CHAPTER - I
INTRODUCTION

1.1 General Background

The study of working capital behavior occupies an important place in financial management .working capital is nothing but the capital needed to run day to day operations of a business. If all these expenses, which are to be incurred on short term or day to day basis, are put together, it is called working capital. Working capital is a broader term and there are chances of misunderstanding it. Both the concepts are of equal value. Gross concept emphasizes that investment in current assets should be adequate, not more or not less, to the needs of the business firm. Excessive investment in current assets affects profitability as idle investment yields nothing. Similarly, inadequate investment in current assets makes it difficult to carry out the day to day operations of the business smoothly. It also threatens the solvency position of the business. The need for net concept of that short term creditors want an enterprise to maintain current assets at a higher level as compared to current liabilities. It shows the extent of protection provided to short term liabilities. The current ratio of 2:1 and quick ratio 1:1 is considered to be the appropriate standards but they are simply the conventional rules or rules of thumb. The quality of current assets is more important then the current ratio of 2:1. The illiquid firm finds it difficult to borrow from outside. The net concept of working capital is simply an excess of current assets over current liabilities (NWC =CA-CL).

Current liabilities are those claims of outsiders which are expected to mature for payment within an accounting year and include sundry creditors, bank overdraft, short-term loan, proposed dividends, and tax payable and outstanding expenses.

The net working capital may be positive or negative. It is positive if current assets are greater than current liabilities and it is negative if current liabilities are greater than current assets. Working capital management is concerned with the problems that arise in attempting to manage the current assets, the current liabilities and the interrelationship that exist between them. The management of working capital is synonymous to the management of short term liquidity. It has been regarded as one of the conditioning factors in the decision making issues. It is no doubt, very difficult to point out as to how much working capital is needed by a particular

business organization. An organization, which is not willing to take more financial risks, can go for more short - term liquidity. The more of short term liquidity means more of current assets and less of current liabilities. The less current liabilities applies less short term financing heading to the lower returns resulting from the use of more high cost long term financing . So it is very essential to analyze and find out problems and its solutions to make efficient use of finds for minimizing the risk of loss to attain profit objectives.

Working capital management on bank is also difficult that of manufacturing and how manufacturing business organization. Commercial banks are great monetary institutions, which are playing important role to general welfare of the economy. The responsibility of commercial banks is more than any other financial institutions. They must be ready to pay on demand. Without warning or notice, a good share of their liabilities. Banks collect funds from different types of deposits for providing loan and advances to different sector. To get higher return banks must try to increase funds from deposits as well as their investment. The first motive of banking business is to borrow public saving and lend to needy people. But commercial banks always face the problem for utilizing more deposits on investment fully and productively. The gap between collection of deposits and disbursement of loans increase the cash balance on bank, which require playing its large amount of liabilities on its depositors, demand without notice. But large amount of idle cash balance also decrease profitability of banks. (Pardhan; 2006)

The management of the funds of business can be described as financial management. Financial management is mainly concerned with two aspects. Firstly, fixed assets and fixed liabilities, in other words, long term investment and sources of funds, secondly, current uses and sources of funds. Both of these types of funds play a vital role in business finance. Normally the finance function can be divided in three decision activities they are Investment decision, financing decision, Dividend policy decision. But the must important decision for business is investment decision it includes the long term assets management i.e., working capital management.

The term Working capital management is closely related with short term financing and it is concerned with collection and allocation of resources. Working capital management is related to the problems that arise in automating to manage the

current assets, the current liabilities and the interrelationship that exist between them (Smith; 1974).

The goal of working capital management is to support the long term operation and financial goals of the business. In effect, this involves recognizing the relationship between risk and return. Three elements must be included in analyzing the trade off between risk and return when managing working capital. (I) Insolvency; this condition occurs when a firm can no longer pay its bills and, must default on obligations and possibility declares bankruptcy. A firm without adequate level of working capital may have to face this risk. (II) Profitability of Assets: Different level of current assets will have varied effects on profits. A high level of inventory will require high carrying cost.

At the same time, the firm will have a wide range of goods to sell and may be able to generate higher sales and profit. Each decision on the level of cash, receivables and inventory should consider the effects to different level. III Cost of financing : when interest rates are high, its costs more to carry inventory then when rates are low - large cash balances may not earn the return that is possible if the cash is converted in to operating assets. The cost of debt and the opportunity cost of alternative investments are items to consider when evaluating working capital level (Hampton & Wagner, 1989).

The meaning of the term “working capital " Should not be allowed to limit either the gross or net concept of working capital only. It is true that very often working capital is interpreted as circulating capital as it keeps on circulating in the course of operations. Working capital is constantly flowing and changing its form as the enterprise accomplishes its objectives and performs its operations.

1.2 Introduction of Standard Chartered Bank Nepal Limited

The bank was originally established as a joint venture of Grind lays Bank and Nepal Bank Limited fifty percent (50 %), Nepal Bank Limited 33.34 percent and general public16.66 percent along with the change of ownership to standard chartered, the banking are of SCBNL same the rise of a new down changing the general image of the bank. With the acquisition, Standard Charter Bank now owns 50 percent share of Nepal Grind lays Bank limited (NGBL).

With the mission statement "To be the leading international bank in our principal markets" The bank operates through 11 offices, spread throughout Nepal and focuses mainly one corporate, consumer and commercial banking providing services for international firms as well. The bank contributed to a large extent in the development of the country by the way of loans to industrial project, the priority and deprived sectors.

Standard Chartered Bank Nepal Limited, offers a full range of banking products and services in wholesale and consumer banking, catering to wide rang of customer banking, catering to wide rang of customers from individuals, to mid - market local corporate to multinationals and public sector companies as well as embassies, aid agencies, airlines, hotels and government corporations.

1.3 Introduction of Himalayan Bank Limited

Himalayan Bank Limited was incorporated in 1992 by a few distinguished business personalities of Nepal in partnership with Employees provident fund and Habib Bank Limited, one of the largest commercial bank of pakistan. Banking operation concerned from January 1993. It is the first commercial bank of Nepal whose maximum shares are held by the Nepalease private sector. Besides Commercial banking services, the bank also offers industrial and merchant banking services.

The bank has six branches in kathmandu valley at the following location; Thamel, Newroad, Maharagunj, Teku, Pulchowk (Patan) and Suryavinayak (mound from Nagarkot). In addition the bank also has 11 other branches outside Kathmandu valley in Banepa, Butwal, Bharatpur, Tandi, Birgunj, Bhairahawa, Daran and Nepalgunj.

Himalayan Bank is committed to be a bank where " Banking is done with a difference".

1.4 Statement of the Problems

Working capital is a crucial capital which is compared as lifeblood of the human beings for any organization. In most enterprises the management of working capital has been misunderstood as the management of money rather than its efficient utilization. The management of working capital is synonymous to the management

to short term liability. It has been regarded as one of the conditioning factor in the decision making issuer. It is on doubt, very difficult to point out as to how much working capital is needed by a particular business organization. An organization, which is not willing to take more financial risks, can go for more short - term liability. The more of short - term liability mean more of current assets and less of current liability.

The less current liabilities implies less short term financing heading to the lower returns resulting front the use of more high cost long term financing. So it is very essential to analyze and find out problems and its solution to make efficient use of funds for minimizing the risk of loss to attain profit objective.

Join venture banks like Standard Chartered Bank Nepal limited and Himalayan Bank limited are playing an important role in the economic development of the country. Wrong decision on working capital management of these two commercial banks not only affects the liquidity and profitability of the bank but also economy and banking system of the country.

Working capital management on bank is also difficult as that of manufacturing and non - manufacturing business organization. Commercial banks are great monitory institutions, which are playing important role to the general welfare of the economy. The responsibilities of commercial banks are more than any other financial institutions. They must be ready to pay on demand a good share of their liabilities without warning or notice. Bank collects fund from different types of deposits for providing locus and advances to different sector. To get higher return, banks must try to increase funds from deposits as well as their investment. The first motive of banking business its to borrow public saving and lend to need y people. But commercial banks always face the problem for utilizing more deposits as investment fully and productivity. The gap between the information and assumption collection of deposits and disbursement of loans increase the cash balance on bank, which require paying its large amount of liabilities on its depositors demand without notice. But large amount of idle cash balance also decrease profitability of banks.

1.5 Research Question

- How to assess the composition of working capital management between Standard Chartered Bank Nepal Limited and Himalayan Bank Limited?
- How to analyses the financial performance of SCBNL and HBL in terms of profitability and liquidity position?
- How to evaluate the current assets and current liabilities and their impact on liquidity and profitability?

1.6 Objectives of the Study

The main objective of this study is to examine of the management of working capital in Standard Charter Bank Nepal Limited and Himalayan Bank Limited. The specific objectives are as follows:

- To assess the composition of working capital management between Standard Chartered Bank Nepal Limited and Himalayan Bank Limited.
- To analyses the financial performance of SCBNL and HBL in terms of profitability and liquidity position.
- To evaluate the current assets and current liabilities and their impact on liquidity and profitability.

1.7 Significance of the Study

Nepalese Commercial Banks are operating in the competitive environment. In this situation, banks have to adopt suitable strategies for their existence. They should balance and co-ordinate the different functional areas of any organization depends on its strategy, which is affected by working capital management is the crux of problem to prepare proper strategy on its favors.

The study has multidimensional significance, which can be divided into four broader headings.

1. Its significance to the shareholders

The study might be helpful to aware the shareholders regarding the working Capital management, i.e., liquidity and profitability of their banks. The Comparison will help them to identity the productivity of their funds in each of these two banks.

2. Its significance to the management

The study might be helpful to go deep into the matters as to why the working Capital management of their banks is better (or works) than their competitors.

3. Its significance to the outsiders

Among outsiders, mainly the customers, financing agencies, stock exchanges and stock traders are interested in the performance of banks and the customers (Both depositors and debtors) can identify to which bank they should go. The financial agencies can understand which there is more secured and stock exchange stockbrokers and stock traders can find out the relative worth of the Stocks of each bank.

4. Its significance to the policy makers

Policy makers here refer to the government and Nepal Rasta Bank. The study will be helpful to them while formulating the policy regarding commercial banks.

Therefore, considering all these facts, the study of working capital management of SCBNL and HBL is considerably important.

1.8 Limitation of the Study

The scope of the present study has been limited in terms of period of study as well as sources and nature of data. The period covered by the study extends over 5 years from 2060/065 B.S. only. The limitations of this study are as follows:

a. This study is mainly based on secondary data. It is done mostly on the basis of the published financial document, and annual report of SCBNL and HBL banks.
b. The study follows with specific tools such as ratio analysis, mean, CV, correlation and hypothesis.
c. The study is fully based on only five fiscal year data from 2060/2061 to 2064/65 BS.
d. The study may not be appropriate for other financials companies.

1.9 Organization of the Study

This thesis has been divided into five chapters they are

i. Introduction
ii. Review of literature
iii. Research methodology
iv. Presentation and analysis
v. Summary, conclusion and recommendation

The introduction chapter covers general background, statement of the problem, objectives of the study, research hypothesis, and significance of the study, limitation of the study and organization of the study.

The second chapter focuses on the review of literature. It contains the conceptual framework, review of empirical works and concluding remarks.

The third chapter deals with the research methodology to be adopted for the study consisting research design, sources of data, data processing procedure, tools and techniques of analysis and period covered.

The forth chapter deals with presentation, analysis and interpretation of data. IT consists testing of hypothesis and major findings of the research.

The last chapter covers summary conclusion and recommendations.

Finally an extensive bibliography and appendix are presented at the end of study.

CHAPTER - II

REVIEW OF LITERATURE

2.1 Introduction

Review of literature means reviewing research studies or other relevant preposition in the related areas of the study so that all past studies, their conclusion and deficiencies may be known and further research can be conducted. This chapter highlights on the conceptual framework of working capital management. It also provides insight into the findings of earlier studies though the review of books, publications and previous studies (Pant, 2003).

2.2 Concept of working capital management

Working capital management was studies as a part of economies in the beginning of the 19th century but today it is being studied as a separate entity. It is considered as the heart and soul of any business and working capital decision directly relates to every thing that happens in business. Working capital policy affects every thing of business such as production, personnel, marketing, and finance etc. working capital management ensures better liquidity stock control and profitability (Pradhan, 1986).

Financial management is mainly concerned with concerned with two aspects. Firstly, fixed assets fixed liabilities, or in other words, long term investment and sources of funds, and secondly, current uses and sources of funds play a vital role in business finance.

Working capital refers to the resources of firm that are used to conduct operations to do day to day works that makes the business successful. Without cash, bills cannot be paid, without receivables; the firm cannot allow timing difference between delivering goods or services and collecting the money to pay for them. Without inventories the firm cannot engage in production nor can it stock goods to provide immediate deliveries. As a result of the critical nature of current assets, the management of working capital in one of the most important areas in determining whether a firm will be successful. The term working capital refers to the current assets of the firm-those items that can be converted into cash with in the year. Hence, working capital management is the management for the short-term. It is a process of short-term operation of an enterprise. It is a process of planning and controlling the level of mix of current assets of the firm as well as financing these

assets. It concludes decision regarding cash and marketable securities, receivables, inventories and current liabilities with an objective of maximizing the overall value of a firm. There are two concept of working capital (Pandey, 1995).

Gross working capital

In simple terms, gross concept of working capital may be defined as the total of current assets. In other words, if all expenses needed to run day to day operation of business, such as amount to be invested in the form of cash, finished goods receivables etc. are put together it is called working capital.

It is simply called as working capital refers to the firm's investment in current assets, current assets are the assets which can be converted into cash with in an accounting year and include cash, marketable securities, inventory, account receivable and debtors (Pandey, 1995).

Net working capital

This is of critical importance to a firm net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders that are expected to mature for payment within an accounting year and include creditors (account payable) bills payable and outstanding expenses.

Another way of defining working capital is that portion of firm's current assets financed with long term fund. Both liquid assets and liabilities are important in working capital management.

Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets (Pradhan, 1986).

2.3 Types of working capital

There are two types of working capital:

They are permanent working capital and variable working capital. These working capitals are necessary for any organization for continuous production and sales without any interruption. (Van Horne1995)

i) Permanent (Fixed) working capital

Permanent working capital refers to that level of current assets, which is required on a continuous basis over the entire year. A manufacturing concern cannot operate regular production and sales function in the absence of this portion of working capital. Therefore, a manufacturing concern holds certain minimum amount of working capital to ensure uninterrupted production and sales functions. This portion of working capital is directly related to firm's expansion of operation capacity (Van Horne, 1999).

Permanent working capital has the following characteristics

- It is classified on time basis.
- It continuously varies from one asset to another and continuous to remain in the business process.
- It also varies with the growth of business.

ii) Variable working capital

Variable working capital represents that portion of working capital, which is required over permanent working capital. If the nature of production and sales of a firm is directly related to seasonal variations, it should stock extra raw material, working in progress and inventory of finished goods. Therefore, this portion of working capital depends upon the nature of firm's production relation between labor and management. It is temporarily invested in current assets and its main features are (Pradhan, 1982):

a. It is particularly paired to a concern of a seasonal or cycle nature.
b. It is not always gainfully utilized, though it may change from one asset to another as fixed working capital does.

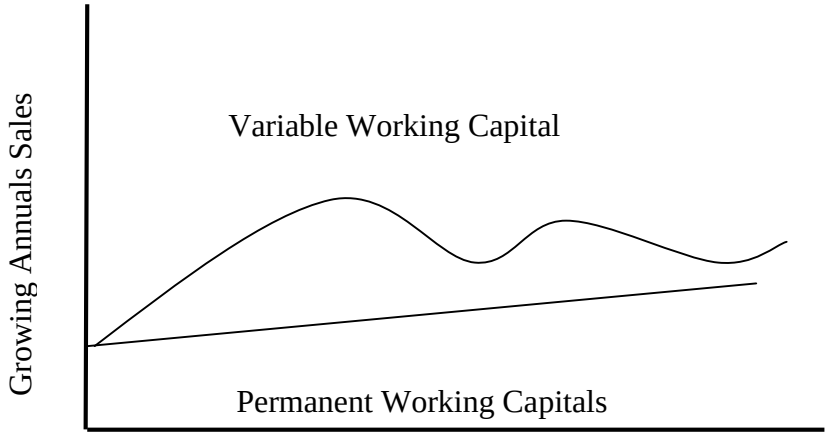


Figure 2.1 types of working capitals (Van Horne1999)

Figure 2.1 shows clearly about this portion of working Capital. If a firm has sound management on this portion of working capital, it can easily win over other competitors in today's competitive and aggressive market.

2.4 Working capital policy

Working capital policy refers to the firm's basic policies regarding target levels for each category of current assets and how current assets will be financed. so first of all in working capital management a firm has to determine how much funds should be invested in working capital in gross concept. Every firm can adopt different financing policy according to financial manager's attitude towards the risk-return trade off. One of the most important decisions is financing current assets. Any firm has working capital policies regarding to the level of each category of current assets and their financing are discussed in the ensuing part of this section. (Western, 1996)

i) Current Assets Investment Policy

Current assets investment policy refers to the policy regarding to the total amount of current assets to be carried to support the given level of sales. There are three alternative current assets investment policies, namely, fat cat, lean mean and Moderate (Western,1996).

a. Fat Cat Policy

This is also known as relaxed current investment policy. It is the policy under which relatively large amount of cash and marketable securities and inventories are carried, and sales are stimulated by a liberal credit policy which results in high level of receivables. This policy provides the low expected return in investment with lower risk (Western, 1996).

b. Lean and Mean Policy

This is also known as restricted current assets investment policy. This is the policy under which holding of cash and marketable securities, inventories and receivable are minimized .This policy tends to reduce the policy conversion cycle. Under this policy firm follows a tight credit policy and bears the risk of losing sales (Western and Brigham, 1996).

c. Moderate policy

It is the policy that is between the relaxed and restricted polices. In moderate policy, a firm holds amount of current assets in between the relaxed and restrictive policies. Both risk and return are moderate in this policy (Western and Brigham, 1996).

ii) Current Assets Financing Policy

It is the manner in which the permanent and temporary current assets are financed. Current assets are financed with funds raised from different sources. But cost and risk affect the financing of any assets. Thus, current assets financing policy should clearly outline the sources of financing of assets. There are three variables, namely, aggressive, conservative and matching policies of current assets financing (Weston and Brigham, 1996).

a. Aggressive Policy

In aggressive policy, all the fixed assets of a firm are financed with long-term capital, but some of the firm's permanent assets are financed with short-term, non-spontaneous sources of fund. In other words, the firm finances not only temporary current assets but also a part of permanent current assets with short-term financing (Weston and Brigham, 1996).

Figure 2.2 shows that 50% of the permanent current assets are financed through short-term financing. In general, interest rate increases with time, i.e. the shorter the time, lower the interest rate. It is because lenders are risk adverse and risk period. Thus, under normal circumstances, the firm borrows on a short-term financing rather than that from long-term financing. On the other side, if the firm finances its permanent current assets by short-term financing, then if runs the risk of renewing the borrowing the again and again. This future interest expenses will fluctuate widely, and it may also be difficult for the firm to raise the fund during the stringent credit this policy. In conclusion, there is higher return and low liquidity position under this policy (Weston and Brigham, 1996)

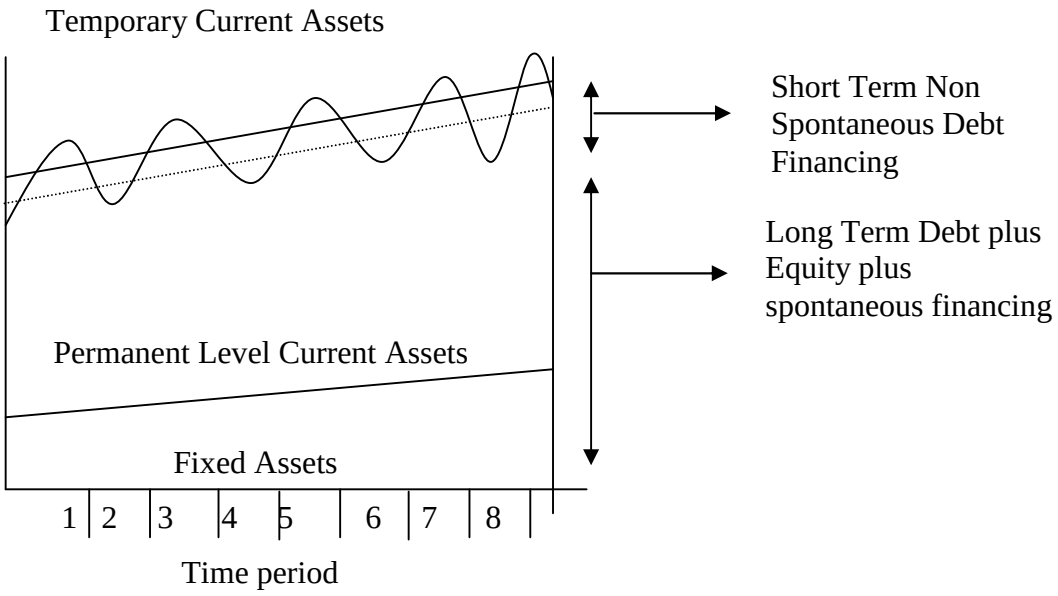


Figure 2.2 aggressive financing policy (Weston and Brigham, 1996)

A. **Conservative Policy**

In conservative policy, the firm uses long term financing to finance not only fixed assets and permanent current assets, but also part of temporary current assets i.e. with short term financing .It means that the firm depends upon the long-term sources for financing needs. This policy leads to high level of current assets, with long conversion cycle, low level of current liabilities and higher interest cost. The risk and return are lower than that of aggressive one. The risk adverse management follows this policy (Weston and Brigham, 1996).

