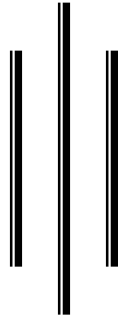


# **COMPARATIVE WORKING CAPITAL MANAGEMENT OF EBL AND HBL**



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A Thesis Submitted To:

**Office of the Dean**

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**Tribhuvan University**

*In Partial Fulfilment of the Requirement for the*

**Masters Degree in Business Studies (MBS)**

**Biratnagar, Nepal**

**March 2011**



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**RECOMMENDATION**

This is to certify that the thesis

*Submitted by*

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**Comparative Working Capital Management of EBL  
and HBL**

*has been prepared as approved by this Department in the prescribed format of  
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## **DECLARATION**

I hereby declare that the work reported in this thesis entitled “**COMPARATIVE WORKING CAPITAL MANAGEMENT OF EBL AND HBL**” submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original research work, which is prepared as the partial fulfillment of the requirement for the Master's Degree in Business Studies (MBS), under the supervision of **Dev Raj Shreshtha**, Thesis Supervisor, Post Graduate Campus, Biratnagar, T. U.

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Date: March 2011

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**Lila Raj Ghimire**

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March 2011

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## LIST OF ABBREVIATION

a	:	Constant Number
CA	:	Current Assets
CL	:	Current Liabilities
CR	:	Current Ratio
C.V.	:	Co-efficient of Variation
d. f.	:	Degree of Freedom
EBL	:	Everest Bank Limited
Ed.	:	Edition
e.g.	:	For example
F/Y	:	Fiscal Year
HBL	:	Himalayan Bank Limited
i.e.	:	That is
L & Adv.	:	Loan and Advances
n	:	Number of Items
NEPSE	:	Nepal Stock Exchange
No.	:	Number
NPAT	:	Net Profit After Tax
NW	:	Net Worth
NWC	:	Net Working Capital
P.E.	:	Probable Error
ROA	:	Return on Assets
Rs	:	Rupees
S.D.	:	Standard Deviation
S.N.	:	Serial Number
TA	:	Total Assets
TD	:	Total Deposit
VIZ.	:	Namely
WC	:	Working Capital
www	:	World Wide Web

# CHAPTER I

## INTRODUCTION

### 1.1 Background of the study:

The financial institution, Bank is the essential part of the nation for the development of trade, commerce & industry. This plays the vital role for lending & dealing in money, which is main objective too. "The word 'Bank' was originated from Italian word "BANCO" which was later on analyzed into 'Bank' ". Bank is an institution which deals money and credit. (K.C., 2005:135)

The different economists have different views to define bank.

"A Bank is an establishment which makes individuals such advance of money as may be required and safely made to which individual moneys when not required by them for use." (Kinley, *Adapted from Pradhan, 1996 : 24*)

"A Bank is an institution whose debts (bank deposit) are widely accepted in settlement of their people's debt to each other." (Syers, *Adapted from Pradhan, 1996 : 25*)

"Any institution offering deposits subjects to withdrawal on demand and making loans of commercial business nature is bank." (U.S. Law, *Adapted From Dahal, 2002 : 7*)

A bank is an institution which accepts deposits from the general public and grant loans by creating credit. Banks are the institutions that provide the fund to the required persons & organization in different terms & condition to generate profit and to help people for their economic problems. Bank is a resource of mobilizing institution, which accepts deposit from various sources and invests that fund in different sectors i.e. agriculture, commerce, trade and industry.

Finally a bank is an institution which deals with money by accepting various types of deposit and disbursing loan and rendering other financial services. So, they have a wide range of service by which we can consider as an essential part of modern society.

The first bank was probably the religious temples of the ancient world, and were probably established sometime during the third millennium B.C.

Banks probably predated the invention of money. Deposits initially consisted of grain and later other goods including cattle, agricultural implements, and eventually precious metals such as gold, in the form of easy-to-carry compressed plates. Banking business has been running visible or invisible from ancient time. According to Revilpot there was operating of bank and money from far east 600AD. The first banking as a public organization was started in the middle of 12<sup>th</sup> century from Italy. 'Bank of VANICE' the first Bank which was established as a public bank in 1157 AD. (KFA, 2010: 3)

In the context of Nepal, 'Nepal Bank Limited' is the 1<sup>st</sup> bank which was established in 1994 B.S. 18 years later central bank of Nepal was established in 2013 B.S. After the restoration of democracy in Nepal, government has taken liberal economic policy, as a result number of commercial banks have been established in Nepal. Some of them are in joint venture with foreign commercial banks.

### **EVEREST BANK LTD.**

Everest Bank Ltd. & Himalayan Bank Ltd. both are joint venture commercial banks. EBL was established in first Kartik 2051 B.S. jointly with Punjab national bank of India under the company act 2053 and commercial bank act 2031 of Nepal with authorized capital of Rs. 12 million and issued & paid up capital is same as Rs. 12 million. Where as 50% share from Nepalese investors, 30% from general public and 20% from Punjab National Bank, India. It has 37 branches now to provide banking services to the people.

### **HIMALAYAN BANK LTD.**

Himalayan Bank Ltd. is also a joint venture bank with Habib bank of Pakistan. This was established in 5th Magh 2049 under the terms and condition like other commercial bank with authorized capital of Rs. 24 million & issued and paid up capital Rs. 12 million. Whereas 51% share of Nepalese investors, 14% of bank and financial institution, 15% of general public and 20% of Habib bank of Pakistan. It is the first commercial bank of

Nepal whose maximum shares are held by the Nepalese private sector. The head office is situated at Tridevi Marg, Thamel, Kathmandu. Now altogether 32 branches provide modern banking services.

Both the banks provide their services like accept the deposit with suitable interest rate as well as minimum balancing amount by different types of saving a/c, current a/c & fixed a/c and provide different type of loan i.e. Education loan, Business loan, Vehicle loan, Mortgage loan etc. by taking suitable rate of interest.

At last bank help the people in different sectors like personal business, industry, commercial area & Social Corporation to progress and development of the economy.

This study focuses on working capital management of commercial bank with special reference to EBL & HBL. Their working capital is found fluctuated. Due to some error of miss management of working capital it was happened. Working capital management is useful private as well as public enterprises. It is not totally in control of the management team because of some internal & external factors i.e. size of organization, growth rate, business cycle, technology, government policy. Therefore for achieving success in private bank proper financial management is most important factor. Financial management remains incomplete without study of management of working capital.

It is important to study about working capital management in private bank. Working capital is not cost free capital. To minimize cost & financial risk it must be manage working capital properly. Portion of working capital on total capital is more in this type of banks. On the other hand success of an organization depends on smooth operation of working capital. They are required to ascertain to turnover the current assets that greatly determine the profitability of the institutions. From the view point of credit worthiness it is more important in commercial in commercial bank because they must have adequate cash to pay wages, interest and other regular expenses. To increase in credit power and creation of goodwill timely payment is useful tools of a bank.

There are two concepts regarding the meaning of working capital they are gross concept and net concept. According to gross concept, working capital is

the total of current assets only. But according to net concept working capital is the difference between current assets and current liabilities.

The gross working capital concept makes the implied meaning of working capital or current assets only. It is also called circulating capital. It is equal to total sum of current assets only, and it may represent both owned capital as well as loan capital assets used for financing current assets.

Current assets mean assets that normally get converted into cash within an accounting cycle that is usually a period of one year. The major current assets are cash, marketable securities, bills receivables, sundry debtors and inventory.

The net working capital is the difference between current assets and current liabilities. It indicates the liquidity position and suggests the extent to which working capital needs may be financed by the permanent source of fund. Business enterprises must possess sufficient current assets to pay current liabilities and maturing obligation within the operating cycle because cash outflows and inflows do not coincide.

In other words it is the non syndromes nature of cash flows that makes net working capital necessary, while in adequate investment in working capital threatens solvency of firm and excessive investment affects enterprise profitability, as idle investment yield nothing.

Implementing an effective working capital management system is an excellent way for many companies to improve their earnings. The two main aspects of working capital management are ratio analysis and management of individual components of working capital. Ratio analysis will lead management to identify areas of focus such as inventory management, cash management, accounts receivable and payable management.

## **1.2 Statement of the problem:**

For successful running in the context of globalization every developing countries should be developed both financially and economically. And the only way of this development in the country will be by the activities of bank. In the present context, bank is considered as a heart for mobilization the fund with the



people in various productive sectors for development of financial and economical sector. In this situation Nepalese commercial banks are not far from the problem. The main problem is instability in political environment and fluctuation in economic condition of the country.

The banking sector is the major factor that plays the most significant role for the reviving whole economy that accumulates funds from various units of the society and transfers it to the productive sector. It tends to increase employment opportunity, industrial activities, and trade business. The country is facing huge crisis because of the political instability and other reasons. So, the study is purely involved to show the clear picture of the banking sector.

EBL & HBL are facing so many problems. It is not far from this surrounding area i.e. planning, organizing, staffing, directing, coordinating, reporting and budgeting etc. Some major problems are listed below:

- ❖ They are facing the political instability in this country.
- ❖ Both the banks have same common problem of limited area coverage in the mass market.
- ❖ Due to poor economic condition of the people of our country banking transaction could not be increased.
- ❖ Banks have technical products and service which is more expensive but customers take it uneasy.
- ❖ People show less interest in investing in shares of commercial bank as compare to government bank.

### **1.3 Objectives of the study:**

The basic objective of the study is to determine the position of working capital of EBL & HBL. It has also some specific objectives, they are as follows:

- ❖ To identify the various working capital aspects of the EBL and HBL.
- ❖ To know the situation of working capital management of EBL and HBL with respect to cash, debtors & inventory management.

- ❖ To establish the relationship between sales and different variables of working capital.
- ❖ To identify the effect of working capital on profitability.

#### **1.4 Research Questions of the Study:**

This study is devoted to the following issues:

- ❖ What is the situation of working capital management in the bank with respect to cash, debtors and inventory management?
- ❖ What is the relationship between sales and different variables of working capital?
- ❖ What is the effect of working capital on profitability of the bank?
- ❖ What is the situation of deposit and lending?

#### **1.5 Importance of the study:**

At present the joint venture banks are gaining a wide popularity through their professional service and playing an eminent role in the economy. This study is important for analysis of different component of current assets as well as current liabilities to evaluation of working capital management of the banks. Working capital is a circulating capital which is compared as life blood of the human being. Without proper management no one can achieve their goal of the business. So it is the essential part for the banks also.

Business organizations are not only for today but for tomorrow also. Similarly management of working capital affect shortly on profitability of the banks but lastly on the life of the bank. Working capital is the size of investment in each type of current assets. Each of these assets should be efficiently and effectively.

The success of an organization depends upon the proper operation of working capital. So the need of the study is to find out internal position of working capital of EBL & HBL under the financial problem as well as to given an opportunity to correcting its shortcomings.

## **1.6 Hypothesis of the study:**

Research hypothesis is the backbone of the research process. There is no any ready made research hypothesis. A hypothesis helps the researcher in proceeding further or finding solution of the problem which researcher wants to study. In this study working capital is depended variable and current assets and current liabilities are independent variable. Every research has to start with certain assumption. Without hypothesis the effectiveness of research is not possible.

The following are the hypothesis of this thesis:

- There is no significant difference in current assets of EBL and HBL
- There is no significant difference in current liabilities of EBL & HBL
- There is no significant difference in working capital of EBL and HBL
- There is no significant difference in net profit of EBL & HBL
- There is no significant difference in total deposit of EBL & HBL
- There is no significant difference in loan and advance of EBL & HBL
- There is no significant difference in total assets of EBL & HBL.

## **1.7 Assumptions and limitations of the study:**

As in the process of the study the research has certain limitations. Due to it limitations the barrier is created to gain sufficient information. Such limitations arise here due to various circumstances. So, there are some limitations for the reliable and valid analysis. The present study has following assumptions and limitations:

- This study is limited on the assumption of the working capital management.
- This study is mainly based on secondary data.
- This study only present and analysis about Everest Bank Ltd. & Himalayan Bank Ltd.
- Only five year data from 2004/05 to 2008/09 maintained in the study.

- The data available in published accounts and other reference have been assumed correct and true.

## **1.8 Organization of the study:**

This research 'A comparative study on working capital management of EBL & HBL' has been organized into five chapters; each chapter deals some important factors of working capital management. The titles of each of these chapters are listed below.

- Chapter I - Introduction of the study.
- Chapter II - Review of literature.
- Chapter III - Research methodology.
- Chapter IV - Presentation and Analysis of data.
- Chapter V - Summary, Conclusion and Recommendation

### **Chapter I Introduction:**

This is the introduction chapter, which is related to the introduction of the study. It deals with focus of the study, statement of the problem, need of the study, objectives of the study, research questions of the study and assumptions and limitations of the study.

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

The second chapter deals with review of literature relating to working capital management. The second parts of these consist of review of books, journals, previous study, research paper and review of unpublished of various research studies.

### **Chapter III Research Methodology:**

This chapter includes research design, nature and source of data, population and sample of the study, procedure employed and use of analytical tools.

#### **Chapter IV Presentation and Analysis of Data:**

In this chapter, the acquired data are presented, analyzed and interpreted by using different financial as well as statistical tools. It is the most important part of the study it includes major finding of the study also.

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

This chapter includes summary of study, conclusion of the study and recommendations. At the end of the study the bibliography and appendices will be also presented.

## **CHAPTER II REVIEW OF LITERATURE**

### **2.1 Conceptual and theoretical literature:**

"The main reason for a full review of research in the past is to know the outcomes of those investigations in area where similar concept and methodologies had been used successfully. In this connection a review of previous related research projects, will help the researcher to formulate a satisfactory structure for the project." (*Joshi, 2001:89*)

There are many kinds of view about the related literature with the purpose of reviewing the literature, while reviewing related literature of working capital management. In this study, the researcher has gone through different books, journal, articles and thesis.

The concept of working capital management was published in 19th century as a part of economics but nowadays it is studies as a separate entity. It involves both setting working capital policy and carrying out that policy in day to day operation.

At first a business organization needs fixed capital to start business by having fixed assets i.e. land & building, plant & machinery, furniture & fixture etc. Secondly it is desire to have working capital for daily operation of the business. To finance in short term assets like cash and marketable securities, inventories, account receivable. It must have working capital. When all these short term assets are put together it is called working capital. This working capital and total current assets are synonymous. So, working capital is related to short term financing. In short term most of the variables are elastic.

"Working capital management is the functional area of finance that covers all current account of the bank. It is concerned with the adequacy of current assets as well as level of risk posed by current liabilities. It is a discipline that seeks proper policies for managing current assets and current liabilities and practical techniques of maximizing the benefits from managing working capital."(*Hampton, 1998:117*)

According to Weston and Brigham, "Working capital refers to a firm's investment in short-term securities, accounts receivable and inventories." (*Dangol, 2002:800*)

The use of the term working capital indicates that its flow is circular in nature. Because of the circular nature of current assets, working capital is sometimes called circulating capital. (*Pandey, 1987:328*)

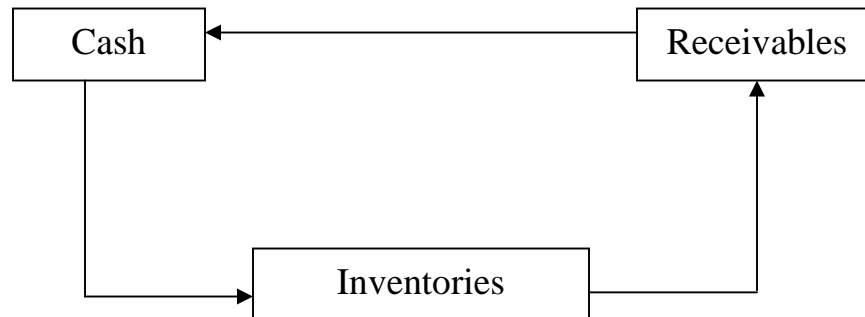
The use of this term 'circulating capital' emphasizes on short-term cash cycle or operating cycle of the firm. The short-term cash cycle refers to the recurring transaction from cash to inventory, inventory to receivable and then to cash again. In other words "The term cash cycle refers to the length time necessary to complete the following cycle of events:

- I. Conversion of cash into inventories.
- II. Conversion of inventory into receivable.
- III. Conversion of receivable into cash. (*Khan and Jain, 1998:620*)

The figure of operating cycle can be shown as below:

Figure 2.1

**Operating Cycle**



The length of operating cycle of manufacturing firm is the sum of inventory conversion period (ICP) and debtor conversion period (DCP). The inventory conversion period is the total time needed for producing and selling product. Debtor conversion period is the total time needed for collecting cash from the debtors.

Sufficient working capital must be provided in order to take care of normal process of purchase of raw materials and supplies turning out finished products, selling that products and waiting for payment to be made. If the original estimate of working capital is insufficient business fluctuate shortly.

Working capital management usually is considered in involve the administration of current assets. Mainly cash, marketable securities, receivables & inventories are current assets. The firm cannot maintain to satisfactory level of working capital, it is likely to become an insolvent and may be forced into bankruptcy. Current assets must be managed efficiently in order to maintain the liquidity of the firm. While not keeping high level of any one of them, it is recognized that any mistake made in management of working capital can lead to adverse effect in business and reduce the liquidity turnover and profitability and increase the cost of financial of the enterprises.

To analyzing the concept about working capital, we concluded that all the corporation whether public or private, manufacturing or service oriented have just adequate working capital serve excessive or adequate working capital is dangerous from the firms point of view.

Working capital is needed for day to day operation of the business. Operating efficiency of the firm result in optimum utilization of resources at minimum cost, working capital has a volatile nature. This nature presents some problem and contains in financing working capital need. This nature of working capital refers to the change in total current assets. Thus, the nature of working capital is not static; it is changeable as per transaction of goods.

## **2.2 Concept of Working Capital:**

Working capital is the life blood of the business. Capital required for running day-to-day operation of bank. Working capital is one of the most important factors of financial management. It is very essential to maintain the smooth operation of business. Both over as well as under level of working capital is dangerous to the firm. So the firm should maintain an optimum level of working capital to run the business smoothly.



"Working capital deals with the nature of current assets and current liabilities which must be ready in cash with in a year. Current assets are cash, inventories; account receivable and current liabilities are trade creditors, account payable, short-term bank loan and outstanding expenses etc." (*Smith and Narang, 1991:171*)

Firms need cash to pay for all their daily activities. They have to pay wages, pay for raw materials, pay bills and so on. The money available to them to do these activities is known as the firm's working capital. The main sources of working capital are the current assets as these are the short term assets that the firm can use to generate cash. However, the firm also has current liabilities and so these have to be taken account of when working out how much working capital a firm has at its disposal.

Working capital management involves the relationship between a firm's short-term assets and its short-term liabilities. The goal of working capital management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses. The management of working capital involves managing inventories, accounts receivable and payable, and cash. ([www.finance.com](http://www.finance.com))

Working capital, also known as "WC", is a financial metric which represents operating liquidity available to a business. Along with fixed assets such as plant and equipment, working capital is considered a part of operating capital. It is calculated as current assets minus current liabilities. If current assets are less than current liabilities, an entity has a working capital deficiency, also called a working capital deficit. Net working capital is working capital minus cash (which is a current asset) and minus interest bearing liabilities (i.e. short term debt). ([www.wikipedia.org](http://www.wikipedia.org))

There are two concepts of working capital.

- I. Gross concept of working capital
- II. Net concept of working capital

**Gross concept:**

Gross concept of working capital refers to the part of capital which is required for financing short term or current assets. Under gross concept working capital means sum of current assets only. Current assets are those which can be converted into cash within a year. It includes cash, marketable securities, sundry debtors, bills receivable and inventory etc.

"Gross concept refers to the firm's investment in current assets. Current assets are the assets which can be converted into cash within one accounting year and includes cash, debtors, stock, short-term-securities and bills receivable." (*Pandey, 1987:340*)

Gross concept is quantitative concept. Gross concept is focuses on optimum investment to current assets and financing of current assets. Investment in current assets should be just adequate to the needs of the business firm. Lower and higher investment in current assets is harmful. It affects profitability of an organization. Financial manager should have knowledge of the source of working capital fund as well as investment area where idle fund may be invested. Need of working capital funds arise due to the increasing level of business activity or for any other reason.

### **Net Concept:**

According to this concept, working capital refers to that volume which is the difference between current assets and current liabilities. It measures of liquidity, which is defined as the adequacy to meet the firm's obligations. Liquid firm has sufficient cash to pay its bills at all times.

"Net working capital is commonly defined as difference between current assets and current liabilities or in the order words; net working capital is current assets minus current liabilities." (*Van Horne and Wachnowica, 1997:204*)

"Working capital sometimes called net working capital is represented by the excess of current assets over current liabilities and identifies the relatively liquid position of total enterprises capital, which contributes the margin of buffer for maturing obligation with the ordinary operation cycle of the business." (*Encyclopedia, 1983: 133*)

The net working capital needs may be financed by permanent sources of funds. There is minimum amount of the working capital which is permanent nature. Therefore a portion of the working capital should be financed with the permanent source of fund such as equity share capital, debentures, long-term debt, preference share capital or retained earning.

### **2.3 Meaning of Commercial Banks:**

The main part of the industry and commerce is handling by Commercial Banks. On the other word CB's are the right partners of financial system to regulate and develop. Their purpose is to earn profit from providing banking services. They collect the idle funds from different sector and mobilizing them into productive sector, finally it helps to develop overall economy. They provide short-term, medium-term and long-term loans for various productive sector. Their main sources of income are interest from loans, foreign exchange commission and other commission and service charges. They earn profits from maximum utilization of their collected funds into the productive sector. Banks are the gatherers of saving, the allocates of resources, providers of liquidity and payment of services

'A bank that offers services to the general public and to companies', it is the general concept of commercial bank. Bank is a financial establishment that uses money deposited by customers for investment, pays it out when required, makes loans at interest and exchanges currency. The definition of the commercial bank is related to its work. It can be said that bank is an institution that collect deposits from the creditors, grant loans to the debtors, provide exchange services to the people, discounting bills and ultimately its objective is to earn profit. Any institution will be known as bank if it renders all or some of these functions. It is not impossible to discharge all these functions by a single bank. So, they are classified on the basis of their function. They are as follows:-

1. Central Bank
2. Commercial Bank
3. Agriculture Bank
4. Industrial Bank

5. Exchange Bank
6. Saving Bank
7. Rural Bank

"The name commercial bank was first used to indicate that the loans extended were short-term loan to business, though loans later were extended to consumers, government and other business institution as well. In general the assets of commercial banks tend to be more liquid and carry less than the assets held by other financial intermediaries." (*Encyclopedia*, 1991)

Commercial bank is an important bank which provides different service for the economic development of a country. In the context of Nepal commercial banks are more essential. At present there are more there are 28 commercial banks which are providing services and facility to the society and nation.

