]}}$$

Correlation of coefficient (r) = 0.7870

Coefficient of determination (r<sup>2</sup>) = 0.6194

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 \text{P.Er.} &= 0.6745 \frac{1 - r^2}{\sqrt{N}} \\
 &= 0.1148
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 \text{ P.Er.} &= 6 \times 0.1148 \\
 &= 0.6889
 \end{aligned}$$

## (ii) Correlation between Total Deposit and Loan & Advances

### Calculation of Correlation between Total Deposit and Loan & Advances of EBL

FY	Deposit (X)	Loan & Advances (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2003/04	18756	5696	351787536	32444416	106834176
2004/05	21161	6410	447787921	41088100	135642010
2005/06	19335	8143	373842225	66308449	157444905
2006/07	23061	8935	531809721	79834225	206050035
2007/08	24647	10502	607474609	110292004	258842794
Total	106960	39686	2312702012	329967194	864813920

Now, we have

$$\begin{aligned}n &= 5 & \sum X &= 106960 \\ \sum Y &= 39686 & \sum X^2 &= 2312702012 \\ \sum Y^2 &= 329967194 & \sum XY &= 864813920\end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

$$\text{Correlation coefficient (simply, } r) = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Correlation of coefficient (r) = 0.8257

Coefficient of determination (r<sup>2</sup>) = 0.6818

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}\text{P.Er.} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.0960\end{aligned}$$

Now,

$$\begin{aligned}6 \text{ P.Er.} &= 6 \times 0.0960 \\ &= 0.5758\end{aligned}$$

### Calculation of Correlation between Total Deposit and Loan & Advances of HBL

FY	Deposit (X)	Loan & Advances (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2003/04	21007	10845	441294049	117614025	227820915
2004/05	22010	12920	484440100	166926400	284369200
2005/06	24814	13451	615734596	180929401	333773114
2006/07	26490	15762	701720100	248440644	417535380
2007/08	30048	16998	902882304	288932004	510755904
Total	124369	69976	3146071149	1002842474	1774254513

Now, we have

$$\begin{aligned}
 n &= 5 & \sum X &= 124369 \\
 \sum Y &= 69976 & \sum X^2 &= 3146071149 \\
 \sum Y^2 &= 1002842474 & \sum XY &= 1774254513
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

$$\text{Correlation coefficient (simply, } r) = \frac{n \sum xy - \sum x \sum y}{\sqrt{\left[ n \sum x^2 - (\sum x)^2 \right] \left[ n \sum y^2 - (\sum y)^2 \right]}}$$

Correlation of coefficient (r) = 0.9584

Coefficient of determination (r<sup>2</sup>) = 0.9185

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 \text{P.Er.} &= 0.6745 \frac{1 - r^2}{\sqrt{N}} \\
 &= 0.0246
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 \text{ P.Er.} &= 6 \times 0.0246 \\
 &= 0.1476
 \end{aligned}$$



### (iii) Correlation between Outside Assets and Net Profit

#### Calculation of Correlation between Outside Assets and Net Profit of EBL

FY	Outside Assets (X)	Net Profit (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2003/04	6722	507	45185284	257049	3408054
2004/05	17771	538	315808441	289444	9560798
2005/06	17846	539	318479716	290521	9618994
2006/07	21783	659	474499089	434281	14354997
2007/08	24056	692	578691136	478864	16646752
Total	88178	2935	1732663666	1750159	53589595

Now, we have

$$\begin{aligned}n &= 5 & \sum X &= 88178 \\ \sum Y &= 2935 & \sum X^2 &= 1732663666 \\ \sum Y^2 &= 1750159 & \sum XY &= 53589595\end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

$$\text{Correlation coefficient (simply, } r) = \frac{n \sum xy - \sum x \sum y}{\sqrt{\left[ n \sum x^2 - (\sum x)^2 \right] \left[ n \sum y^2 - (\sum y)^2 \right]}}$$

Correlation of coefficient (r) = 0.8308

Coefficient of determination ( $r^2$ ) = 0.6903

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}\text{P.Er.} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.0934\end{aligned}$$

Now,

$$\begin{aligned}6 \text{ P.Er.} &= 6 \times 0.0934 \\ &= 0.5605\end{aligned}$$

Calculation of Correlation between Outside Assets and Net Profit of HBL

FY	Outside Assets (X)	Net Profit (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2003/04	21020	212	441840400	44944	4456240
2004/05	22212	263	493372944	69169	5841756
2005/06	25144	308	632220736	94864	7744352
2006/07	26651	457	710275801	208849	12179507
2007/08	29617	492	877166689	242064	14571564
Total	124644	1732	3154876570	659890	44793419