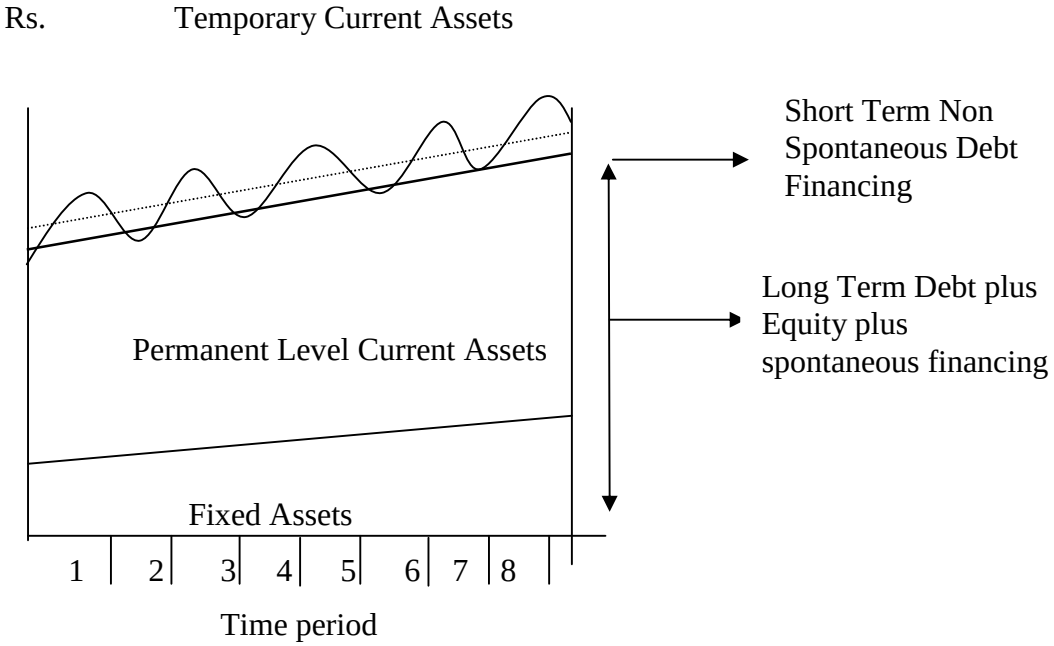


Figure 2.3 conservative financing polices (Weston and Brigham, 1996)

B. Maturity Matching Policy

It is self-liquidity approach. In this policy, the firm finances the permanent current assets with long-term financing and temporary with short-term financing. It means that the firm matches the maturity of financing source with an assets useful life. It lies in between the aggressive and conservative policies. It leads to both neither high nor low level if current assets and current liabilities. It lies in between a low profitability.

Figure 2.4 shows the temporary working capital is financed by short-term financing and long-term financing. Thus, no working capital is financed by long-term funds. Hence, net working capital is zero under this policy (Weston and Brigham, 1996).

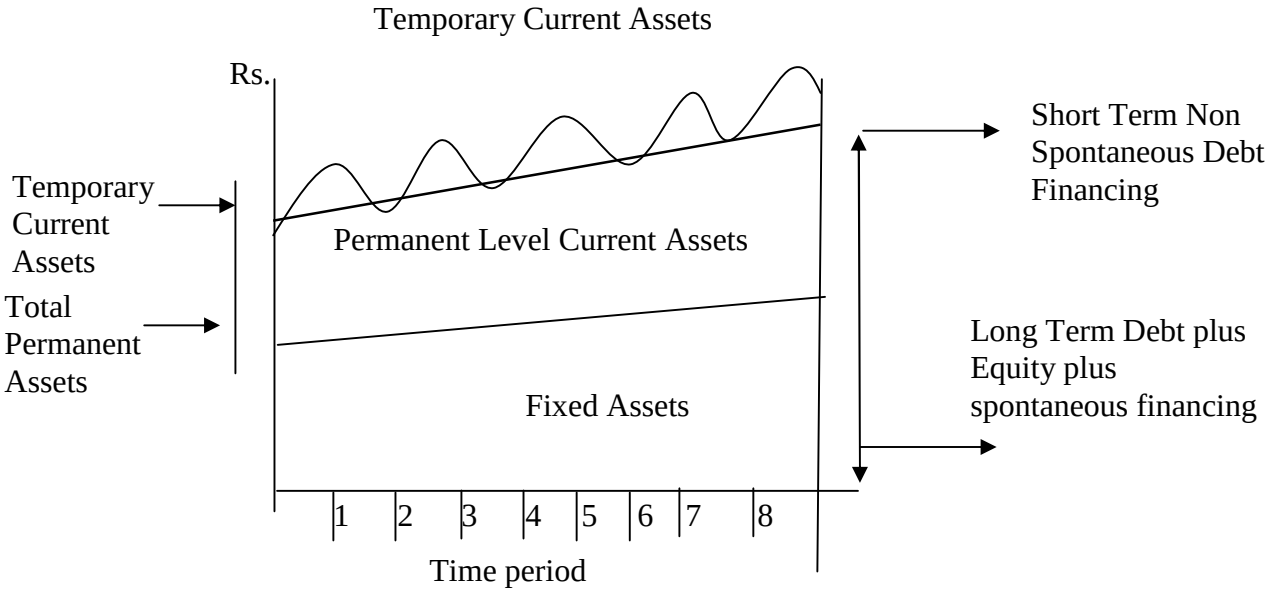


Figure 2.4 Maturity Matching Financing Policies (Weston and Brigham, 1996)

2.5 Determinants of working capital

The firm should maintain a sound working capital position. It should have adequate capital to run its business operation. Both excessive as well as inadequate capital positions are dangerous from the firm's point of view. Excessive working capital means idle fund which earns no profit for the firm. Paucity of working capital not only impairs firm's profitability but also results in production interruption and inefficiencies (Khan, 1992).

The working capital is determined by a wide variety of factors. These factors however affect different enterprises differently. They also vary from time to time.

Therefore, it is often said that there are no set rules or formulas to determine the level of the working capital of a firm. In fact a large number of factors affect the working capital requirement and all factors plays different importance. Thus an analysis of related should be made in order to determine the size of investment in working capital. These factors are highlights below (Gupta, 1987):

1. Nature and size of business

It depends upon the nature and size of the business. If the size of the firm is bigger than it requires more working capital. While a small firm needs less working capital. Trading and financial firm require larger amount of working capital relatively to public utilities, while manufacturing concern lies between these two extremes.

2. Growth and Expansion

This also affects the working capital requirement of a firm. A growing firm needs more working capital than those static ones. However, it is difficult to precisely determine the relationship between the growth and expansion of the firm and working capital needs.

3. Credit policy

Working capital requirement depends on term of sales. Different terms may be followed to different customers according to their credit worthiness. If the firm follows the liberal credit policy then it requires more working capital. Conversely, if firm follows the stringent credit policy it requires less working capital.

4. Production policy

If a firm produces seasonal goods, then it sells its products in a certain month of the year. In this situation it can either confine its production only that period when goods are sold or follow a steady production policy through the year and produce goods at level to meet the peak demand. The former policy does not need more working capital than the latter does.

5. Availability of credit

Availability of credit facility is another factor that affects the working capital requirement. If the creditors avail a liberal credit terms then the firm will need less

working capital and vice-versa. In other words, if the firm can get credit facility easily on favorable conditions, it requires less working capital is required to operate the firm smoothly.

6. Manufacturing cycle

Working capital requirement of an enterprise is also influenced by the manufacturing or production cycle. It refers to the time involved to make the finished goods from the raw materials. During the process of manufacturing cycle, the larger will be working capital requirement and vice-versa.

7. Profit Margin

The level of profit margin differs from firm to firm. It depends upon the nature and quality of product, marketing management and monopoly power in the market. If the firm deals with the high quality product, has a sound marketing management and has enjoyed monopoly power in the market then if earns quite high profit and vice-versa. Profit is source of working capital pool by generating more internal funds.

8. Price level changes

Generally, a firm is required to maintain the higher amount of working capital if the price level rises, because the same level of current assets needs more funds due to the increasing price. In conclusion, the implications of changing price level on working capital position will vary from firm to firm depending on the nature and other relevant consideration of the operation of the concerned firms.

9. Operation Efficiency

It is also the important factor, which influence the working capital requirement of the firm. It refers to the efficient utilization of available resources at minimum cost. Thus financing manager can contribute to strong working capital position though operating efficiency. If a firm has strong operating efficiency then it needs less amount of working capital otherwise if requires large amount of working capital.

10. Level of taxes

The level of taxes also influences working capital requirement. The amount of taxes to be paid advance is determined by prevailing tax regulations. But the firm’s profit is not constant or can’t be predetermined. Tax liability in a sense of short-term

liquidity is payable in cash. Therefore, the provision for tax amount is one of the important aspects of working capital planning. It tax liability increases, it needs to increase the working capital and vice-versa.

2.6 Financing of working capital

Every manufacturing concern or industry requires additional assets whether they are in stable or growing conditions. When the growing firm wants to generate sustained normally require fixed capital as well as working capital. Additional portion of working capital is approximately dominated by the same rate as sales. But this portion of capital requirement depends up on the nature of the firm. So the most important function of financed manager is to determine the level of working capital and to decide how it is to be finance. Financing of any assets is concerned with two major factors cost and risk. Therefore the financial manager must determine an appropriate financing mix or decide how current liabilities should be used to finance current assets. However, a number of financing mixes are available to the financial manager. He can present generally three kinds of financing (Van Horn, 1998).

1. Long term financing

Long term financing has high liquidity and low profitability. Ordinary shares, debenture, preference share, retained earning and long-term debts from financial institutions are the major sources of long-term financing. Even it includes retained earnings and long- term loan from Nepal development corporation and long-term other commercial bank.

2. Short term financing

Firm must arrange short-term credit in advance. The sources of short-term financing of working capital are trade credit and bank borrowing.

i) Trade credit

It refers to the credit that a customer gets from supplies of goods in the normal course of business. The buying firms does not pay cash immediately for the purchase is called trade credit. It is mostly an informal arrangement and granted on an open account basis. Another from of trade credit is bills payable. It depends upon the term of trade credit.

Ii) Bank credit

Bank credit is the primary institutional sources for working capital financing. For the purpose of bank credit, amount of working capital requirement has to be estimated by the borrowers and banks are approached with the maximum credit based on the margin requirement of the security the following types of loan are provided by commercial banks.

a. Loan Arrangement

Under this arrangement the entire amount of loan is given credit by the bank to the borrowers account and the loan is repaid in installment interest is payable on actual balance outstanding.

b. Overdraft Arrangement

Under this arrangement the borrowers is allowed to overdraft on this current account with the bank up to stipulate limit. With in this limit, any numbers of drawings are permitted. Repayment should be made in short period.

c. Commercial papers

It is used only by well-established high quality companies. This evidence of debts is an unsecured short-term promissory note, sold in the money market. It is sold either though dealers or directly to inventories. Besides the above from of credit bank provider loan against the warehouse receipt, inventory receivable. In our contest, most popular sources of short term financing are short-term loan form public deposit, which is an also major source of working capital financing in our country.

3. Spontaneous financing

Spontaneous financing arises from the normal operation of the firms. The two major sources of such financing are trade credit (i.e. credit and bills payable) and accruals. Whether trade credit is free of cost or not actually depends upon the terms of trade credit. Financial manager of the firm would like to finance its working capital with spontaneous sources as much as possible. In practical aspect, the real choice of current assets financing is either short-term or long-term sources. Thus, the financial manager concentrates his power is short-term versus long-term financing. Hence, the financing of working capital depends upon the working capital policy, which is perfectly dominated by the management attitude towards the risk-return.

Profitability and risk

Underlying sound working capital management lie two fundamental decision issues for the firm. They are the determination of (Gupta, 1987):

- The optimal level of investment in current assets.
- The appropriate mix of short-term and long-term financing used to support this investment in current assets.

In turn, these decisions are influenced by the trade-off that must be made between profitability and risk. Lowering the level of investment in current assets, while still being able to support sales, would lead to an increase in the firm's return on total assets. To the extent that the explicit costs of short-term financing are less than those of intermediate and long term financing, the greater the proportion of short-term debt to total debt, the higher is the profitability of the firm.

Although short-term interest rates sometimes exceed long-term rates, generally they are less. Even when short-term rates are higher, the situation is likely to be only temporary. Over an extended period of time, we would expect to pay more in interest cost with long-term debt than we would with short-term borrowings, which are continually rolled over (refinanced) at maturity. Moreover, the use of short-term debt as opposed to longer term debt is likely to result in higher profits because debt will be paid off during periods when it is not needed (Van Horne & Wachowicz; 1999).

These profitability assumptions suggest maintaining a level of current assets and high proportion of current liabilities to total liabilities. This strategy will result in a low, or conceivably negative, level of net working capital, offsetting the profitability of this strategy, however, is the increased risk means jeopardy to the firm for not maintaining sufficient current assets to.

- Meet its cash obligations as they occur.
- Support the proper level of sales (e.g. running out of inventory).

2.7 Review of Books

Some of the books on financial management regarding working capital management are reviewed here under.

Pradhan (1986), "Management of working capital" New Delhi, has published a book on management of working capital in Nepalese PES. This book is based on the study on none manufacturing public enterprises of Nepal for the duration of ten years from 1973 to 1982 A.D. He has aimed to provide useful insight into the existing and forthcoming corporations on working capital behavior. In this study, he has dealt with various issues viz-type of working capital policy followed by those PES-liquidity positions, structure of working capital, nature of working capital, utilization and demand for working capital and its various components with changes volume of sales in that PES. In the study he reveals that most of the selected enterprises achieved a trade off between risk and return there-by following neither an aggressive nor a conservative approach. Almost all the selected PES had a positive net working capital and much of the growth in net working capital might, however, be attributed to inflation as the forth in net working capital at deflated prices has been much lower. The liquidity measures showed a poor liquidity position in majority of MPES. It has been noticed that the enterprises had either negative cash flows or earning before tax or they had excessive net current debts, which could not be paid with in a year. Of the current assets, which is an average, half of the total assets, in PES, the share of inventories is the largest followed by receivables and cash. There had been an improvement in utilization of current assets in the majority of PES. He also noticed that the adjustment speed of actual to desire balance had been observed as highest for cash followed by inventories. However the speed of adjustment was much slower in all this cases. The results were, therefore, surprising as the adjustment or even cash holding was not immediate. Further more, the conclusion of capacity utilization in the models did not seem to have contributed much to the demand functions of working capital and its various components. Thus capacity utilization as a significant variable affecting these demand functions was doubtful. This book, thus, provides an extensive and comprehensive survey on the overall liquidity position, working capital policy, working capital utilization and demand functions of the current assets.

Weston & Copeland, (1990), have given some theoretical insights into working capital management after their various research studies on it. The bond conceptual finding's of their study provides sound knowledge and guidance for the further

study on the field of management of the further study on the field of management of working capital in any enterprise and naturally to this study as well. They explain, in the beginning. The importance of working capital, concept of working capital financing of working capital, the use of short-term vs long-term debt and relationship of current assets to fixed assets, In the next chapter they have dealt with the several of working capitals and their effective management techniques. The components of working capital they have dealt with are- cash, marketable securities, receivable and inventory. For the efficient management of cash, they have explained the different cash management models. They have also explained the major sources and forms of short-term financing such as trade credit, loans from commercial banks and commercial paper.

Shrestha, (1995), "portfolio Behavior of commercial Banks in Nepal", study on portfolio behavior of commercial banks in Nepal and selected two local commercial banks, three joint-venture banks and one development banks a sample for the study. Some major findings of her study are here under

a. Total deposits have been the major sources of fund for all the banks.
b. Capital and reserve funds do not seem to have changed much over the year.
c. The user of fund analysis show that the resources of commercial banks are allocated in the liquid funds, investments on securities, loans and advances, bills purchased, and discounted.
d. Among the portfolio, for Nepalese banks loan and advances share highest volume of the resources and the bills purchased and discounted the least over the year.
e. The excess reserve of the commercial banks shows unused resource. The cash reserve exceeds much more than the required cash reserve.

Van Horn (1998), "Financial Management and Policy" New Delhi, has categorized the various components of working capital i.e. liquidity, receivable and inventory and current liabilities and grouping them according to the way they affect valuation. He has also described the different methods for efficient management of cash and marketable securities and various models for balancing cash and marketable securities. For the management of receivable, different credit and collection policies have been described and various principles of inventory have been examined for inventory management and control.

Pandey, (2000), "Financial Management" New Delhi, has described some conceptual ingredients, which are base on his various research studies. He has described various aspects of working capital management. He has divided working capital management into five chapter deals with the concepts of working capital, need for working capital, determinants of working capital, dimension of working capital management, optimal level of current assets and working capital trends in India. In the second chapter, he has described the management of cash and marketable securities, where he has dealt with facts of cash management, motives for holding cash, cash planning, managing the cash flows, determining the optimum cash balance, investment in marketable securities. In the third chapter, he has described the management of receivable, in which he has dealt with goals of credit management, optimum credit policy, aspects of credit policy, and credit procedures for individual accounts. In the fourth chapter on inventory management, he has described the need to hold inventories, objectives of inventory management, inventory management techniques, selective inventory control technique, and financial manager's role working capital has describe the Ton don Committee recommendation on the fifth chapter.

2.8 Review of Articles

This section deals with the review of journal /articles and research work by different management experts relating to working capital management and bank performance.

Shrestha, (2003) "Working Capital Management in Public Enterprises: A study on financial results and constraints" in his article has considered ten selected PES and studied the working capital management in that PES. He has focused on the liquidity, turnover and profitability position of those enterprises. He found that four PES had maintained adequate liquidity position two had excessive and remaining four had failed to maintain desirable liquidity position. On the turnover, four had adequate turnover, one had high turnover and remaining three had not satisfactory turnover on net working capital. He had also fount that out of ten PES, six PES were operating at losses while only four were getting some percentage profits. With reference to those findings he had brought certain policy issues such as lack of suitable financial planning negligence of working capital management, deviation

between liquidity and turnover of assets and inability to show positive relationship between turnover and return on net working capital.

Acharya, (2005), "Problems and impediment in the management of working capital in Nepalese Enterprises" article has described the two major problems: operational problems and organizational problems regarding the working capital management in Nepalese PES. The operational problems he found are listed in the current ratio 2:1 and slow turnover of inventory. Similarly, change in working capital in relation to fixed capital had very low impacts over the profitability, thin transmutation of capital employed to sales, absent of apathetic management information system; break even analysis, fund flow analysis and ratio analysis were either undone or ineffective for performance evaluation. Finally monitoring of the proper functioning of working capital management has never been considered a managerial job. In the second part, he has listed the organizational problems in the PES. In most of the PES, there is lack of regular internal and external audit system as well as evaluation of financial results. Similarly, very few PES have been able to present their capital requirement, functioning of finance department is not satisfactory and some PES are even facing the under utilization of capacity. To make an efficient use of fund for minimizing the risk of loss and to attain profit objective, he has made some suggestions.