'Nepal Bank Limited' is the first bank in Nepal which was established in 1994. 18 years later central bank was established in 2013 BS. This is the central bank of Nepal. Similarly, a government commercial bank was established in 2022 BS, named by 'Rastriya Banijya Bank'. 'Agriculture Development Bank' was established in 2024 BS to connect the agriculture system with banking. (K.C., 2005: 138)

## **2.4 Working capital policy:**

It is related to the management of the working capital. "How much working capital holds? And what is the source of collection of the fund?" That is called working capital policy. It includes the collection of the fund, hold and investment of the fund. These decisions involve trade off between risk and profitability. There are two policies of working capital i.e. investing policy and financing policy.

### **2.4.1 Working capital investing policy:**

Policy related to investment in current assets is working capital investing policy. It refers to the policy regarding the total amount of current assets to be carried out to support the given level of sales. Huge investments in current assets affect its liquidity positively but negatively in its profitability. On the

other hand inadequate investment in current assets directly affects its liquidity and capacity of payment of current liabilities. It reduces ultimately production and sales. So the management of the organization try to remain in optimum level of current assets. There are three policies regarding the investment policy. They are as follows:

**A. Relaxed Policy:**

It is the policy of holding large amount of current assets in comparison with sales. It includes more cash and bank balance, inventory of goods and gives priority for credit sales. This is the policy of getting higher of current assets on total assets. So, this policy provides the lowest expected return on investment with lower risk.

**B. Restricted policy:**

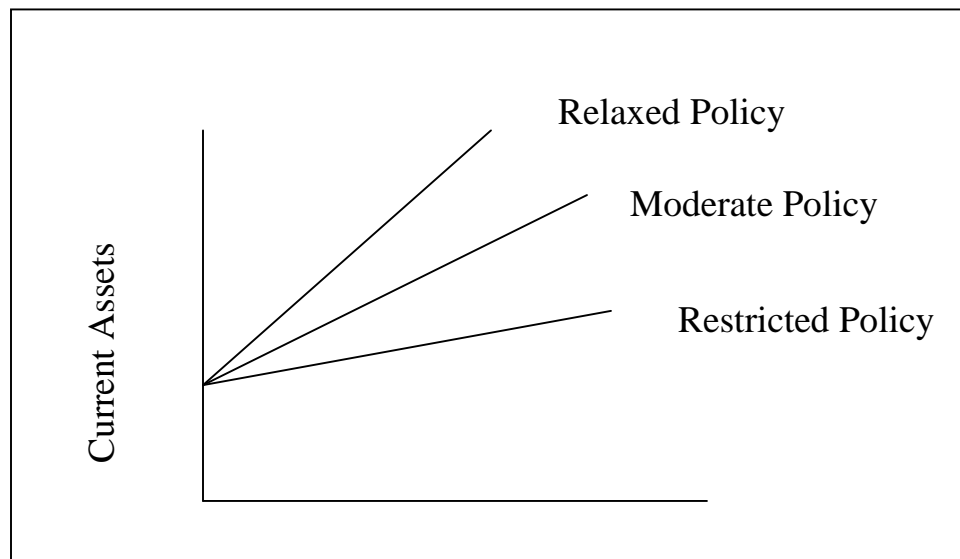
In this policy, a firm holds minimum cash and bank balance, inventory, bills receivable and marketable securities. In this policy increase in current assets is lower than increase in sales. The policy gives priority to cash sales and collection period of receivables. Return on shareholders equity is more but liquidity is less in this policy. So risk and return is getting higher in it.

**C. Moderate Policy:**

It is the middle of relaxed and restricted policy. This policy includes the level of current assets more than restricted policy and less than relaxed policy.

Figure-2.4.1

**Current assets investing policies**



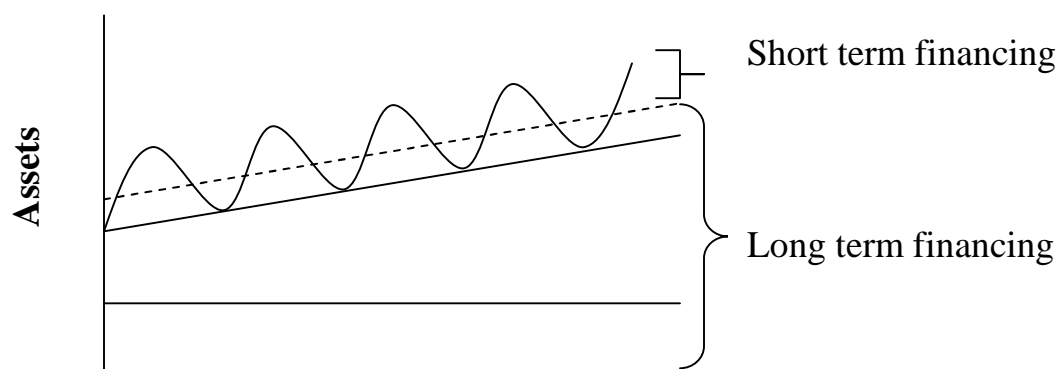
### 2.4.2 Working capital financing policy:

The policy related to selection of short term and long term financial sources to investment in current assets. Long term financing include ordinary share capital, preference share capital, debenture, long term borrowing from financial institution and retained earning. Short term financing is obtained for a period less than one year. It is arranged in advance from banks and other suppliers of short term finance in the money market. Cost of finance is less in short term financing but it affect in liquidity position of the firm because of high current liabilities in comparison with current assets. So the decision regarding working capital financing is depends upon decision of the financial manager, their view regarding risk and return. There are three policies of working capital financing. They are conservative, aggressive and moderate or hedging policy.

#### A. Conservative Approach:

This approach gives priority to long term sources to finance in current assets. According to it long term source is useful to finance in permanent working capital as well as huge portion of variable working capital. Short term source is used to finance in remaining portion of variable working capital. It is less risky and returnable approach from the view point of risk and return. Because it increases liquidity of the firm but shareholders return is less in it.

Figure-2.4.2.1  
Conservative Approach



### Time Period

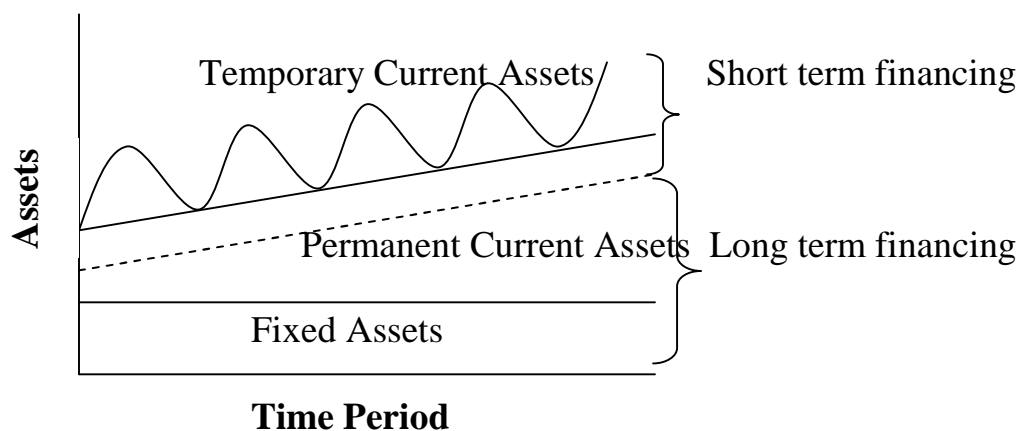
Conservative approach carries a high level of current assets (cash, marketable securities, receivable and inventories) to sales. In this approach, the use of short-term fund is restricted to the urgent situation when there is necessary to investment in current assets.

#### B) Aggressive Approach:

It is the opposite of conservative approach. On the other word the approach gives priority for short term financial sources to invest in current assets. According to aggressive approach, the firm finances temporary as well as a part of permanent current assets with short term financing and remaining from long term financing. Low level of long term financing may cause high level of profit with decreasing in financial cost but it increases current liabilities. So it makes lower liquidity and higher risk position.

According to Van Horne "The greater position of permanent assets need financed with short term source or debt, the more aggressive the financing is said to be."

Figure-2.4.2.2  
**Aggressive Financing**



Aggressive policy uses more short-term source and less long term sources for financing current assets. In the above figure 50% of permanent current assets financing from long term sources and remaining 50% and other temporary current assets from short term financing. In general, interest rate increases with long period but decrease in short period. It is because lenders are risk adverse and risk generally increases with the period of financing.

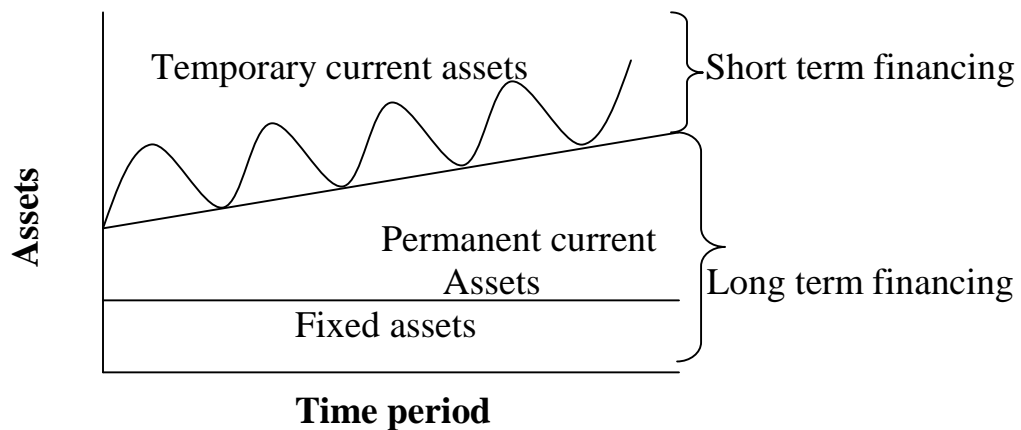
**C) Moderate Approach:**

It is the approach in between aggressive and conservative approach. According to this temporary current assets financed by short-term sources and permanent current assets financed by long term sources. It is also called as Matching/Hedging approach.

"With the hedging approach short-term on seasonal variation in current assets would be financed with long term debt or equity. With the hedging approach to financing, the borrowing and payment schedule for short term financing would be arranged to correspond to the expected swing in current assets less spontaneous financing. (Van Horne and Wachnowica, 1997: 209)

The following figure shows clearly about this approach.

Figure-2.4.2.3  
**Moderate Approach**



Selection of financial sources depends upon time period or conversion period of assets into cash i.e. if inventory conversion period is 30 days into



cash, then it use to finance from that source which have 30 days maturity period for payment. Risk & return (Profit) is in average level between aggressive and conservative approach. In this approach assets are classified into three categories.

- Funds requirement for seasonally needed current assets.
- Funds requirement for regularly needed current assets.
- Funds requirement for fixed or long term assets.

## **2.5 Need and Importance of working capital**

There are two types of capital need to operate business smoothly. One is fixed capital and another is working capital. So working capital is a part of a business. It is the life blood of the business because it is related to day to day operation. No business can run successfully without sufficient and adequate amount of working capital. Working capital is not cost free sources. But efficient management of working capital reduces financial cost as well as risk. So it is not desire for the business organization but it is very necessary to a firm. Importance of working capital management is as follows:

### **I) From the view point of time:**

Most of the time of a financial manager passes on management of working capital. Decision regarding working capital is related to daily operation of a business. So, financial manager spent his valuable time in management of cash, credit and inventory. Consumption of time is greater in management of working capital to a financial manager in comparison with other sector. So it is importance to management of working capital to a business organization.

### **II) From the view point of investment:**

Working capital management is more important to those firms who have proportionately higher working capital on total capital. Because success of an organization depends upon proper management of working capital. Most of the

organization have higher portion of working capital on total capital. So it is necessary for proper management.

### **III) From the view point of size of firm:**

It is necessary to management of working capital to small and large both types of organization. But comparatively it is more important to small types of organization. Because they can reduce the investment in fixed assets by taking it in hire or in lease. But reduce the investment in current assets is depends upon proper management of working capital only.

### **IV) From the view point of sales:**

The main objective of the organization is to maximize the shareholders wealth which is achieved from increasing in sales. Inventory, receivable and cash also increase with increase in sales. To increase in sales it must be increase in current assets but at once it must be increase in fixed assets also. To increase in proportionate investment in current assets and fixed assets it is important to proper management of working capital. The relationship between sales growth and need to invest in current assets is close and direct.

### **V) From the view point of creditworthiness:**

Timely payment of bank loan, creditor, employee and investor shows the creditworthiness of an organization. Financial cost of these external liabilities is not more but timely payment is a weapon to create good will and increase in creditworthiness. When working capital manages properly it is possible to paid external liabilities in time and create the firm's good will.

## **2.6 Working capital cash flow cycle**

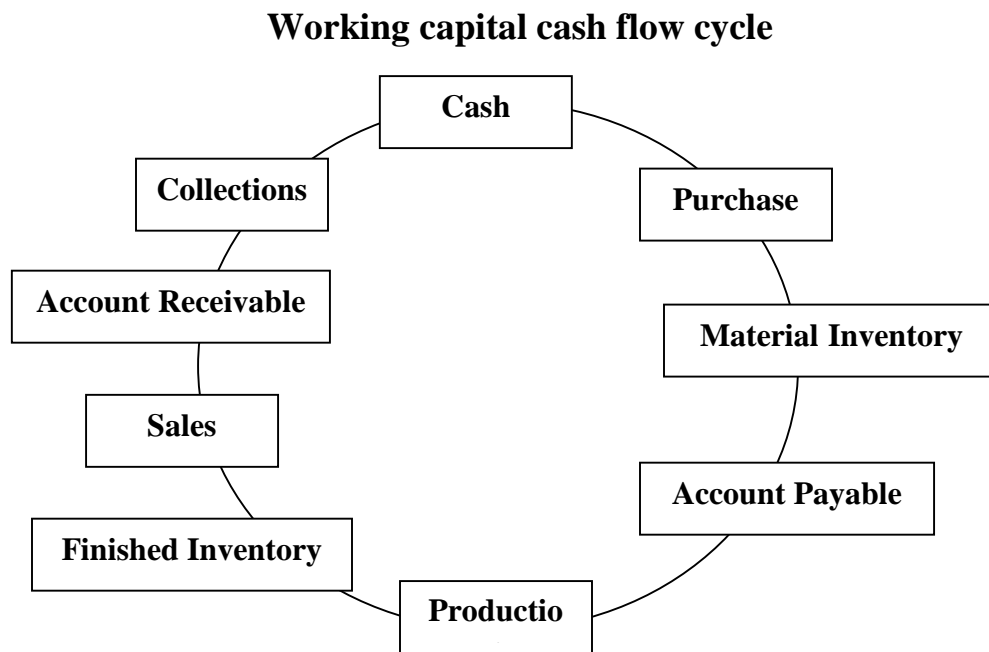
"The working capital cash flow cycle or cash conversion cycle is the length of time between paying for purchases and receiving cash from the sales of finished goods." (Joshi, 2004: 127)

The working capital cash flow cycle or cash conversion cycle is the length of time between paying for purchase and receiving cash from the sales of

finished goods. The time duration starting from the procurement of goods or raw material and ending with sales realization. The time gap is called operating cycle. A series of such cycle recur one after another and change continued till the end of operating period. The shortest operating cycle is preferable for business organization because it demands lower level of working capital.

On the other word it is called as cash conversion cycle. It means conversion of cash from payment to receive. It is start from payment for purchase and end at receive cash after sales of finished goods. Purchase of raw material for production then get finished product by processing it after those sales of the products, introducing account receivable at the result of credit sales, at the end collection of cash on account of receivable. It is a continuous process. Cash flow cycle is that period of time which is in between from purchase of raw material to collecting from receivable.

Figure-2.6.1



### 2.6.1 Determinants of cash flow cycle

It is depends upon inventory conversion period (ICP), receivable conversion period (RCP) and payable deferral period (PDP).

**ICP:** Conversion period of raw material into finished goods and sales period of that goods.

$$\text{ICP} = \frac{\text{Inventory} \times 360}{\text{Cost of goods sold}} \quad \text{or,} \quad \frac{\text{Inventory} \times 360}{\text{Sales}}$$

**RCP:** It is related to collection period of credit sales or account receivable. It is called days sales outstanding (DSO) or average collection period (ACP).

$$\text{RCP} = \frac{\text{Receivables}}{\text{Sales}/360} \quad \text{or,} \quad \frac{\text{Inventory} \times 360}{\text{Sales}}$$

**PDP:** It is the period of account payable or payment of credit purchase.

$$\text{PDP} = \frac{\text{Bills Payable}}{\text{Cost of goods sold}/360} \quad \text{or,} \quad \frac{\text{B/P} \times 360}{\text{Credit Purchase}}$$

Cash Conversion Cycle (CCC) can find out by the help of three determinant factors.

$$\text{CCC} = \text{ICP} + \text{RCP} - \text{PDP} = \dots\dots\dots\text{Days.}$$

There is positive relation between CCC and working capital. If CCC is greater then working capital must be greater and vice versa. Working capital is to determine by the help of CCC.

$$\text{WC} = \text{Production units} \times \text{VCPO} \times \text{CCC}$$

## 2.7 Management of working capital:

There are two types of capital to run the business. They are fixed capital and working capital. Working capital includes cash & bank balance, raw material, work-in-progress, stock of finished goods, bills receivable. Working capital deals not only current assets but current liabilities also. It concerned with the adequacy of current assets as well as the level of risk posed by current liabilities. The objective of working capital management is to manage current

assets as well as current liabilities to maximize the profit of an organization. If an organization manages working capital properly it reduces financial cost as well as risk. So it is compulsory to manage working capital effectively to run the business smoothly.

"Working capital management related with short-term finance and it is concerned with collection and allocations of the resources. Working capital management is related to the problem arises in attempting to manage the current assets and current liabilities and the relationship that exists between them." (*Jain & Khan, 1982:603*)

"Working capital is a controlling nerve of business. It is an important and integral part of financial management as short-term survival is a pre-requisite to long term success. The pointed out by Ralph Kennedy & steward Mc Millar, the inadequacy or miss management of working capital the heading cause of business failure. Unless the payment is made at the maturity of the particular debt, the firm is at worst and the creditors may force the firm to terminate its business. (*Funk and Donald, 1964:13*)

Management of working capital is concerned with management of day to day activities of an organization. It is important to those firm's who have more investment in working capital in comparison with fixed capital.

### **2.7.1 Determinants or Factor Affecting Working Capital**

Different organizations have proportionately different working capital position on total capital. It is the important part of business. Working capital plays an important role in business. To maintain a particular level of operation, the working capital must be analyzed sufficiently. But it is not easy to determining or estimate the required amount of working capital. To keep the working capital in equilibrium level it must be consider by financial manager about determinants of working capital, which is given below.

#### **I) Nature of business**

There are different types of organizations involved in different area i.e. production oriented, manufacturing oriented, sales oriented, service oriented

etc. investment in working capital is more in production and manufacturing related organization for the purpose of raw material, work-in-progress, finished goods and inventory (stock). On the other hand sales oriented organization also need of working capital to purchase of finished goods which is comparatively less than production and manufacturing companies. Service oriented organization i.e. bank, insurance company, traveling companies do not need the inventory of goods. So their need of working capital is also in different level. Thus the nature of organization is a determinant of working capital.

## **II) Size of business**

There are three types of business i.e. large, medium & small according to their capital, plant & equipment, production capacity etc. Large types of business organization need more working capital. On the other hand small types of organization need lower level of working capital in comparison with large organization because of their capacity of production and sales.

## **III) Growth rate**

There is direct relation between working capital and growth of an organization. If an organization is in growing condition then the need of working capital is greater to increase in inventory, receivable proportionately with increase in sales. But if the business is decreasing condition then need of working capital is less to meet the decreasing level of sales.

## **IV) Seasonal effect**

Seasonal business needs working capital also in seasonal basis. Their production and sales mainly depends upon season. In the peak season they need more working capital and in slack season they need less working capital to fulfill their sales and make the market in good condition. Some organization have to buy their raw material in one season but sales them by production in another season. So their requirement of working capital is in seasonal basis i.e. sometimes more and sometimes less.

#### **V) Cyclical factor**

Need of working capital is depends upon business cycle also. At the time of recession sales is decreasing so need of working capital is also decreasing. But at the time of boom sales increasing and to grab that opportunity need of working capital is also increase.

#### **VI) Change in technology**

Science and technology is going to be change day by day. Due to this, the capacity of plant and equipment is change shortly. So the business organization must have the capacity to replace the old machine by having new technology product. So the need of working capital is getting lower because it saves the operation cost. Proper use of raw material makes quantitative production easy. But it increases fixed capital.

#### **VII) Manufacturing process**

Production of goods is originated from raw material. Time of production from the use of raw material is also determinant factor of working capital. If production period is short then the investment in semi-finished goods is decrease so the need of working capital is also decrease but the long production period need working capital more because it increase investment in current assets and also increase in production cost.

#### **VIII) Production policy**

It is the policy of production of single product or different products. Production of single product in huge quantity decreases the cost of production and working capital also. But production of different product by one business need working capital more because it increases the investment in raw material, work-in-process and stock of finished goods.

#### **IX) Credit policy**

Open credit policy needs more working capital because it increases the investment in bills receivable. But if the business has control credit policy it

makes the investment in receivable lower. So, needs of working capital is also getting lower.

### **X) Cash flow cycle**

'Raw material change into semi-finished goods, semi-finished goods change into finished goods, finished goods change with sales into receivable and receivable change into cash from collection', the total time the total time taken for this process is cash flow cycle. Longer the cash flow cycle large will be the firm's working capital requirements. If the cash conversion period is short and delay in payment schedule need working capital lower.