Now, We have,

$$\begin{aligned}
 n &= 5 & \sum X &= 124644 \\
 \sum Y &= 1732 & \sum X^2 &= 3154876570 \\
 \sum Y^2 &= 659890 & \sum XY &= 44793419
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

$$\text{Correlation coefficient (simply, } r) = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Correlation of coefficient (r) = 0.9565

Coefficient of determination (r<sup>2</sup>) = 0.9149

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 \text{P.Er.} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.0257
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 \text{ P.Er} &= 6 \times 0.0257 \\
 &= 0.1540
 \end{aligned}$$

### Appendix 3: Trend Analysis

#### (i) Trend Analysis of Total Deposit of EBL

Year	X	$x = X - \bar{X}$	Deposit (Y)	$x^2$	$y^2$	xy
2003/04	1	-2	18756	4	351774032	-37512
2004/05	2	-1	21161	1	447806543	-21161
2005/06	3	0	19335	0	373846092	0
2006/07	4	1	23061	1	531811105	23061
2007/08	5	2	24647	4	607475595	49294
<b>Total</b>	<b>15</b>	<b>0</b>	<b>106960</b>	<b>10</b>	<b>2312713366</b>	<b>13682</b>

$$\Sigma X = 15$$

$$N = 5$$

$$\Sigma y = 106960$$

$$\bar{X} = \frac{\Sigma X}{N} = 3$$

$$\Sigma y^2 = 2312713366$$

$$\Sigma x^2 = 10$$

$$\Sigma xy = 13682$$

Since  $\Sigma x = 0$ ,

$$a = \frac{\Sigma y}{n} = \frac{106960}{5} = 21392$$

$$b = \frac{\Sigma xy}{\Sigma x^2} = \frac{13682}{10} = 1368.2$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$y = a + bx = 21392 + 1368.2x$$

For Trend Values,

FY	$x = X - 3$	a	b	Trend Value $y = a + bx$
2003/04	-2	21392	1368.2	18655.6
2004/05	-1	21392	1368.2	20023.8
2005/06	0	21392	1368.2	21392
2006/07	1	21392	1368.2	22760.2
2007/08	2	21392	1368.2	24128.4
2008/09	3	21392	1368.2	25496.6
2009/10	4	21392	1368.2	26864.8
2010/11	5	21392	1368.2	28233
2011/12	6	21392	1368.2	29601
2012/13	7	21392	1368.2	30969.4

**(ii) Trend Analysis of Total Deposit of HBL**

Year	X	$x = X - \bar{X}$	Deposit (Y)	$x^2$	$y^2$	xy
2003/04	1	-2	21007	4	441310014	-42014
2004/05	2	-1	22010	1	484454627	-22010
2005/06	3	0	24814	0	615735092	0
2006/07	4	1	26491	1	702083060	26491
2007/08	5	2	30048	4	902907544	60096
<b>Total</b>	<b>15</b>	<b>0</b>	<b>124370</b>	<b>10</b>	<b>3146490338</b>	<b>22563</b>

$$\Sigma X = 15$$

$$N = 5$$

$$\Sigma y = 124370$$

$$\bar{X} = \frac{\Sigma X}{N} = 3$$

$$\Sigma y^2 = 3146490338$$

$$\Sigma x^2 = 10$$

$$\Sigma xy = 22563$$

Since  $\Sigma x = 0$ ,

$$a = \frac{\Sigma y}{n} = \frac{124370}{5} = 24874$$

$$b = \frac{\Sigma xy}{\Sigma x^2} = \frac{22563}{10} = 2256.3$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$y = a + bx = 24874 + 2256.3x$$

For Trend Values,

FY	$x = X - 3$	a	b	Trend Value $y = a + bx$
2003/04	-2	24874	2256.3	20361.68
2004/05	-1	24874	2256.3	22618.54
2005/06	0	24874	2256.3	24875.40
2006/07	1	24874	2256.3	27132.26
2007/08	2	24874	2256.3	29389.12
2008/09	3	24874	2256.3	31645.98
2009/10	4	24874	2256.3	33902.84
2010/11	5	24874	2256.3	36159.70
2011/12	6	24874	2256.3	38416.56
2012/13	7	24874	2256.3	40673.42

**(iii) Trend Value of Loan & Advances of EBL**

Year	X	$x = X - \bar{X}$	Loan & Advances (Y)	$x^2$	$y^2$	xy
2003/04	1	-2	5696	4	32444416	-11392
2004/05	2	-1	6410	1	41088100	-6410
2005/06	3	0	8143	0	66308449	0
2006/07	4	1	8935	1	79834225	8935
2007/08	5	2	10503	4	110313009	21006
<b>Total</b>	<b>15</b>	<b>0</b>	<b>39687</b>	<b>10</b>	<b>329988199</b>	<b>12139</b>

$$\Sigma X = 15$$

$$N = 5$$

$$\Sigma y = 39687$$

$$\bar{X} = \frac{\Sigma X}{N} = 3$$

$$\Sigma y^2 = 329988199$$

$$\Sigma x^2 = 10$$

$$\Sigma xy = 12139$$

Since  $\Sigma x = 0$ ,

$$a = \frac{\Sigma y}{n} = \frac{39687}{5} = 7937.4$$

$$b = \frac{\Sigma xy}{\Sigma x^2} = \frac{12139}{10} = 1213.9$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$y = a + bx = 7937.4 + 1213.9x$$