Dahal, (2007) has studied the need to build up a theory of working capital . He discussed mainly the role and function of the money manager who is directly concerned with the management of cash that is generated in the course of business transactions.

The emphasis was laid on money manager's job because this responsibility to provide funds as and when needed and to invest excess funds as when available plays a crucial role in the enterprise. The money manager can avoid borrowing from outside even when his net working capital position is low. On the other hand, the money manager who has a sizeable net working capital that is primarily in inventories and account receivable might be forced to borrow funds in order to meet early obligations. He pointed out that it all depended on the money manager's job of managing the cash flows and total current position. He suggested that the

preparation and analysis of a cash flow schedule or budget was a basic factor to achieve a successful program of money management.

2.9 Review of previous Thesis

Joshi, (2000), has studied on the topic, "A study on working capital management of Birat Nagar Jute Mill L.T. D". The main objective of this study is to show the composition of working capital and relationship between working capital and working capital components. To fulfill these objectives, he has taken five-year study period and used secondary data. He found out that inventory, cash and bank balance, receivable and components of working capital. The major portion of current assets has been occupied by inventory and cash, which have not been efficiently managed. The company has relied heavily on bank support for meeting additional funds without making the best utilization of realized funds. Receivable turnover is in favorable condition. Collection period is also favorable. It means the company can change in cash in very short period.

The research findings of the study are summarized as:

Inventory hold share of current assets followed by debtors and very negligible cash balance. The company held poor liquidity position and was financed by short term sources. The company had not earned sufficient profit even to pay the interest on short term loans.

Pathak, (2001), has done a research on "An Evaluation of working capital management of Nepal Lube oil Limited," The main objective of his study is to appraise the working capital management of NLOL and to study the relationship between sales and different variables of working capital. To achieve these objectives, he has taken five-year study period and applied the secondary data.

He found out the current assets with respect to total assets are in increasing trend year after year during the study period. It has occupied high portion that fixed assets. Investment on current assets has affected on investment on total assets. According to him, the growing tendency of investment over current assets could have adverse affects in NLOL's wealth maximization goal in the long run.

According to the conclusion of his study, the major findings were summarized as:

The company had lesser participation of fixed assets in total assets. Cash holds of the company was relatively small portion of total assets and inventory held larger portion indicating unused inventory Management.The Company was inefficient in collecting receivables. Receivables were not affected by sales.

Lamsal, (2001), has conducted research study on "A comparative study of working capital management of NABIL and standard chartered Bank Nepal Limited." The main objectives are:
To study the current assets and current liabilities and their impact on liquidity and profitability, to analyze the liquidity, assets utilization, long term solvency and profitability of both banks, to analyze the comparative study of working capital management between NABIL and SCBNL.

Based on his findings, the standard chartered should seriously adjust its policy of investment on loan and advances with collected funds and increase their proportion of loan and advances in total current assets fixed deposits and saving deposits turnover position are also not satisfactory on both banks. Therefore, NABIL as well as SCBNL should give proper attention on collection over dated loan and advances and utilization of idle fund as well as loan and advance. Interest earned to total assets ratio is higher cost on NABIL but net profit ratios are less than SCBNL. It is due to higher cost on NABIL. By adopting the matching working capital management policy instead of adopting conservative working capital policy NABIL as well as SCBNL could improve in its profitability in the short run as well as long run.
The major findings of his study were summarized as:
The major components of current assets in NABIL and SCBNL are cash and bank balance, loan and advance and government securities. The liquidity position of SCBNL is better than NABIL .The turnover position of NABIL has better than SCBNL. The NABIL has better utilization of deposits in income generating activity than SCBNL. Long term debt to net worth ratio of NABIL is always higher than SCBNL on that study period. Net profit to total assets ratio and net profit to total deposit ratios are always higher on SCBNL than NABIL. Cost of services to total assets ratio of NABIL is always higher than the same of SCBNL on the study

period. The average value of interest earned to total assets ratio of NABIL is higher than SCBNL.

Shrestha, (2003), has carried out a study, her stud, "A study on working capital management with respect to National Trading Limited and Salt Trading Corporation Limited". Her main objective is to present overall picture of working capital of National Trading Limited and Salt Trading Corporation Limited. The major findings of the study are as summarized as:

The Current Assets to Total Assets of NTL and STCL both are in fluctuating trend.

The investment in current assets is high in both of the trading companies with respect to its total assets and net fixed assets. Cash and bank balance holds the highest portion followed by inventory in NTL whereas cash and bank balance holds the highest portion. The turnover position of the NTL and STCL are in fluctuating trend.

K.C., (2005), has carried out, "Comparative study of working capital management of Nepal Bank Limited and Nepal Arab Bank Limited."

The major objectives of the research are:

To review the related literature of recent development in working capital management, to analyses the comparative study of working capital management of NBL and NABIL, to study the current assets and current liabilities and their impact and relationship to each other of NBL and NABIL.

Based on his findings, he has recommended that NBL should reduce or replace fixed deposits by collecting higher amount of short term deposits. NBL as well as NABIL should give proper attention on collection of over-dated loan and advances and utilization of idle fund as loan and advances. NBL should reduce its cost through reducing high cost deposit, and operate in a proper way so that it can have least operating cost which further maximize its profitability and maximize shareholders return. Both banks should adopt the matching working capital management policy instead of adopting conservative working capital policy.

The major findings of his study are summarized as:

The major components of current assets in NBL and NABIL are cash and bank balance, loan and advances and government securities. Out of major three current

assets components, cash and bank balance holds the smallest portion in NBL. On the other hand, government securities hold the smallest portion in NABIL. The interest income of NBL was better than NABIL. The trend of quick ratio, cash and bank balance to deposit ratio, and cash and bank balance to current, margin and other deposit ratio of NBL and NABIL are decreasing. The liquidity position of NBL was always better than NABIL. Fixed deposit to total deposit; ratios of NBL were always higher than same of NABIL for the study period. The turnover position of NBL are in fluctuating trend but turnover position of NABIL are decreasing in first three years then increasing in last two years of study period. NABIL has the better utilization of deposits in income generating activity than NBL. Also the NABIL has better investment efficiency on loan and advance. Large portion of long term debt is used in current assets of both banks but relatively it is higher on NBL than NABIL. Both banks follow conservative working capital policy but NBL has more conservative working capital than NABIL. Due to more conservative working capital policy, risk of insolvency is lesser but cost of fund is higher on NBL than NABIL. The profitability position of NABIL is far better although NBL earned higher interest NABIL.

Shrestha, (2006), has carried out his research on "A study on working capital management of Dairy Development Corporation." The main objective of the study is to analyze the current assets and current liabilities and their impact and relationship to each other. The major findings of his study are summarized as:

The major components of current assets in DDC are inventory cash and bank balance, sundry debtors and miscellaneous current assets in which inventory hold major portion respectively in each year. The company's investment in the form of working capital has been increasing. The average investment 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 to fixed assets portion. The average receivable turnover and ACP is in fluctuating trend during the study period. There is ineffective liquidity position and unsatisfactory profitability ratio in DDC. The overall return position of DDC is negative i.e. not in favorable condition. It is because of inefficient utilization of CA, TA and shareholder's wealth.

Subedi, (2007), has carried out a study "Working Capital Management of Manufacturing Companies Listed in NEPSE. "His main objective is to examine the working capital policy of Nepalese manufacturing companies listed in Nepal Stock Exchange Limited. He has identified the following points as major findings are summarized as:

There is wide variation of the current assets within individual manufacturing companies. The ratio of cash to current assets is widely varied among manufacturing companies during the study period from 1997 to 2001. The overall company average of receivable to current assets ratio is 16 percentages. There is wide variation in the ratio of inventory to current assets among manufacturing companies. There is no consistency in the company average of current assets to total assets in manufacturing companies. The liquidity position of Nepalese manufacturing companies is not similar among different companies.

Giri, (2008), has analyzed the working capital management of Dabur Nepal Limited (DNL) he has tried to make an evaluation of working capital management of Dabur Nepal Limited, and has focused on the working capital management with respect to cash credit and inventory management and relationship between sales and different variable of working capital. He has used financial ratio analysis, Karl person's coefficient of correlation 'r' and test of hypothesis. Major findings of this study were high proportion of current assets, unfavorable liquidity position and very low level of cash occupied the major proportion of current assets but the share of finished goods stock is very low. Receivable has the second place in current assets and it is continuously rowing. Finally he concluded that company had adopted the moderate financial policy.

Dhakal, (2009), has carried out a study on management of working capital in Nepal Telecom (NTC). The objective of the study was to analyze the importance of proper management of working capital and to show the relation between different components of current assets and currents liabilities. He found high collection period of outstanding debt. He concluded that NTC has tried to maintain high standard of working capital theoretically. Further he found high collection period of outstanding debt. He concluded that NTC has tried to maintain high standard of working capital theoretically. Further he found improper financing of current assets and high earning

capacity. In this study he has drawn the conclusion that the working capital management of NTC in general is satisfactory.

Sharma, (2009), concluded study on working capital management of selected manufacturing companies listed in NEPSE. The objective of the study is to examine the working capital management of selected companies.

To assets the level of current assets and liabilities of the selected companies, to analyze the profitability position of selected enterprises with respect to working capital, to determine structure and utilization of working capital of these companies, to analyze the relationship between working capital variables, to provide suggestion and recommendations to improve working capital management.

Based on the findings of the study following recommendations forwarded for the improvement of the working capital management of NEPSE:

The fluctuation in the current assets holdings leads to conclude that selected manufacturing company. The liquidity position of Nepalese manufacturing companies, the liquidity position of B.N. Ltd., TSM Ltd. And NB Ltd is good. The current assets turnover ratio of the Nepalese manufacturing companies is also widely among the individual companies. Net working capital turnover ratio of overall company average in negative Jsm Ltd, AVO Ltd and NL Ltd have negative working capital turnover ratio and BN Ltd have positive turnover ratio. The major finding of the study showed there is wide variation of the current within individual companies.

2.10 Research Gap

Many research studies have been concluded by different students, experts and researchers about working capital management. There have been found numerous research studies on financial companies and public enterprises regarding working. Some studies are related to a case study of a single company and some others are comparative in nature. But the comparative study of working capital management between two financial companies can be hardly found. From the review of related studies no one studies have been found (working capital management) as a comparative study in the context of standard chartered Bank Nepal Limited (SCBNL) and Himalayan Bank Limited (HBL). The financial and statistical tools used by most of the researches were ratio analysis, test of hypothesis and regression

analysis. This research includes different tools like ratio analysis, correlation analysis and trend analysis as specific tools.

This research study made on “A comparative study of working capital management of Standard Chartered Bank Nepal Limited and Himalayan Bank Limited” will be an effort to analyze on detail about working capital management of the two Banks as a comparative study in present situation with the help of various related financial as well as statistical tools and techniques. The study can be benefited to all the concerned parties like investors, policy makers and student to carry on further studies.

CHAPTER - III
RESEARCH METHODOLOGY

3.1 Introduction

Research is a common refers to a search for knowledge. The Webster International Dictionary gives a Very inclusive definition of research as “a careful critical inquiry or examination in seeking facts and principal, diligent investigation in order to ascertain something”.

Research Methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher, studying his research problem among with the logical behind them.

Research methodology is the process of arriving at process of arriving at the solution of the problem through planned and systematic dealing with collection, analysis and interpretation of facts and figures. Good and proper methodology is needed to carry out study works smoothly and to visualize all the works clearly and vividly. Main aim this research is to evaluate and analysis the financial strengths and weakness of two selected banks.

This chapter describes the methodology employed in this study. The research methodology is the process of arriving to the solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of facts and figure. It consists of research design, population and sample study, sources of data, data processing procedure and technique of analysis of data.

This study is more analytical and empirical. It covers quantitative methodology using financial and statistical tools. The study is mainly based on secondary data gathered from respective annual report of concerned banks especially from profit and loss account, balance sheet and other publications made by the banks.

3.2 Research Design

This study aims to portray accurately upon the working capital (or current assets and current liabilities) and its impact on overall financial position two banks under consideration, namely, Standard Chartered Bank Nepal Limited and Himalayan

Bank Limited. The research methodology followed for this study is basically descriptive cum analytical research design.

3.3 Population and sample

Now a days number of commercial banks have been emerging rapidly some have already been established and others are in the process of establishment. Currently, there are 26 commercial banks in Nepal (Appendix –I). In this study, all the commercial banks are population of the study. Among them SCBNL and HBL have been selected as random sampling techniques for present study on the basis good financial performance.

3.4 Period recovered

As mentioned earlier, this study covers a period of five years from 2060/61 B.S to 2064/65 B.S (2004-2008). The analysis is done on the basis of the data for five years.

3.5 Nature and sources of data

The data used in this study are secondary in nature. Published annual reports of the concerned banks are taken as basic source of data. The data relating to financial performance are directly obtained from the concerned banks. Similarly, related books, magazines, journals, articles, reports, bulletins, data from Nepal Stock Exchange and Nepal Rastra Bank, Central Bureau of statistics, related website from internet etc. as well as other supplementary data and various economic surveys are also used. Previous related studies to the subject are also counted as source of information.

3.6 Data Gathering Procedure

Since the data have been obtained from secondary sources, after collection of financial statement, master sheet of financial data have been extracted and tabulated as per the need of this study. In order to process the data, financial statement and other available information were reviewed. These data were grouped in different tables and charts according to their nature. Most of the data have bees complied in one from and processing and interpreted as required.

3.7 Methods of analysis

On the basis of historical data, both financial and statistical tools are used to analysis of different variables.

3.7.1 Financial Tools

For the shake of analysis, various financial tools were used. The basic tool is Ratio Analysis. In this research study various financial tools are employed for the analysis. There are various ratios but in this study some selected ratios among them are used.

Ratio Analysis

Ratio analysis is a powerful and most widely used tool of financial analysis. The analysis of financial ratios involves two types of comparison. One is present ratio with past and expected future ratios for the same company and another is one firm with those of similar firms at the same at a time.

1. Liquidity Ratio

This ratio measures the liquidity position and short term solvency of the firm indicating the company's ability to meet short-term obligation. The current ratio and quick ratio measures the liquidity position of the company. (These ratios are calculated to judge the long term as well as short-term financial position of concerned firm. Liquidity of any business organization is directly related to working capital or current assets and current liabilities of that organization.

The liquidity ratios calculated in this study are as follows:

a. Current ratio

Current Ratio reflects the strength of current assets available with the company over its current liabilities into cash in one accounting year. This ratio indicates the current short term solvency position of the bank. The current ratios are the ratios of total current assets to current liabilities.

$$\text{Current Ratio} = \frac{\textit{Current}\ \text{Assets}}{\text{Current Liabilitis}}$$

A proportion of 2:1 or more is considered satisfactory although many firms below this standard also sound and to be meeting their obligations efficiently. It is the trend over time rather than the absolute value that gives the most valuable information.

b. Quick Ratio

Quick ratio is used to measure the ability of concerned firms to pay current obligation (short term) without depending on other liquid assets of current ratio. It provides relationship between quick assets with current liabilities.

$$\text{Quick Ratio} = \frac{\text{Quick or liquid Assets}}{\text{Current Liabilitis}}$$

c. Cash and Bank Balance to Deposit Ratio (Excluding fixed Deposit)

This ratio shows the ability of banks immediate funds to cover their (current margin c all and saving) deposits. It can be calculated by dividing cash and bank balance by deposits (excluding fixed deposits). The ratio can be expressed as:

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

Moreover, Nepal Rastra Bank "Dictionary" provision of 5% of cash balance with NRB to total deposit is to be maintained.

d. Fixed Deposit to Total Deposit Ratio

Fixed deposit is a long term and high interest charge bearing deposit. Although a high cost liability, increasing fixed deposits is subject to an additional advantage if utilized properly. Sufficient fixed deposits enable banks to grant long term loan to their clients at higher interest rate. It is computed by dividing the amount of fixed deposits by the total deposits amount which is expressed as follows:

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

e. Saving Deposit to Total Deposit Ratio

Saving deposit is an interest bearing short term deposit. The ratio is developed in order to find out the proportion of saving deposit, which is interest bearing and short term in nature. It calculated by dividing the total amount of saving deposits by the amount of total deposits that can be expressed as follows:

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

II Activity or Turnover Ratio

The funds of creditors and owners are invested in various assets to generate sales and profit. Activity ratios are used to evaluate the efficiency with the firm managers and utilize its assets. This ratio indicates how quickly certain assets are converted into cash. From this ratio it can be known whether or not the business activities are efficient. These ratios are also called turnover ratios because they indicate speed with which assets are converted or turnover into profit generating assets. These ratios moreover help in measuring the banks ability to utilize their available resources. Following ratios are used under the activity ratios.

a. Loans & Advances to Total Deposit Ratio

The ratio asses to what extent the bankers are able to utilize the depositors fund to earn profit by providing loans and advances. In other words, how quickly total are collected deposits are converted into loans and advances given to the client to earn income. It is computed by dividing the total deposit fund. Higher ratio indicates higher/proper utilization of funds and low ratio is the signal of inefficiency or remaining idle.

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

b. Loans & Advances to Fixed Deposit Ratio

This ratio examines that how many times the funds is used in loans and advances against fixed deposits. For commercial banks, fixed deposits are long-term interest bearing obligations. Where as investment in loans and advances are the main sources of earning. This ratio is computed dividing loans and advances by fixed deposit as under. A low ratio indicates idle cash balance. It means total funds not properly utilized. This ratio is computed as:

$$\text{Loans \& Advances to Fixed Deposit Ratio} = \frac{\text{Loan and Advances}}{\text{Fixed Deposit}}$$

This ratio examines to what extent the fixed deposits are utilized for income earning purpose.

c. Loans& Advances to Saving Deposit ratio.

This ratio is also employed for the purpose of measuring utilization of savings deposits in generating revenue by giving loan and advances to the client i.e. to determine to what extent collected saving deposit amount is being deployed in providing loans and advances to generating income. Saving deposits are interest bearing obligation for revenue income. This ratio indicates how much short term interest bearing deposits. The formula for this ratio is as follows:

$$\text{Loans \& Advances to Savings Deposit Ratio} = \frac{\text{Loan Advances}}{\text{Saving Deposits}}$$

III Profitability Ratio

The profitability ratio, as the name suggests, measures the operating profitability in terms of profit returns on equity and returns on total investment, reflects the overall efficiency and effectiveness of management. Profitability can be measured in terms of a relationship between net profit and assets. This ratio is also known as profit to assets ratio. It measures the profitability of investment.

Various ratios can be developed based upon the profit under different circumstances. These profit under different ratios are called profitability ratios, which are required to support the purpose of the study. The profitability ratios calculated in this study are.

a) Interest Earned to Total Assets Ratio

This ratio is used to determine total interest earned from investment over the total assets of a firm. It can be computed as follows:

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

b) Net profit to total Assets Ratio

Profit to total assets ratio is useful in measuring the profitability of all financial resources invested compared to total assets of a firm. This ratio is calculated by dividing the amount of net profit by the amount of total assets employed.

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

c) Net Profit to Total Deposit Ratio

This ratio measures the percentage of profit earned from the utilization of the total deposits. Higher ratio indicates the return from investment on loans and lower ratio indicates that the funds are not properly mobilized.

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

d) Cost of Services to Total Assets Ratio

A sound management always tries to utilize its larger amount of assets with minimum cost. Cost of services to total assets ratio is useful in measuring the utilization of assets with cost of services, the ratio can be expressed as:

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

IV) Composition of Working Capital

To operate a business, different kinds of assets are needed. For the day to day business operation different types of current assets are utilized. In case of SCBNL and HBL, the main components of current assets are cash and bank balance, loan and advances and government securities. Miscellaneous current assets are also components of current assets. Prepaid expenses, outstanding income like interest receivable and other current assets are included in miscellaneous current assets.

In this study, composition percentages of following components:

- Cash and bank balance percentage.
- Loan and advances percentage.
- Government securities percentage
- Miscellaneous current assets percentage.