## **2.8 Inventory Management**

Inventory refers to the goods and or materials used by a firm for the purpose of production and sales. It also includes the items, which are used as supportive materials to facilitate production. There are three basic types of inventory, raw materials, work-in-process and finished goods. Raw materials are the items purchased by firm for use in production of finished product. Work-in-process consists of all items currently in the process of production. These are actually the partly manufactured products. And, finished goods consist of those items, which have already been produced but not yet sold. Inventory constitutes one of the important items of current assets, which permits smooth operation of production and sale process of a firm.

Inventory management is an important aspect of firm's current assets management. The efficiency of firm's current assets management, to a larger extent depends on the effective inventory management and control. The basic issues associated with inventory management are – what should be the level of investment in inventories? How much should be ordered each time? How frequently such orders are made? What should be the minimum or maximum level of stock to be maintained by a firm? And so on.

Inventory as a type of current assets involves significant investment of funds. Investment in inventory may cover more than 15 percent of total assets for a manufacturer and more than 25 percent of total assets investment for a retailer, which indicates that a larger amount of money is invested in the form



of inventory. In this sense, inventory is an investment that the firm ties up its money in it, there by forgoing certain other opportunities of investment. As the firm goes on investing more and more in inventories, the cost of funds being tied up will also be increasing. Therefore, inventory management is considered a significant part of firm's financial management function. (*Dahal, 2007: 468*)

## **2.9 Receivable Management**

Receivable is termed as trade credit or debtors are another component of current assets that result through credit sales. When a firm sells its product in credit, account receivables are created.

Account receivables are the money receivable in some future date for the sale of goods and services at present. In modern corporate business world more than 60 percent transactions are performed in credit. Most companies, when they face competition, use credit sales as an important tool of sales promotion. As a sales promotional tool, creating accounts receivable enhances firm's sales revenue and pushes up its profitability. But at the same time, after a sale has been made, the actual collection of payment may be delayed for months. As these late payments stretch out over time, they may cause a company to experience a substantial drop in its profit margin. The extension of credit involves risk and cost, so that the firm's receivable management should be able to measure the benefit as well as cost to determine its effectiveness. (*Paudel and Baral, 2007: 442*)

Credit transactions occupy significant portion of total business transactions, and it is because of credit sales that a firm must hold receivables. Holding the investment in receivables has both cost and benefit to the firm. It is the firm's credit policy that influences level of investment in account receivable of a firm.

The specific purposes of receivable management are as follows:

- I) To evaluate the creditworthiness of customers before granting or extending the credit.

- II) To minimize the cost of investment in receivables.
- III) To minimize the possible bad debt losses.
- IV) To formulate the credit terms in such a way that results into maximization of sales revenue and still maintaining minimum investment in receivables.
- V) To minimize the cost of running credit and collection department.

## **2.10 Cash Management**

The term 'cash' constitutes the most readily acceptable item of current assets to all. It includes currency, coins, cheques and also some near cash items such as marketable securities, bank time deposits and so on. Some items of cash such as currencies, coins, cheques are readily available in term of cash. Financial manager must ensure that neither there are excess not inadequate cash balances. It must be held in sufficient amount.

"Cash is important current assets for the operation of the business. Cash is the basic input needed to keep the business running on a continuous basis, it is also the ultimate output expected to be released by the selling service or product manufacturing, by the firm. The firm should keep sufficient cash neither more nor less cash storage will disturb the firms manufacturing operations while excessive cash will simply remain idle. Without contributing anything towards the firm's profitability, thus a major function of financial manager is to maintain a sound cash piston." (*Pandey, 1987: 641*)

Cash is the basic input of business transactions. It should be held in sufficient amount. There should be neither shortage nor excess cash. Holding excess cash is expensive because it earns nothing but bears opportunity costs.

### **2.10.1 Motives for holding cash**

According to Keynes (1936) there are three important motives for holding cash: transaction motive, precautionary motive and speculative motive.

#### **I) Transaction Motive:**

Transaction means the act of giving and taking of cash or kinds in the ordinary course of business. In its ordinary course of action, a firm frequently involves in purchases and sales of goods or services. Need of cash for the purchase of goods, payment of wages, salary, interest, commission, rent, tax, insurance and dividend and so on. Like wise, a firm receives cash in terms of sales revenue, interest on given loan, return on investment and so on.

## **II) Precautionary Motive:**

A firm may have to face emergencies such as strikes and lock-up increase in cost of raw materials, funds and labour, fall in market demand etc. These emergencies also bound a firm to hold certain level of cash.

## **III) Speculation Motive:**

It refers to the need to hold cash to take advantage of bargain purchases, attractive interest rates, and favorable exchange rate fluctuations. Speculative need for holding cash requires that a firm possibly may have some profitable opportunities to exploit, which are out of the normal course of business. To purchase of raw material in low price and to invest at seasonal basis a firm must hold cash.

## **2.11 Review of Literature**

Review of literature means review of research study or study of other materials in the related area which provides issues and major findings of the study which is the right way for future research study. It is the base for upcoming researcher.

### **2.11.1 Review of Books**

This chapter is important to make research easier by the help of different books of different authors related to the research. This part includes the review of books of different authors, professors.

"Financial analysts on the other hand, mean current assets when they speak about working capital. Therefore, their focus is on gross working capital.

Since it does make sense for the financial manager to be involved with providing the correct amount of current assets for the firm at all times, we will adopt the concept of gross working capital. As the discussion of working capital management unfolds, our concern will be to consider the administration of the firm's current assets-namely cash & marketable securities, receivables and inventory and the financing needs to support current assets. (*Van Horne, 1996: 204*)

"Working capital management is the functional area of finance that covers all current account of the bank. It is concerned with the adequacy of current assets as well as level of risk posed by current liabilities. It is a discipline that seeks proper policies for managing current assets and current liabilities and practical techniques of maximizing the benefits from managing working capital." (*Hampton, 1998: 117*)

"Working capital management is closely related with short term finance and it is concerned with collection and allocations of the resources. Working capital management is related to the problem arises in attempting to manage the current assets and current liabilities and the relationship that exists between them." (*Jain and Khan, 1982: 603*)

Brigham E.F. and J.F. Houston have described various areas of working capital management, which is useful to the researcher in this research study. They have described about two concept (Gross and Net) of working capital based on their research study which gives clear picture about both concept regarding the working capital terms current assets and current liabilities. They have included significance of working capital management in their books because effective working capital management provides a cushion of protection to the short-term lenders so that smaller firm can function well and survive for a long term. They have explained the working capital policy i.e. working capital investing and working capital financing policy based on different approaches, which is useful to invest in current assets and determining the appropriate mix of long-term as well as short term funds to meet the investment in current assets. They have deal determinants of working capital and working capital

cash flow cycle, which is important to the researcher to gain knowledge about detail in working capital management.

"The financial manager is responsible for day-to-day financial activities of the firm. Managing daily financial activities belongs within the preview of working capital management or short-term financial management. In other words working capital management covers all decisions of an organization involving cash flows in the short run with emphasis on the management of investment in current assets and their financing. It focuses on the coordinated control of the firm's current assets and current liabilities. In most manufacturing concerns current assets absorb significant part of total financing. The total idea behind a firm's working capital management is to maintain the current assets and liabilities a point, which represents the most satisfactory level of working capital. Both excessive and inadequate levels of working capital are harmful for a firm. The excessive level of current assets of a firm means to use more long-term fund, which is costlier than current liabilities. On the other hand the inadequate level of current assets may lead the firm into technical bankruptcy, as it becomes unable to satisfy its current obligations timely. (*Paudel and Baral, 2007: 381*)

### **2.11.2 Review of Related Journals/Articles**

It is important to review of related journals and articles to the researcher for writing the research report. This section includes various published and unpublished journals and articles by different authors, experts and executives surrounding to working capital management. This study is related to working capital management so the researcher have considered with working capital only.

R.S. Pradhan, has described in an article 'The demand of working capital on Nepalese enterprises'. He has selected nine manufacturing companies with twelve years data included on. From the study he has concluded that the earlier studies concerning about the report unanimous findings. A lot of controversies exist with respect to the presence of economies of scale, roles of capital cost, capacity utilization rates and the speed with which actual cash and inventories

are adjusted to describe cash and inventory respectively. The pooled regression result shows the presence of economies of scale with respect to the demand or working capital and its various components. The regression results suggest strongly that the demand for working capital and its components is function of both scale and their capital cost.

Likewise Dr. P.R. Sharma conduct a research entitled working capital management in Biratnagar Jute Mills and Raghupati Jute Mills Ltd. He had undertaken altogether ten year's study starting from 2026/027 to 2035/036 BS. The major findings of the study are as follows:

- I) The natures of management of current assets in both the mills are almost same. However management of stock and debtors in Biratnagar Jute Mills seems better and cash management seems better in Raghupati Jute Mills.
- II) Both mills have faced an acute shortage of liquidity in the later years. The indices of total current liabilities of both BJM and RJM indicated that they have rather an increasing trend.
- III) The nature of management of inventory in both the mills is same but the turnover ratios are respectively lower in the later years of the study.
- IV) Both the Jute mills should make their selling effective so that heavy stocks of finished goods would be minimum for this both the mills should make their selling units efficient.
- V) The management of cash in RJM as compared to BJM is efficient in using its cash and bank balanced but not effective in maintaining its liquidity.
- VI) The debt collection efficiency of both the mills should be improved. Greater attention should be given to collect the debts from institutions. (*Sharma, P.R. T. U. Thesis, Management, 1988:140*)

Another research study of Professor Dr. K. Acharya related to working capital management of Nepalese manufacturing public enterprises has focuses about different tools of working capital management. He found the negative

correlation between working capital and inventory. The turnover of inventory, receivable and current assets were lower than average of PE's selected. BEP analysis shows that the insufficient working capital has led to sell its product at a rate for below

than its BEP. Insufficient uses of credit policy is harmful to the enterprises while collection of over due to account.

### **2.11.3 Review of Related Thesis**

In this topic, review of different thesis and dissertation relating to working capital management include which have already been finished. Mr. Mahesh Chandra Newpane, in his study on 'working capital management of Hulas Wire Industry', found the problem of check and balance in current assets and current liabilities. Major findings are as under:

- I) The HWI should made regular check to identity both excess and shortage of current assets, this avoids risk in management of working capital. This can be checked through the study of cash flow statement ratio analysis, trend analysis and fund flow analysis.
- II) Inventory occupies the largest portions in the total current assets level, further raw material, packing material and spare parts are in such a large scale that they cover 89% and that stock of finished goods in covering only 11% in it.
- III) The huge amounts of raw material and inventory kept by HWI should be reduced so that it can tune to the level of sales and production. The non-moving and absolute items should be discarded to avoid unnecessary pilling up inventory.
- IV) The HWI is investing huge amount in current assets like inventory and receivable. The amounts should be reduced and surplus from this cut in current assets should be further invested in capital goods in order to expand the production capacity and increases the scale volume to earn more profit.

- V) Receivable also consist of large volume of the total current assets level and the most portions of that is also being covered by deposit and claims. In this regard management is advice to reduce it. Its marketing policy should be integrated with credit policy. The credit policy largely affect the sales, certain target should be asset for credit policy and avoid unnecessary increase in the volume of receivables.
- VI) The inventory turnover ratio and receivable turnover ratio are both in un-measurable condition. If present trend of its both inventory and receivable turnover ratio is not controlled.
- VII) HWI should make optimal cash balance by removing the situation of excess deficiency of cash balance. The company should be consider general economic factor investment opportunities and availability of its bank credit holding while determination cash balance the condition of cash holding of HWI is neither proportionate nor sufficient to mobilization its financing activity. Therefore the company should determine its cash holding structure accounting to its operational needs. So that the return to the company can be increased. (*Newpane, T.U. Thesis, Management, 2004: 105*)

Pradeep Kumar Pathak, on his research study evaluation of working capital management on Nepal Tube Oil Ltd. has found difference fluctuation on current assets and current liabilities. The major findings of the study are as follows:

- I) There is significant positive correlation between investment in current assets an investment in total assets which means both of them are going hand in hand. This growing tendency of investment over current assets could have adverse effect in Nepal Lube Oil Ltd's wealth maximization goal in the long run.
- II) Cash is relatively holding tiny portion of total assets and if we only consider the position of cash. We can see that the cash in increasing every year during the study period.



- III) As an important aspect of current assets inventory is holding the highest portion of total assets in comparison to its reset partners.
- IV) Portion of receivable to total assets is in increasing trend which indicates the rowing inefficiency in credit collection.
- V) The inventory turnover ratio is in increasing trend and receivable turnover ratio is in decreasing trend.
- VI) The company's current ratio and quick ratio both are lower than the standard.
- VII) NLO ltd is presently following the conservative policy in financing its capital and is forwarding towards following moderate policy in financing its total capital. (*Pathak, SDC Thesis : 1995*)

Another research study by Basudev Shrestha, "A study on Working Capital Management of Dairy Development Corporation" has presented the overall working capital position of DDC based on different year data. He had used financial tools for the purpose of analytical research on different tools of working capital management. The major findings of the study are as follows.

- I) The corporation's investment in the form of working capital has been increasing and DDC followed the conservative working capital policy with respect of current assets management.
- II) The average investments in current assets is lower with respect to net fixed assets during the study period and DDC has no clear vision about the investment in current assets portion cash and bank balance holds the second largest portion of the current assets and has fluctuating trend.
- III) Other major components of current assets i.e. inventories and receivables are in fluctuating trend. The company does not follow credit sales policy.
- IV) The company has been able to maintain its current ratio in an average 1.78:1 during the study period which is regarding satisfactory level.
- V) The gross and net profit margin in DDC shows that company is suffering from a heavy loss during the study period.

VI) The overall return position of DDC is negative, not in favorable condition. It is because of inefficient utilization of current assets, total assets and shareholders wealth. (*Shrestha*, T.U. Thesis : 2001)

Homnath Baskota in his thesis entitled 'A study on working capital management of Kumari Bank Ltd.' has covered the five years data. The objective of the study is

- I) To know the working capital position of KBL respect to cash, debtors and inventory management.
- II) To know the relationship between sales and other variable of working capital.
- III) To know the effect of working capital on profitability.

He has used different financial as well as statistical tools to achieve the above mention goals of the research. The major findings of the study are as follows:

- I) The working capital of KBL has been increasing trend. The working capital depicts the liquidity position of an organization. It means higher the working capital higher the liquidity of the firm and vice versa.
- II) The saving deposit to total deposit ratio of the bank has been gradually increasing over the study period. Higher level of this ratio of the bank indicates to the idle fund. From the profitability point of view, the bank should minimize the ratio.
- III) The coefficient of correlation between investments and government securities and total deposit was to 0.88%, which is significant over the study period.
- IV) Working capital is essential to meet short-term obligations. But high level of working capital increase idle fund which affects the profitability of the bank. Therefore, the bank should maintain sound working capital position.

- V) If the bank has more than sufficient current assets, it is an indication of unfavorable of distribution of current assets than current liabilities. Therefore, there is quite higher idle fund which may result unproductive for bank. Thus, the bank should try to reduce its current assets to increase its profitability. (*Baskota, Homenath, T.U. Thesis, Management, 2008: 102*)

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This chapter presents the research methodology used to study working capital management of the commercial banks. The following research methodologies are used in this chapter.

#### **3.1 Research Design**

The research design is descriptive cum analytical because the historical secondary data have been used to describe and analyze using variables which is related to working capital management of the commercial banks. The study has been conducted to assess the existing situation of working capital management of commercial banks of Nepal and describe the situation and event occurring at present.

#### **3.2 Population and Sample**

Presently, there are 28 commercial banks working in Nepal including government owned, private and joint venture. Due to lack of time and resource factors, it is not possible to study all the population into this topic. Therefore the total population of this topic is the Nepalese commercial banks.

The samples to be selected are as follows:

**I. Everest Bank Ltd.**

**II. Himalayan Bank Ltd.**

#### **3.3 Nature and Source of Data**

There are two types of sources of data i.e. primary and secondary sources. This study is mainly based on the secondary data. This study is mainly based on the secondary data. The required data have been collected from

financial statements of listed companies which have located at [www.nepalstock.com](http://www.nepalstock.com) and from their official website.

Different books from library, periodicals, newspaper cuttings, companies' magazines will also be used whenever required. Report of EBL and HBL, Nepal Rastra Bank's directives to the commercial banks, published and unpublished materials has been collected.

### **3.4 Period of the study**

The study is based on five years financial data of sample banks (i.e., Everest Bank Ltd. and Himalayan Bank Ltd.) from fiscal year 2004/05 to 2008/09.

### **3.5 Data Processing Procedure**

To achieve the goals of this study, it must be process of the collected data because they are in raw form. They were classified and tabulated as per the requirement of the study. Different financial as well as statistical tools were used to analyze the collected data.

### **3.6 Tools and Techniques of Analysis**

Under this study, financial as well as statistical tools have been used to analyze the gathered data and information.

#### **3.6.1 Financial Tools**

In this research study various financial tools are used to analysis the study. The analysis of this study based on following tools:

##### **A. Working Capital**

Working capital is used to assess the firm's current assets as well as current liabilities to improve their financial position and investment policy for the successful operation of the firm's. It is the excess of current assets in comparison with current liabilities. On the other word working capital

management is that it enables a firm to maintain the investment in current assets at optimum level that maintain a proper trade off between profitability and risk.

Working Capital (WC) = Current Assets (CA) – Current Liabilities (CL)

## **B. Liquidity Ratio**

Liquidity ratios measure the firm's ability to satisfy its short-term commitments out of current or liquid assets. These ratios focus on current assets and liabilities and are used to ascertain the short-term solvency position of a firm. The current ratio measures debts over the year, while the quick ratio measures liquidity available for immediate demands.

### **I) Current ratio**

A current ratio (CR) is the quantitative relationship between current assets (CA) and current liabilities (CL). Here, current assets are those, which can normally be converted into cash within a year. On the other hand current liabilities refer to those obligations, which must be paid within an accounting cycle. Current ratio measures the short term solvency, i.e. its ability to measure short-term obligation. It is calculated by divided current assets by current liabilities.

$$\text{Current Ratio (CR)} = \frac{\text{Current Assets (CA)}}{\text{Current Liabilities (CL)}}$$

Current assets include cash and marketable securities, accounts receivable, inventories etc. But current liabilities include accruals, account payable, notes payable and so on. As a conventional rule the ratio 2:1 are typically considered very low and indicate financial difficulties.

### **II) Current Assets to Total Assets Ratio**

This ratio shows the portion of current assets on total assets. Current assets include cash and bank balance, account receivables, inventories,

marketable securities etc. Higher the ratio greater the liquidity as well as lower the risk of being insolvent and vice -versa. The ratio is calculated as follows:

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

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

This ratio measures the liquid assets position on current assets of the bank. It is calculated by dividing cash and bank balance by current assets.

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

High ratio indicates the more liquidity of a firm and low ratio indicates the low liquidity of a firm.

### **IV) Working Capital to Current Assets Ratio**

Working capital is the difference between current assets and current liabilities. This ratio shows the relationship between net working capital and current assets. Working capital is the size of investment in each type of current assets. Each of these assets should be managed efficient and effectively. It is because decisions regarding working capital not only affect profitability of the bank or other institution but also affects the survival in the long run. The formula is given below:

$$\text{Working Capital to Current Assets Ratio} = \frac{\text{Working Capital}}{\text{Current Assets}}$$

### **V) Cash and Bank Balance to Deposit (excluding fixed deposit) Ratio**

This ratio is useful to measure whether the bank and cash balance is sufficient to cover its current call margin including deposits. It is calculated by

dividing cash and bank balance by saving margin and current deposits (excluding fixed deposit).

$$\text{Cash \& Bank Balance to Deposit Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Deposit (Excluding Fixed Deposit)}}$$

### **C. Activity or Turnover Ratio**

The ratios are concerning with the effective utilization of funds. If too many funds are tied up in certain types of assets that could otherwise employed more productively elsewhere, the firm is not as profitable as it should be.

Activity or turnover ratio indicates the firm's effectiveness by the use of their resources in a business organization. From the ratios, it is known whether the funds employed have been used effectively into the business activities or not. The following ratios employed to analyze the activeness of the concerned bank.

#### **➤ Loan and Advances to Total Deposit Ratio**

It is the proportion of loan and advance on total deposit. On the other hand it is the capacity of bank to utilize depositor's money by providing loan and advance to earn profit as an interest. It is calculated as loan and advance divided by total deposit.

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

A high ratio indicates that the bank utilizes their deposits properly and low ratio indicates the idle of their deposit because it is the major sources of investment.

### **D. Leverage Ratio**



The leverage refers to the use of debt capital. If a firm uses debt capital along with equity capital it is called a levered firm. Debt, equity, retained earnings and other short-term obligations are the parts of capital structure of the firm. It is shown in the liabilities side of balance sheet. The long term financial position of the firm is determined by the leverage or capital structure. The leverage ratios are maintained to measure the financial risk or proportion of outsider's funds and owner's capital used the firm.