For Trend Values,

FY	$x = X - 3$	a	b	Trend Value $y = a + bx$
2003/04	-2	7937.4	1213.9	5509.6
2004/05	-1	7937.4	1213.9	6723.5
2005/06	0	7937.4	1213.9	7937.4
2006/07	1	7937.4	1213.9	9151.3
2007/08	2	7937.4	1213.9	10365.2
2008/09	3	7937.4	1213.9	11579.1
2009/10	4	7937.4	1213.9	12793
2010/11	5	7937.4	1213.9	14006.9
2011/12	6	7937.4	1213.9	15220.8
2012/13	7	7937.4	1213.9	16434.7

**(iv) Trend Value of Loan & Advances of HBL**

Year	X	$x = X - \bar{X}$	Loan & Advances (Y)	$x^2$	$y^2$	xy
2003/04	1	-2	10845	4	11760532747	-21690
2004/05	2	-1	12920	1	16691686518	-12920
2005/06	3	0	13451	0	18093392056	0
2006/07	4	1	15762	1	24843991895	15762
2007/08	5	2	16998	4	28892510285	33996
<b>Total</b>	<b>15</b>	<b>0</b>	<b>69976</b>	<b>10</b>	<b>100282113501</b>	<b>15148</b>

$$\sum X = 15$$

$$N = 5$$

$$\sum y = 69976$$

$$\bar{X} = \frac{\sum X}{N} = 3$$

$$\sum y^2 = 1.00282E+11$$

$$\sum x^2 = 10$$

$$\sum xy = 15148$$

Since  $\sum x = 0$ ,

$$a = \frac{\sum y}{n} = \frac{69976}{5} = 13995.2$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{15148}{10} = 1514.8$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$y = a + bx = 13995.2 + 1514.8x$$

For Trend Values,

FY	$x = X - 3$	a	b	Trend Value $y = a + bx$
2003/04	-2	13995.2	1514.8	10965.6
2004/05	-1	13995.2	1514.8	12480.4
2005/06	0	13995.2	1514.8	13995.2
2006/07	1	13995.2	1514.8	15510
2007/08	2	13995.2	1514.8	17024.8
2008/09	3	13995.2	1514.8	18539.6
2009/10	4	13995.2	1514.8	20054.4
2010/11	5	13995.2	1514.8	21569.2
2011/12	6	13995.2	1514.8	23084
2012/13	7	13995.2	1514.8	24598.8

**(v) Trend Value of Total Investment of EBL**

Year	X	$x = X - \bar{X}$	Total Investment (Y)	$x^2$	$y^2$	xy
2003/04	1	-2	10216	4	104370742	-20432
2004/05	2	-1	11360	1	129057097	-11360
2005/06	3	0	9703	0	94139476	0
2006/07	4	1	12848	1	165059284	12848
2007/08	5	2	13553	4	183690043	27106
<b>Total</b>	<b>15</b>	<b>0</b>	<b>57680</b>	<b>10</b>	<b>676316644</b>	<b>8162</b>

$$\sum X = 15$$

$$N = 5$$

$$\sum y = 57680$$

$$\bar{X} = \frac{\sum X}{N} = 3$$

$$\sum y^2 = 676316644$$

$$\sum x^2 = 10$$

$$\sum xy = 8161$$

Since  $\sum x = 0$ ,

$$a = \frac{\sum y}{n} = \frac{57680}{5} = 11536$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{8162}{10} = 816.2$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$y = a + bx = 11536 + 816.2x$$

For Trend Values,

FY	$x = X - 3$	a	b	Trend Value $y = a + bx$
2003/04	-2	11536	816.2	9903.60
2004/05	-1	11536	816.2	10719.80
2005/06	0	11536	816.2	11536.00
2006/07	1	11536	816.2	12352.20
2007/08	2	11536	816.2	13168.40
2008/09	3	11536	816.2	13984.60
2009/10	4	11536	816.2	14800.80
2010/11	5	11536	816.2	15617.00
2011/12	6	11536	816.2	16433.20
2012/13	7	11536	816.2	17249.40