V. Net working capital

Net working capital is the difference between current assets and current liabilities. Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets.

3.7.2 Statistical tools

Statistic may be defined as the collection, presentation, analysis and interpretation of the numerical data. For any statistical investigation, the data must be collected and those obtained from different sources are organized. Them these are presented systematically so that they can be presented in various forms of table, diagrammatical from or graphic from. These data are analyzed and then interpreted. Various financial tools mentioned above were used to analyze the working capital management of SCBNL and HBL. Likewise, the relationship between different variables related to the study topics were also drawn out using statistical tools.

a. Mean or Average

The mean or average value is a single value within the range of the data that is used to represent all the values in the series. Since an average is somewhere with in the range of the data, it is also called a measure of central value. Average value is obtained by adding together all the terms and by dividing this total by the number of items. The formula is given below:

$$\bar{x} \, X \frac{\phi x}{N}$$

$\overline{X}$ = Arithmetic Average

x = Sum of values of all terms and,

N = Numbers of terms

b. Standard Deviation

The standard deviation is the measure that most often to describe variability in data distributions. It can be thought of as a rough measure of the average amount by which observations deviation either side of the mean. Denoted by Greek letter (read as sigma), standard deviation is extremely useful for judging the representatives of the mean. Standard deviation is represented as:

Where, $\pm \, X \sqrt{\frac{\phi d^2}{n \, Z1}}$

$\pm$ = Standard Deviation

d^2 = Sum of squares of the deviations measured from the arithmetic average, and.

n = Nuber of items.

c. Coefficient of variation

The coefficient of variation is the ratio of standard deviation to the mean for a given sample used to measure spread. It can also be thought of as the measure of relative risk. The larger the coefficient of variation the greater the risk relative to the average mathematically,

$$CV = \frac{\pm}{\bar{x}}$$

Where,

CV = Coefficient of Variation

$\pm$ = Standard deviation and

$\bar{x}$ = Arithmetic Average

d. Coefficient of correlation.

Correlation is a statistical tool, which is used to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between to sets of figures. Among the various methods of finding out coefficient of correlation, Karl Pearson's method is applied in the study. The result of coefficient of correlation is always between +1 and -1. When r, the coefficient of correlation is +1, there is perfect relationship between two variables and vice-versa. When r is 0, there is no relationship between two variables. The formula for the calculation of coefficient of correlation between x and y is given below:

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

Also the test of significance of correlation coefficient has been done in this study. In order to test whether the correlation coefficient is significant to the correlation between the two variables, paired sample t- test has been applied at the standard significance level of 5%. If calculated value of t is greater or equal to its tabulated value, correlation is significant or else it is not significant. The formula for the calculation of t value is,

$$t = \frac{r(\sqrt{n - 2})}{\sqrt{1 - r^2}}$$

e. Trend Analysis

Trend analysis is an analysis of financial ratio time used to determine the improvement of determination of its financial situation. The trend line is represented by following equation.

Yc = a+bx, where

Yc = 1 estimated value of y for given value of x in coordinate axes,

a = y intercept of mean of y value,

b = slope of the line or rate of change

x = variable in time axis

To find the value of a & b, we have to solve the following equation:

$y = Na+b \quad x \qquad (1)$

$xy = a \quad x + b \quad x^2 \qquad (2)$

Where, N = Number of Years

There are four method of measuring the trend values.

1. Graphical method or free hand curve
2. Semi – average method.
3. Moving – average method.
4. Least square method.

f. Test of Hypothesis

A hypothesis is a conjectural statement of the relation between two or more variables. Hypothesis is always in declarative sentence from and they relate either generally or specifically, variables to variables. There are two criteria for 'good' hypothesis and hypothesis statement. One hypothetical statement is about the relations between variables. Second hypothesis carries a clear implication for testing the stated relation. These criteria mean that hypothesis statement certain two or more variables that are measurable and they specify how are related.

For the study set of null hypothesis have been formulated and tested.

a)

- H0: There is significant difference in composition of working capital between SCBNL and HBL.
- H1: There is significant difference in composition of working capital between SCBNL and HBL.

b)

- H0: There is no significant difference in liquidity position between SCBNL and HBL.
- H1: There is significant difference in liquidity position between SCBNL and HBL.

C)

- H0: There is no significant difference in profitability position between SCBNL and HBL.
- H1: There is significant difference in profitability position between SCBNL and HBL.

To test the validity of our assumption, if sample size is less than 30, t-test is used. For applying t-test in the context of small sample, the t-value is calculated first and compared with the table value of t at a certain level of significance (say 5%) for given degree of freedom. If calculated value of t exceeds the table value, we infer that the null hypothesis is rejected i.e., the different is significance at 5% level of significance. But if t is less than the concerning table value of t, the null hypothesis is accepted i.e. the difference is not treated as significant.

CHAPTER - IV
PRESENTATION AND DATA ANALYSIS

4.1 Introduction

The major objective of this study is a comparative study of the management of working capital of standard Chartered Bank Limited and Himalayan Bank Limited. To achieve the objective set in this study, data are presented and analyzed in this chapter on the whole; this chapter is related to quantity analysis of various ratios. Some quality oriented analysis has also been done in order to make the result realistic and complete to the possible extent.

The major variables of the study are cash and bank balance, loan and advances and investment of government securities. Relevant data and information of working capital as well as financial performance of SCBNL and HBL are presented, compared and analyzed accordingly.

Analysis is performed using various financial and statistical and statistical tools. In financial tools, it uses ratio analysis in which various related ratios have been compared and analyzed such as liquidity ratio, turnover ratios, profitability ratios and composition of working capital.

In statistical tools, it uses trend analysis, correlation analysis and hypothesis test.

4.2 Composition of working capital

To operate the business, different kinds of assets are needed. For the day-to-day business operation, different types of current assets are required. The composition of current assets or the main components of current assets at SCBNL and HBL are cash and bank balance, loan and advances and government securities. Miscellaneous current assets is also a component of current assets prepaid expenses, outstanding income like interest receivable and other current assets are included in miscellaneous current assets. Prepaid expenses, outstanding income like interest receivable and other current assets are included in miscellaneous current assets.

4.2.1 Composition of Current Assets

Business needs different types of assets to operate its activities. Some assets are needed for the long term fulfillment of the business activities while others are needed to carry out the day to day operation of the business. The assets that are used to carry out day to day operation of the business are known as current assets. The composition of current assets of the SCBNL and HBL are cash and bank balance, loan and advances and government securities. Miscellaneous current assets is also a component of current assets prepaid expenses, outstanding income like interest receivable and other current assets are included in miscellaneous current assets. Prepaid expenses, outstanding income like interest receivable and other current assets are included in miscellaneous current assets.

The table 4.1 and 4.2 shows the component of current assets i.e., amount of cash and bank balance loan and advances, government securities and miscellaneous current assets of standard Chartered Bank and Himalayan Bank respectively for the study period.

Table 4.1: current assets component of SCBNL (Rs.: In Million)

Fiscal year	Cash & Bank Balance	Loan & Advance	Government Securities	Misc. Current Assets	Total current Assets
2060/061	4241.76	6410.24	7948.22	4894.41	23494.63
2061/062	3370.81	8143.21	7203.07	3091.74	21808.83
2062/063	3253.51	8935.42	8644.86	4828.9	25662.69
2063/064	3782.17	10502.54	7107.94	7036.41	28429.16
2064/065	4247.78	13718.6	8137.61	7073.10	33177.09

Table 4.2: Current Assets Component of HBL (Rs In Million)

Fiscal Year	Cash & Bank Balance	Loan & Advance	Government Securities	Misc. Current Assets	Total current Assets
2060/061	2370.09	11951.87	3431.73	742.17	18495.86
2061/062	2455.55	12424.52	5469.76	976.46	21326.29
2062/063	2722.63	14642.56	5144.32	643.61	23153.12
2063/064	3467.36	16998.00	6454.88	643.97	27564.21
2064/065	1966.67	19497.52	7166.53	634.79	29265.51

Cash and bank balance of SCBNL is seen higher in all study period than HBL. Similarly, loan and advance of HBL is seen higher in all study period than SCBNL. A government security of SCBNL is seen higher in all period than HBL. Miscellaneous current Assets of SCBNL is seen higher in all period than HBL. Total amount of current assets components of SCBNL is seen higher than that of HBL. Due to unequal volume of the components percentage of components of current assets is required from comparative analysis.

The percentage composition of current assets to total current assets i.e. cash and bank balance, loans and advances investment in government securities and miscellaneous current assets are as follows:

Table 4.3

Percentage components of current Assets of SCBNL

Fiscal year	Cash & Bank Balance	Loan & Advance	Government Securities	Misc. Current Assets	Total Current Assets
2060/061	18.05	27.28	33.84	20.83	100
2061/062	15.45	37.34	33.03	14.18	100
2062/063	12.68	34.82	33.68	18.82	100
2063/064	13.30	36.95	25.00	24.75	100
2064/065	12.80	41.35	24.53	21.32	100
Average	14.46	35.55	30.016	19.98	
Std Dev	2.298	5.1896	4.8059		
C.V.	0.1589	0.1459	0.1601		

Graph No. 4.1

Bar Diagram of percentage Composition of SCBNL'S Current Assets

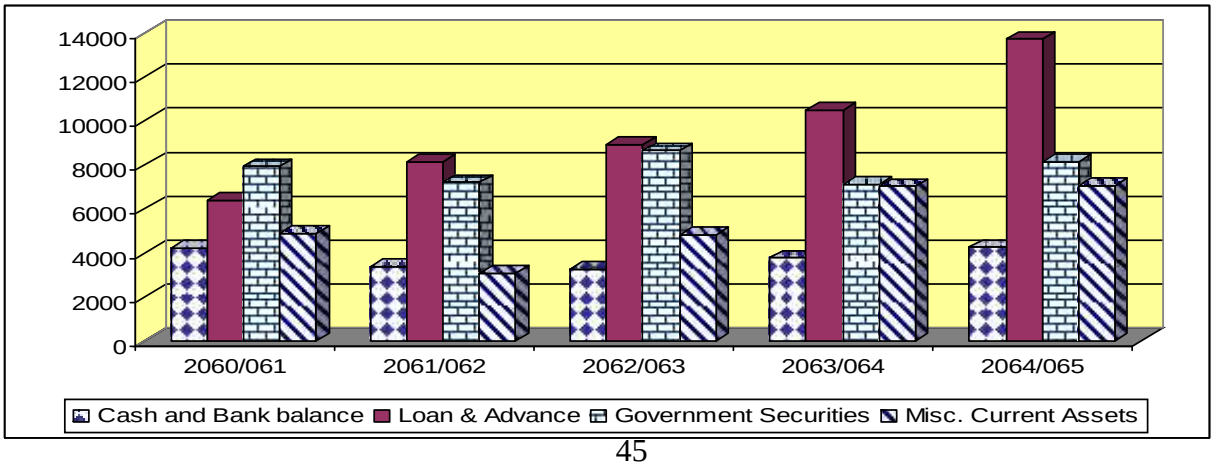


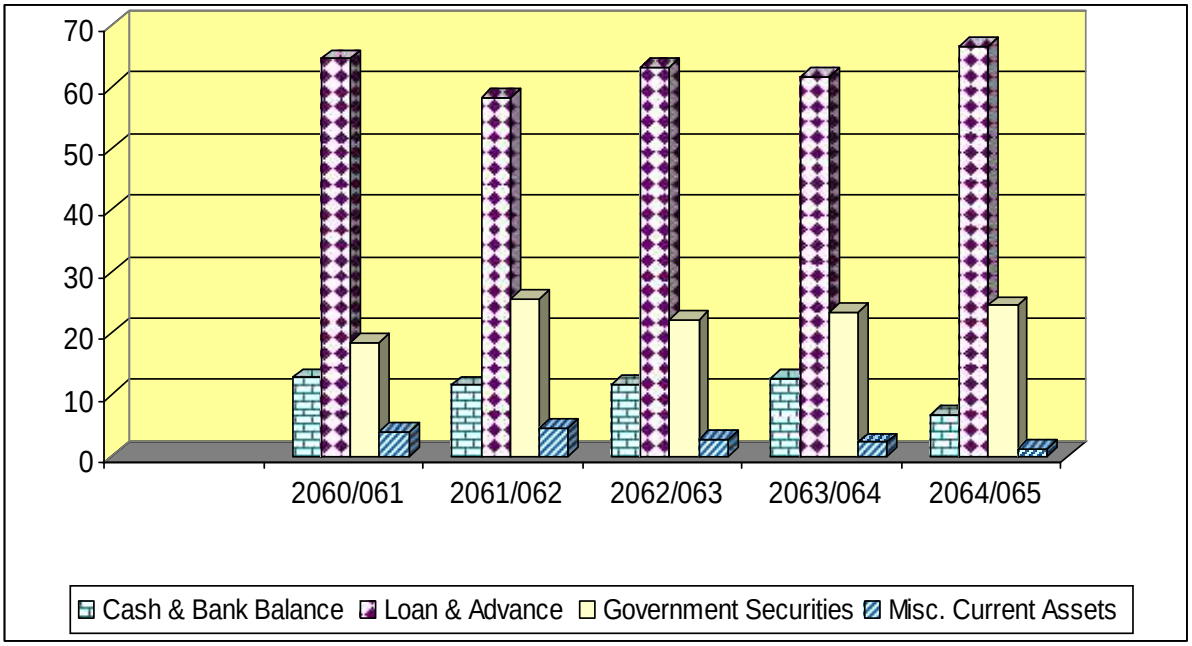
Table 4.4

Percentage Components of current Assets of HBL

Fiscal year	Cash & Bank Balance	Loan & Advance	Government Securities	Misc. Current Assets	Total Current Assets
2060/061	12.81	64.62	18.55	4.02	100
2061/062	11.51	58.26	25.65	4.58	100
2062/063	11.76	63.24	22.22	2.78	100
2063/064	12.58	61.66	23.42	2.34	100
2064/065	6.72	66.62	24.49	1.17	100
Average	11.076	62.88	22.866	3.178	
Std Dev	2.249	3.1613	2.7267		
C.V.	0.2252	0.05027	0.1192		

Graph No.4.2

Bar diagram of percentage Composition HBL'S Current Assets



4.2.1.1 Cash and bank Balance Percentage

Cash and Bank Balance Percentage of SCBNL fluctuated over the study Period It is highest (18.05%) in the first year and lowest (12.68%) in the third year of the study period. The average cash and bank balance percentage of SCBNL is 14.46%.

Likewise, cash and bank balance percentage of HBL also fluctuated over the study period. It is highest (12.81%) in the first year and lowest (6.72%) in the fifth year of the study period. The average cash and bank balance percentage of HBL is 11.076%.

The study shows that average cash and bank balance percentage of HBL is 11.076%.

Similarly, standard deviation is 2.298% SCBNL, where as it is 2.495% in HBL. Hence it shows that HBL has higher risk factor than that of SCBNL. Likewise, Coefficient of variation is 0.1589 for SCBNL and 0.2252 for HBL, Indicating more variation in cash and Bank balance maintained in HBL compared to SCBNL.

From the calculation of cash and bank balance percentage trend as per Appendix 2 the value of the constants a and b are as follows:

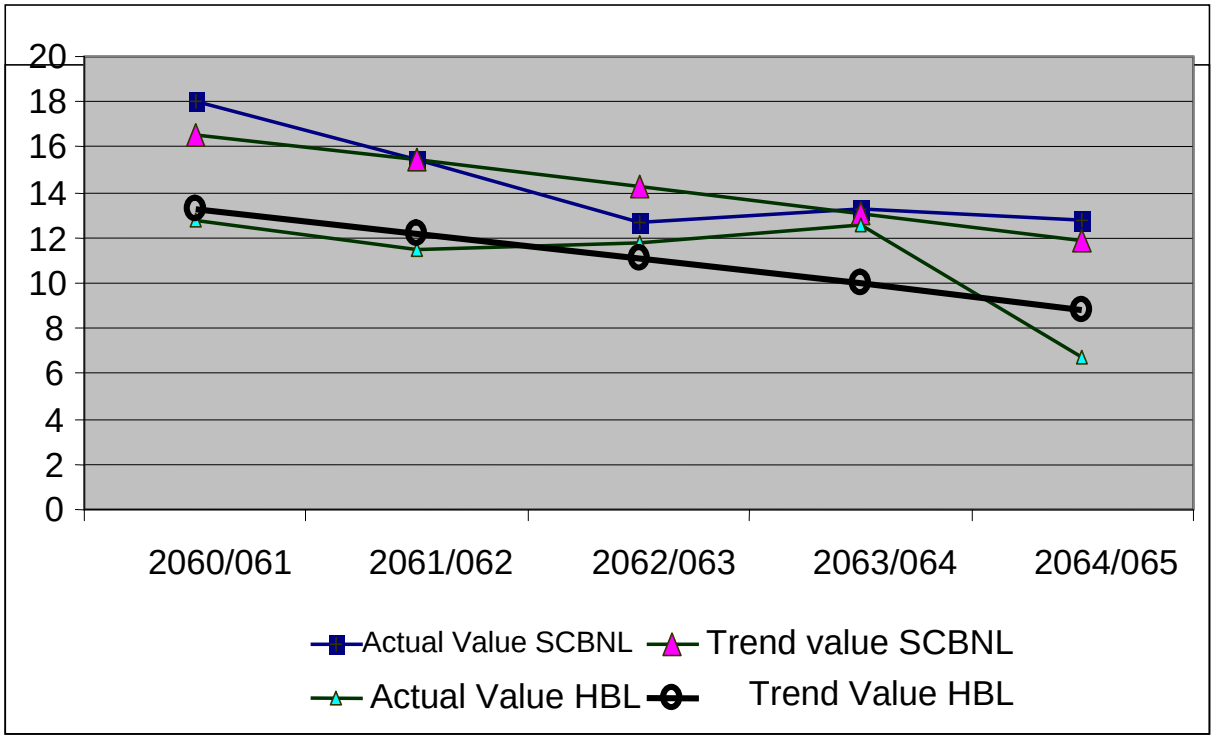
SCBNL	HBL
a= 14.256	a= 11.076
b= -1.165	b= -1.111

The rate of change of cash and bank balance percentage b in both the banks are negative.

It implies the decreasing in cash and bank balance percentage to total current assets on both banks. The greater negative value of ‘b’ of SCBNL shows vastly decreasing in cash and bank balance percentage. Higher negative trend value of cash percentage of SCBNL indicates the better utilization of cash on income generating sources.

Graph No. 4.3

Actual and Trend Lines of cash and Bank Balance percentage



Details on appendix -3

The graph no 4.3 describe that the trend line of SCBNL is always higher of the study period due to high cash and bank balance percentage.

It helps to conclude that the average cash and bank balance percentage of SCBNL is higher than HBL.

4.2.1.2 Loan and Advance percentage

In case of SCBNL, loan and advance percentage are increasing for two years and it has decreased in third year and increase in next two years. It is highest in the year 2064/065 i.e. 27.28 percentage. The range of loan and advances percentage is 41.35 percentages to 27.28 percentages. The average loan and advance percentage is 35.55 percentage of SCBNL. The loan and advance percentage of SCBNL in the year 2060/061 and 2062/063 are less than the average i.e. 35.55%. Other three years of the study period is 2061/062, 2063/064 and 2064/065 the loan and advances percentage of SCBNL are higher than the average.

Incase of HBL, loan and advances percentage are fluctuate all study period. After first year it is decreasing in the second year and it is increasing in the third year and again it is decreasing in the fourth year and again it is increasing in the fifth year. The highest percentage of HBL in year in 2064/065 i.e. 66.62% and lowest in the year 2061/062 i.e. 58.26%.. The range of loan and advance percentage is 66.62% to 58.26%. The average loan and advances percentage is 62.88. The loan and advances percentage of HBL in the year 2061/062 and 2063/064 are less than the average i.e. 62.88. Others three years of the study period i.e. 2060/061, 2062/063 and 2064/065 the loan advances percentage of HBL are higher than the average.

Similarly, standard deviation is 5.1896% SCBL where as it is 3.1613% in HBL. Hence it shows that SCBNL has higher risk factor than that of HBL.

Like wise, coefficient of variation is 0.1459 for SCBNL and 0.05027 for HBL, indicating more variation loan average maintained in SCBNL compared to HBL.