➤ **Long Term Debt to Net worth Ratio**

It represents the relationship between long term debts to net worth of the bank. The ratio measure the proportion of outsiders and owner's fund employed in the capitalization of bank. It is calculated by dividing long term debt by net worth. The formula is given below:

$$\text{Long Term Debt to Net worth Ratio} = \frac{\text{Long Term Debt}}{\text{Net Worth}}$$

**E. Profitability Ratio**

Profitability is the end results of a number of corporate policies and decisions. It measures how effectively the firm is being operated and managed. Creditors are interested to know the financial soundness of the firm. Owners are eager to know their returns whereas managers are interested in their operating efficiency. Their expectations are evaluated in term of profit earned by the firm. The major ratios to measure the profitability are as follows:

**I) Net Profit to Total Assets Ratio**

The ratio, which is often called the firm's return on total assets, measure the overall effectiveness of management in generating profit with its available assets. The higher the firm's return on assets the better it is doing in operation and vice versa. It is calculated as follows:

$$\text{Net Profit to Total Assets Ratio} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

## II) Net Profit to Total Deposit Ratio

It is the measurement of return from deposits. Deposit is the main source of investment to the banks. The ratio is find out by dividing NPAT by total deposit. The higher ratio is the proper utilization of the deposit for investment and lower ratio indicates the lack of mobilization of the funds. The formula is given below:

$$\text{Net Profit to Total Deposit Ratio} = \frac{\text{Net Profit After Tax}}{\text{Total Deposit}}$$

## III) Cost of Services to Total Assets Ratio

Profit maximization is the result of cost minimization also. Management of the firms are always try to utilize their available assets into the low cost. This ratio is the measurement of the assets utilization with cost of services. It is find out by using following formula:

$$\text{Cost of Services to Total Assets Ratio} = \frac{\text{Cost of Services}}{\text{Total Assets}}$$

### 3.6.2 Statistical Tools

It is another useful tool to fulfill the demand of the study or to achieve the objectives of this research. The result of analysis has been properly tabulated, compared, analyzed and interpreted. This study presents the following statistical tools:

#### A) Arithmetic Mean or Average ( $\bar{X}$ )

Arithmetic mean or average is the set of observation that present the entire data; its value lies some where in between the extremes. For this reason and average is frequently referred to as a measure of central tendency. It is denoted by  $\bar{X}$ . Symbolically,

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{N} = \frac{\sum X}{N}$$

Where,

$\bar{X}$  = Arithmetic mean or Average

$X_1, X_2, X_3, X_n$  = Values of variables

$\sum X$  = Sum of the values of variables

N = Total number of observation

### **(B) Standard Deviation ( $\sigma$ )**

Standard deviation is the square root of the mean of the squared deviation, where deviation is the difference between an outcome and the expected mean value of the standard deviation, weight to the square root of each deviation by its probability occurrence.

The concept of standard deviation was first introduced by Karl Pearson in 1893. It is the most usual measure of dispersion and it represents the square root of the variance of a group of numbers, i.e., the square root of the sum of the squared differences between a group of numbers and their arithmetic mean. In other words, standard deviation is the positive square root of the arithmetic average of the squares of all the deviations measured from the arithmetic average of the series. It is independent of the position of the origin. Generally, it is denoted by small Greek letter (read as sigma) and is obtained as follows.

The standard deviation measures the absolute dispersion or variability of a distribution; the greater the amount of dispersion or variability the greater the standard derivation, for the greater will be the magnitude of the deviations of the values from their mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series.

It is denoted by  $\sigma$ . Symbolically,

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

Where,

u = Standard deviation

$\sum (x - \bar{X})^2$  = Sum of the mean deviation squared

N = Total number of observation

### **(C) Coefficient of Variation (C.V.)**

The C.V. is the relative measure of dispersion, comparable across which is defined as the ratios of the standard deviation to the mean expressed percent.

Symbolically,

$$C.V. = \frac{u}{\bar{X}} \times 100 \%$$

Where,

C.V. = Coefficient of variation

u = Standard deviation

$\bar{X}$  = Arithmetic mean or Average

### **(D) Trend Analysis**

Trend analysis is the analysis of the financial situation of the firm's whether it is increasing or decreasing or fluctuating according to the different year data. It indicates the direction of changes in financial situation. It helps to analysis of trend i.e. is there positive change or negative? Thus the tools that are used to show grandly increase or decrease in variables over the period of time.

### **(D) Correlation Coefficient (r)**

Correlation analysis is defined as the statistical technique which measures the degree and direction of relationship between the variables. With the help of this, it can be determine whether or not two or more variables are

correlated and if they are correlated the degree (extent) and direction of correlation is determined. Correlation analysis does not tell anything about cause and effect relationship i.e. if there is high degree of correlation between the variables, we cannot say which the cause is and which is the effect.

The numerical measurement of relationship between the two variables is denoted by the symbol "r" whose value ranges from -1 to +1 i.e.  $-1 \leq r \leq +1$ .

- I. If  $r = 0$ , there is no relationship between the variables
- II. If  $r < 0$ , there is negative relationship between the variables
- III. If  $r > 0$ , there is positive relationship between the variables
- IV. If  $r = +1$ , the relationship is perfectly positive
- V. If  $r = -1$ , the relationship is perfectly negative

The most important method of measuring the correlation between the two variables is "Karl Pearson's Coefficient of Correlation". It is calculated by using following formula:

$$r = \frac{\text{Cov. (X, Y)}}{x \cdot y}$$

or, 
$$r = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{N \cdot x \cdot y}$$

or, 
$$r = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \cdot \sqrt{N \sum Y^2 - (\sum Y)^2}}$$

Where,

Cov.(X,Y) = Covariance of X &Y.

x = Standard deviation of the distribution X.

y = Standard deviation of the distribution Y.

### **(E) Probable Error [P. E. (r)]**

The probable error of the coefficient of correlation helps in interpreting its value. It helps to determine the reliability of the value of coefficient. To cross check the validity of the result, we can take help of following formula:

$$\text{P. E. (r)} = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

Where;

P. E. (r) = Probable error of r.

r = correlation coefficient between X and Y

- If the value of r is less than 6 times, the probable error i.e.  $r < 6 \text{ P.E. (r)}$ . There is no significant relation between X and Y.
- If the value of r is more than 6 times the probable error i.e.  $r > 6 \text{ P.E. (r)}$ , there is most significant correlation between X and Y.
- If  $\text{P.E. (r)} < 6 \text{ P.E. (r)}$ , there is moderate relation between X and Y.

### **(F) T-statistics**

It is used to test the validity of assumption of the study for small sample. It is very difficult to make clear-cut distinction between small samples and large samples. Generally, a sample is termed as small, if  $n < 30$  from practical point of view. For applying t-distribution, the t-values are calculated first and compared with critical values at a certain level of significance for given degree of freedom. If the computed value of (t) exceeds the table value (say to 0.05), it is known that the difference is significant at 5% level of significance but if t-values are less corresponding critical values of the t-distribution, the difference is not treated as significant. T value is calculated as follows;

$$t = \frac{X_1 - X_2}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where,

$X_1$  = EBL and  $X_2$  = HBL

$n_1$  = Number of year of EBL

$n_2$  = Number of year of HBL

$S^2$  = Unbiased estimate of population variance.

### **(G) Test of Hypothesis**

The statement of the relationship between two or more variable is called hypothesis. Hypothesis statement should be able to show the relationship between variables. At the same time they should carry clear implications for testing the stated relations. The research on thesis strongly holds the hypothesis criteria. In this research work, it has been tried to find whether the independent variables have statistically significant relationship with dependent variable or not. The test is based on the pooled average data of five years of the sample banks. Testing of hypothesis includes the following systematic steps in order to make precise decision about the value which has to be tested.

#### **Null Hypothesis:**

For decision making procedure, first of all the null hypothesis is stated which is denoted by  $H_0$ . The null hypothesis refers hypothesis of no difference. It is usually set for the express purpose of being rejected.

$$H_0: \mu = \mu_0$$

#### **Alternative Hypothesis:**

This is the hypothesis which is the opposite of null hypothesis. It is denoted by  $H_1$ . The hypothesis is accepted if the null hypothesis is rejected. It should be noted that alternative is a mutually exclusive and complementary statement of null hypothesis.

$$H_1: \mu \neq \mu_0$$

## **CHAPTER IV**

### **PRESENTATION AND ANALYSIS OF DATA**

#### **4.1 Introduction**

In this chapter the relevant data and information on working capital of EBL and HBL are presented and analyzed comparatively keeping objectives of the study in mind. From the point of view of the study, this chapter is the focal part of the study. Using the various financial tools and statistical tools mentioned in chapter three, we analyze the data to achieve the objective of the study. This chapter is important part of this research study because it provides the numerical vision of EBL and HBL by the help of five years data. Data are presented in the form of tabular, diagram or graphical through different statistical and financial tools, which is easy to analysis and understand.

It covers the analysis of working capital of EBL and HBL by using different tools i.e. ratio analysis, standard deviation, arithmetic mean, trend analysis, co-efficient of correlation and hypothesis testing etc.

#### **4.2 Ratio and Trend Analysis**

Ratio analysis serves the mode of financial analysis of the various financial data extracted from different financial statements. It is used as a technique to quantify the relationship between two or more sets of financial data taken from income statement and balance sheet. It provides the information relating to strength and weakness of a financial data in relations to other. Financial ratios serve different comparison through the establishment of one accounting data with other.

Trend analysis is the graphical presentation of the available data. It is important to analyze trends in ratio as well as their absolute levels. Trend gives clue to the financial situation whether it is improving or not? It indicates the direction of changes which is useful to make better in the future. It indicates changes that are taking place in an organization and highlights the direction of these changes.



### 4.2.1 Current Ratio

Current ratio is the quantitative test of a firm's liquidity. It measures the ability of the firm to meet obligations due within one year. Higher the ratio indicates better liquidity position. On the other hand lower the ratio indicates financial difficulties of a firm. This ratio indicates the current short term solvency position of bank. It is calculated as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets (CA)}}{\text{Current Liabilities (CL)}}$$

The following table shows the current ratio of EBL and HBL for the five fiscal years from 061/62 to 065/66.

Table No 4.1  
**Current Ratio (CR) of EBL and HBL** (Rs. in million)

Bank F/Y	EBL			HBL		
	CA	CL	CR (%)	CA	CL	CR (%)
2061/62	11515.67	10599.90	108.64	27422.71	25942.94	106.70
2062/63	15685.14	14696.48	106.73	28897.84	27334.21	106.72
2063/64	21125.70	19931.06	106.00	32932.30	31012.62	106.19
2064/65	26592.03	24928.10	106.67	35439.15	32802.54	108.64
2065/66	36138.28	34413.22	105.00	38345.43	35700.44	107.41
Mean ( $\bar{x}$ )			106.61	Mean ( $\bar{x}$ )		106.61
S.D. (u)			1.19	S.D. (u)		0.95
C.V.			1.12	C.V.		0.89

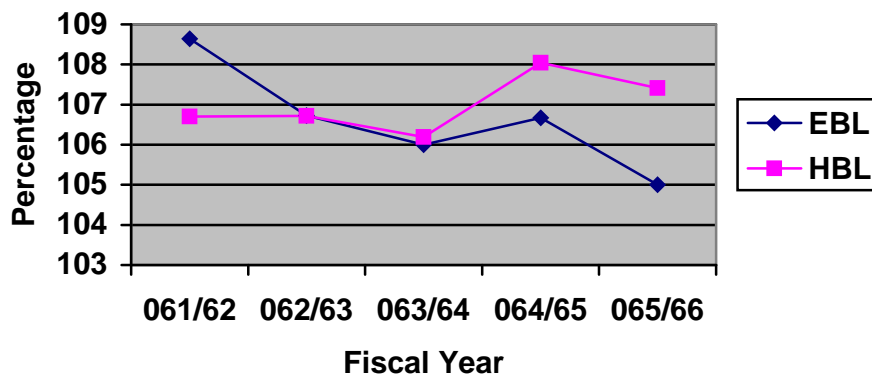
*Source: Annual financial summary of EBL and HBL.*

The above table shows the proportion of current assets to current liabilities of EBL and HBL from fiscal year (F/Y) 061/62 to 065/66. The current ratio of EBL is 108.64% in 061/62 then it has decreased in 062/63 and 063/64. But it has increased in 064/65 then decreased again in 065/66. The CR of HBL is increasing in first and second year of the study period and decreased

in the year 063/64, again increase in the year 064/65 to 108.64% and lastly it is decreased again to 107.41%. The highest ratio of EBL is in 061/62 and lowest ratio in 065/66. The highest ratio of HBL is in 064/65 and lowest ratio is in 061/62. The average proportion of EBL and HBL is same i.e. 106.61%. It indicates both the banks have maintained current ratio better. The ratio indicates the good liquidity position of EBL and HBL. Likewise C.V. of EBL is 1.12% and 0.89% of HBL. EBL has greater C.V. which indicates the more fluctuation of CA to CL in EBL and lower C.V. indicates the less fluctuation of CA to CL in HBL.

The following chart shows the trend of current ratio.

**Chart no 4.1**  
**Current Ratio of EBL and HBL**



Source: Table no 4.1

From the above graph the current ratio of EBL is greater than HBL in the year 061/62 but it is decreasing after that. The current ratio of EBL is decreasing trend except in the year 064/65. On the other hand the ratio of HBL is fluctuating over the study period.

#### 4.2.2 Current Assets to Total Assets Ratio

This ratio is calculated by dividing current assets by total assets. It indicates the proportion of current assets on total assets of a bank. Higher the

ratio greater the liquidity as well as lower the risk of being insolvent and vice - versa. The formula is given below:

$$\text{Current Assets to Total Assets} = \frac{\text{Current Assets}}{\text{Total Assets}}$$

The following table shows the current assets to total assets ratio of EBL and HBL for the fiscal year 061/62 to 065/66.

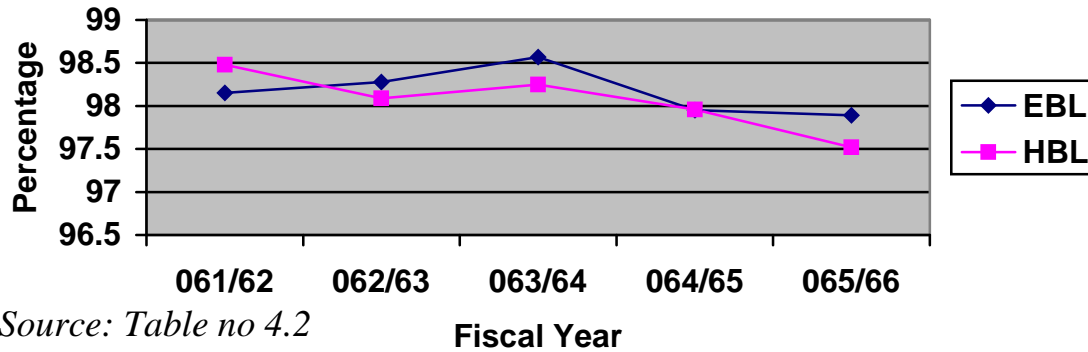
Table No 4.2  
**Current Assets (CA) to Total Assets (TA) Ratio** (Rs in million)

Bank F/Y	EBL			HBL		
	CA	TA	Ratio (%)	CA	TA	Ratio (%)
2061/62	11515.67	11732.52	98.15	27422.71	27844.69	98.48
2062/63	15685.14	15959.27	98.28	28897.84	29460.39	98.09
2063/64	21125.70	21432.57	98.57	32932.30	33519.13	98.25
2064/65	26592.03	27149.34	97.95	35439.15	36175.53	97.96
2065/66	36138.28	36916.86	97.89	38345.43	39320.31	97.52
<b>Mean (<math>\bar{x}</math>)</b>			98.17	<b>Mean (<math>\bar{x}</math>)</b>		98.06
<b>S.D. (u)</b>			0.24	<b>S.D. (u)</b>		0.32
<b>C.V.</b>			0.24	<b>C.V.</b>		0.32

*Source: Annual financial summary of EBL and HBL.*

The above table shows the proportion of current assets to total assets of EBL and HBL from fiscal year 061/62 to 065/66. The ratio of EBL is 98.15%, 98.28%, 98.57%, 97.95% and 97.89% for five years. Hence the ratio of HBL for five years is 98.48%, 98.09%, 98.25%, 97.96% and 97.52% respectively. The average proportion of EBL is 98.17% and 98.06% for HBL. The average proportion of current assets to total assets of EBL is greater than HBL. It indicates the better position of current assets on total assets of EBL than HBL. The C.V. of EBL is 0.24% and 0.32% of HBL. EBL is more consistent or uniform than HBL. The following chart shows the trend of CA to TA of EBL and HBL.

Chart No 4.2  
**Current Assets to Total Assets of EBL and HBL**



Source: Table no 4.2

The above chart shows the current assets to total assets ratio of EBL and HBL. Where as the trend of the ratio of EBL is increasing in first three years and decreasing then after. But the ratio of HBL is decreasing approximately but increasing in third year of the study period i.e. 063/64 than second year.

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

It measures the liquidity position of a bank because cash and bank balance are liquid current assets. This ratio is calculated by dividing cash and bank balance by current assets. It is major source of working capital. It is the portion of cash and bank balance on total current assets. It is calculated as follows:-

$$\text{Cash and bank balance to Current assets} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}}$$

The following table shows the cash and bank balance to current assets of EBL and HBL from fiscal year (F/Y) 2061/062 to 2065/066.

Table No 4.3

**Cash & Bank Balance(C& BB) to Current Assets (CA) Ratio**

(Rs in million)

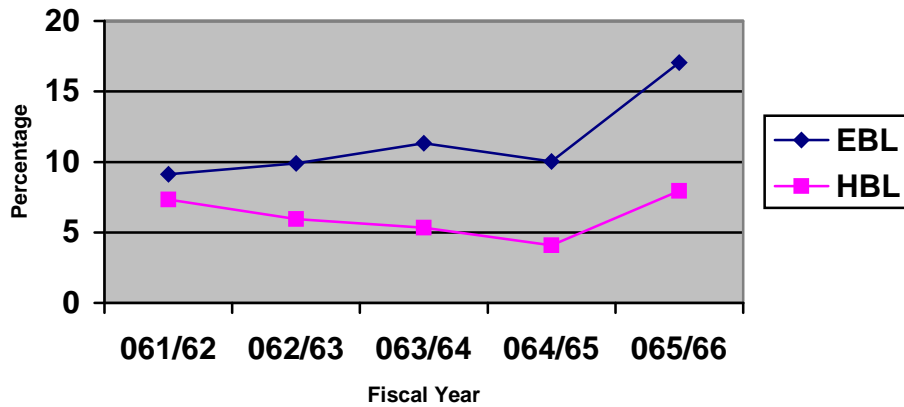
Bank F/Y	EBL			HBL			
	C & BB	CA	Ratio (%)	C & BB	CA	Ratio (%)	
2061/62	1049.99	11515.67	9.12	2014.47	27422.71	7.34	
2062/63	1552.96	15685.14	9.9	1717.35	28897.84	5.94	
2063/64	2391.42	21125.70	11.32	1757.34	32932.30	5.34	
2064/65	2667.97	26592.03	10.03	1448.14	35439.15	4.08	
2065/66	6164.37	36138.28	17.06	3048.53	38345.43	7.95	
<b>Mean (<math>\bar{x}</math>)</b>			11.48	<b>Mean (<math>\bar{x}</math>)</b>			6.13
<b>S.D. (u)</b>			2.87	<b>S.D. (u)</b>			1.39
<b>C.V.</b>			25	<b>C.V.</b>			22.67

Source: Annual financial summary of EBL and HBL.

The above table shows the proportion of cash and bank balance to current assets of EBL and HBL for the five fiscal year ended 2065/66. The proportion of EBL for five years is 9.12%, 9.9%, 11.32%, 10.03% and 17.06% respectively. Hence the proportion of HBL for five years is 7.34%, 5.94%, 5.34%, 4.08% and 7.95% respectively. EBL has higher proportion in the year 065/66 and lower in the year 061/62. HBL has higher proportion in the year 065/66 and lower in the year 064/65. The average proportion of EBL is 11.48% and 6.13% of HBL. Higher ratio shows the weak management of cash and lower ratio indicates the sound cash management policy. HBL is better in this case because of lower ratio in average. The C.V. of the ratio is 25% for EBL and 22.67% for HBL. The C.V. of HBL is lower than EBL. It indicates that HBL is more consistence or uniform than EBL. There is more fluctuation in cash and bank balance to current assets ratio of EBL than HBL.

The following chart shows the trend of cash and bank balance to current assets ratio of EBL and HBL.

Chart No 4.3  
Cash & Bank Balance to Current Assets of EBL and HBL



Source: Table no4.3

The above chart 4.3 shows the trend of cash and bank balance to current assets of EBL and HBL. The ratio of EBL is increasing from the fiscal year 061/62 to 063/64 in a small percentage but it is decrease in the year 064/65 and at the last year it is slightly increasing to 17.06%. Hence the ratio of HBL is decreasing in a small range from F/Y 061/62 to 064/65 but at the last year it is slightly increasing to 7.95% from 4.08% (year 064/65). The ratio of EBL and HBL is slightly increasing in the last year of the study period.

#### 4.2.4 Working Capital to Current Assets Ratio

Working capital is the difference between current assets and current liabilities. Money invested on working capital should be neither more nor less because both the position of working capital affects not only liquidity but also profitability of an organization. This ratio shows the relationship between net working capital and current assets. It is calculated as follows:

$$\text{Working Capital to Current Assets} = \frac{\text{Net Working Capital}}{\text{Current Assets}}$$

The following table shows the ratio of working capital to current assets of EBL and HBL for the five F/Y ended 2065/066.

Table No 4.4  
**Net Working Capital (NWC) to Current Assets (CA) Ratio**  
(Rs in million)

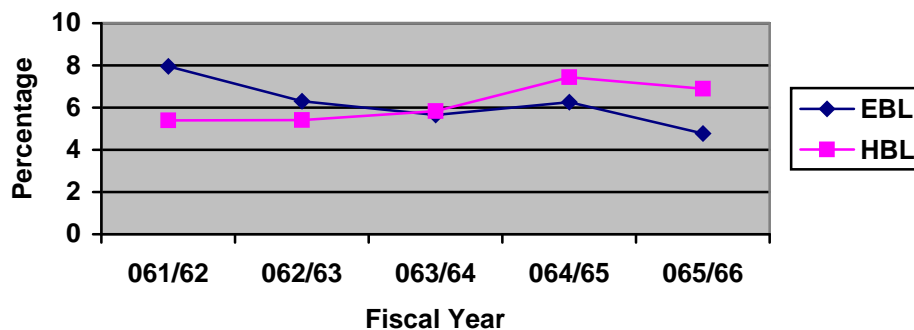
Bank F/Y	EBL			HBL		
	NWC	CA	Ratio (%)	NWC	CA	Ratio (%)
2061/62	915.77	11515.67	7.95	1479.77	27422.71	5.40
2062/63	988.66	15685.14	6.30	1563.63	28897.84	5.41
2063/64	1194.64	21125.70	5.65	1919.68	32932.30	5.83
2064/65	1663.93	26592.03	6.26	2636.61	35439.15	7.44
2065/66	1725.06	36138.28	4.77	2644.99	38345.43	6.90
<b>Mean (<math>\bar{x}</math>)</b>	6.19			<b>Mean (<math>\bar{x}</math>)</b>	6.20	
<b>S.D. (u)</b>	1.04			<b>S.D. (u)</b>	0.83	
<b>C.V.</b>	16.80			<b>C.V.</b>	13.39	

*Source: Annual financial summary of EBL and HBL*

The above table 4.4 shows the working capital to current assets ratio of EBL is 7.95%, 6.30%, 5.65%, 6.26% and 4.77% for five F/Y respectively. Similarly ratio of HBL is 5.4%, 5.41%, 5.83%, 7.44% and 6.9% for five F/Y respectively. The average ratio of EBL is 6.19% and 6.20% of HBL. Higher is better for liquidity position. So HBL is better than EBL in an average ratio. The C.V. of EBL is greater than HBL. So HBL is more consistence than EBL. There is more fluctuation on working capital to current assets ratio of EBL than HBL.