**(vi) Trend Value of Total Investment of HBL**

Year	X	$x = X - \bar{X}$	Total Investment (Y)	$x^2$	$y^2$	xy
2003/04	1	-2	10175	4	103539579	-20350
2004/05	2	-1	9292	1	86343122	-9292
2005/06	3	0	11692	0	136710814	0
2006/07	4	1	10889	1	118570974	10889
2007/08	5	2	11823	4	139783092	23646
<b>Total</b>	<b>15</b>	<b>0</b>	<b>53871</b>	<b>10</b>	<b>584947583</b>	<b>4893</b>

$$\sum X = 15$$

$$N = 5$$

$$\sum y = 53871$$

$$\bar{X} = \frac{\sum X}{N} = 3$$

$$\sum y^2 = 584947583$$

$$\sum x^2 = 10$$

$$\sum xy = 4893$$

Since  $\sum x = 0$ ,

$$a = \frac{\sum y}{n} = \frac{53871}{5} = 10774.2$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{4893}{10} = 489.30$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$y = a + bx = 10774.2 + 489.30x$$

For Trend Values,

FY	$x = X - 3$	a	b	Trend Value $y = a + bx$
2003/04	-2	10774.2	489.30	9795.60
2004/05	-1	10774.2	489.30	10284.90
2005/06	0	10774.2	489.30	10774.20
2006/07	1	10774.2	489.30	11263.50
2007/08	2	10774.2	489.30	11752.80
2008/09	3	10774.2	489.30	12242.10
2009/10	4	10774.2	489.30	12731.40
2010/11	5	10774.2	489.30	13220.70
2011/12	6	10774.2	489.30	13710.00
2012/13	7	10774.2	489.30	14199.30



**(vii) Trend Value of Net Profit of EBL**

Year	X	$x = X - \bar{X}$	Net Profit (Y)	$x^2$	$y^2$	xy
2003/04	1	-2	507	4	256978	-1014
2004/05	2	-1	538	1	289228	-539
2005/06	3	0	539	0	290736	0
2006/07	4	1	659	1	433964	659
2007/08	5	2	692	4	478407	1384
<b>Total</b>	<b>15</b>	<b>0</b>	<b>2935</b>	<b>10</b>	<b>1749315</b>	<b>491</b>

$$\sum X = 15$$

$$N = 5$$

$$\sum y = 2935$$

$$\bar{X} = \frac{\sum X}{N} = 3$$

$$\sum y^2 = 1749315$$

$$\sum x^2 = 10$$

$$\sum xy = 491$$

Since  $\sum x = 0$ ,

$$a = \frac{\sum y}{n} = \frac{2935}{5} = 587$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{491}{10} = 49.1$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$y = a + bx = 587 + 49.1x$$

For Trend Values,

FY	$x = X - 3$	a	b	Trend Value $y = a + bx$
2003/04	-2	587	49.1	488.79
2004/05	-1	587	49.1	537.83
2005/06	0	587	49.1	586.87
2006/07	1	587	49.1	635.91
2007/08	2	587	49.1	684.95
2008/09	3	587	49.1	733.99
2009/10	4	587	49.1	783.03
2010/11	5	587	49.1	832.07
2011/12	6	587	49.1	881.11
2012/13	7	587	49.1	930.15

**(viii) Trend Value of Net Profit of HBL**

Year	X	$x = X - \bar{X}$	Net Profit (Y)	$x^2$	$y^2$	xy
2003/04	1	-2	212	4	44999	-424
2004/05	2	-1	263	1	69195	-2635
2005/06	3	0	308	0	95036	0
2006/07	4	1	457	1	209269	457
2007/08	5	2	492	4	241886	984
<b>Total</b>	<b>15</b>	<b>0</b>	<b>1732</b>	<b>10</b>	<b>660387</b>	<b>754</b>

$$\sum X = 15$$

$$N = 5$$

$$\sum y = 1732$$

$$\bar{X} = \frac{\sum X}{N} = 3$$

$$\sum y^2 = 660387$$

$$\sum x^2 = 10$$

$$\sum xy = 754$$

Since  $\sum x = 0$ ,

$$a = \frac{\sum y}{n} = \frac{1732}{5} = 346.4$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{754}{10} = 75.4$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$y = a + bx = 346.4 + 75.4x$$

For Trend Values,

FY	$x = X - 3$	a	b	Trend Value $y = a + bx$
2003/04	-2	346.4	75.4	195.79
2004/05	-1	346.4	75.4	271.17
2005/06	0	346.4	75.4	346.55
2006/07	1	346.4	75.4	421.93
2007/08	2	346.4	75.4	497.31
2008/09	3	346.4	75.4	572.69
2009/10	4	346.4	75.4	648.07
2010/11	5	346.4	75.4	723.45
2011/12	6	346.4	75.4	798.83
2012/13	7	346.4	75.4	874.21