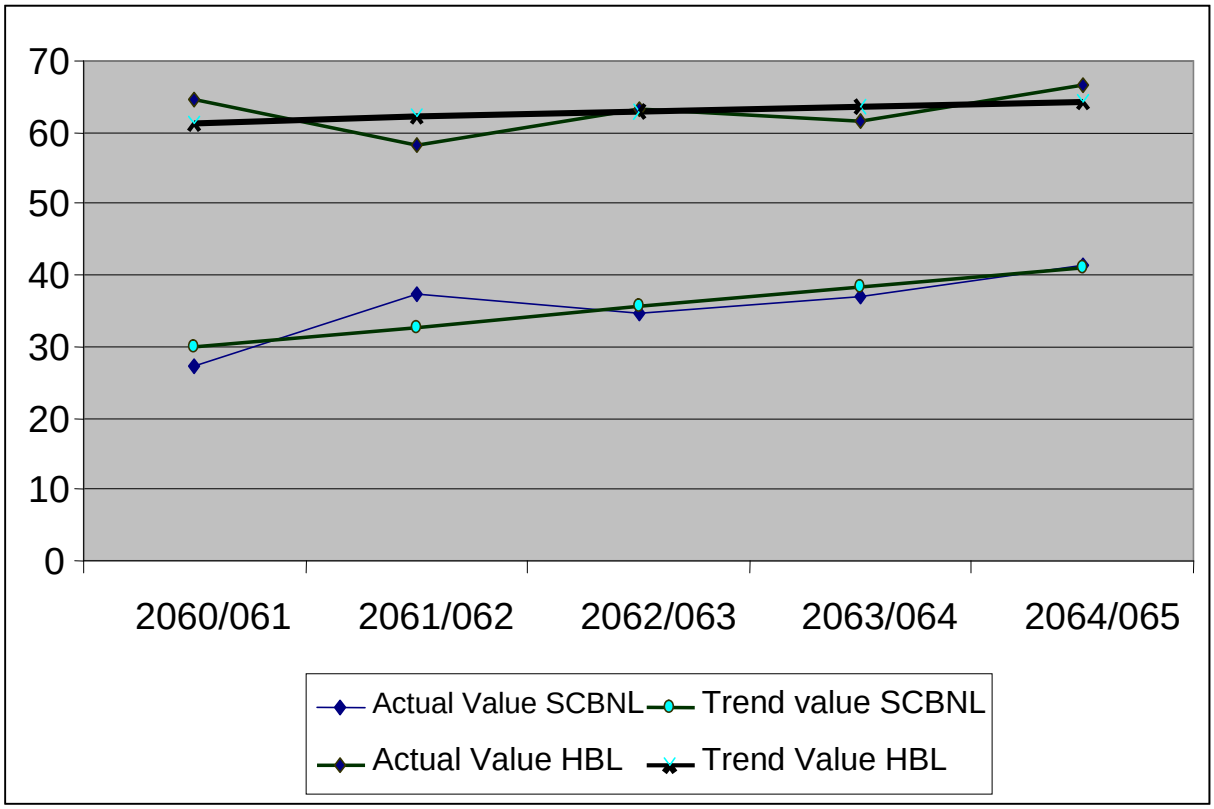
From the calculation of loan and advances percentage trend as per Appendix 4 the value of the constants ‘a’ and ‘b’ are as follows.

SCBNL	HBL
a = 35.55	a = 62.88
b = 2.775	b = 0.74

The trends rates on the rate of change of loan and advances percentages of both banks are positive. It implies that the loan and advances of both banks are increasing.

Graph No. 4.4

Actual and trend lies of loan and advances percentage



Details on appendix -4

Graph 4.4 shows that the trend line is actual line of loan and advance of HBL are always higher than SCBNL.

The above analysis helps to conclude that the loan and advance percentage of HBL are better than SCBNL. The loan and advances percentage of total assets indicates that the greater portions of current assets of HBL, is employed for the income generating purpose.

4.2.1.3 Government securities percentages.

In case of SCBNL, The percentage of Government securities is fluctuating in study periods. It is highest in the year 2060/60 i.e. 33.84 percentage and lowest in the year 2064/65 i.e. 24.53%. The average investment in Government securities is 30.016%. It is increases in third year and decrease there after.

The percentage of Government securities of HBL is also fluctuating all the study periods. It is highest in the year 2061/62 is 25.65 percentages and lowest in the year 2060/61 is 18.55%. The average investment in government securities is 22.866% the

average government securities percentage of SCBNL (30.016%) is higher than that of HBL (22.866%).

The standard deviation is 4.8059% in SCBL where as it is 2.7267% in HBL. Similarly, coefficient of variation is 0.1601 in SCBNL and 0.1192 in HBL. Hence, more variation in government securities is maintained in SCBNL composed to HBL.

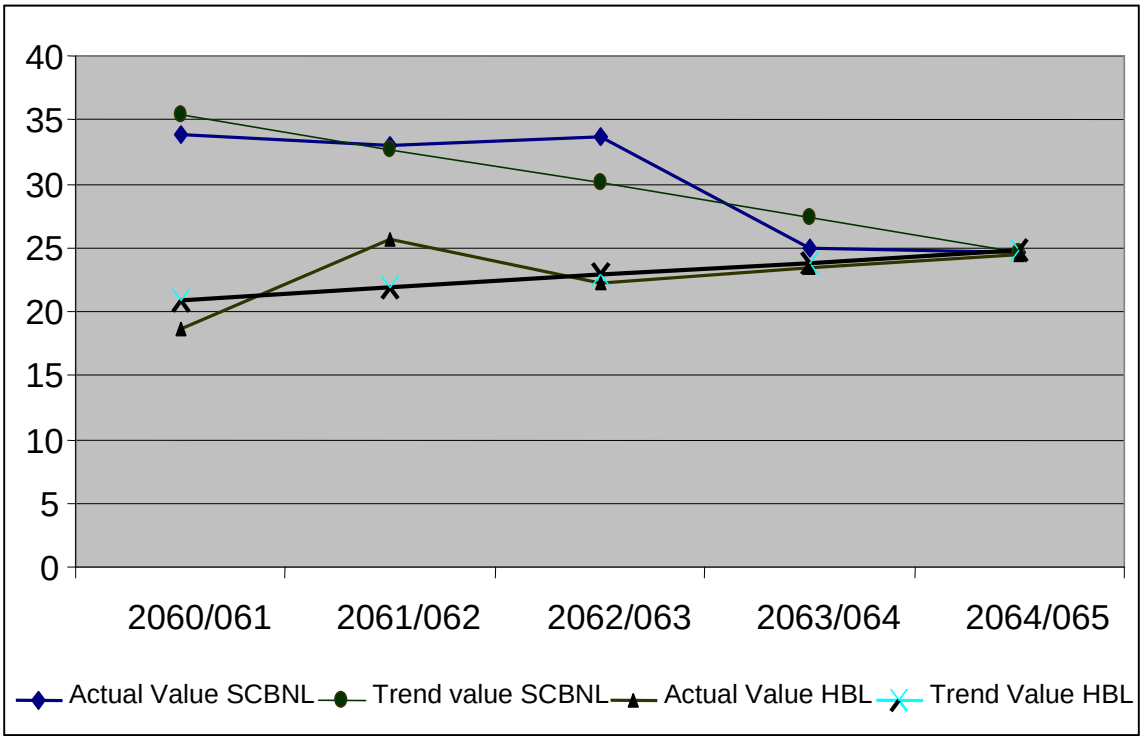
From the calculation of government securities percentage trend as per Appendix 6 the value of constant 'a' and 'b' are as follow.

SCBNL	HBL
A= 30.016	A= 22.866
B= -2.665	B= 0.965

The trend rate or rate of change of government securities percentage b of SCBNL is negative and it is positive in HBL.

Graph No 4.5

Actual & trend line of Government securities percentages



Details on appendix -5

Graph 4.5 shows that the trend line and actual line of government securities percentage of SCBNL are always higher than that of HBL.

The above analyses help to conclude the government securities percentage on total current assets of SCBNL is better than HBL. It shows the SCBNL has prioritized to invest on government securities rather than loan & advance due to unavailability of secured investment sector.

4.2.1.4 Miscellaneous current Assets percentage

The percentage of miscellaneous current assets of SCBNL is fluctuating in every year of study period. It is highest (24.75%) in the fourth year 2063/64 and lowest (14.18%) in second year 2061/62. The average miscellaneous current assets percentage of SCBNL is 19.98%.

The percentage of miscellaneous current assets of HBL is fluctuating in the period of study. It is increasing in first and second year and decreasing in third, fourth and fifth year of the study period. It is highest (4.58%) in second year 2061/62 and lowest (2.17%) in last year 2064/65. The average miscellaneous current assets percentage for HBL is 3.178%.

The standard deviation is 3.8812% in SCBNL where as it is 1.0666% in HBL.

Similarly, coefficient of variation is 0.1942 is SCBNL and 0.3356 in HBL. Hence, more variation in miscellaneous current assets is maintained in HBL as composed to SCBNL.

4.2.2 Composition of Current Liabilities

Each and every corporate have not interested to hold the liabilities. But knowingly or unknowingly the liabilities we can hold to grave the short term return. The liabilities which should pay with in one year accounting period are called the current liabilities. The composition of current liabilities of the SCBNL and HBL Bank are as given below

Table 4.5

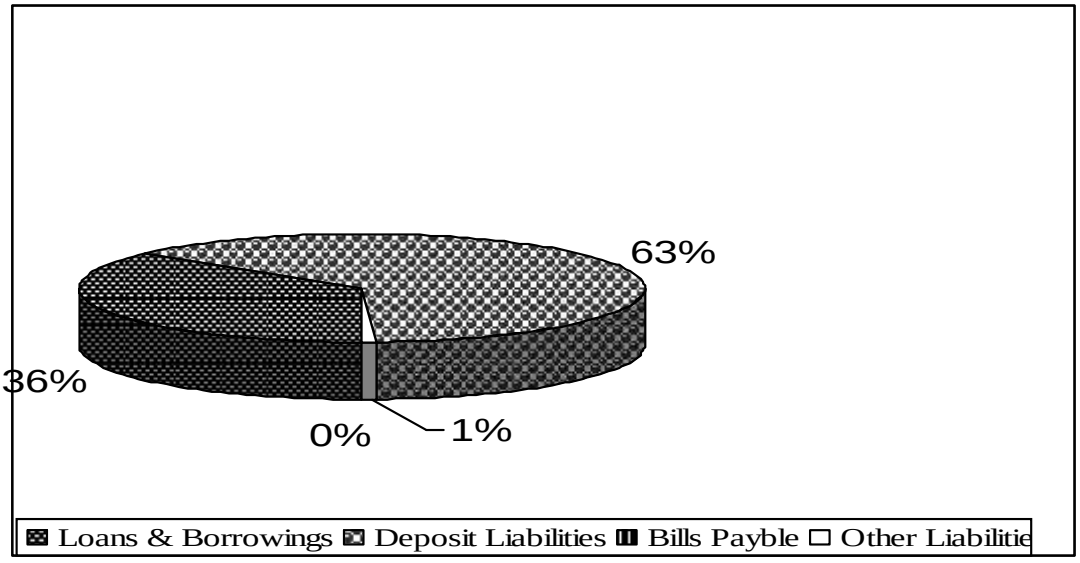
Composition of Current Liabilities of SCBNL

(Rs. in Million i.e. 000,000)

Fiscal Year	Loans & Borrowings	Deposit Liabilities	Bills Payable	Other Liabilities	Total Current Liabilities
2060/61	7691.03	12774.86	38.71	153.11	20657.71
2061/62	7704.38	10,942.76	19.87	167.77	18834.78
2062/63	7139.98	14485.36	11.62	188.44	21825.40
2063/64	8701.06	14,388.92	25.77	107.84	23223.59
2064/65	9244.95	18,083.98	51.57	161.73	27542.23
Total	40481.4	70675.88	147.54	778.89	112083.71

Graph No 4.6

Pie chart of Current liabilities of SCBNL



Above table and graphs shows that the current liabilities condition of the SCBNL. Loans and borrowing for the year 2064/65 is the highest 9244.95 million & least 7139.98 million for the year 2062/63. It is so fluctuating for the other year. i.e SCBNL has no rigid rules for loans and borrowings. Deposit liabilities for the year 2064/65 are the highest 18,083.98 million & least 10,942.76 for the year 2061/62. It is increasing for the each and every year. i.e. the depositors depositing money in the bank is increasing position and better liquid money. Bills Payable for the year

2064/65 is the highest 51.57 million and least 11.62 million for the year 2062/63. The bills payable is also in changing position. Other liabilities for the year 2062/63 are the highest 188.44 million & least 107.84 in the year 2063/64. It means other liabilities are not so fluctuating

Table 4.6

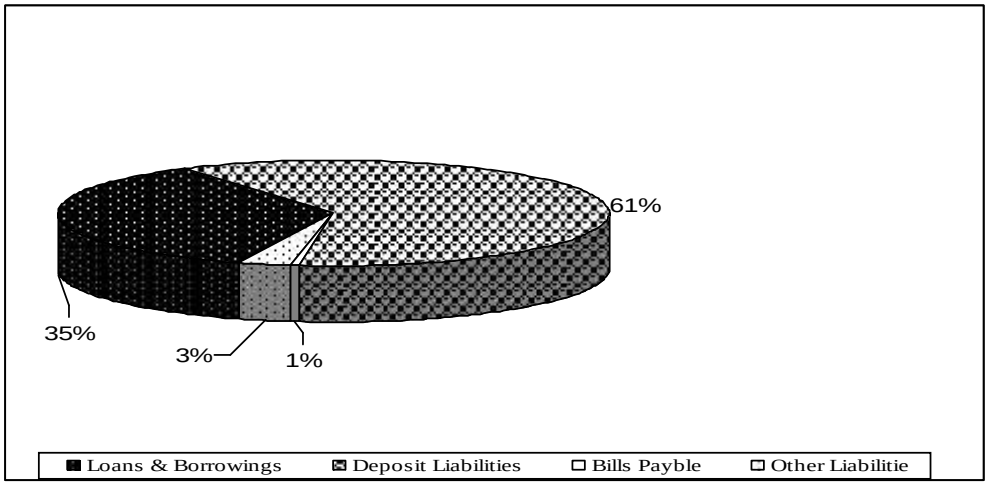
Composition of Current Liabilities of HBL

(Rs. in Million i.e. 000,000)

Fiscal Year	Loans & Borrowings	Deposit Liabilities	Bills Payble	Other Liabilities	Total Current Liabilities
2060/61	7286.57	10,119.03	173.50	741.61	18320.71
2061/62	6683.88	12,586.61	119.75	805.27	20195.51
2062/63	7702.23	12,347.40	112.61	821.77	20984.01
2063/64	8007.17	14,342.28	83.51	378.55	22811.51
2064/65	8759.25	16,915.05	238.42	465.94	26378.66
Total	38439.1	66310.37	727.79	3213.14	108690.4

Graph No 4.7

Pie chart of Current liabilities of HBL



Above table and graphs shows that the current liabilities condition of the HBL. Loans and borrowing for the year 2064/65 is the highest 8759.25 million & least 6683.88 million for the year 2061/62. It is so fluctuating for the other year. i.e. HBL has also no strict rules for loans and borrowings. Deposit liabilities for the year 2064/65 are the highest 16,915.05 million & least 10,119.03 million for the year 2060/61. It is in slightly changing condition. Bills Payable for the year 2064/65 is

the highest 238.42 million and least 83.51 million for the year 2063/64. Other liabilities for the year 2062/63 are the highest 821.77 million & least 378.55 million in the year 2063/64. It means other liability is in the up and down condition.

Since, both the bank SCBNL& HBL has showed the increasing trend of current liabilities. But, the SCBNL has higher current liabilities then that of HBL. Higher the current liabilities means the SCBNL has greater responsibility of short term debt but not the HBL.

4.3 Net working capital

Net working capital is the difference between current assets and current liabilities. Net working capital can be positive or negative. A positive net working capital will rise, when current assets exceeds current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets. All the organization should have just adequate working capital to serve in competitive market. Excessive or inadequate working capital is dangerous from the firm's points of view. Excessive investment working capital affects a firm's profitability just as idle investment yields nothing. In the same way inadequate or negative working capital may be harmful to the organization. So, net working capital can be more useful for the analyses of trend off between profitability and risk. It enables a firm to determine how much amount is left for operational requirement.

Table 4.7

Net working capital of SCBNL (Rs in million)

Fiscal Year	Current Assets	Current Liabilities	Net Working capital	% change in working Capital
2060/61	23494.60	20657.71	2836.92	-
2061/62	21808.83	18834.78	2974.41	0.05
2062/63	25662.69	21825.40	3837.29	0.29
2063/64	28429.16	23223.59	5205.57	0.36
2064/65	33177.09	27542.23	5634.86	0.083
Average			**4097.81**	
C.V.			**0.3113**	

Table 4.8

Net Working Capital of HBL (Rs.In million)

Fiscal Year	Current Assets	Current Liabilities	Net Working capital	% change in working Capital
2060/61	18495.86	18320.79	175.15	-
2061/62	21326.29	20195.51	1130.75	5.46
2062/63	23153.12	20984.01	2169.11	0.92
2063/64	27564.21	22811.51	4752.70	1.191
2064/65	29265.51	26378.66	2886.85	-0.392
Average			**2222.918**	
C.V.			**0.7866**	

Table 4.7 shows that the net working capital of SCBNL is increasing always during the study period. The average net working capital of SCBNL is 4097.81 million. The net working capital of SCBNL ranges from Rs 2836.92 million to Rs 5634.86 million.

Incase of HBL, Table 4.8 shows that the net working capital is continuously increase till fourth year than the last year working capital is decreases. The average net working capital of HBL is Rs. 2222.918 million. The net working capital in HBL ranges from Rs. 175.15 million to Rs. 4752.70 million.

4.4 Ratio Analysis

Ratio analysis is a powerful financial tool to measure the financial performance of banks comparatively. As mentioned in research methodology, liquidity, turnover and profitability ratios are calculated. As a mathematical tool, the method of least-square is used to analyze performance.

4.4.1 Liquidity Ratios

Liquidity of any business organization is directly with the working capital or current with the working capital of that organization. In other words, one of the main objectives sounds liquidity position. Bank is different organization which is engaged in mobilization of funds. Therefore, without sounds liquidity position bank is not able to operate its function.

To measure the bank's solvency position or ability to meet its short-term obligation, various liquidity ratios are calculated and to know the trend of liquidity, trend analyses of major liquidity ratios have been calculation.

4.4.1.1Current Ratio

This ratio indicates the current short-term solvency position of bank. Higher current ratio indicates better liquidity position. In other words, current ratio represents a margin of safety i.e. a "cushion" of protection for creditors and the highest the current ratio, greater the margin of safety, large the amount of current assets in relation to current liabilities, more the banks ability to meet its current obligations.

The current ratio can be calculated as shown below:

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilitis}}$$

The following table shows the current ratio to compare the working capital management of SCBNL and HBL.