The following chart shows the trend of working capital to current assets ratio.

Chart No 4.4  
**WC to CA Ratio**



Source: Table no 4.4

The above chart shows the ratio of working capital to current assets of EBL and HBL from F/Y 2061/62 to 2065/66. The ratio of EBL is approximately decreasing trend over the study period but it is increase from 5.65% to 6.26% in the year 064/65. On the other hand the ratio of HBL is increasing trend from first year to fourth year of the study period but it is decrease in the last year to 6.90% from 7.44% (064/65).

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

This ratio shows the ability of banks immediate funds to cover their (current, margin, call and saving) deposits. It can be calculated by dividing cash and bank balance by total deposit excluding fixed deposits. The formula is given below:

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

The following table shows the cash and bank balance to total deposit ratio of EBL and HBL over the study period.

Table No 4.5

#### Cash and Bank Balance (C& BB) to Total Deposit (TD) Ratio

(Rs In million)

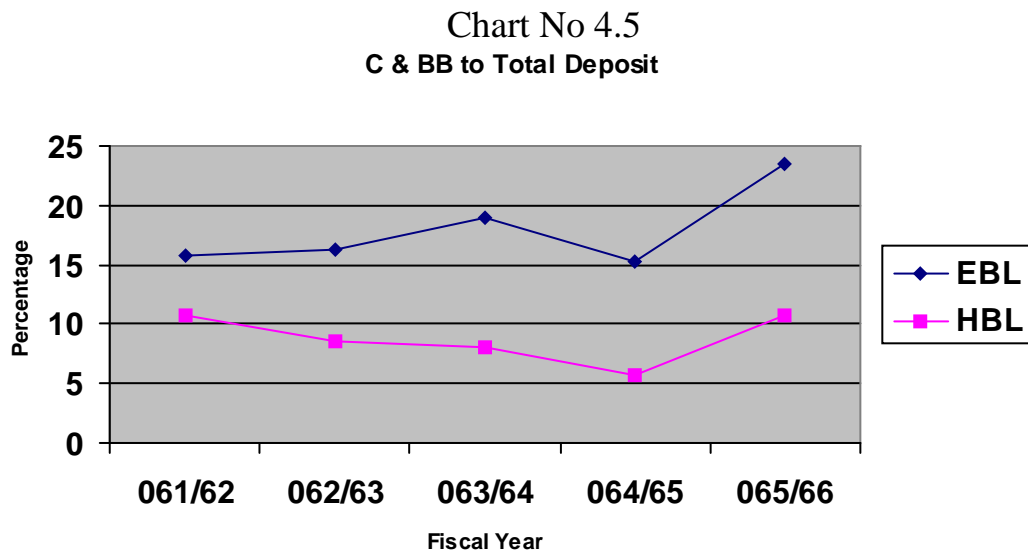
Bank F/Y	EBL			HBL		
	C & BB	TD	Ratio (%)	C & BB	TD	Ratio (%)
2061/62	1049.99	6693.73	15.69	2014.47	18706.57	10.77
2062/63	1552.96	9560.09	16.24	1717.35	20140.65	8.53
2063/64	2391.42	12559.59	19.04	1757.34	21847.29	8.04
2064/65	2667.97	17530.12	15.22	1448.14	25418.93	5.70
2065/66	6164.37	26272.97	23.46	3048.53	28304.21	10.77
<b>Mean (<math>\bar{x}</math>)</b>			17.93	<b>Mean (<math>\bar{x}</math>)</b>		8.76
<b>S.D. (u)</b>			3.07	<b>S.D. (u)</b>		1.90
<b>C.V.</b>			17.12	<b>C.V.</b>		21.69



Source: Annual financial summary of EBL and HBL.

The above table shows the cash and bank balance to total deposit (except fixed deposit) ratio of EBL is increasing up to first three years then decreasing to 15.22% in fourth year. But at the last year it is again increasing to 23.46%. Similarly the ratio of HBL is decreasing from 10.77% in first year to 5.70% in fourth year but it is increasing in fifth year of the study period to 10.77% which is same as the first year of the study. The average ratio of EBL is 17.93% and 21.69% of HBL. It shows the ability of banks to cover its current, margin, call and saving deposit of the bank, in other words the liquidity position of the bank. EBL is more liquid than HBL because it has higher average ratio. But the large amount of idle cash and bank balance badly affect the profitability of the bank. On the other hand HBL is better for cash management because of low average ratio. The C.V. of HBL is greater than EBL. So EBL is more consistence or uniform than HBL. There is more fluctuation on cash and bank balance to total deposit (except fixed deposit) of HBL.

The following chart shows the trend of cash and bank balance to total deposit ratio of EBL and HBL.



*Source: Table no 4.5*

The above chart 4.5 shows the trend of cash and bank balance to total deposit of EBL and HBL. The ratio of EBL is increasing from the fiscal year 061/62 to 063/64 in a small percentage but it is decrease in the year 064/65 and at the last year it is slightly increasing to 23.46%. Hence the ratio of HBL is decreasing in a small range from F/Y 061/62 to 064/65 but at the last year it is slightly increasing to 10.77% from 5.70% (year 064/65). The ratio of EBL and HBL is slightly increasing in the last year of the study period.

#### **4.2.6 Loan and Advances to Total Deposit Ratio**

The banks collect deposit from the people and provide loan and advances for needy person or an organization. Loan and advances are the main sources of earning of the banks. This ratio shows the proportion of loan and deposit. It is calculated as follows:

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

The following table shows the proportion of loan and advances to total deposit of EBL and HBL for five year.

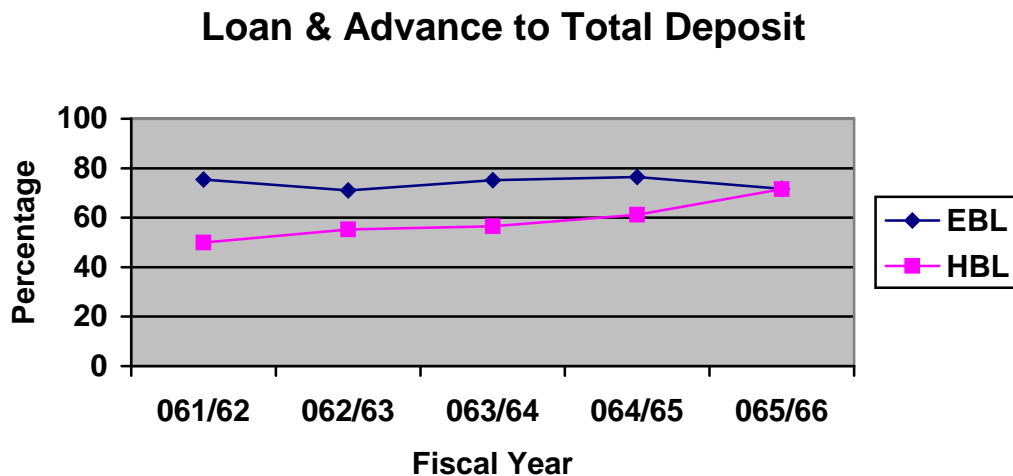
Table No 4.6  
**Loan and Advances (L&ADV) to Total Deposit (TD) Ratio**  
(Rs. in million)

Bank F/Y	EBL			HBL		
	L& ADV	TD	Ratio (%)	L & ADV	TD	Ratio (%)
2061/62	7618.67	6693.73	75.45	12424.53	18706.57	50
2062/63	9801.31	9560.09	71.01	14642.55	20140.65	55.27
2063/64	13664.08	12559.59	75.13	16997.99	21847.29	56.57
2064/65	18339.06	17530.12	76.49	19497.52	25418.93	61.23
2065/66	23884.68	26272.97	71.68	24793.16	28304.21	71.49
<b>Mean (<math>\bar{x}</math>)</b>	73.95			<b>Mean (<math>\bar{x}</math>)</b>	58.91	
<b>S.D. (u)</b>	2.19			<b>S.D. (u)</b>	7.23	
<b>C.V.</b>	2.96			<b>C.V.</b>	12.27	

*Source: Annual financial summary of EBL and HBL.*

The above table shows the proportion of loan and advances to total deposit of EBL for five year is 75.45%, 71.01%, 75.13%, 76.49% and 71.68% respectively. Similarly the ratio of EBL is 50%, 55.27%, 56.57%, 61.23% and 71.49% for five years respectively. The ratio of EBL is 73.95% and 58.91% of HBL. It shows that EBL has more earning power from loan and advance on the other hand EBL has utilized the deposit more than HBL. Similarly HBL has more liquidity because of low average ratio. But EBL is better for fund utilization in this case. The C.V. of EBL is less than HBL. So, EBL is more consistence or uniform than HBL. There is more fluctuation on loan and advance to total deposit of HBL. The following chart shows the trends of the ratio.

Chart No 4.6



*Source: Table no 4.6*

The above chart shows that the loan and advance to total deposit ratio of HBL is increasing trend in the study period but the ratio of EBL is fluctuating in the study period. The ratio of EBL is fluctuating over the five year period but the ratio of HBL is increasing from 061/62 to 065/66. But both the banks have nearer ratio at the last year of the study period.

#### **4.2.7 Long Term Debt to Net Worth Ratio**

Long term debt is the long term loan of the banks. This ratio measures the proportion of outsiders and owner's fund which is used in the capitalization of banks. It is calculated by dividing the long term debt by owners claim. It is the relationship between owned funds and borrowed funds. Long term debt includes long term borrowing from government agencies or financial institutions. It is calculated as follows:

$$\text{Long Term Debt to Net Worth} = \frac{\text{Long Term Debt}}{\text{Net Worth}}$$

The following table shows the ratio of long term debt and net worth EBL and HBL for five F/Y end 2065/66.

Table No 4.7

**Long Term Debt (LTD) to Net Worth (NW) Ratio** (Rs. in million)

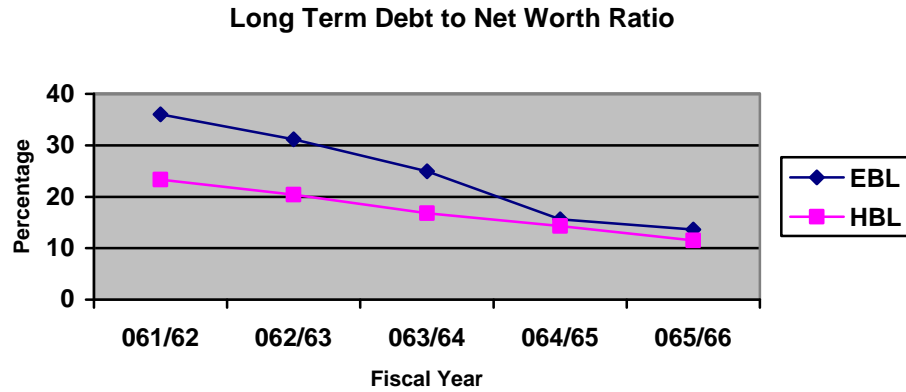
Bank F/Y	EBL			HBL		
	LTD	NW	Ratio (%)	LTD	NW	Ratio (%)
2061/62	300	832.61	36.03	360	1541.75	23.35
2062/63	300	962.81	31.16	360	1766.18	20.38
2063/64	300	1201.52	24.97	360	2146.51	16.77
2064/65	300	1921.24	15.61	360	2512.98	14.32
2065/66	300	2203.62	13.61	360	3119.87	11.53
<b>Mean (<math>\bar{x}</math>)</b>			24.28	<b>Mean (<math>\bar{x}</math>)</b>		17.27
<b>S.D. (u)</b>			8.66	<b>S.D. (u)</b>		4.21
<b>C.V.</b>			35.67	<b>C.V.</b>		24.36

*Source: Annual financial summary of EBL and HBL.*

Above table shows the long term debt to net worth ratio of EBL for five years is 36.03%, 31.16%, 24.97%, 15.61% and 13.61% respectively with an average of 24.28%. Similarly the ratio of HBL for five years is 23.35%, 20.38%, 16.77%, 14.32% and 11.53% respectively with an average 17.27%. The ratio of EBL is decreasing over the study period and the ratio of HBL also in decreasing position. There is some higher outsiders claim in EBL than HBL because of high average ratio. It shows EBL is more risky capital structure because of higher ratio in an average in comparison with HBL. The ratio of long term debt to net worth reflects the relative contribution of creditors and owners of the bank in its financing. The C.V. of HBL is lower than EBL it shows the HBL is more uniform than EBL. There is more fluctuation on long term debt to net worth of EBL than HBL.

The following chart shows the trends of long term debt to net worth ratio of EBL and HBL.

Chart No - 4.7



*Source: Table No 4.7*

The above chart 4.7 shows the trends of long term debt to net worth ratio of EBL and HBL for the five year study period ending 2065/66. The ratio of HBL is decreasing over the study period on the other hand the ratio of EBL also in decreasing trend. But the trend of the ratio of EBL is more than HBL.

#### **4.2.8 Return on Assets Ratio**

This ratio is useful to measuring the profitability of funds invested in the bank's assets. On the other word it measures the banks return from total assets. It is calculated as follows:

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

The following table shows the ROA of EBL and HBL for the five F/Y.

Table No 4.8  
Return on Assets of EBL and HBL (Rs in million)

Bank F/Y	EBL			HBL		
	NPAT	TA	Ratio (%)	NPAT	TA	Ratio (%)
2061/62	168.21	11732.52	1.43	308.28	27844.68	1.11
2062/63	237.29	15959.27	1.49	457.46	29460.39	1.56
2063/64	296.41	21432.57	1.38	491.82	33519.13	1.47
2064/65	451.22	27149.34	1.66	635.87	36175.53	1.76
2065/66	638.73	36916.86	1.73	752.84	39320.31	1.92
<b>Mean (<math>\bar{x}</math>)</b>			1.54	<b>Mean (<math>\bar{x}</math>)</b>		1.56
<b>S.D. (u)</b>			0.13	<b>S.D. (u)</b>		0.27
<b>C.V.</b>			8.45	<b>C.V.</b>		17.31

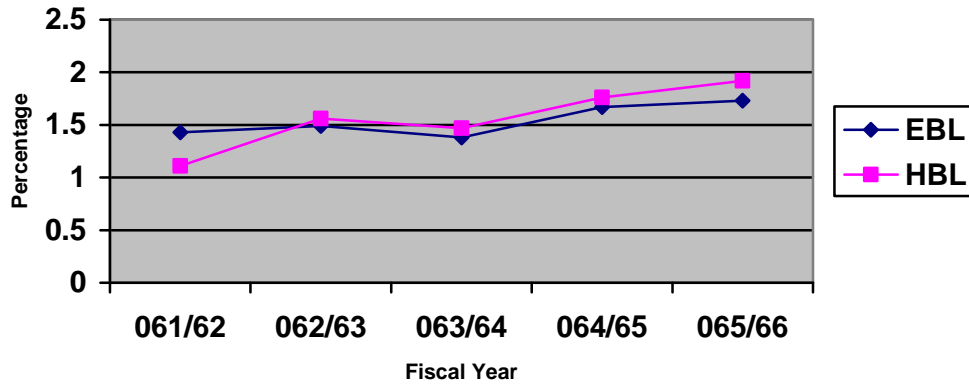
*Source: Annual financial summary of EBL and HBL*

The above table 4.8 shows the return on assets of EBL for five years study period is 1.43%, 1.49%, 1.38%, 1.66% and 1.73% respectively. The ratio of HBL for five years is 1.11%, 1.56%, 1.47%, 1.76% and 1.92% respectively. The average ratio of EBL is 8.45% and 17.31% of HBL. HBL is better for return on assets ratio because of higher average ratio than EBL. Five years average ratio shows the return from the uses of assets of HBL is more than EBL. C.V. of EBL is 8.45% and HBL is 17.31% which shows that EBL is more consistence or uniform than HBL. The net profit after tax to total assets is more fluctuation in HBL.

The following chart shows the trend of the return on assets ratio.

Chart No - 4.8

Return on Assets Ratio of EBL and HBL



Source: Table no 4.8

The trend of the return on assets ratio of EBL and HBL is increasing over the study period apart from F/Y 063/64. The ratio of HBL is increasing more than EBL. So HBL is better for having return from the maximum utilization of assets. The ratio is greater in EBL than HBL in the F/Y 061/62 but it is increasing more than EBL from the F/Y 063/64.

#### 4.2.9 Net Profit to Total Deposit Ratio

This ratio is useful to measure the internal rate of return from deposit. Higher ratio indicates the maximum utilization of depositors fund to earn profit for bank and lower ratio indicates the funds are not properly mobilizing. The formula is given below:

$$\text{Net Profit to Total Deposit} = \frac{\text{Net Profit After Tax}}{\text{Total Deposit}}$$

The following table shows the net profit to total deposit ratio for five year study period.



Table No 4.9  
**Net profit after tax to Total Deposit of EBL and HBL**

(Rs million)

Bank F/Y	EBL			HBL		
	NPAT	TD	Ratio (%)	NPAT	TD	Ratio (%)
2061/62	168.21	10097.69	1.67	308.28	24814.00	1.24
2062/63	237.29	13802.44	1.72	457.46	26490.85	1.73
2063/64	296.41	18186.25	1.63	491.82	30048.42	1.64
2064/65	451.22	23976.30	1.88	635.87	31842.80	1.99
2065/66	638.73	33322.95	1.92	752.84	34681.34	2.17
<b>Mean (<math>\bar{x}</math>)</b>			1.76	<b>Mean (<math>\bar{x}</math>)</b>		
<b>S.D. (u)</b>			0.12	<b>S.D. (u)</b>		
<b>C.V.</b>			6.82	<b>C.V.</b>		

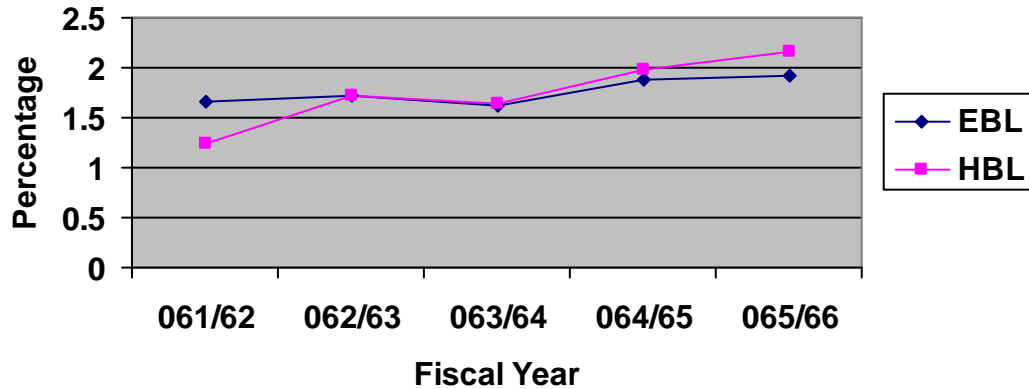
*Source: Annual financial summary of EBL and HBL.*

From the above table, net profit to total deposit ratio of EBL is 1.67%, 1.72%, 1.63%, 1.88% and 1.92% respectively. Hence the ratio of HBL is 1.24%, 1.73%, 1.64%, 1.99% and 2.17% respectively. The average ratio of EBL is 1.76% and 1.75% of HBL. The EBL could be able to mobilize outsider's funds efficiently than HBL because of higher average ratio. The C.V. of EBL is lower than HBL. So EBL is more consistence than HBL. There is more fluctuation on net profit after tax to total deposit of HBL than EBL.

The following chart shows the trend of the ratio.

Chart No 4.9

### NPAT to TD of EBL and HBL



Source: Table no 4.9

The trend of the net profit after tax to total deposit ratio of EBL and HBL is increasing over the study period apart from F/Y 063/64. The ratio of HBL is increasing more than EBL. So HBL is better for having return from the maximum utilization of outsider's deposits. The ratio is greater in EBL than HBL in the F/Y 061/62 but it is increasing more than EBL from the F/Y 063/64 and then after.

#### 4.2.10 Cost of Service to Total Assets Ratio

Earning depends upon proper utilization of assets and reduction of cost. This ratio is useful to measure the utilization of assets with cost of services. The ratio can be calculated as follows:

$$\text{Cost of Service to Total Assets Ratio} = \frac{\text{Cost of Service}}{\text{Total Assets}}$$

The following table shows the proportion of cost of services to total assets of EBL and HBL.

Table No 4.10  
**Cost of Service and Total Assets of EBL and HBL (Rs million)**

Bank F/Y	EBL			HBL		
	Cost of service	TA	Ratio (%)	Cost of service	TA	Ratio (%)
2061/62	360.16	11732.52	3.07	740.55	27844.68	2.66
2062/63	472.31	15959.27	2.96	883.43	29460.39	2.99
2063/64	603.29	21432.57	2.81	1058.33	33519.13	3.15
2064/65	790.57	27149.34	2.91	1115.96	36175.53	3.08
2065/66	1199.79	36916.86	3.24	1295.76	39320.31	3.29
<b>Mean (<math>\bar{x}</math>)</b>			2.99	<b>Mean (<math>\bar{x}</math>)</b>		3.03
<b>S.D. (u)</b>			0.15	<b>S.D. (u)</b>		0.21
<b>C.V.</b>			5.02	<b>C.V.</b>		6.93

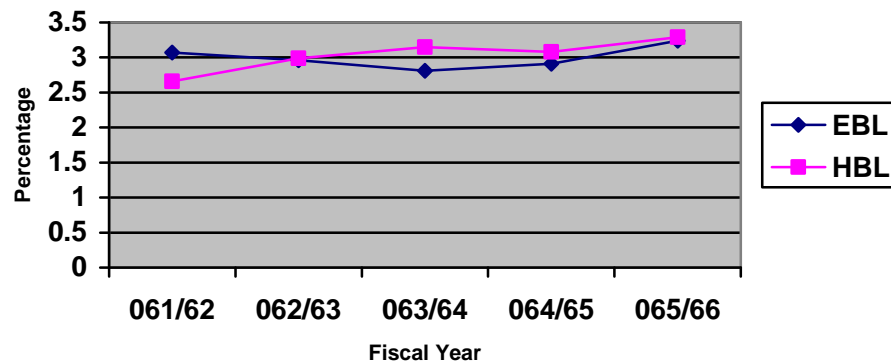
*Source: Annual financial summary of EBL and HBL.*

The above table 4.10 shows the cost of service to total assets ratio of EBL for the five fiscal years of the study period is 3.07%, 2.96%, 2.81%, 2.91% and 3.24% respectively. Similarly the ratio of HBL is 2.66%, 2.99%, 3.15%, 3.08% and 3.29% respectively. The ratio of EBL is decreasing for the first three year then increase in the remaining two year of the study period. On the other hand the ratio of HBL is increasing over the five years period except 064/65. The cost of service included interest paid on borrowings and on deposit as well as salaries, allowances of the staffs. The average ratio of EBL is 2.99% and 3.03% of HBL. Where as the ratio of EBL is less than HBL. Lower is better because decrease in service cost affect the earning negatively. There is negative relation between service cost and earning. So, EBL is better than HBL. The C.V. of EBL (5.02) is lower than HBL (6.93). EBL is more consistence or uniform than HBL. There is more fluctuation on cost of service to total assets of HBL.

The following chart shows the trend of the ratio

Chart No 4.10

Cost of Service to TA Ratio



Source: Table no 4.10

The cost of service to total assets ratio of EBL is greater than HBL in the first year. The ratio of HBL is increasing over the five years period except 3.08% in 064/65. But the ratio of EBL is decreasing from the first year to third year (063/64) then it is also increasing. The ratio of EBL is lower than HBL. So EBL is better to earn from low cost than HBL. At the last of the study period the ratio of both the banks is nearer i.e. 3.24% and 3.29%.

### 4.3 Correlation Analysis and Probable Error

Correlation is defined as the relationship between two or more variables. Correlation analysis is a statistical relation between two or more variables such that systematic changes in the value of one variable are accompanied by systematic change in the other. Correlation is a statistical tool, with the help of which, we can determine whether or not two or more variables are correlated and if they are correlated the degree and direction of correlation is determined. The coefficient of correlation measures the degree of relationship between two sets of figures. It is denoted by 'r'. Correlation lies between +1 and -1. If  $r = +1$ , it means there is perfect relationship between two variables.

The probable error (P.E.) of the correlation coefficient is applicable for the measurement of reliability of the computed value of the correlation coefficient, 'r'. P.E. is used in interpretation whether the calculated value of 'r' is significant or not. If the value of correlation (r) is less than P.E., it means correlation is not significant. If  $r > 6P.E.$  the value of r is significant.

The method used to find out 'r' is 'Karl Pearson's coefficient of correlation' by the researcher here.

#### **4.3.1 Coefficient of Correlation Between Current Assets and Current Liabilities:**

The purpose of computing correlation coefficient is to justify whether the current liabilities are significantly used in current assets or not, or whether there is any relationship between these two variables. In this analysis, current asset is dependent variable (X) and current liability is independent variable (Y). The following table shows the coefficient of correlation between CA and CL i.e. 'r', P.E.(r), '6PE(r) of EBL and HBL.

Table No 4.11  
**Coefficient of correlation between CA & CL**

<b>Bank</b>	<b>Correlation</b>	<b>PE(r)</b>	<b>6PE(r)</b>	<b>Correlation</b>
EBL	+ 0.9999	0.00006	0.00036	$r > 6PE$ , Significant
HBL	+ 0.9991	0.00054	0.00324	$r > 6PE$ , Significant

*Source: For Calculation Appendix –I, II*

The above table shows that the Karl Pearson's Correlation Co-efficient for the five years in between current assets and current liabilities of EBL and HBL are 0.9999 and 0.9991 respectively. EBL has higher correlation between current assets and current liabilities than HBL. But there is perfectly positive high degree correlation between two variables of EBL and HBL because of

positive value of 'r' which is nearer to +1. EBL shows the more perfectly positive correlation than HBL.

The value of 'r' is greater than  $6PE(r)$  of both the banks. So, there is significant relationship between current assets and current liabilities of EBL and HBL.

### 4.3.2 Coefficient of Correlation Between Loan and Advance to Total Deposit:

The coefficient of correlation between loan & advance and total deposits measure the degree of relationship between a part of current assets i.e. loan & advances and another part of current liabilities i.e. total deposit of EBL and HBL. The dependent variable (X) is loan & advances and independent variable (Y) is total deposit in this correlation analysis. The purpose of computing coefficient of correlation is to justify whether the deposits are significant used in loan and advances or not?

Table No 4.12

#### Coefficient of Correlation between Loan & Advance and Total Deposit

Bank	Correlation	PE(r)	6PE(r)	Correlation
EBL	+ 0.997	0.0018	0.0108	$r > 6PE$ , Significant
HBL	+ 0.978	0.0131	0.0787	$r > 6PE$ , Significant

Source: For Calculation Appendix – III, IV

The above table shows the coefficient of correlation between loan & advance and total deposit value 'r' is +0.997 and +0.978 of EBL and HBL respectively. It shows that there is highly positive relationship between loan & advance and total deposit of EBL and HBL. But EBL is better than HBL for utilization of total deposit on loan and advances because of greater value 'r'. By considering the probable error, since the value of 'r' is more than six times of P.E. of EBL and HBL, we can say that the value of 'r' is highly significant, i.e. there is significant relationship between total deposit and loan and advances.

From the analysis, we can conclude that both the banks have utilized its total deposits on loan and advances effectively.

### 4.3.3 Coefficient of Correlation between Investment on Government Securities and Total Deposit:

The coefficient of correlation between investment on government securities and total deposit is to measure the degree of relationship between two variables. The bank utilizes its deposit on loan and advances but some part of idle deposit are invested on government securities which is risk free assets. The purpose of computing correlation coefficient between dependent variable (Investment on government securities) 'X' and independent variable (Total deposit) 'Y' is to justify whether the excess deposits are significantly used in government securities or not? The following table shows the value of 'r', P.E.,  $6PE(r)$ .

Table No 4.13

#### Coefficient of Correlation between Investment on Government Securities and Total Deposit

Bank	Correlation	PE(r)	6PE(r)	Correlation
EBL	+ 0.850	0.0837	0.502	$r > 6PE$ , Significant
HBL	- 0.206	0.3015	1.809	$r < 6PE$ , Not Significant

*Source: For Calculation Appendix – V, VI*

The above table shows the coefficient of correlation (r) for the study period in between investment on government securities and total deposit of EBL and HBL is +0.85 and -0.206 respectively. It shows that there is positive relationship between two variables on government securities and total deposit of EBL but the relationship between investment on government securities and total deposit of HBL is negative. On the other hand the value of 'r' is more than  $6PE(r)$  of EBL but not in HBL. It shows that there is significant relationship between government security and total deposit of EBL but there is not

significant relationship between investment on government securities and total deposit of HBL.

Hence, from the above analysis excess deposits are significantly used in government securities by EBL but not in HBL over the study period.

#### **4.3.4 Coefficient of Correlation between Cash and Bank Balance and Current Liabilities:**

Cash and bank balance is liquid assets of the bank. This is necessary to meet the short-term obligation i.e. current liabilities. In correlation analysis, cash and bank balance is dependent variable (X) and current liability is independent variable (Y).

Table No 4.14

#### **Coefficient of Correlation between Cash & Bank Balance and CL**

<b>Bank</b>	<b>Correlation</b>	<b>PE(r)</b>	<b>6PE(r)</b>	<b>Correlation</b>
EBL	+ 0.95	0.0269	0.1614	$r > 6PE$ , Significant
HBL	+ 0.49	0.2280	1.3680	$r < 6PE$ , Not Significant

*Source: For Calculation Appendix – VII, VIII*

Above table shows the correlation coefficient between cash and bank balance and current liabilities of EBL and HBL is +0.95 and +0.49 respectively. It shows that there is highly positive relationship between cash and bank balance and current liabilities of EBL but there is positive relation between cash and bank balance and current liabilities of HBL. By considering P.E. the value of 'r' is 6 times greater than PE(r) in EBL but not in HBL. So, there is significant relation between cash and bank balance and current liabilities of EBL but there is not significant relation between cash and bank balance and current liabilities of HBL because of  $r < 6PE(r)$ .

From the above analysis, it can be conclude that the EBL is better than HBL to utilization of current liabilities on cash and bank balance.

#### **4.3.5 Coefficient of Correlation between Return on Total Assets**



The bank collects deposit on lower interest rate and invests it into productive sectors on higher interest rate to earn profit. Earning of a bank depends upon the maximum utilization of total assets. In correlation analysis, net profit is dependent variable (X) and total assets are independent variable (Y). The purpose of computing the correlation coefficient is to justify whether the total assets are significantly generate profit or not and whether there is any relationship between these two variables. The following table shows the 'r', PE(r), and 6PE(r) of EBL and HBL.

Table No 4.15

**Coefficient of Correlation between Return on Total Assets**

<b>Bank</b>	<b>Correlation</b>	<b>PE(r)</b>	<b>6PE(r)</b>	<b>Correlation</b>
EBL	+ 0.99	0.006	0.036	r > 6PE, Significant
HBL	+ 0.97	0.018	0.108	r > 6PE, Significant

*Source: For Calculation Appendix – IX, X*

As stated in above table, the coefficient of correlation between return on total assets of EBL and HBL over the study period is +0.99 and +0.97 respectively. It shows that there is positive relationship between return and total assets of EBL and HBL but comparatively EBL is better than HBL to earn more from the utilization of total assets because of greater value of 'r'. Similarly, considering the value of probable error, since the value of 'r' is greater than six times of PE(r) in both the banks, we can say that value of 'r' is significant.

From the above analysis, it can be conclude that there is positive relationship between return and total assets of the banks.

**4.3.6 Coefficient of Correlation between Working Capital and Total Assets:**

Working capital is the difference between current assets and current liabilities. In correlation analysis, working capital is dependent variable (X) and total assets are independent variable (Y). It is the relation between working

capital and total assets of the banks. The following table shows the correlation and probable error of EBL and HBL over the study period.

Table No 4.16

**Coefficient of Correlation between Working Capital and Total Assets**

<b>Bank</b>	<b>Correlation</b>	<b>PE(r)</b>	<b>6PE(r)</b>	<b>Correlation</b>
EBL	+ 0.95	0.029	0.174	r > 6PE, Significant
HBL	+ 0.96	0.024	0.144	r > 6PE, Significant

*Source: For Calculation Appendix –XI, XII*

The above table shows the coefficient of correlation (r) and probable error (PE) for the five years in between working capital and total assets of EBL and HBL. The correlation of EBL and HBL is +0.95 and +0.96 respectively. There is high degree positive correlation between working capital and total assets of EBL and HBL. Both the banks correlation is greater than 6 times of PE(r). So, the correlation is significant and changes in working capital affects total assets.

**4.4 Testing of Hypothesis (With the help of t -Test)**

One of the important applications of statistical inference is 'test of hypothesis'. In testing of hypothesis, an assumption is made about two or more variables to test whether the assumption or hypothesis is right or not. It helps in organization to collect data in a systematic way. It helps to compare the population and sample, and test whether the difference is significant or insignificant. Smaller the difference, the sample mean is close to the hypothesized value, and larger the difference the hypothesized value has low chance to be correct.

According to the objective of the study the following null hypothesis is formulated:

- I) There is no significant difference in current assets of EBL and HBL
- II) There is no significant difference in current liabilities of EBL & HBL

- III) There is no significant difference in working capital of EBL and HBL
- IV) There is no significant difference in net profit of EBL & HBL
- V) There is no significant difference in total deposit of EBL & HBL
- VI) There is no significant difference in loan and advance of EBL & HBL
- VII) There is no significant difference in total assets of EBL & HBL

#### **4.4.1 Testing of Hypothesis on the basis of Current Assets**

The following hypothetical testing is related to current assets of EBL and HBL by the help of t-statistics on 5% level of significance.

##### **Step-1**

##### **Hypothesis Formulation**

Null Hypothesis (Ho):  $\mu_1 = \mu_2$  There is no significant difference in average current assets of EBL and HBL

Alternative Hypothesis (H1):  $\mu_1 \neq \mu_2$  There is significant difference in average current assets of EBL and HBL

[EBL =  $X_1$ , HBL =  $X_2$ ]

##### **Step-2**

##### **Testing of Hypothesis**

$$t = \frac{X_1 - X_2}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

$$= \frac{22211.36 - 32607.48}{\sqrt{56626070.26 \left( \frac{1}{5} + \frac{1}{5} \right)}}$$

$$= \frac{-10396.12}{4759.25} = -2.18$$

$$t = -2.18 \text{ or } |t_{\text{cal}}| = 2.18$$

Where, X1= EBL and X2= HBL

### Working Note

$$S^2 = \frac{\Sigma(x_1 - \bar{x}_1)^2 + \Sigma(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

$$= \frac{371317360 + 81691202.11}{5 + 5 - 2}$$

$$= 56626070.26$$

### Step-3

$$\text{Degree of freedom (d.f.)} = n_1 + n_2 - 2$$

$$= 5 + 5 - 2$$

$$= 8$$

Tabulated value of t at 5% level of significance for two tailed test and for d.f. 8 is 2.306.

$$\text{Since } |t_{\text{cal}}| = 2.18 < t_{\text{tab}} = 2.306$$

### Step-4

**Decision:** The null hypothesis (Ho) is accepted. So, it can be said that there is no significant difference in average current assets of EBL and HBL.

#### 4.4.2 Testing of Hypothesis on the basis of Current Liabilities

The following null and alternative hypothesis has been tested by applying t-test on the basis of current liabilities of EBL and HBL.

##### Step-1

##### Hypothesis Formulation

Null Hypothesis (Ho):  $\mu_1 = \mu_2$  There is no significant difference in average current liabilities of EBL and HBL

Alternative Hypothesis (H1):  $\mu_1 \neq \mu_2$  There is significant difference in average current liabilities of EBL and HBL

[EBL =  $X_1$ , HBL =  $X_2$ ]

##### Step-2

##### Testing of Hypothesis

$$t = \frac{X_1 - X_2}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$
$$= \frac{20913.75 - 30558.55}{\sqrt{50965906.43 \left( \frac{1}{5} + \frac{1}{5} \right)}}$$
$$= \frac{-9644.80}{\sqrt{20386362.57}} = -2.14$$

$$t = -2.14 \text{ or } |t_{\text{cal}}| = 2.14$$

Where,  $X_1 = \text{EBL}$  and  $X_2 = \text{HBL}$

##### Working Note

$$\begin{aligned}
S^2 &= \frac{\Sigma(x_1 - \bar{x}_1)^2 + \Sigma(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2} \\
&= \frac{344346323.90 + 63380927.56}{5 + 5 - 2} \\
&= 50965906.43
\end{aligned}$$

### **Step-3**

$$\begin{aligned}
\text{Degree of freedom (d.f.)} &= n_1 + n_2 - 2 \\
&= 5 + 5 - 2 = 8
\end{aligned}$$

Tabulated value of t at 5% level of significance for two tailed test and for d.f. 8 is 2.306.

$$\text{Since } |t_{\text{cal}}| = 2.14 < t_{\text{tab}} = 2.306$$

### **Step-4**

**Decision:** The null hypothesis (Ho) is accepted. So, it can be said that there is no significant difference in average current liabilities of EBL and HBL.

#### **4.4.3 Testing of Hypothesis on the basis of Working Capital**

The hypothesis of testing on the basis of working capital of EBL and HBL is as follows:

### **Step-1**

#### **Hypothesis Formulation**

Null Hypothesis (Ho):  $\mu_1 = \mu_2$  There is no significant difference in average working capital of EBL and HBL

Alternative Hypothesis (H1):  $\mu_1 \neq \mu_2$  There is significant difference in average working capital of EBL and HBL

[EBL =  $X_1$ , HBL =  $X_2$ ]

## **Step-2**

### **Testing of Hypothesis**

$$\begin{aligned}t &= \frac{X_1 - X_2}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} \\&= \frac{1297.61 - 2048.94}{\sqrt{230697.33 \left( \frac{1}{5} + \frac{1}{5} \right)}} \\&= \frac{-751.33}{\sqrt{92278.93}} = -2.47 \\t &= -2.47 \text{ or } |t_{\text{cal}}| = 2.47\end{aligned}$$

Where,  $X_1 = \text{EBL}$  and  $X_2 = \text{HBL}$

### **Working Note**

$$\begin{aligned}S^2 &= \frac{\Sigma(x_1 - \bar{x}_1)^2 + \Sigma(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2} \\&= \frac{568758.55 + 1276820.06}{5 + 5 - 2} \\&= 230697.33\end{aligned}$$

## **Step-3**

$$\begin{aligned}\text{Degree of freedom (d.f.)} &= n_1 + n_2 - 2 \\&= 5 + 5 - 2 \\&= 8\end{aligned}$$

Tabulated value of  $t$  at 5% level of significance for two tailed test and for d.f. 8 is 2.306.

$$\text{Since } |t_{\text{cal}}| = 2.47 > t_{\text{tab}} = 2.306$$

#### **Step-4**

**Decision:** The calculated value of (t) is greater than the tabulated value of (t). So, alternative hypothesis (H<sub>1</sub>) is accepted i.e. there is significant difference in average working capital of EBL and HBL.

#### **4.4.4 Testing of Hypothesis on the basis of Net Profit**

The hypothesis below shows the average net profit of EBL and HBL.

#### **Step-1**

#### **Hypothesis Formulation**

Null Hypothesis (H<sub>0</sub>):  $\mu_1 = \mu_2$  There is no significant difference in average net profit of EBL and HBL

Alternative Hypothesis (H<sub>1</sub>):  $\mu_1 \neq \mu_2$  There is significant difference in average net profit of EBL and HBL

[EBL = X<sub>1</sub>, HBL = X<sub>2</sub>]

#### **Step-2**

#### **Testing of Hypothesis**

$$\begin{aligned} t &= \frac{X_1 - X_2}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} \\ &= \frac{358.37 - 529.25}{\sqrt{32328.24 \left( \frac{1}{5} + \frac{1}{5} \right)}} \\ &= \frac{-170.88}{\sqrt{12931.29}} = -1.50 \end{aligned}$$

$$t = -1.50 \text{ or } |t_{\text{cal}}| = 1.50$$



Where, X1= EBL and X2= HBL

Working Note

$$S^2 = \frac{\Sigma(x_1 - \bar{x}_1)^2 + \Sigma(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

$$= \frac{141883.09 + 116742.86}{5 + 5 - 2}$$

$$= 32328.24$$

### Step-3

$$\begin{aligned} \text{Degree of freedom (d.f.)} &= n_1 + n_2 - 2 \\ &= 5 + 5 - 2 \\ &= 8 \end{aligned}$$

Tabulated value of t at 5% level of significance for two tailed test and for d.f. 8 is 2.306.

$$\text{Since } |t_{\text{cal}}| = 2.14 < t_{\text{tab}} = 2.306$$

### Step-4

**Decision:** The calculated value of (t) is less than the tabulated value of (t). i.e.  $|t_{\text{cal}}| = 2.14 < t_{\text{tab}} = 2.306$ . So, null hypothesis (Ho) is accepted. We can conclude that there is no significant difference in average net profit of EBL and HBL.

#### **4.4.5 Testing of Hypothesis on the basis of Total Deposit**

The following null and alternative hypothesis has been tested by the help of applying the t-test on the basis of total deposit of EBL and HBL.

### Step-1

#### Hypothesis Formulation

Null Hypothesis (Ho):  $\mu_1 = \mu_2$  There is no significant difference in average total deposit of EBL and HBL

Alternative Hypothesis (H1):  $\mu_1 \neq \mu_2$  There is significant difference in average total deposit of EBL and HBL

[EBL =  $X_1$ , HBL =  $X_2$ ]

## **Step-2**

### **Testing of Hypothesis**

$$t = \frac{X_1 - X_2}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$
$$= \frac{19877.13 - 29575.48}{\sqrt{49576562.90 \left( \frac{1}{5} + \frac{1}{5} \right)}}$$
$$= \frac{-9698.35}{\sqrt{19830625.16}} = -2.18$$

$$t = -2.18 \text{ or } |t_{\text{cal}}| = 2.18$$

Where,  $X_1 = \text{EBL}$  and  $X_2 = \text{HBL}$

### **Working Note**

$$S^2 = \frac{\Sigma(x_1 - \bar{x}_1)^2 + \Sigma(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$
$$= \frac{332991650.60 + 63620852.59}{5 + 5 - 2}$$
$$= 49576562.90$$

## **Step-3**

Degree of freedom (d.f.) =  $n_1 + n_2 - 2$

$$\begin{aligned} &= 5+5-2 \\ &= 8 \end{aligned}$$

Tabulated value of t at 5% level of significance for two tailed test and for d.f. 8 is 2.306.

$$\text{Since } |t_{\text{cal}}| = 2.18 < t_{\text{tab}} = 2.306$$

#### **Step-4**

**Decision:** The calculated value of (t) is less than the tabulated value of (t). i.e.  $|t_{\text{cal}}| = 2.18 < t_{\text{tab}} = 2.306$ . So, null hypothesis (Ho) is accepted. We can conclude that there is no significant difference in average total deposit of EBL and HBL.

#### **4.4.6 Testing of Hypothesis on the basis of Loan and Advances**

The following are the hypothesis of the two banks average loan and advances on the basis of t-statistics.