Table 4.9

Current ratio (Rs in million)

Fiscal Year	SCBNL			HBL		
	Current Assets	Current Liabilities	Ratio	Current Assets	Current Liabilities	Ratio
2060/61	23494.6	20657.71	1.14	18495.86	18320.71	1.01
2061/62	21808.83	18834.42	1.16	21326.29	20195.51	1.05
2062/63	25662.69	21825.4	1.18	23153.12	20984.01	1.10
2063/64	28429.16	23223.59	1.22	27564.21	22811.51	1.21
2064/65	33177.09	27542.23	1.20	29265.51	26378.66	1.11
Average	1.18			1.098		
Std.dev.	0.05049			0.0739		
C.V	0.0428			0.06730		

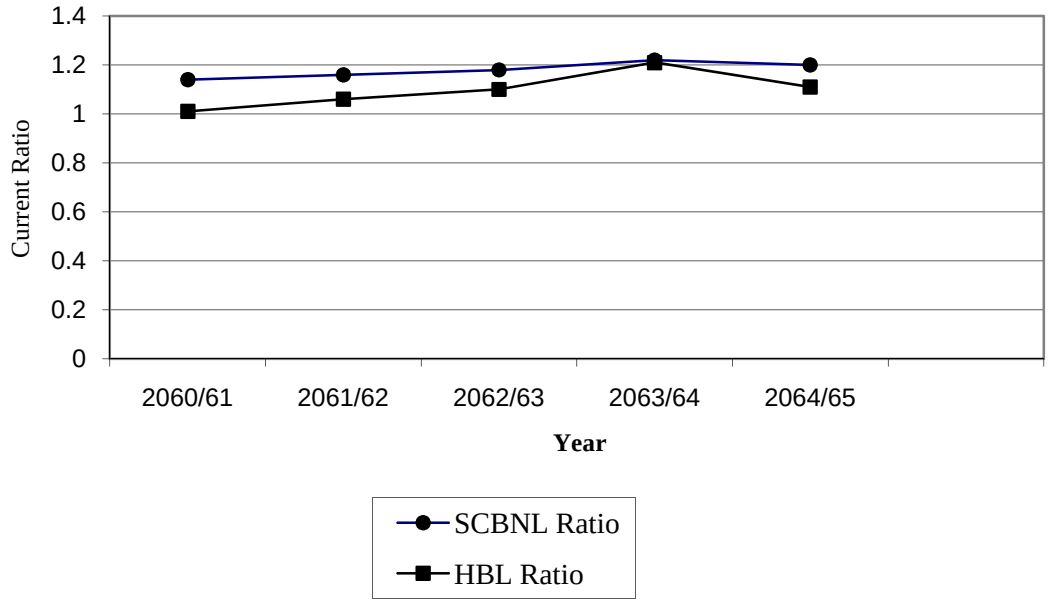
Details on Appendix -9

Table 4.9 depicts that current ratio of HBL is quite fluctuating. The highest current ratio of SCBNL is 1.22 in year 2063/64and lowest is 1.14 in 2060/61. In HBL, the highest current ratio is 1.21 in Fourth year 2063/64 and lowest is 1.01 in first year 2060/61. The average current ratio of SCBNL is 1.18. In HBL the average current ratio is 1.098. The yearly ratio of SCBNL are always higher then that of HBL. Therefore, the average ratio of SCBNL is higher then the average ratio of HBL.

The standard deviation is 0.05049 of SCBNL, where as it is 0.0739 of HBL. Similarly, coefficient of variation is 0.0428 in SCBNL and 0.06730 in HBL Hence it shows there is more variation in current ratio maintained by HBL compared to SCBNL.

Graph.4.8

Current ratio



Graph 4.8 shows the current ratio of SCBNL and HBL. It is clear from the above graph that current ratios of SCBNL are higher then HBL. The above analysis helps to conclude that both banks have sufficient current assets to discharge current liabilities. Comparatively, the liquidity position of SCBNL is better than that of HBL. In other words, SCBNL has more ability to meets its current obligation that than HBL.

4.4.1.2 Quick ratio

Quick ratio establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of original value. Cash is a most liquid asset and other assets are book debts and marketable securities.

For quick ratio cash and bank balance and government securities are included in quick assets. This ratio can be found out by dividing the total of quick assets by total current liabilities. The formula is given below.

$$\text{Quick Ratio} = \frac{\text{Quick or Liquid Assets}}{\text{Current Liabilitis}}$$

The following table shows the quick ratio of SCBNL and HBL

Table 4.10

Quick Ratio **(Rs in million)**

Financial Year	SCBNL			HBL		
	Quick Assets	Current liabilities	Ratio	Quick assets	Current liabilities	Ratio
2060/61	12189.98	20657.71	0.59	5801.82	18320.71	0.32
2061/62	10573.88	18834.42	0.56	7925.31	20195.51	0.39
2062/63	11898.77	21825.40	0.55	7866.95	20984.01	0.37
2063/64	10890.11	23223.59	0.47	9922.24	22811.51	0.43
2064/65	12385.39	27542.23	0.45	9133.2	26378.66	0.35
Average			0.524			0.372
Std.dev			0.0609			0.0415
C.V.			0.1152			0.1115

Details on appendix - 10

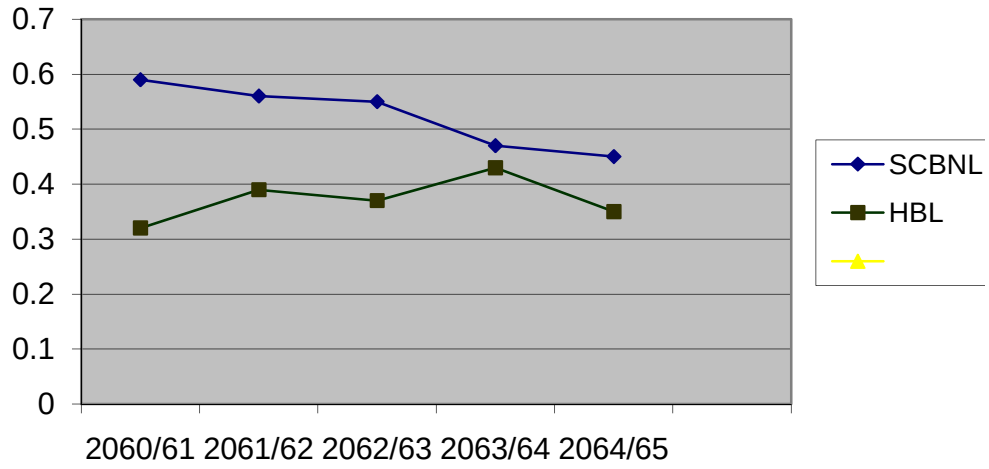
Table 4.10 shoes that the quick ratios of SCBNL are fluctuating over the study period .The ratio are highest (0.59) in the year 2060/61 and lowest (0.45) in the year 2064/65. The average quick ratio of SCBNL is 0.524.The yearly quick ratios in 2060/61, 2061/62 and 2062/63 are higher than average ratio. Other two years of study period i.e. 2063/64 and 2064/65 the yearly ratios of SCBNL are less than the average ratio.

In HBL, ratios are also fluctuating over the study period. The quick ratio is higher in 2063/64 i.e.0.43 and lower in 2060/61 i.e. 0.32. The average quick ratio of HBL is 0.372. The yearly quick ratios in 2061/62 and 2063/64 are higher than average ratio. Other three years of study period i.e 2060/61, 2062/63 and 2064/65 are less than the average ratio. The average quick ratio of SCBNL is higher than that of HBL.

The standard deviation is 0.0609 in SCBNL where it is 0.0415 in HBL. Similarly, coefficient of variation of SCBNL is 0.1152 and 0.115 in HBL. The coefficient of variation of SCBNL is higher than that of HBL. This shows that there is more variation in quick ratio of SCBNL as compared to HBL.

Graph No. 4.9

Quick Ratio



Graph 4.9 shows that the quick ratio of SCBNL and HBL. It is clear from the above graph that the quick ratio of SCBNL are always higher than HBL. The above analyses helps to conclede that the quick ratio of SCBNL are always better than HBL. It shows the better liquiding position of SCBNL in comparisen to HBL.

4.4.1.3 Cash and Bank Balance to deposit ratio (excluding fixed deposit)

The ratio shows that ability of banks immediate funds to cover their (current, margin call and saving) deposit. It can be calculated by dividing cash and bank balance with deposits (excluding fixed deposits). The ratio can be expressed as:

$$\text{Cash and Bank Balance to deposit ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit (Excluding Fixed Deposit)}}$$

The following table shows the cash and bank balance to deposit ratio (excluding fixed Deposit) of SCBNL and HBL.

Table 4.11

Cash and Bank Balance to Deposit Ratio (Excluding Fixed Deposit)

(Rs. in million)

Fiscal year	Cash & Bank Balance	Deposit	Ratio	Cash & Bank Balance	Deposit	Ratio
2060/61	4241.76	19732.96	0.21	2370.09	17300.16	0.14
2061/62	3370.81	17918.72	0.19	2455.55	18706.57	0.13
2062/63	3253.51	20924.72	0.11	2722.63	20140.65	0.14
2063/64	3782.17	21450.53	0.18	3467.36	21847.29	0.16
2064/65	4247.78	26442.98	0.16	1966.67	25418.91	0.08
Average			0.17			0.13
Std. dev.			0.038			0.03
C.V.			0.2239			0.2308

Appendix -11

Table 4.11 describes that the ratios of SCBNL are Actuating over the study period. The highest ratio (0.21) in the year 2060/061 and lowest (0.11) in the year 2062/063. The average ratio of SCBNL is 0.17. In the third year and last year the yearly ratio is lower than the average ratio. But yearly ratio in first year second year and fourth year is higher than the average ratio.

In case of HBL, the ratios are fluctuating over the study period. The highest ratios is (0.16) in 2063/064 and lowest (0.08) in the year 2064/065. The average ratio of HBL is 0.13. The average ratio is greater than the yearly ratio of last year (2064/65) and lower than the yearly ratio i.e. fist year, third year and fourth year. The average ratio is equal to yearly ratio of second year (i.e. 2061/062).

The average ratio of SCBNL (0.17) is higher than that of HBL (0.13).

The standard deviation is 0.038 in SCBNL where as it is 0.03 in HBL. Similarly, coefficient of variation of HBL is higher than that of SCBNL. This explain that SCBNL is more preferable than HBL in terms of cash & Bank Balance to deposit ratio (excluding fixed deposit)

For the above analysis, it can be concluded that from the average ratio shows that liquidity position of SCBNL is better than HBL because it has higher average ratio these that of HBL.

4.4.1.4 Fixed Deposit to total deposit Ratio

This ratio is calculated as follows

Fixed deposit to total deposit ratio = $\frac{\textit{Fixed}\ \text{Deposits}}{\text{Total Deposit}}$

Table 4.12

Fixed Deposit to Total Deposit Ratio

(Rs. in million)

Fiscal year	**Cash & Bank Balance**	Deposit	Ratio	Cash & Bank Balance	Deposit	Ratio
2060/61	1428.5	21161.46	0.07	4710.18	22010.34	0.21
2061/62	1416.38	19335.1	0.07	6107.43	24814	0.25
2062/63	2136.31	23061.03	0.09	6350.20	26490.85	0.24
2063/64	3196.49	24647.02	0.13	8201.13	30048.42	0.27
2064/65	3301.01	29743.99	0.11	6423.87	31842.79	0.202
Average			0.094			0.2344
Std. dev.			0.0261			0.0282
C.V.			0.0277			0.1203

Details on appendix -12

Table 4.12 shows that the fixed deposit to total deposit ratios of SCBNL and HBL. In SCBNL, the fixed deposit to total deposit ratios are increasing on fourth year but decrease in last year during the study period. The ratio is at the constant level in the second year. It is highest (0.13) in the year 2063/064 and lower (0.07) in the year 2060/061 and 2061/062. The average ratio SCBNL is 0.094. The yearly ratio of fourth year and fifty year are higher that the average ratio. However, the rest of first, second and third years are lower than that of the average ratio.

In HBL, the fixed deposit to total deposit ratios are increasing in second year and fourth year, but decreases in other study period. It is higher (0.27) in the year

2063/064 and lowest (0.20) in the year 2064/065. The average ratio of GBL is 0.2344. The yearly ratio of second, third and fourth year are higher them that the average ratio. However, the rest of first and last year are lower than that of the average ratio.

The standard deviation of SCBNL is 0.0261 where as it is 0.0282 in HBL. The coefficient of variation of SCBNL is 0.277, similarly, the coefficient of variation of HBL is 0.1203. It shows that there is more variation in the composition in the fixed assets to total deposit ratio of SCBNL compared to HBL.

The above analysis helps to conclude that the fixed deposit to total, deposit ratio of HBL are better than the SCBNL. This indicates the better liquidity position in HBL than SCBNL. Fixed deposit is higher cost long term source, which affected the profitability of bank adversely. The study shows SCBNL has high risk or the variability of ratio is higher in SCBNL that HBL.

4.4.1.5 Saving Deposit to Total Deposit Ratio

Saving deposit is interest bearing short term deposit. The ratio is developed in order to find out the proportion of saving deposit, which is interest bearing and short term in nature. It is find out by dividing the total amount of saving deposit by the amount of total deposit, which is given as follows:

$$\text{Saving Deposit to Total Deposit Ratio} = \frac{\text{SavingDeposit}}{\text{TotalDeposit}}$$

Table 4.13

Saving Deposit to Total Deposit Ratio

(Rs. in Million)

Fiscal year	SCBNL			HBL		
	Saving Deposit	Total Deposit	Ratio	Saving Deposit	Total Deposit	Ratio
2060/61	12771.83	21161.46	0.60	11759.6	22010.34	0.53
2061/62	13030.93	19335.1	0.67	12852.41	24814	0.51
2062/63	14597.67	23061.03	0.63	14582.86	26490.85	0.55
2063/64	15244.38	24647.02	0.62	15784.77	30048.42	0.52
2064/65	17856.13	29743.99	0.60	17972.44	31842.79	0.56
Average			0.624			0.534
Std. dev.			0.029			0.0207
C.V.			0.0462			0.0388

Details on appendix-13

Table 4.13 shows that the saving deposits to total deposit ratios of SCBNL and HBL.

In SCBNL, the saving deposit to total deposit ratios are fluctuating during the study period. It is highest (0.67) in the year 2061/62 and lower (0.60) in the year 2060/61 and 2064/65. The average ratios of SCBNL are 0.624. The yearly ratios of first year, fourth year and fifth year lower than the average ratio. However, the yearly ratio of second year and third year are higher than the average ratio.

In case of HBL, the saving deposits to total deposit ratio are also fluctuating in the study period. It is higher (0.56) in the year 2064/65 and lower (0.51) in the year 2061/62. The average ratio of HBL is 0.534. The yearly ratios of first year, second year and fourth year lower than the average ratio. However the yearly ratio of third year and fifth year are higher than the average ratio.

The average ratio of SCBNL (0.624) is higher than that of HBL (0.534).

The standard deviation of SCBNL is 0.029 and standard of HBL is 0.0207. The coefficient of variation of SCBNL is 0.0462 and coefficient of variation of HBL is 0.0388.

Saving deposit are short term viability is longer in term the current and other deposits. So the large portion of saving deposit in total deposits shows the liquidity of the bank, bank also pays interest on saving deposit whereas current, margin and other deposits are nominal cost fund. From the above table 4.11, saving deposit to total deposits ratio of SCBNL is better than HBL.

4.4.2 Activity or Turnover Ratio

Activity ratios are used to evaluate the efficiency with which the firm manages and utilized its assets. These ratios are also employed to evaluate the speed with which assets are being converted and turnover. These ratios moreover, help in measuring the banks ability to utilize their available resources.

4.4.2.1 Loan and Advances to Total Deposit Ratio

This ratio measures the extent to which banks are successful in utilizing the outsider's funds for the profit generating purpose. In other words how quickly collected deposits total are converted into loan and advances given to the client to earn income. It is calculated as follows.

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

The following table shows that effectiveness in utilization of total deposits of SCBNL and HBL.

Table 4.14

Loan and Advances to Total Deposits Ratio

(Rs in million)

Financial Year	SCBNL			HBL		
	Loan & Advances	Total Deposit	Ratio	Loan & Advances	Total Deposit	Ratio
2060/61	6410.24	21161.46	0.30	11951.87	22010.34	0.54
2061/62	8143.21	19335.1	0.42	12424.52	24814	0.50
2062/63	8935.42	23061.03	0.39	14642.56	26490.85	0.55
2063/64	10502.64	24647.02	0.43	16998.00	30048.42	0.57
2064/65	13718.60	29743.99	0.46	19497.52	31842.79	0.61
Average	0.40			0.554		
Std.dev	0.0612			0.0404		
C.V.	0.153			0.0729		

Details on Appendix -14

Table 4.14 describes that the loan & advances to total deposit ratios of SCBNL are fluctuating during the study period. It is highest (0.46) in the year 2064/65and lowest (0.30)in the year 2060/61. it is decreasing till the third year and again increase in fourth and fifth year. The average ratio of SCBNL is 0.40.The yearly ratios of first and third year are lower than the average ratio. However second, fourth and fifth year ratios are higher than the average ratio.

Incase of HBL, loan and advances to total deposit ratios are also slightly fluctuation during the study period. It is highest 0.61 in the year 2064/65 and lowest 0.50 in the year2061/62.The average ratio of HBL is 0.554. The yearly ratios of first and second year are lower than the average ratio. The yearly ratio of third year equal to average ratio. The yearly ratios of fourth and fifth year are higher than the average ratio.

The average ratio of HBL (0.554) is higher than that of SCBNL (0.40).

The standard deviation of SCBNL is 0.0612, where as it is 0.0404 in HBL. The coefficient of variation of SCBNL is 0.153 and coefficient of variation of HBL is

0.0729. The CV. of SCBNL is higher than the HBL. This shows that there is less variation in loan and advances to total deposit ratio maintained by HBL compared to SCBNL. In other words HBL has low risk.

The above analysis helps to conclude that loan and advances to total deposit ratio or total deposit turnover ratio of SCBNL is better than HBL. It is the indication of better performance of SCBNL. Thus, SCBNL is utilizing the funds more efficiently for the profit generating purpose on loan and advances than HBL. However, higher C.V. in SCBNL compared to HBL shows high risk in loan and advances to total deposit ratio of SCBNL.

4.4.2.2 Loan and Advance to Fixed Deposit Ratio.

This ratio examines that how many times the funds is used in loan and advances against fixed deposit. Fixed deposits are interest bearing long term obligation where as loan and advances are the major sources of investment in generating income for commercial banks. It is calculated as follows:

$$\text{Loan and Advances to Fixed Deposit Ratio} = \frac{\textit{Loan}\ \&\ \text{Advances}}{\text{Fixed Deposit}}$$

The following table shows the effective loan and advances to fixed deposit ratio SCBNL and HBL.

Table 4.15

Loan and Advances to Fixed Deposit Ratio

(Rs in million)

Financial Year	SCBNL			HBL		
	Loan & Advances	Fixed Deposit	Ratio	Loan & Advances	Fixed Deposit	Ratio
2060/61	6410.24	1428.5	4.49	11951.87	4710.18	2.54
2061/62	8143.21	1416.38	5.75	12424.52	6107.43	2.03
2062/63	8935.42	2136.31	4.18	14642.56	6350.20	2.31
2063/64	10502.64	3196.49	3.29	16998.00	8201.13	2.07
2064/65	13718.60	3301.01	4.10	19497.52	6423.84	3.03
Average			**4.378**			**2.396**
Std.dev			**0.89**			**0.406**
C.V.			**0.203**			**0.1709**

Details on Appendix-15

Table 4.15 shows that the loan and advances to fixed deposit ratio.

In case of SCBNL, the yearly ratios are fluctuating all the study period. It is increasing in second year and again decreasing third year and fourth year than again increasing in last year of the study period. It is highest (5.75) in the year 2061/62 and lowest 3.29 in the year 2063/64. The average ratio of SCBNL is 4.378. The yearly ratios of SCBNL are lower than the average ratio in third, fourth and fifth year. However, the yearly ratios are higher than the average ratio in the first and second year.

Incase of HBL, the yearly ratios are also fluctuating all the times during the study period. It is increasing in the first year and decreasing in second year and increasing in the third year and again decreasing in fourth year and again increasing in last year. It is highest (3.03) in the year 2064/65 and lowest (2.03) in the year 2061/62.The average ratio of HBL is 2.396. The yearly ratios of HBL are lower than the average ratio in second year and fourth year. However the yearly ratio are higher than the average ratio in first, third and fifth year.

The average ratio of SCBNL (4.378) is higher than that of HBL (2.396).
The standard deviation of SCBNL is 0.89 where as it is 0.409 in HBL. The coefficient of variation of SCBNL 0.203 and it is 0.1709 in HBL. The above analysis helps to conclude that loan and advances to fixed deposit ratio of SCBNL is better than HBL.

The above analysis helps to conclude that loan and advances to fixed deposit ratio of SCBNL is better than HBL. Because of lower amount of fixed deposit, the ratio because higher on SCBNL than HBL. The ratio implies that SCBNL is utilizing its fixed deposit in loan and advances more efficiently. Higher C.V. in SCBNL, compared to HBL, shows that the variability is more in loan and advance to fixed deposit ratio of SCBNL.

4.4.2.3 Loan and Advances to Saving Deposit Ratio

This ratio is also employed for the purpose of measuring the utilization of saving deposits in generating revenue by giving loan and advances to the client i.e. to what extent collected saving deposit amount is deploying in providing loan and advances to generating income. Saving deposits are interest bearing obligation for short- term purpose where as loan and advances are the short term investment for revenue

income. This ratio indicates how many times short-term interest bearing deposits are utilized for income generating purpose is calculated as follows.

Loan and Advances to Saving Deposit Ratio = $\frac{Loan\ \&\ Advancs}{Saving\ Deposit}$

The following table shows the ratio of loan and advances to saving deposit of SCBNL and HBL.

Table 4.16

Loan and Advance to saving Deposit of SCBNL and HBL

(Rs in million)

Financial Year	SCBNL			HBL		
	Loan & Advances	Saving Deposit	Ratio	Loan & Advances	Saving Deposit	Ratio
2060/61	6410.24	12771.83	0.50	11951.87	11759.6	1.02
2061/62	8143.21	13030.93	0.62	12424.52	12852.41	0.97
2062/63	8935.42	14597.67	0.61	14642.56	14582.86	1.00
2063/64	10502.64	15244.38	0.69	16998.00	15784.77	1.08
2064/65	13718.60	17856.13	0.77	19497.52	17972.44	1.08
Average			**0.638**			**1.03**
Std.dev			**0.100**			**0.049**
C.V.			**0.157**			**0.0476**

(Details on appendix -16)

Table 4.16 shows that the loan and advances to saving deposit of SCBNL and HBL. Incase of SCBNL, the loan and advances to saving deposit ratio of SCBNL are fluctuating during the study period. It is increasing all the study period but it is decreasing in third year. It is highest 0.77 in the year 2064/65. It is lowest 0.50 in the year 2060/61. The average ratio of SCBNL is 0.638. The yearly ratios of SCBNL are lower than the average ratio in first year, second year and third year of the study period. However, the yearly ratios of SCBNL are higher than the average ratio in fourth and last year.

In case of HBL, the loan and advances to saving deposit ratio of HBL are also fluctuating during the study period. It is decreasing in the second year and it is increasing in the third and fourth year. Then it is constant in the last year. It is highest 1.08in the year 2063/64 and 2064/65 and it is lowest 0.97 in the year 2061/62. The yearly ratios of HBL are higher than the average in fourth and last year and lower than the average ratio in first, second and third year of study period.
The average ratio of HBL1.03 is higher than that of SCBNL.0.638.

The standard deviation of SCBNL is 0.100 where as HBL is 0.049. Similarly, the coefficient of variation of SCBNL is 0.157 and it is 0.0476 in HBL.

From the above analysis, it can be concluded that the loan and advances to saving deposits ratio of HBL is better than that of SCBNL. It implies that HBL is utilizing short term fund of outsiders more effectively than SCBNL but risk more in SCBNL than HBL.

4.4.3 Profitability Ratios

Profit is an important factor that determines the firm's expansion and diversification. A required level of profit is necessary for the firm's growth and survives in the competitive environment. Various ratios can be developed upon the profit under different circumstances. These different ratios can be developed upon the profit under different circumstances. These different ratios are called profitability ratios, which are required to support the purpose of the study.

4.4.3.1 Interest Earned to Total Assets Ratio

It is the ratio, which formed to find out the percentage of the interest income to total assets.

This ratio is calculated as below:

$$\text{Interest Earned to Total Assets} = \frac{\text{Interest Earned}}{\text{TotalAssets}}$$

The following table shows the interest earned to total assets ratio of SCBNL and HBL.

Table 4.17

Interest Earned to Total Assets Ratio

(Rs in million)

Fiscal Year	SCBNL			HBL		
	Interest Earned	Total Assets	Ratio	Interest Earned	Total Assest	Ratio
2060/61	1042.18	23642.06	0.04	1245.89	24762.04	0.05
2061/62	1058.68	21893.89	0.05	1446.47	24844.69	0.05
2062/63	1189.60	25776.37	0.05	1626.47	29460.39	0.05
2063/64	1411.98	28596.69	0.05	1775.58	33519.15	0.05
2064/65	1591.19	33335.79	0.048	1963.65	36175.53	0.05
Average	0.0475			0.0528		
Std. deviation	0.00434			0.00438		
C.V	0.0913			0.0830		

Details on Appendix -17

Table 4.17 shows that interest earned to total assets ratio of SCBNL and HBL.

Incase of SCBNL, the interest earned to total assets ratios of SCBNL are fluctuating during the study period . It is increasing in second year and constant till fourth year and decreasing in last year. It is highest (0.05) in the years 2061/61,2062/63, 2063/64 and lowest in (0.04) in the year 2060/61. The average ratio of SCBNL is 0.0475 the yearly ratios of SCBNL are higher than the average ratio in the second, third, fourth and fifth year. However the yearly ratios are lower than the average ratio in first year of the study period.

In case of HBL, the interest earned to total assets ratios of HBL are also fluctuating during the study period. It is highest (0.06)in the year 2062/63 and lowest (0.05) in the year 2061/61,2061/62 and 2063/64. The average ratio of HBL is 0.0528

The average ratio of HBL (0.0528) is higher than that of SCBNL (0.0475). The standard deviation of SCBNL is 0.00434 where as standard deviation of HBL is 0.00438. The coefficient of variation of SCBNL is 0.0913 and 0.0830 in HBL. Thus Cv of HBL is lower than SCBNL .This shows that there is less variation in interest

earned to total assets ratio maintained by HBL compared to SCBNL. in other words, HBL has lower risk. So the analysis helps to conclude that the interest earned to total assets ratio of HBL is better than SCBNL. This implies that HBL is efficiently using its total assets (funds) to earn interest income.

4.4.3.2 Net Profit to Total Assets Ratio

This ratio is useful in measuring the profitability of all financial resource invested in the firm's assets. The return on assets or profit to assets ratio is calculated by dividing the amount of net profit by the amount of total assets employed. This ratio can be expressed as:

$$\text{Net profit to total Assets Ratio} = \frac{\text{Net Profit}}{\text{TotalAssets}}$$

The following table shows the net profit to total assets ratio of SCBNL and HBL.

Table 4.18

Net profit to total Assets Ratio

(Rs in million)

Fiscal Year	SCBNL			HBL		
	Net Profit	Total Assets	Ratio	Net Profit	Total Assest	Ratio
2060/61	257.8	23642.06	0.02	263.06	24762.04	0.01
2061/62	539.21	21893.89	0.02	308.28	24844.69	0.01
2062/63	658.75	25776.37	0.03	457.46	29460.39	0.02
2063/64	691.65	28596.69	0.02	491.82	33519.15	0.01
2064/65	818.92	33335.79	0.02	635.87	36175.53	0.02
Average			0.022			0.014
Std. deviation			0.0045			0.0055
C.V			0.203			0.39

Details on appendix -18

Table 4.18 shows that the net profit to total assets ratio of SCBNL and HBL. In SCBNL, the net profits to total assets ratio are not much fluctuating during the study period. It is highest (0.03) in the year 2062/63 and lowest (0.02) in the rest of the

years during the study period. The average ratio of SCBNL 0.022, the yearly ratios of SCBNL is always lower than the average ratio. But yearly ratio is highest than the average ratio in year 2062/63.

In HBL, the net profits to total assets ratios of HBL are also not much fluctuating during the study period. It is highest (0.02) in the year 2062/63 and 2064/65. It is lowest (0.01) in the rest of the years during the study period. The average ratio of HBL is higher than the average ratio in year 2062/63 and 2064/65. The yearly ratios of HBL is less than the average ratio in year 2061/61, 2061/62 and 2063/64.

The average ratio of SCBNL (0.022) is higher than the average ratio of HBL (0.014).

The standard deviation of SCBNL is 0.0045 where as standard deviation of HBL is 0.0055. The coefficient of variation of SCBNL is 0.203 and 0.09 in HBL. Thus C.V. of SCBNL is lower than C.V. of HBL. This shows that there is less variation in interest earned to total assets ratio maintained by SCBNL compared to HBL. In other words, SCBNL has lower risk.

The analysis helps to conclude that the overall profitability of SCBNL is better than the same of HBL. SCBNL is more efficiently using its working funds of assets to earn higher rate of profit.

4.4.3.3 Net profit to total Deposit Ratio

Deposits are mobilized for investment, loan and advances to the public in generating revenue. The ratio measures the percentage of profit earned from the utilization of the total deposits. This ratio can be calculated as follows

$$\text{Net profit to total Deposit ratio} = \frac{\text{Net Profit}}{\text{TotalDeposit}}$$

The following table shows the net profit to total deposit ratio of SCBNL and HBL.

Table 4.19

Net profit to Total Deposit Ratio

(Rs in million)

Fiscal Year	SCBNL			HBL		
	Net Profit	Total Deposit	Ratio	Net Profit	Total Deposit	Ratio
2060/61	257.8	21161.46	0.03	263.06	22010.34	0.01
2061/62	539.21	19335.1	0.03	308.28	24814	0.01
2062/63	658.75	23061.03	0.03	457.46	29490.85	0.02
2063/64	691.65	24647.02	0.03	491.82	30048.42	0.02
2064/65	818.92	29743.99	0.03	635.87	31842.79	0.02
Average			0.03			0.016
Std. deviation			0			0.0055
C.V			0			0.324

Details on Appendix – 19

Table 4.19 shows that the net profit to total deposit ratio of SCBNL and HBL. In case of SCBNL, net profit to total deposit ratio are always same during the study period. The average ratio of SCBNL is 0.03.

In case of HBL, the ratios are a little bit fluctuating during the study period. The highest ratio of HBL is 0.02 in the year 2062/63, 2063/64 and 2064/65 and rest of the year it is same 0.01. The average ratio of HBL is 0.016.

The average ratio of SCBNL is higher than that of HBL. The standard deviation of SCBNL is 0 where as HBL has 0.0055. Similarly, the coefficients of variation are 0 in SCBNL and 0.342 in HBL. Thus,C.V. of HBL is higher than that of SCBNL. this shows that there is more variation in net profit to total deposit ratio maintained by HBL compared to SCBNL. in other words, HBL has high risk.

The above analysis helps to conclude that the net profit to total deposit ratio SCBNL is better than HBL. Mobilization of external funds in important to earn for commercial banks. Thus SCBNL has better performance on mobilization total deposits during that period.

4.4.3.4 Cost of services to Total Assets Ratio

This ratio is useful in measuring the assets utilization with cost of services. The ratio can be calculated as follows:

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

The following Table shows the cost of services to total assets ratio of SCBNL and HBL.

Table 4.20

Cost of services to total assets Ratio

(Rs in million)

Fiscal Year	SCBNL			HBL		
	Cost of services	Total Assets	Ratio	Cost of services	Total Assest	Ratio
2060/61	410.5	23642.06	0.02	644.05	24762.04	0.03
2061/62	402.71	21893.89	0.02	740.55	24844.69	0.03
2062/63	471.43	25776.37	0.02	883.41	29460.39	0.03
2063/64	612.85	28596.69	0.02	1039.60	33519.15	0.03
2064/65	696.98	33335.79	0.02	1115.96	36175.53	0.03
Average			0.02			0.03
Std. deviation			0			0
C.V			0			0

Details on Appendix -20

Table 4.20 shows that the cost of services to total assets ratio of SCBNL and HBL.

In SCBNL, ratios are constant all the time during the study period. The average ratio of SCBNL is 0.02.

In HBL, ratios are constant all the time during the study period. The average ratio of HBL is 0.03.

The standard deviation and coefficient of variation are 0 in both banks.

4.5 Correlation Analysis

Correlation is a statistical tool that we can use describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between to sets of figures. Among the various methods of finding out coefficient of correlation, Karl person's methods are applied in the study.

The result of coefficient of correlation is always between +1 and -1, when r is +1; it means there is perfect relationship between two variables.

4.5.1 Coefficient of correlation between loan and advances and total Deposit.

The coefficient of correlation between loan and advances and total deposits is to measure the degree of relationship between major components of current assets ie loan and advances and major sources of fund on bank ie total deposits. In correlation analysis deposit is independent variable (Y) and loan and advances is dependent variable (X). The purpose of computing coefficient of correlation is to justify whether the deposits are significantly used in loan and advances or not and whether there is any relationship between these to variables. To find out the correlation r various calculation are done.

Table 4.21 shows the coefficient of correlation r, between loan and advances and total deposit ie r, Per, 6Per, of SCBNL and HBL during the study period.

Table 4.21

Correlation Analysis between loan and advances and total deposits

Bank	r	PEr	6PEr
SCBNL	0.9241	0.044	0.264
HBL	0.973	0.016	0.096

Details on Appendix -21

From the above table, we can find that coefficient of correlation between loan and advances and total deposits in SCBNL (r) is 0.924. It shows positive relationship between two variables. By considering the probable error, since the value of r i.e.

0.924 is greater than six times of PEr, i.e. 0.264, we can say that the value of 'r' is significant.

In case of HBL, we observe coefficient of correlation between loan and advances and total deposits in HBL (r) is 0.973, which shows the positive relationship between the two variables. By considering the probable error, since the value of r ie 0.973 is higher than six times of PEr i.e. 0.096. It shows that relationship between these two variables is highly significant.

From the above analysis, it can be conclude that there is significant relationship between loan and advances and total deposits is SCBNL and HBL.

4.5.2 Coefficient of correlation between investments of government Securities and total deposit:

The coefficient of correlation between investment of government security and total deposit it to measure the degree of relationship between two variables. Although bank utilities its deposits on loan and advances, some part of idle deposits are invested on government securities. In correlation analysis, deposit is independent variable Y and government security is dependent variable X. The purpose of computing coefficient of correlation in this case is to justify whether or not the excess deposits are significantly used is government securities and whether there is any relationship between these two variables.

Table 4.22 shows the coefficient of correlation r, between government securities and total deposits ie r, PEr 6PEr of SCBNL and HBL during the study period.

Table 4.22

Correlation Analysis between Government Securities & Total Deposits

Bank	r	PEr	6PEr
SCBNL	0.298	0.2748	1.65
HBL	0.957	0.0255	0.153

(Details on appendix -22)

The above tables indicate that the coefficient of correlation between government securities and total deposits value 'r' is 0.298 in SCBNL. It shows positive

relationship between two variables. By considering the probable error, since the value of r i.e. 0.298 is less than six time of PEr i.e. 1.65, we can say that the value of r is not significant.

In case of HBL, we observe coefficient of correlation between government securities and total deposits is 0.957, which shows the positive relationship between two variables. By considering the probable error, since the value of r ie 0.957 is higher than the six time PEr, i.e. 0.153 it shows that relationship between two variables is highly significant.

From the above analysis, it can be concluded that there is no significant relationship between government security and total deposits in SCBNL but it is highly significant in HBL.

4.5.3 Coefficient of correlation between cash and bank balance and current liabilities:

Cash and Bank balance are most liquid component of current assets, which is required to meet the unexpected short- term obligation ie current liabilities. The coefficient of correlation between cash and bank balance and current liabilities is to measure the degree of relationship between cash and bank balance and current liabilities. To find out the correlation, various calculations are performed.

Table 4.23 shows the coefficient of correlation r, between cash and bank balance and current liabilities ie r, PEr, 6PEr of SCBNL and HBL during the study period.

Table 4.23

Correlation Analysis between cash and bank balance and current liabilities

Bank	r	PEr	6PEr
SCBNL	0.55	0.211	1.27
HBL	-0.1604	0.294	1.76

Details on appendix-23

The above table indicates that the coefficient of correlation between cash and bank balance and current liabilities. Value ‘r’ is 0.55 in SCBNL; it shows positive relationship between two variables. By considering the probable error, since the

value of r ie 0.55 is less than six time PEr ie 1.27 we can say that the value of 'r' is not significant.

In case of HBL, we observe coefficient of correlation between cash and bank balance and current liabilities. It has been found that the value of 'r' is -0.1604 which shows that the negative relationship between these two variables. Value of 'r' HBL is lower than 6PEr, it shows that the relationship between those two variables is not significant.

From the above analysis, it can be concluded that there is not significant relationship between cash and bank balance and current liabilities in SCBNL and HBL.

4.5.4 Coefficient of correlation between loan and advances and net Profit

The basic function of commercial bank is to collect deposit and invest these funds on loan and advance to generate higher profit. Large amount of loan and advances generate higher profit. The coefficient of correlation between loan and advances and net profit measures the degree of relationship between loan and advance and net profit. In correlation analysis, loan and advances is dependent variable Y and net profit is dependent variable X. the purpose of computing coefficient of correlation is to justify whether or not the loan and advances. Significantly generate profit and whether there is any relationship between these two variables.

Table 4.24 shows the coefficient of correlation r, between loan and advances and net profit i.e. r, pEr 6PEr of SCBNL and HBL during the study period.

Table 4.24

Correlation Analysis between loans and advances and net profit

Bank	r	PEr	6PEr
SCBNL	0.99	0.0060	0.036
HBL	0.98	0.01176	0.0706

Details on appendix -24

The above table indicates that the coefficient of correlation between loan and advances and net profit value 'r' 0.99 in SCBNL. It shows positive relationship between two variables. By considering the probable error, since the value of r is 0.99

is greater than the six time of PEr ie 0.036, we can say that the value of 'r' is significant.

In case of HBL, we observe coefficient of correlation between loan and advance and net profit is 0.98, which shows positive relationship between two variables. By considering the probable error, since the value r ie 0.98 is greater than the six times PEr ie 0.0706, it shows that the value of 'r' is significant.

From the above analysis, we conclude that there is significant relationship between loan and advances and net profit in SCBNL and HBL.

4.6 Test of hypothesis

A hypothesis is a hypothetical statement of the relation between two or more variables. Hypothesis always in declarative sentence from and they relate either generally or specifically variable or variables. There are two criteria for 'good' hypothesis and hypothesis statement. One hypothetical statement is about the relations between variables. Second hypothesis carries a clear implication for testing the stated relation. These criteria's means that hypothesis statement certain two or more variables that are measurable and specify how the variables are related. (Kerlinger:, 1983, 18).

As stated in chapter three in research methodology, some conceptual frame work of null and alternative hypothesis between SCBNL and HBL. In various variables and formulated and tested as follows:

For the study, following set of null hypothesis have been formulated and tested.

a) H0: There is no significant difference in composition of working capital between SCBNL and HBL.

   H1: There is a significant difference in composition of working capital between SCBNL and HBL.

b) H0: There is no significant difference in liquidity position between SCBNL and HBL.

   H1: There is a significant difference in liquidity position between SCBNL and HBL.

c) H0: there is no significant difference in profitability position between SCBNL and HBL.

H1: There is a significant difference in profitability position between SCBNL and HBL.

To test the validity of our assumption, if sample size is less than 30, t-test is used. In order to apply t-test in the context of small sample, the t-value is calculated first and compared with the table value of t at a certain level of significance (say on 5%) for given degree of freedom. If calculated value of t exceeds the table value, we infer that the null hypothesis is rejected, that is the difference is significant at 5% level of significance. If t is less than corresponding table value of t, the null hypothesis is accepted. In other words, the difference is not treated as significant.

4.6.1 Composition of working capital

To judge whether there is significant difference in composition of working capital between SCBNL and HBL, following null hypothesis and alternative hypothesis are formulated and tested.

a) Null hypothesis

H0: there is no significant difference in composition of working capital between SCBNL and HBL.

b) Alternative Hypothesis

H1: There is significant difference in composition of working capital between SCBNL and HBL.

The following table exhibits the mean value of various percentages measuring the composition or structure of working capital of SCBNL HBL and student t value.

Table 4.25
Mean t-value of composition of working capital

Composition	SCBNL Mean	HBL Mean	Calculated t-Value	Tabulated t-value	Result / decision
Cash &Bank balance	14.46	11.076	2.23	2.306	H0 is accepted
Loan & advance	35.55	62.88	10.06	2.306	H0 is accepted
Govt. securities	30.016	22.866	2.893	2.306	H0 is rejected
Misc. current assets	19.98	3.178	9.33	2.306	HO is rejected

(Details on appendix -25, 26, 27, 28)

From the above table, it is clear that there is significant difference between loan and advances, government securities and miscellaneous current assets percentage of SCBNL and HBL because the calculated value of t is more that its tabulated value, therefore, null hypothesis is rejected and there is no significant difference between cash and bank balance of SCBNL and HBL because the calculated value of t is less than that its tabulated value and therefore null hypothesis is accepted. And alternative hypothesis is rejected.