#### **Step-1**

#### **Hypothesis Formulation**

Null Hypothesis (Ho):  $\mu_1 = \mu_2$  There is no significant difference in average loan and advances of EBL and HBL

Alternative Hypothesis (H1):  $\mu_1 \neq \mu_2$  There is significant difference in average loan and advances of EBL and HBL

$$[\text{EBL} = X_1, \text{HBL} = X_2]$$

#### **Step-2**

#### **Testing of Hypothesis**

$$t = \frac{X_1 - X_2}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

$$= \frac{14661.56 - 17671.15}{\sqrt{33002560.29 \left( \frac{1}{5} + \frac{1}{5} \right)}}$$

$$= \frac{-3009.59}{\sqrt{13201024.12}} = -0.83$$

$$t = -0.83 \text{ or } |t_{\text{cal}}| = 0.83$$

Where, X1= EBL and X2= HBL

### Working Note

$$S^2 = \frac{\Sigma(x_1 - \bar{x}_1)^2 + \Sigma(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

$$= \frac{172809244.70 + 91211237.59}{5 + 5 - 2}$$

$$= 33002560.29$$

### Step-3

$$\text{Degree of freedom (d.f.)} = n_1 + n_2 - 2$$

$$= 5 + 5 - 2$$

$$= 8$$

Tabulated value of t at 5% level of significance for two tailed test and for d.f. 8 is 2.306.

$$\text{Since } |t_{\text{cal}}| = 0.83 < t_{\text{tab}} = 2.306$$

### Step-4

**Decision:** The calculated value of (t) is less than the tabulated value of (t). i.e.  $|t_{cal}| = 0.83 < t_{tab} = 2.306$ . So, null hypothesis (Ho) is accepted. We can conclude that there is no significant difference in average loan and advances of EBL and HBL.

#### 4.4.7 Testing of Hypothesis on the basis of Total Assets

The following hypothesis has been tested by the help of applying t-test on the basis of total assets of EBL and HBL.

##### Step-1

##### Hypothesis Formulation

Null Hypothesis (Ho):  $\mu_1 = \mu_2$  There is no significant difference in average total assets of EBL and HBL

Alternative Hypothesis (H1):  $\mu_1 \neq \mu_2$  There is significant difference in average total assets of EBL and HBL

[EBL =  $X_1$ , HBL =  $X_2$ ]

##### Step-2

##### Testing of Hypothesis

$$t = \frac{X_1 - X_2}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

$$= \frac{22638.11 - 33264}{\sqrt{59785436.10 \left( \frac{1}{5} + \frac{1}{5} \right)}}$$

$$= \frac{-10625.89}{\sqrt{23914174.44}} = -2.17$$

$$t = -2.17 \text{ or } |t_{\text{cal}}| = 2.17$$

Where, X1= EBL and X2= HBL

### Working Note

$$\begin{aligned} S^2 &= \frac{\Sigma(x_1 - \bar{x}_1)^2 + \Sigma(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2} \\ &= \frac{389226021.40 + 89057467.37}{5 + 5 - 2} \\ &= 59785436.10 \end{aligned}$$

### Step-3

$$\begin{aligned} \text{Degree of freedom (d.f.)} &= n_1 + n_2 - 2 \\ &= 5 + 5 - 2 \\ &= 8 \end{aligned}$$

Tabulated value of t at 5% level of significance for two tailed test and for d.f. 8 is 2.306.

$$\text{Since } |t_{\text{cal}}| = 2.17 < t_{\text{tab}} = 2.306$$

### Step-4

**Decision:** The calculated value of (t) is less than the tabulated value of (t). i.e.  $|t_{\text{cal}}| = 2.17 < t_{\text{tab}} = 2.306$ . So, null hypothesis (Ho) is accepted. We can conclude that there is no significant difference in average total assets of EBL and HBL.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.1 SUMMARY**

Finance refers to the management of funds in the context of business firm. Finance traditionally refers to the fund raising activities. But, it includes all types of financial decisions- investment decision, financing decision, dividend policy decision and asset management decision. And it is known as the process of financial decisions. All these three decisions are made at managerial level based on the wealth maximization decision criterion. Management of funds is important aspect to make correct financial decisions and make the corporation competent in the ever changing market environment.

The modern day organizations are updated with complexities and challenges relating to raising financial resource and their effective utilization. In banking sector, it is most important to make decision about financial management. Because they collect funds from different cheaper sources everyday and invest into the productive sector to achieve their organizational goals in this competitive business environment. Their day to day activities mostly depends upon fund management. Management is the functions of top level manager but it is not separated than overall functions of an organization.

Banks are the institutions that uses money which is deposited by customers for investment, pay it out when required, makes loans at interest and exchanges currency. There are different types of banks all over the Nepal. Some of them are commercial banks, some of them are development banks, some of them are merchants and some of them are other financial institutions which are established to mobilize the different sources of fund.

A firm's working capital management is important because of many reasons. The basic importance of working capital management is that it enables a firm to maintain the investment in current assets at optimum level that maintains a proper trade-off between profitability and risk.

The working capital requirement for a firm may be permanent and temporary. Permanent working capital is the minimum amount of working

capital to be maintained by a firm at all times and any amount of working capital over and above the permanent need is called variable or temporary working capital.

Firms need cash to pay for all their day-to-day activities. They have to pay wages, pay for raw materials, pay bills and so on. The money available to them to do this is known as the firm's working capital. The main sources of working capital are the current assets and the short term assets that the firm can use to generate cash. However, the firm also has current liabilities and so these have to be taken on account of when working out, how much working capital a firm has at its disposal.

There are two concepts of working capital: gross working capital and net working capital. Gross concept simply refers to the total amount invested into current assets. But net concept refers to the excess of current assets over current liabilities. A firm should hold neither excessive nor inadequate investment in current assets. On the other hand, the net concept of working capital indicates the firm's liquidity position as well as the pattern of current assets financing.

This research study has been divided into five chapters which include introduction, review of literature, research methodology, presentation and analysis of data and summary, conclusion and recommendation.

The first chapter is the 'Introduction'. It includes background of the study, focus of the study, need & important of the study, statement of problems, objectives of the study, hypothesis of the study, limitation of the study and the organization of the study.

The second chapter is 'Review of Literature'. It includes introduction, conceptual and theoretical literature, concept of working capital, nature of working capital, management of working capital, classification of working capital, need & important of working capital, goals of working capital, financing of working capital, review of journals/articles and review of related research work.

The third chapter is 'Research Methodology'. This chapter includes research design, population and sample, source of data, methods of data collection, sampling methods and tools.



The fourth chapter is 'Presentation and analysis of Data'. This chapter consists of presentation, analysis, interpretation and hypothetical testing of data.

The fifth chapter is 'Summary, Conclusion & Recommendation' of the study. This chapter is important to know the total research work in a summary.

## **5.2 CONCLUSION**

The following are the conclusions of this research study:

- 1.** The current ratio of EBL and HBL is fluctuating over the five years study period but it is same on an average. The current ratio of EBL is 108.64%, 106.73%, 106%, 106.67% and 105% respectively for five fiscal years. Similarly the current ratio of HBL for five fiscal years is 106.7%, 106.72%, 106.19%, 108.04% and 107.41% respectively. Comparatively it is fluctuating more in EBL than HBL because of higher C.V. i.e.  $1.12% > 0.89%$ . Higher current ratio is the quantitative test of a firm's liquidity. The average CR is more than 1. So the bank has enough liquidity to meet the current obligations.
- 2.** The proportion of current assets to total assets is increasing from the year 061/62 to 063/64 from 98.15% to 98.57% of EBL then decreasing after the remaining two years of the study period. Hence the proportion of HBL is fluctuating over the five years period from the year 061/62 to 065/66 by 98.48% to 97.52% respectively. The average ratio of EBL is 98.17% which is greater than average of HBL 98.06%. It indicates that EBL is better in liquidity position than HBL because EBL has proportionately more CA in total assets.
- 3.** Cash and bank balance is the liquid assets of the bank. And cash and bank balance to current assets shows the liquidity position of the bank. The ratio is 9.12%, 9.9%, 11.32%, 10.03% and 17.06% respectively over the five

year of EBL. Similarly the ratio of HBL is 7.34%, 5.94%, 5.34%, 4.08% and 7.95% respectively. The average ratio of EBL is greater than HBL i.e.  $11.48\% > 6.13\%$ . It indicates more liquidity in EBL. But the ratio increase more in the year 065/66 of EBL. The ratio of EBL is fluctuating.

4. The ratio of working capital to current assets shows the position of working capital on current assets of the bank. The ratio of EBL for five years is 7.95%, 6.30%, 5.65%, 6.26% and 4.77% respectively and the ratio of HBL is 5.4%, 5.41%, 5.83%, 7.44% and 6.90% respectively. The ratio of EBL is in fluctuating trend. But the ratio of HBL is increasing over the study period except last year. The average ratio of HBL is greater than EBL. So HBL has good working capital position on current assets than EBL.
5. Cash and bank balance to total deposit (except fixed deposit) ratio of EBL is increasing trend except the year 064/65. Hence the ratio of HBL is equal in the first and last year and decrease in three years 062/63, 063/64 and 064/65. The average ratio of HBL is less than EBL i.e.  $8.76\% < 17.93\%$ . Lower is better here because higher the cash and bank balance shows the idle cash for bank which affect the profitability of the bank. But if it is too low the bank can't cover its current, margin, call and saving deposit.
6. Loan and advances to total deposit ratio shows the investment position of the bank. The ratio of EBL for five years is 75.45%, 71.01%, 75.13%, 76.49% and 71.68% respectively. But the ratio of HBL is in increasing trend which is 50% in F/Y 061/62 but it is 71.49% in the year 065/66. The ratio of HBL is fluctuating more than EBL because of more C.V. i.e.  $2.96\% < 12.27\%$ . The average ratio of EBL is 73.95% and 58.91% of HBL. So EBL is good command to invest the available funds than HBL. Low investment of deposit in loan and advances hamper its profitability because loan and advances are the risky sector of investment to gain more profit for bank.

7. Long term debt to net worth ratio of EBL is decreasing from 36.03% to 13.61% in year 061/62 to 065/66 respectively. The ratio of HBL is also decreasing. The average ratio of EBL is 24.28% and 17.27% of HBL. It indicates that EBL is more risky than HBL from the view point of investor because EBL used more outsider funds than HBL.
8. The return on assets ratio of EBL is increasing over the study period except 1.38% in F/Y 063/64 with an average ratio 1.54%. Similarly the ratio of HBL is also increasing except 1.47% in F/Y 063/64 with an average ratio of 1.56%. It shows that HBL is some better than EBL. HBL could be able to utilize its total assets to generate profit.
9. The net profit to total deposit ratio of EBL is increasing over the five year study period except 1.63% in the year 063/64. Hence the ratio of HBL is also increasing apart from 1.64% in the year 063/64. 1.76% and 1.75% is the average ratio of EBL and HBL respectively. Greater is better here i.e. EBL is better than HBL. EBL has utilized outsider's funds properly than HBL.
10. The cost of service to total assets ratio of EBL is decreasing in first three years then increasing in last two years. The maximum ratio is 3.24% in the year 065/66 and 2.81% is minimum ratio in the year 063/64. But the ratio of HBL is increasing except 3.08% in the year 064/65. The ratio of HBL is minimum in the year 061/62 (2.66%) and maximum in the year 065/66 (3.29%). The average ratio of EBL is 2.99% and 3.03% of HBL. Lower is better here i.e.  $2.99\% < 3.03\%$  (EBL is better). It shows that EBL has decreased its cost of services but HBL has increased its service cost. The bank must decrease its service cost or make effort to gain more than that.
11. The coefficient of correlation between CA and CL of EBL and HBL are +0.9999 and 0.9991 respectively. EBL shows more perfectly positive correlation than HBL. The value of 'r' is 6 times greater than PE(r) of both

the banks. It shows that there is significant relationship between CA and CL of EBL and HBL.

- 12.** The coefficient of correlation between loan & advance and total deposit of EBL is +0.997 and HBL is +0.978. It shows the highly positive relationship between loan & advance and total deposit of the banks. EBL could be able to utilize its total deposit on loan and advance than HBL because higher positive value of 'r'. The value of 'r' is 6 times greater than  $PE(r)$  in both the bank. It shows the relationship between loan & advance and total deposit of both banks are significant.
- 13.** The coefficient of correlation between investment on government securities and total deposit of EBL and HBL is +0.85 and -0.0206 respectively. It shows the positive correlation of EBL but HBL has negative correlation. The value of 'r' is greater than  $6PE(r)$  of EBL but not in HBL. So there is significant relation between government securities and total deposit of EBL but the relationship of HBL is not significant. The above analysis shows the uses of excess deposit in government securities by EBL is better than HBL.
- 14.** The coefficient of correlation between cash & bank balance and current liabilities of EBL and HBL is +0.95 and +0.49 respectively. It shows the high degree positive relation between cash & bank balance and current liabilities of EBL but only positive relation of HBL. The value of  $r > 6PE(r)$  of EBL which shows the relationship is significant but HBL has lower value of r than 6 times  $PE(r)$  it shows the relationship is not significant. From the above study it can be conclude that the EBL is better to utilization of current liabilities on cash & bank balance than HBL.
- 15.** The coefficient of correlation between return and total assets of EBL is +0.99 and +0.97 of HBL. Both the banks have high degree of positive relation between return and total assets. There is also significant

relationship between return and total assets of EBL and HBL because of  $r > 6PE(r)$ . The above study shows that EBL is good to use its total assets for return.

- 16.** The coefficient of correlation between working capital and total assets of EBL and HBL is +0.95 and +0.96 respectively. There is high degree correlation between working capital and total assets of EBL and HBL. The correlation of EBL and HBL is 6 times greater than  $PE(r)$ . So the relationship between working capital and total assets is significant.
- 17.** The hypothetical testing on the basis of current assets shows that there is no significant difference in average current assets of EBL and HBL because  $|t_{cal}| < t_{tab}$ .
- 18.** The hypothesis test on the basis of current liabilities shows that there is no significance difference in average current liabilities of the two banks because  $|t_{cal}| < t_{tab}$ .
- 19.** The hypothetical testing on the basis of working capital shows that there is significant difference in average working capital of EBL and HBL. The calculated value of 't' is less than the tabulated value. So the alternative hypothesis is accepted.
- 20.** The hypothesis testing shows that there is no significant difference in average net profit of EBL and HBL. The calculated value of 't' is greater than the tabulated value of 't'. So the null hypothesis is accepted.
- 21.** Testing of hypothesis on the basis of total deposit shows that there is no significant difference in average total deposit of two banks because of  $|t_{cal}| < t_{tab}$ .

22. There is no significance difference in average loan and advances of EBL and HBL, which is shown in hypothetical testing on the basis of average loan and advances. i.e.  $|t_{cal}| < t_{tab}$ .
23. Testing of hypothesis on the basis of total assets shows that there is no significant difference in average total assets of EBL and HBL because  $|t_{cal}| < t_{tab}$ . The null hypothesis is accepted.

### 5.3 RECOMMENDATION

Based on the major findings of the study, some recommendations have been made so as to overcome some weakness and strength regarding the issue of working capital management of EBL and HBL. Some recommendations are as follows:

- The current ratio of EBL is decreasing and the ratio of HBL is fluctuating over the study period but it is not satisfactory. Both the banks should maintain its current ratio better than this to meet obligation due within one year. As a conventional rule the current ratio 2: 1 is employed as a standard of comparison.
- The current assets to total assets ratio of HBL is decreasing over the study period. On the other hand the ratio of EBL is increasing in first three years then after it is decreasing. So EBL and HBL should have to improve its current assets to make the firm liquid.
- The cash and bank balance to current assets ratio of EBL is fluctuating more than HBL. The ratio of HBL is decreasing over the study period except the last year. EBL is more liquid than HBL because of higher ratio on an average. So HBL should have to be maintained this ratio to make its liquidity position strong. But more liquidity is harmful to earn more.

- The basic importance of working capital management is that it enables a firm to maintain the investment in current assets at optimum level that maintains a proper trade-off between profitability and risk. But high and low level of working capital affects the firm's growth. So both the banks should maintain sound working capital position. Both the banks working capital is increasing trend. But they should try to maintain sound working capital.
- The loan and advances to total deposit ratio indicates the performance of the bank to utilize its deposit through loan and advances. The ratio of HBL is not yet satisfactory in comparison with EBL. So HBL should mobilize its deposits through loan and advances.
- The return on assets ratio of EBL and HBL are increasing trend except in the year 063/64. But it is not satisfactory yet. To improve its profitability the bank should utilize its available sources (total assets) more than that.
- The net profit to total deposit ratio of HBL is fluctuating more than the ratio of EBL. The ratio shows the returns from the use of deposit. The increasing trend of the ratio of EBL and HBL is same. But the average ratio of EBL is more than HBL. So HBL should use its total deposit to improve its profit.
- The cost of service to total assets ratio of EBL and HBL is not in satisfactory level. The ratio of HBL is increasing trend and the ratio of EBL is decreasing in first three years then it is increasing after that. It indicates that both the banks should try to minimize its service cost as soon as possible.
- Each and every company should provide the information regarding their activities and performance, so that investor can analyze the situation and invest their money in the best company.

- In this competitive business environment most of the business organizations are affected from the modern technology. So banks should take decision to maximum use of technology products to run well their business.



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# Annual Financial Summary of HBL

From 2061/62 to 2065/66

Rs. In  
million

S.N.	Particulars	2061/62	2062/63	2063/64	2064/65	2065/66
A	Cash Balance	286.53	305.43	177.24	278.18	473.76
B	Cash Balance with NRB	1727.94	1411.92	1580.1	1169.96	2574.77
C	Money at call and Short Notice	441.08	1005.28	1710.02	518.53	1170.79
D	<b>Investment:</b>	<b>11692.34</b>	<b>10889</b>	<b>11822.98</b>	<b>13340.17</b>	<b>8710.69</b>
	a) Government Securities	5469.73	5144.28	6454.87	7471.66	4212.3
	b) Share and Debenture	39.91	38.57	73.42	89.56	93.88
	c) Others	6182.7	5706.15	5294.69	5778.95	4404.51
E	Interest Receivable	511.18	550.37	336.71	347.78	376.75
F	Miscellaneous current assets	339.12	93.24	307.26	287.01	245.51
G	<b>Loan, Advance and Bills Purchase</b>	<b>12424.53</b>	<b>14642.55</b>	<b>16997.99</b>	<b>19497.52</b>	<b>24793.16</b>
	a) Loans, Cash, Credit and OD	12088.71	14395.84	16831.88	19257.72	24119.99
	b) Bills Discount and Purchase	335.82	246.71	166.11	239.8	673.17
	<b>Total Current Assets (A+B+C+D+E+F+G)</b>	<b>12424.53</b>	<b>14642.55</b>	<b>16997.99</b>	<b>19497.52</b>	<b>24793.16</b>
H	<b>Fixed Assets (Net)</b>					
	Gross Block	480.96	766.26	831.85	1018.74	1294.44
	Less: Depreciation	185.14	225.44	257.79	292.67	342.25
		<b>295.82</b>	<b>540.82</b>	<b>574.06</b>	<b>726.07</b>	<b>952.19</b>
I	<b>Other Assets</b>	126.18	21.73	12.77	10.31	22.69
	<b>TOTAL ASSETS</b>	<b>27844.68</b>	<b>29460.39</b>	<b>33519.13</b>	<b>36175.53</b>	<b>39320.31</b>
A	<b>Current Liabilities</b>					
a)	<b>Deposits and Other Accounts</b>					
	Saving	12852.41	14582.86	15784.77	17972.45	20061.05
	Fixed	6107.43	6350.2	8201.13	6423.87	6377.13
	Current	5045.16	5028.15	5589.58	4784.22	3218.22
	Calls and Short Deposit	222.96	41.61	97.91	2017.07	4359.77
	Other	586.04	488.03	375.03	645.19	665.17
b)	Short Term Loan	146.06	144.62	235.97	83.18	0
c)	Bills Payable	68.4	73.58	91.3	102.67	113.51
d)	Staff Bonus	58.06	67.24	71.74	94.88	106.66
e)	Proposed Dividend Payable	5.61	238.41	130.94	263.08	162.1
f)	Miscellaneous Current Liabilities	850.82	319.51	434.25	415.95	636.83
	<b>Total Current liabilities (a+b+c+d+e+f)</b>	<b>25942.95</b>	<b>27334.21</b>	<b>31012.62</b>	<b>32802.56</b>	<b>35700.44</b>
B	<b>Differed Liabilities</b>					
	a) Long Term Loan	360	360	360	860	500
	b) Other Different Liabilities	0	0	0	0	0
		<b>360</b>	<b>360</b>	<b>360</b>	<b>860</b>	<b>500</b>
C	<b>Net Worth</b>					
	<b>a) Share Capital</b>	<b>643.5</b>	<b>772.2</b>	<b>810.81</b>	<b>1013.51</b>	<b>1216.21</b>
	Ordinary Share	120	120	120	120	120
	Bonus Share	523.5	652.2	690.81	893.51	1096.21
	Preference Share	0	0	0	0	0

<b>b) Shareholders Reserve</b>	<b>898.25</b>	<b>993.98</b>	<b>1335.7</b>	<b>1499.47</b>	<b>1903.66</b>
General Reserve	443.74	534.94	633.3	760.47	911.04
Capital Reserve	128.7	38.61	202.7	202.7	383.79
Exchange fluctuation Reserve	16.65	19.55	19.55	20.85	23.08
Other Reserve	154.29	244.32	295.75	418.61	549.22
Unappropriate Profit(loss)	154.87	156.56	184.4	96.84	36.53
<b>Net Worth (a+b)</b>	<b>1541.75</b>	<b>1766.18</b>	<b>2146.51</b>	<b>2512.98</b>	<b>3119.87</b>
<b>Total Capital and Liabilities (A+B+C)</b>	<b>27844.7</b>	<b>29460.39</b>	<b>33519.13</b>	<b>36175.53</b>	<b>39320.31</b>

Annual Financial Summary of EBL  
From 2061/62 to 2065/66

Rs. In  
million

S.N.	Particulars	2061/62	2062/63	2063/64	2064/65	2065/66
A	Cash Balance	192.59	259.35	534.99	822.99	944.7
B	Cash Balance with NRB	857.4	1293.61	1856.43	1844.98	5219.67
C	Money at call and Short Notice	570	66.96	0	346	0
		<b>1619.99</b>	<b>1619.92</b>	<b>2391.42</b>	<b>3013.97</b>	<b>6164.37</b>
D	<b>Investment:</b>	<b>2128.94</b>	<b>4200.51</b>	<b>4984.32</b>	<b>5059.56</b>	<b>5948.48</b>
	a) Government Securities	2100.29	3548.61	4704.63	4821.61	5146.05
	b) Share and Debenture	19.39	19.89	19.89	101.15	102.03
	c) Others	9.26	632.01	259.8	136.8	700.4
E	Interest Receivable	121.1	51.33	26.07	35.32	59.38
F	Miscellaneous current assets	26.97	12.07	59.81	144.09	81.37
G	<b>Loan, Advance and Bills Purchase</b>	<b>7618.67</b>	<b>9801.31</b>	<b>13664.08</b>	<b>18339.06</b>	<b>23884.68</b>
	a) Loans, Cash, Credit and OD	7585	9770.92	13623.69	18317.17	23782.35
	b) Bills Discount and Purchase	33.67	30.39	40.39	21.89	102.33
	<b>TOTAL CURRENT ASSETS</b>	<b>11515.67</b>	<b>15685.14</b>	<b>21125.7</b>	<b>26592.03</b>	<b>36138.28</b>
H	<b>Fixed Assets (Net)</b>					
	Gross Block	221.05	261.26	303.15	539.85	638.42
	Less: Depreciation	86.98	109.17	133.06	179.34	211.26
		<b>134.07</b>	<b>152.09</b>	<b>170.09</b>	<b>360.51</b>	<b>427.16</b>
I	<b>Other Assets</b>	82.78	122.04	136.78	196.8	351.42
	<b>TOTAL ASSETS</b>	<b>11732.52</b>	<b>15959.27</b>	<b>21432.57</b>	<b>27149.34</b>	<b>36916.86</b>
A	<b>Current Liabilities</b>					
a)	<b>Deposits and Other Accounts</b>					
	Saving	4806.83	6929.22	9029.26	11883.85	14782.33
	Fixed	3403.96	4242.35	5626.66	6446.18	7049.98
	Current	1025.02	1145.79	1673.98	2492.35	4859.95
	Calls and Short Deposit	704.36	1293.3	1573.49	2780.65	6294
	Other	157.52	191.78	282.86	373.27	336.69
b)	Short Term Loan	0	0	0	0	312
c)	Bills Payable	17.78	15.81	26.78	49.43	148.66
d)	Staff Bonus	28.08	34.56	45.47	65.87	89.13
e)	Proposed Dividend Payable	23.53	114.67	68.15	140.79	230.52
f)	Miscellaneous Current Liabilities	432.82	729	1604.41	695.71	309.96
	<b>Total Current liabilities</b>	<b>10599.9</b>	<b>14696.48</b>	<b>19931.06</b>	<b>24928.1</b>	<b>34413.22</b>
B	<b>Differed Liabilities</b>					
	a) Long Term Loan	300	300	300	300	300
	b) Other Different Liabilities	0	0	0	0	0
		<b>300</b>	<b>300</b>	<b>300</b>	<b>300</b>	<b>300</b>
C	<b>Net Worth</b>					
	<b>a) Share Capital</b>	<b>518</b>	<b>518</b>	<b>518</b>	<b>831.4</b>	<b>838.82</b>
	Ordinary Share	315	315	315	315	315
	Bonus Share	63	63	63	166.4	323.82
	Preference Share	140	140	140	350	200
	<b>b) Shareholders Reserve</b>	<b>314.61</b>	<b>444.81</b>	<b>683.52</b>	<b>1089.84</b>	<b>1364.8</b>
	General Reserve	126.11	173.56	232.85	323.09	450.84

Capital Reserve	7.65	132.3	170.1	220.1	284.1
Exchange fluctuation Reserve	15.82	16.65	16.97	20.38	22.04
Other Reserve	94.5	13.66	133.05	442.52	525.38
Unappropriate Profit(loss)	70.53	108.64	130.55	83.75	82.44
<b>Net Worth (a+b)</b>	<b>832.61</b>	<b>962.81</b>	<b>1201.52</b>	<b>1921.24</b>	<b>2203.62</b>
<b>Total Capital and Liabilities (A+B+C)</b>	<b>11732.51</b>	<b>15959.29</b>	<b>21432.58</b>	<b>27149.34</b>	<b>36916.84</b>

## Five Year's Consolidated Profit and Loss a/c of HBL

Rs. In million

Particulars	061/62	062/63	063/64	064/65	065/66
<b>A) Operating Income:</b>					
a) Interest Earned	1446.5	1626.5	1775.6	1963.6	2342.2
b) Commission and Discount	132.82	165.45	193.22	187.82	284.3
c) Exchange Income	137.3	198.13	151.63	207.67	249.98
d) Other Income	44.1	54.3	43.82	71.9	50.15
<b>Total Income (A)</b>	<b>1760.7</b>	<b>2044.3</b>	<b>2164.3</b>	<b>2430.9</b>	<b>2926.6</b>
<b>B) Expenses :</b>					
a) Cost of Service:					
Interest Paid	561.96	648.85	767.41	823.74	934.78
Salaries and allowance	178.59	234.58	290.92	292.22	360.98
<b>Total Cost of Service</b>	<b>740.55</b>	<b>883.43</b>	<b>1058.3</b>	<b>1116</b>	<b>1295.8</b>
b) Provision for Staff Bonus	58.06	67.24	71.74	94.88	106.66
c) Provision for Doubtful Debts	147.14	88.59	90.68	6.01	68.8
d) Other General Expenses	292.38	332.6	226.1	265.25	388.81
<b>Total Expenses (B)</b>	<b>1238.1</b>	<b>1371.9</b>	<b>1446.9</b>	<b>1482.1</b>	<b>1860</b>
Profit Before Tax (A-B)	522.56	672.4	717.4	948.84	1066.6
Less: Provision for Tax	214.28	214.94	225.58	312.97	313.76
<b>Net Profit</b>	<b>308.28</b>	<b>457.46</b>	<b>491.82</b>	<b>635.87</b>	<b>752.84</b>



## Five Year's Consolidated Profit and Loss a/c of EBL

Rs in million

Particulars	061/62	062/63	063/64	064/65	065/66
<b>A) Operating Income:</b>					
a) Interest Earned	719.29	903.41	1144.4	1548.7	2186.8
b) Commission and Discount	78.13	96.83	117.71	150.26	202.09
c) Exchange Income	27.07	14.39	28.42	64.45	62.52
d) Other Income	39.69	51.85	80.95	103.84	119.44
<b>Total Income (A)</b>	<b>864.18</b>	<b>1066.5</b>	<b>1371.5</b>	<b>1867.2</b>	<b>2570.9</b>
<b>B) Expenses :</b>					
a) Cost of Service:					
Interest Paid	299.56	401.39	517.17	632.62	1012.9
Salaries and allowance	60.6	70.92	86.12	157.95	186.92
<b>Total Cost of Service</b>	<b>360.16</b>	<b>472.31</b>	<b>603.29</b>	<b>790.57</b>	<b>1199.8</b>
b) Provision for Staff Bonus	28.08	34.56	45.47	65.86	89.13
c) Provision for Doubtful Debts	88.92	70.46	89.69	99.34	93.08
d) Other General Expenses	134.31	143.56	178.33	252.75	297.55
<b>Total Expenses (B)</b>	<b>611.46</b>	<b>720.89</b>	<b>916.78</b>	<b>1208.5</b>	<b>1679.6</b>
Profit Before Tax (A-B)	252.72	345.59	454.68	658.68	891.32
Less: Provision for Tax	84.6	108.3	158.29	207.46	252.59
<b>Net Profit</b>	<b>168.21</b>	<b>237.29</b>	<b>296.41</b>	<b>451.22</b>	<b>638.73</b>

## Appendix - I

### Coefficient of Correlation between Current Assets to Current Liabilities of EBL

(Rs. In million)

F/Y	CA (X)	CL (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	11515.67	10599.90	-10695.69	-10313.85	114397784.60	106375501.80	110313742.3
2062/63	15685.14	14696.48	-6526.22	-6217.27	42591547.49	38654446.25	40575271.82
2063/64	21125.70	19931.06	-1085.66	-982.69	1178657.64	965679.64	1066867.23
2064/65	26592.03	24928.10	4380.67	4014.35	19190269.65	16115005.92	17585542.61
2065/66	36138.28	34413.22	13926.92	13499.47	193959100.70	182235690.30	188006038.7
	X=111056.82	Y=104568.76			X <sup>2</sup> = 371317360	Y <sup>2</sup> = 344346323.90	XY= 357547462.7

$$\bar{X} = \frac{\sum X}{N} = \frac{111056.82}{5} = 22211.36$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{104568.76}{5} = 20913.75$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{357547462.70}{\sqrt{371317360 \cdot 344346323.9}} = \frac{357547462.7}{357577639} = 0.9999 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.9999)^2}{\sqrt{5}} = 0.00006$$

$$6\text{PE}(r) = 6 \times 0.00006 = 0.00036$$

## Appendix - II

### Coefficient of Correlation between Current Assets to Current Liabilities of HBL

(Rs. In million)

F/Y	CA (X)	CL (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	27422.71	25942.94	-5184.77	-4615.61	26881839.95	21303855.67	23930876.26
2062/63	28897.84	27334.21	-3709.64	-3224.34	13761428.93	10396368.44	11961140.64
2063/64	32932.30	31012.62	324.82	454.07	105508.03	206179.56	147491.02
2064/65	35439.15	32802.54	2831.67	2243.99	8018354.99	5035491.12	6354239.16
2065/66	38345.43	35700.44	5737.95	5141.89	32924070.20	26439032.77	29503907.73
	X=163037.43	Y=152792.75			X <sup>2</sup> = 81691202.11	Y <sup>2</sup> = 63380927.56	XY= 71897654.80

$$\bar{X} = \frac{\sum X}{N} = \frac{163037.43}{5} = 32607.48$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{152792.75}{5} = 30558.55$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{71897654.80}{\sqrt{81691202.11 \cdot 63380927.56}} = \frac{71897654.80}{71955987.68} = 0.9991 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.9991)^2}{\sqrt{5}} = 0.00054$$

$$6\text{PE}(r) = 6 \times 0.00054 = 0.00324$$

### Appendix - III

#### Coefficient of Correlation between Loan & Advance to Total Deposit of EBL

(Rs. In million)

F/Y	L & Adv. (X)	TD (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	7618.67	10097.69	-7042.89	-9779.44	49602299.55	95637446.71	68875520.18
2062/63	9801.31	13802.44	-4860.25	-6074.69	23622030.06	36901858.60	29524512.07
2063/64	13664.08	18186.25	-997.48	-1690.88	994966.35	2859075.17	1686618.98
2064/65	18339.06	23976.30	3677.50	4099.17	13524006.25	16803194.69	15074697.68
2065/66	23884.68	33322.95	9223.12	13445.82	85065942.53	180790075.5	124012411.4
	X=73307.80	Y=99385.63			X <sup>2</sup> = 172809244.70	Y <sup>2</sup> = 332991650.6	XY= 239173760.3

$$\bar{X} = \frac{\sum X}{N} = \frac{73307.80}{5} = 14661.56$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{99385.63}{5} = 19877.13$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{239173760.30}{\sqrt{172809244.70 * 332991650.60}} = \frac{239173760.30}{239883379.20} = 0.997 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.997)^2}{\sqrt{5}} = 0.0018$$

$$6\text{PE}(r) = 6 \times 0.0018 = 0.0108$$

### Appendix - IV

#### Coefficient of Correlation between Loan & Advance to Total Deposit of HBL

(Rs. In million)

F/Y	L & Adv. (X)	TD (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	12424.53	24814	-5246.62	-4761.48	27527021.42	22671691.79	24981676.20
2062/63	14642.55	26490.85	-3028.60	-3084.63	9172417.96	9514942.24	9342110.42
2063/64	16997.99	30048.42	-673.16	472.94	453144.39	223672.24	-318364.29
2064/65	19497.52	31842.80	1826.37	2267.32	3335627.38	5140739.98	4140965.23
2065/66	24793.16	34681.34	7122.01	5105.86	50723026.44	26069806.34	36363985.98
	X=88355.75	Y=147877.4			X <sup>2</sup> = 91211237.59	Y <sup>2</sup> = 63620852.59	XY= 74510373.53

$$\bar{X} = \frac{\sum X}{N} = \frac{88355.75}{5} = 17671.15$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{147877.40}{5} = 29575.48$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{74510373.53}{\sqrt{91211237.59 * 63620852.59}} = \frac{74510373.53}{76177009.01} = 0.978 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.978)^2}{\sqrt{5}} = 0.0131$$

$$6\text{PE}(r) = 6 \times 0.0131 = 0.0787$$

## Appendix - V

### Coefficient of Correlation between Investment on Government Securities to Total Deposit of EBL (Rs. In million)

F/Y	Inv. on GS (X)	TD (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	2100.29	10097.69	-1963.95	-9779.44	3857099.60	95637446.71	19206331.19
2062/63	3548.61	13802.44	-515.63	-6074.69	265874.29	36901858.60	3132292.41
2063/64	4704.63	18186.25	640.39	-1690.88	410099.35	2859075.17	-1082822.64
2064/65	4821.61	23976.30	757.37	4099.17	573609.32	16803194.69	3104588.38
2065/66	5146.05	33322.95	1081.81	13445.82	1170312.88	180790075.5	14545822.53
	X=20321.19	Y=99385.63			X <sup>2</sup> = 6276995.45	Y <sup>2</sup> = 332991650.6	XY= 38906211.87

$$\bar{X} = \frac{\sum X}{N} = \frac{20321.19}{5} = 4064.24 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{99385.63}{5} = 19877.13$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{38906211.87}{\sqrt{6276995.45 \cdot 332991650.60}} = \frac{38906211.87}{45718563.80} = 0.85 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.85)^2}{\sqrt{5}} = 0.0837$$

$$6\text{PE}(r) = 6 \times 0.0837 = 0.5022$$

## Appendix - VI

### Coefficient of Correlation between Investment on Government Securities to Total Deposit of HBL (Rs. In million)

F/Y	Inv. on GS (X)	TD (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	5469.73	24814	-280.84	-4761.48	78871.11	22671691.79	1337214.04
2062/63	5144.28	26490.85	-606.29	-3084.63	367587.56	9514942.24	1870180.32
2063/64	6454.87	30048.42	704.30	472.94	496038.49	223672.24	333091.64
2064/65	7471.66	31842.80	1721.09	2267.32	2962150.79	5140739.98	3902261.78
2065/66	4212.30	34681.34	-1538.27	5105.86	2366274.59	26069806.34	-7854191.26
	X= 28752.84	Y=147877.4			X <sup>2</sup> = 6270922.54	Y <sup>2</sup> = 63620852.59	XY= -411443.48

$$\bar{X} = \frac{\sum X}{N} = \frac{28752.84}{5} = 5750.57 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{147877.40}{5} = 29575.48$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{-411443.48}{\sqrt{6270922.54 \cdot 63620852.59}} = \frac{-411443.48}{19974019.09} = -0.0206 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(-0.0206)^2}{\sqrt{5}} = 0.3015$$

$$6\text{PE}(r) = 6 \times 0.3015 = 1.809$$

## Appendix - VII

### Coefficient of Correlation between Cash & Bank Balance to Current Liabilities of EBL

(Rs. In million)

F/Y	C&BB (X)	CL (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	1049.99	10599.90	-1715.35	-10313.85	2942425.62	106375501.80	17691862.60
2062/63	1552.96	14696.48	-1212.38	-6217.27	1469865.26	38654446.25	7537693.80
2063/64	2391.42	19931.06	-373.92	-982.69	139816.17	965679.64	367447.45
2064/65	2667.97	24928.10	-97.37	4014.35	9480.92	16115005.92	-390877.26
2065/66	6164.37	34413.22	3399.03	13499.47	11553404.94	182235690.30	45885103.51
	X= 13826.71	Y=104568.76			X <sup>2</sup> = 16114992.91	Y <sup>2</sup> = 344346323.90	XY= 71091230.10

$$\bar{X} = \frac{\sum X}{N} = \frac{13826.71}{5} = 2765.34$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{104568.76}{5} = 20913.75$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{71091230.10}{\sqrt{16114992.91 \cdot 344346323.9}} = \frac{71091230.10}{74492540.35} = 0.9543 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.9543)^2}{\sqrt{5}} = 0.0269$$

$$6\text{PE}(r) = 6 \times 0.0269 = 0.1614$$

## Appendix - VIII

### Coefficient of Correlation between Cash & Bank Balance to Current Liabilities of HBL

(Rs. In million)

F/Y	C&BB (X)	CL (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	2014.47	25942.94	17.30	-4615.61	299.29	21303855.67	-79850.05
2062/63	1717.35	27334.21	-279.82	-3224.34	78299.23	10396368.44	902234.82
2063/64	1757.34	31012.62	-239.83	454.07	57518.43	206179.56	-108899.61
2064/65	1448.14	32802.54	-549.03	2243.99	301433.94	5035491.12	-1232017.83
2065/66	3048.53	35700.44	1051.36	5141.89	1105357.85	26439032.77	5405977.47
	X= 9985.83	Y=152792.75			X <sup>2</sup> = 1542908.74	Y <sup>2</sup> = 63380927.56	XY= 4887444.80

$$\bar{X} = \frac{\sum X}{N} = \frac{9985.83}{5} = 1997.17$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{152792.75}{5} = 30558.55$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{4887444.80}{\sqrt{1542908.74 \cdot 63380927.56}} = 0.4942 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.4942)^2}{\sqrt{5}} = 0.2280$$

$$6\text{PE}(r) = 6 \times 0.2280 = 1.368$$

## Appendix - IX

### Coefficient of Correlation between Return on Total Assets of EBL

(Rs. In million)

F/Y	Net Profit (X)	TA (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	168.21	11732.52	-190.16	-10905.59	36160.83	118931893.2	2073806.99
2062/63	237.29	15959.27	-121.08	-6678.84	14660.37	44606903.75	808673.95
2063/64	296.41	21432.57	-61.96	-1205.54	3839.04	1453326.69	74695.26
2064/65	451.22	27149.34	92.85	4511.23	8621.12	20351196.11	418867.71
2065/66	638.73	36916.86	280.36	14278.75	78601.73	203882701.60	4003190.35
	X= 1791.86	Y=113190.56			X <sup>2</sup> = 141883.09	Y <sup>2</sup> = 389226021.40	XY= 7379234.26

$$\bar{X} = \frac{\sum X}{N} = \frac{1791.86}{5} = 358.37$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{113190.56}{5} = 22638.11$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{7379234.26}{\sqrt{141883.09 \cdot 389226021.40}} = 0.99 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.99)^2}{\sqrt{5}} = 0.006$$

$$6\text{PE}(r) = 6 \times 0.006 = 0.036$$

## Appendix - X

### Coefficient of Correlation between Return on Total Assets of HBL

(Rs. In million)

F/Y	Net Profit (X)	TA (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	308.28	27844.68	-220.97	-5419.32	48827.74	29369029.26	1197507.14
2062/63	457.46	29460.39	-71.79	-3803.61	5153.80	14467449.03	273061.16
2063/64	491.82	33519.13	-37.43	255.13	1401.00	65091.32	-9549.52
2064/65	635.87	36175.53	106.62	2911.53	11367.82	8477006.94	310427.33
2065/66	752.84	39320.31	223.59	6056.31	49992.49	36678890.82	1354130.35
	X= 2646.27	Y= 166320.04			X <sup>2</sup> = 116742.86	Y <sup>2</sup> = 89057467.37	XY= 3125576.46

$$\bar{X} = \frac{\sum X}{N} = \frac{2646.27}{5} = 529.25$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{166320.04}{5} = 33264$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{3125576.46}{\sqrt{116742.86 \cdot 89057467.37}} = 0.97 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.97)^2}{\sqrt{5}} = 0.018$$

$$6\text{PE}(r) = 6 \times 0.018 = 0.108$$

## Appendix - XI

### Coefficient of Correlation between Working Capital and Total Assets of EBL

(Rs. In million)

F/Y	WC (X)	TA (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	915.77	11732.52	-381.84	-10905.59	145801.79	118931893.2	4164190.49
2062/63	988.66	15959.27	-308.95	-6678.84	95450.10	44606903.75	2063427.62
2063/64	1194.64	21432.57	-102.97	-1205.54	10602.82	1453326.69	124134.45
2064/65	1663.93	27149.34	366.32	4511.23	134190.34	20351196.11	1652553.77
2065/66	1725.06	36916.86	427.45	14278.75	182713.50	203882701.60	6103451.69
	X= 6488.06	Y=113190.56			X <sup>2</sup> = 568758.55	Y <sup>2</sup> = 389226021.40	XY= 14107758.02

$$\bar{X} = \frac{\sum X}{N} = \frac{6488.06}{5} = 1297.61$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{113190.56}{5} = 22638.11$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{14107758.02}{\sqrt{568758.55 \cdot 389226021.40}} = 0.95 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.95)^2}{\sqrt{5}} = 0.029$$

$$6\text{PE}(r) = 6 \times 0.029 = 0.174$$

## Appendix - XII

### Coefficient of Correlation between Working Capital and Total Assets of HBL

(Rs. In million)

F/Y	WC (X)	TA (Y)	X(X- $\bar{X}$ )	Y(Y- $\bar{Y}$ )	X <sup>2</sup>	Y <sup>2</sup>	XY
2061/62	1479.77	27844.68	-569.17	-5419.32	323954.49	29369029.26	3084514.36
2062/63	1563.63	29460.39	-485.31	-3803.61	235525.79	14467449.03	1845929.97
2063/64	1919.68	33519.13	-129.26	255.13	16708.15	65091.32	-32978.10
2064/65	2636.61	36175.53	587.67	2911.53	345356.03	8477006.94	1711018.84
2065/66	2644.99	39320.31	596.05	6056.31	355275.60	36678890.82	3609863.58
	X= 10244.68	Y= 166320.04			X <sup>2</sup> = 1276820.06	Y <sup>2</sup> = 89057467.37	XY= 10218348.65

$$\bar{X} = \frac{\sum X}{N} = \frac{10244.68}{5} = 2048.94$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{166320.04}{5} = 33264$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \cdot \sum Y^2}} = \frac{10218348.65}{\sqrt{1276820.06 \cdot 89057467.37}} = 0.96 \quad \text{P.E.}(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.96)^2}{\sqrt{5}} = 0.024$$

$$6\text{PE}(r) = 6 \times 0.024 = 0.144$$