4.6.2 Liquidity position

To judge whether there is significant difference in liquidity position between SCBNL and HBL, following null hypothesis and alternative hypothesis are formulated and tested.

a) Null Hypothesis

Ho: There is no significant difference in liquidity position between SCBNL and HBL.

b) Alternative Hypothesis

H1: there is significant difference in liquidity position between SCBNL and HBL.

The following table exhibits the mean value of various percentages measuring the liquidity position of SCBNL and HBL and student t value.

Table 4.26

Mean t-Value of liquidity position

Composition	SCBNL Mean	HBL Mean	Calculated t- value	Tabulated t- value	Result/ Decision
Current Ratio	1.18	1.098	2.28	2.306	Ho is accepted
Quick Ratio	0.529	0.372	4.62	2.306	Ho is rejected
Cash &bank balance to deposit ratio(Exc.fixed deposit)	0.17	0.13	1.85	2.306	Ho is accepted
Fixed deposit to total deposit ratio	0.094	0.2344	8.163	2.306	Ho is rejected
Saving deposit to total deposit ratio	0.624	0.534	5.65	2.306	Ho is rejected.

(Details on appendix -29, 30, 31, 32, 33)

From the above table, it is clear that the current ratio and cash and bank balance to deposit ratio of SCBNL and HBL is not significantly different as their calculated t value is less than the tabulated value. There is, however significant difference in quick ratio, fixed deposit to total deposit ratio and saving deposit to deposit ratio of these two banks.

4 .6.3 Profitability position

To judge whether there is significant difference in profitability position between SCBNL and HBL, following null hypothesis and alternative hypothesis are formulated and tested.

a) Null Hypothesis:

H0: there is no significant difference in profitability position between SCBNL and HBL.

b) Alternative Hypothesis:

H1: There is significant difference in profitability position between SCBNL and HBL.

The following table shows the mean value of various percentages measuring the profitability position of SCBNL and HBL and student t value.

Table 4.27

Mean t-Value of profitability position

Composition	SCBNL Mean	HBL Mean	Calculated t-Value	Tabulatd t-value	Result / decision
Interest Earned to total Assets	0.0476	0.0528	1.89	2.306	H0 is accepted
Net profit to total assets	0.022	0.014	2.58	2.306	H0 is rejected
Net profit to total deposit	0.03	0.016	5.71	2.306	H0 is rejected
Cost of services to total assets	0.02	0.03	0.01	2.306	HO is accepted

(Details on Appendiecs-34, 35, 36, 37)

From the above table, it is learnt that there is no significant difference between interest earned to total assets and cost of services to total assets of SCBNL and HBL. Because the calculated value of t is less than its tabulated value but there is significant difference between net profit to total assets and net profit to total deposits

percentage of SCBNL and HBL because the calculated value of t is more than its tabulated value and therefore, the null hypothesis is rejected.

4.7 Major Findings

The major findings of this study of SCBNL and HBL during the five year period are summarized below:

1. The major components of current assets in SCBNL and HBL are cash and bank balance, loan and advance and government securities. In the study period, the proportion of cash and bank balance, loan and advances and government securities to total current assets on an averages and government securities to total current assets average are. 14.46%, 35.55% and 30.016%in SCBNL and 11.076%, 62.88% and 22.866% in HBL, respectively.

2. The net working capital of both banks is positive. The average net working capital of SCBNL is RS 4097.81 million. The net working capital of SCBNL ranges from RS 2836.92 million to RS5634.86 million. The average net working capital of HBL is RS 2222.918 million. The net working capital of HBL ranges from 175.15 million to Rs 4752.70 million. The C.V. of SCBNL is 0.3113 and that of HBL is 0.7866 .

3. The liquidity position of bank is analyzed with the current ratio, quick ratio, and cash and bank balance to deposit ratio. The current ratios of SCBNL and HBL range from 1.14 to1.22 and1.01 to 1.21, respectively.

4. The Fixed deposit to total deposit ratios of SCBNL range from 0.07 to 0.13 with an average of 0.094. The ratio of HBL range from 0.21 to0.27 with an average of 0.2344.

5. The Saving deposit to total deposit ratios of SCBNL range from 0.60 to 0.67 with an average 0.624. The ratios of HBL range from 0.51 to 0.56 with an average 0.534.

6. The average value of loan and advances to total deposit ratio, loan and advances to fixed deposit ratio and loan and advances to saving deposit ratio are, 0.40, 4.378 and 0.638 in SCBNL and 0.554, 2.396 and 1.03 in HBL.

7. The average value of net profit to total Assets ratio of SCBNL is 0.022 and HBL has 0.014. The average ratio of SCBNL is 0.03 and the average ratio of HBL is 0.016.

8 The correlation, loan and advances and total deposits of both the banks SCBNL and HBL are; the value of r of SCBNL is 0.9241 and 0.973 in HBL.

9 Coefficient of correlation between cash and bank balance and current liabilities in SCBNL and HBL .The value of r is 0.55 on SCBNL and -0.1604 on HBL.

CHPTER- V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is dedicated to provide conclusion after comparatively analyzing the working capital management of two joint venture banks, Standard Charted Bank Nepal Limited (SCBNL) and Himalayan Bank Limited (HBL) respectively. It also tries to provide some recommendations to the concerned banks from the conclusion derived from the study.

5.1 Summary

The study mainly focus over the working capital areas of the bank, it does not cover other part of bank. The study is based on the annual accounting data collected basically from profit and loss account and balance sheet. The lack of data at frequently time intervals via, daily, weekly, monthly, or quarterly, is a major constraint in this study. The data used in the study, therefore, suffer from normal accounting problem. However, accounting data they aren't defective. These are the data widely used by investors to evaluate the past and present performance of the SCBNL and HBL.

The necessary data are derived from the balance sheet and profit and loss account of SCBNL and HBL for the period of five years from fiscal year 2060/61 to 2064/65 B.S.(2004-2008).

The introduction chapter covers, general background, statement of the problem, objective of the study, research hypothesis, significance of the study, and organization of the study.

The second chapter focuses on review of literature. It contains the conceptual framework, review of empirical works and research gap.

The third chapter deals with the research methodology to be adopted for the study consisting research design, sources of data, data gathering procedure, tool and techniques of analysis and period recovered.

The fourth chapter deals with the presentation, analysis and interpretation of data. It consist testing of hypothesis and major finding of the research.

The last chapter covers summary, conclusion and recommendation.

5.2 Conclusion

1 The major components of current assets in SCBNL and HBL are cash and bank balance, loan and advance and government securities. In the study period, the proportion of cash and bank balance, loan and advances and government securities to total current assets on an averages and Government securities to total current assets average are. 14.46%, 35.55% and 30.016%in SCBNL and 11.076%, 62.88% and 22.866% in HBL, respectively, so it is found that the average cash and bank balance and government securities are higher on SCBNL than on HBL and average loan and advances percentage is higher in HBL than in SCBNL. The trend value of loan and advance is positive both banks and the trend value of government securities in negative in SCBNL and positive in HBL.

2. The net working capital of both banks is positive. The average net working capital of SCBNL is RS 4097.81 million. The net working capital of SCBNL ranges from RS 2836.92 million to RS5634.86 million. The average net working capital of HBL is RS 2222.918 million. The net working capital of HBL ranges from 175.15 million to Rs 4752.70 million. The C.V. of SCBNL is 0.3113 and that of HBL is 0.7866 which shows that there is vary high variability of net working capital maintained by SCBNL compared to HBL.

3. The liquidity position of bank is analyzed with the current ratio, quick ratio, and cash and bank balance to deposit ratio. The current ratios of SCBNL and HBL range from 1.14 to1.22 and1.01 to 1.21, respectively. This shows that the liquidity position or short term solvency of SCBNL is better than HBL is the study period. The trends of liquidity ratio, or current ratio, quick ratio, cash and bank balance to deposit ratio of SCBNL and HBL are increasing, although higher liquidity means lower risk as well as lower profit in general, it does not necessarily mean lower profit incase of commercial banks.

4. Fixed deposit to total deposit ratios of HBL are higher than that of SCBNL during the study period. The ratios of SCBNL range from 0.07 to 0.13 with an average of 0.094. The ratio of HBL range from 0.21 to0.27 with an average of 0.2344. Therefore, it is concluded the HBL has more long –term

and costly sources of funds than SCBNL and the risk is higher in SCBNL than in HBL.

5. Saving deposit to total deposit ratios of SCBNL are higher than that of HBL for the study period. The ratios of SCBNL range from 0.60 to 0.67 with an average 0.624. The ratios of HBL range from 0.51 to 0.56 with an average 0.534. Saving deposits are short term viability it is longer in term of the current and other deposit. SCBNL has more short term and costly sources of funds than HBL.

6. The average value of loan and advances to total deposit ratio, loan and advances to fixed deposit ratio and loan and advances to saving deposit ratio are, 0.40, 4.378 and 0.638 in SCBNL and 0.554, 2.396 and 1.03 in HBL. In case of loan and advance to total deposit ratio of SCBNL is better than HBL, Incase of loan and advance to fixed deposit ratio of SCBNL is better than HBL. In the case of loan and advance to saving deposit ratio of HBL is better than the SCBNL. The SCBNL has better utilization of deposit in income generating activity than HBL. It also shows that SCBNL has better investment efficiency on loan and advances. But loan and advance to saving deposit ratio that HBL has better.

7 Profitability is the measure of efficiency the profitability position of SCBNL and HBL are analyzed from various angles. The average value of net profit to total Assets ratio of SCBNL is 0.022 and HBL has 0.014. The average value of SCBNL is higher than that of HBL. The analysis concludes that the overall profitability of SCBNL is better than the HBL. The net profit to total deposit ratios of SCBNL is higher than HBL. The average ratio of SCBNL is 0.03 and the average ratio of HBL is 0.016 from the conclusion net profit to total deposit ratio of SCBNL is better than that of HBL. Cost of services to total assets ratio of HBL is higher than that of SCBNL, on the study period of HBL and SCBNL. The profitability proportion of HBL is better than SCBNL. It would be better to decrease the cost of services of SCBNL.

8 While analyzing the correlation, loan and advances and total deposits of both the banks SCBNL and HBL are significantly correlated. The value of r of SCBNL is 0.9241 and 0.973 in HBL. The positive value of r shows the positive relationship between loan and advances and total deposits. It shows that both banks utilize its total deposit on loan and advances effectively, but

relationships as well as utilization of deposits are better in HBL than in SCBNL. Correlation between investment on government security and total deposits of SCBNL is not significant but in case of HBL, it is highly significant.

9 Coefficient of correlation between cash and bank balance and current liabilities shows that there is no significant relationship between cash and bank balance and current liabilities in SCBNL and HBL .The value of r is 0.55 on SCBNL and -0.1604 on HBL. It shows that holding of cash and bank balance of SCBNL and HBL is not related with current liabilities.

10 While testing the hypothesis of composition of working capital, it has been observed that the mean value of proportion of cash and bank balance of SCBNL and HBL is not significantly different. Similarly, the mean value proportion of loan and advances, government securities and misc. current assets of SCBNL and HBL are not significantly different.

11. While testing the hypothesis of liquidity management, it has been observed that the mean value of quick ratio, fixed deposit to total deposit and saving deposit to total deposit ratio of SCBNL are significantly different from HBL. But the current ratio and cash and bank balance to deposit ratio (excluding fixed deposit) of SCBNL and HBL is not significantly different. In overall, it shows that liquidity management policy of these two banks is significantly different.

5.3 Recommendations

On the basis of above analysis and conclusion, following recommendations are made.

1 Although proportion of loan and advances out of the total current assets of SCBNL is more than other current assets. Similarly, the proportion of loan and advances out of the total current assets of HBL is more than 50% of current assets. Hence, SCBNL should adjust its policy of investment on loan and advances with collected funds and increase the proportion of loan and advances in total current assets.

2 Positive working capital represents the sound financial management of the banks. Similarly, negative working capital represents the poor financial

management of the banks. In case of SCBNL, we found always positive working capital during the study period. Similarly, in case of HBL, we found always positive working capital. There should be keeping optimum size of investment in current assets and current liabilities.

3 The liquidity position in terms of current ratio of both SCBNL and HBL are below than the standard. Therefore, both banks should increase the current assets. Shift from invest in govt. securities to loan & advances, which will support in support in increase the profitability.

4 The turnover of the commercial banks is the primary bank is the primary factor of income generating activity. Fixed deposits and saving deposits turnover position are also not satisfactory on both banks. Due to the poor turnover position, the chances of bad debts and non earning idle funds are high. Therefore, both SCBNL and HBL should give proper attention on collection of over-dated loan and advances and utilization of idle funds on loan and advances.

5 Proportion of saving to total deposit is more then 50% of both banks in SCBNL and HBL. Comparatively, SCBNL is better then HBL.

6 Net profit to total assets ratio is higher on SCBNL than HBL but net profit to total deposit ratio is higher on HBL than SCBNL. however, interest earned to total assets ratio and the cost of services are higher on HBL than SCBNL. Therefore, HBL should try to reduce its cost by reducing high cost deposits and operating in proper and efficient way so that it can least operating cost which further maximizes its profitability and shareholders return.

7 The unskilled manpower, over-staffing, unsystematic purpose of raw materials, unnecessary expenses, misuse of facilities, heavy expenses on overhead etc. may be the cause for high operating cost. So, both SCBNL and HBL are recommended to pay attention to these aspects.

8 From turn over ratios investment policies of HBL seems better then that of SCBNL during the study period .therefore it is necessary for SCBNL to

utilize its deposit in income generating activities by better investment efficiency on loan and advances.

9 By implementing the matching working capital management policy instead of adopting concentrative working capital policy, SCBNL, as well as HBL, can improve in its profitability in both short and long runs.

10 Improve working capital leads to decrease the profitability of the company and to run the company in the long run. So, SCBNL and HBL are recommendation to give emphasis to proper working capital policy to uplift the financial performance of the companies in the competitive age of today.

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Appendix- 1

Calculation of standard deviation & C.V. cash and Bank Balance to current Assets (%)

year	X_1	X_2	$d_1^2(X_1-\overline{X}_1)^2$	$d_2^2(X_2-\overline{X}_2)^2$
2060/61	18.05	12.81	12.888	3.006
2061/62	15.45	11.51	0.9801	0.1883
2062/63	12.68	11.76	3.1684	0.4678
2063/64	13.3	12.58	1.3456	2.262
2064/65	12.8	6.72	2.7556	18.9747
N=5	**ǵX_1=72.28**	**ǵX_2=55.38**	**ǵd_1^2=21.1377**	**ǵd_2^2=24.898**

For SCBNL

Average=14.46

Std. dev= 2.298

CV. = 0.1589

For HBL

Average=11.076

Std. dev.= 2.495

C.V = 0.2252

Appendix - 2

Calculation of Trend value of cash & Bank balance to current Assets Ratio

X	X_2	SCBNL			HBL		
		Y_1	Xy_1	yc=a+bx	y_2	xy_2	yc=a+bx
-2	4	18.05	-36.1	16.586	12.81	-25.62	13.298
-1	1	14.45	-14.45	15.421	11.51	-11.51	12.187
0	0	12.68	0	14.256	11.76	0	11.076
1	1	13.3	13.3	13.091	12.58	12.58	9.965
2	4	12.8	25.6	11.926	6.72	13.44	8.854
	ǵX^2=10	**ǵY_1=71.28**	**ǵXY_1=-11.65**			**ǵY_2=55.38**	**ǵXY_2=-11.11**

SCBNL

$$a = \frac{y_1}{N} = \frac{71.28}{5} = 14.256$$

$$b = \frac{Xy_1}{X^2} = \frac{11.65}{10} = 1.165$$

HBL

$$a = \frac{xy^2}{N} = \frac{55.38}{5} = 11.076$$

$$b = \frac{Xy^2}{X^2} = \frac{11.11}{10} = 1.111$$

Appendix - 3

Loan and advance to current Assets (%)

year	X_1	X_2	$d_1^2(X_1-\overline{X}_1)^2$	$d_2^2(X_2-\overline{X}_2)^2$
2060/61	27.28	64.62	68.3929	3.0276
2061/62	37.34	58.26	3.2041	21.344
2062/63	34.82	63.24	0.5329	0.1296
2063/64	36.95	61.66	1.96	1.4884
2064/65	41.35	66.62	33.64	13.9876
N=5	**ǵX_1=177.74**	**ǵX_2=314.4**	**ǵd_1^2=107.7299**	**ǵd_2^2= 39.9772**

SCBNL

Average = 35.55

Std. dev. = 5.1896

C.V. = 0.1459

HBL

Average =62.88

Std. dev = 3.1613

C.V. = 0.05027

Appendix – 4

Calculation of Trend value of loan and Advance to current Assets Ratio

X	X_2	SCBNL			HBL		
		y_1	xy_1	yc=a+bx	y_2	xy_2	yc=a+bx
-2	4	27.28	-54.56	30	64.62	-129.24	61.4
-1	1	37.34	-37.34	32.775	58.26	-58.26	62.14
0	0	34.82	0	35.55	63.24	0	62.88
1	1	36.95	36.95	38.325	61.66	61.66	63.62
2	4	41.35	82.7	41.1	66.62	133.24	64.36
	ǵX^2 =10	**ǵY_1 =177.71**	**ǵXY_1 =27.75**		**ǵY_2= 314.4**	**ǵXY_2 = 7.4**	

FOR SCBNL

$a = \frac{y_1}{N} = \frac{177.74}{5} = 35.55$ $\quad$ **a=** $\frac{y_2}{N} = \frac{314.4}{5} = 62..88$

b= $\frac{xy_1}{X^2} = \frac{27.75}{10} = 2.775$ $\quad$ **b=** $\frac{y_2}{X^2} = \frac{7.4}{10} = 0.74$

Appendix – 5

Government Securities to current Assets Ratio (%)

year	X_1	X_2	$d_1^2(X_1-\overline{X}_1)^2$	$d_2^2(X_2-\overline{X}_2)^2$
2060/61	33.84	18.55	14.6229	18.6278
2061/62	33.03	25.65	9.0841	7.75056
2062/63	33.68	22.22	13.4248	0.41731
2063/64	25.00	23.42	25.1602	0.30691
2064/65	24.53	24.49	30.0961	2.6373
N=5	**ǵX_1=150.08**	**ǵX_2=114.33**	**ǵd_1^2=92.388**	**ǵd_2^2= 29.739**

SCBNL

Average = 30.016

Std. dev. = 4.8059

C.V. = 0.1601

HBL

Average =22.866

Std. dev = 2.7267

C.V. = 0.1192

Appendix -6

Calculation of trend value of government securities to current assets ratio

X	X_2	SCBNL			HBL		
		y_1	xy_1	yc=a+bx	y_2	xy_2	yc=a+bx
-2	4	33.84	-67.68	35.346	18.55	-37.1	20.936
-1	1	33,03	-33.03	32.681	25.65	-25.65	21.901
0	0	33.68	0	30.016	22.22	0	22.866
1	1	25.00	25.00	27.351	23.42	23.42	23.831
2	4	24.53	49.06	24.686	24.49	48.98	24.796
	$\sum X^2$=10	**$\sum Y_1$=150.08**	**$\sum XY_1$=26.65**			**$\sum Y_2$= 114.33**	**$\sum XY_2$=9.65**

For SCBNL

$$a \text{ X} \frac{\phi y_1}{N} \text{ X} \frac{150.08}{5} \text{ X} 30.016$$

$$b \text{ X} \frac{\phi xy_1}{\phi x^2} \text{ X} \frac{26.65}{10} \text{ X} 2.665$$

For HBL

$$a \text{ X} \frac{\phi y_2}{N} \text{ X} \frac{114.33}{5} \text{ X} 22.866$$

$$b \text{ X} \frac{\phi xy2}{\phi x^2} \text{ X} \frac{9.65}{10} \text{ X} 0.965$$

Appendix -7

Miscellaneous current assets to current assets ratio (%)

year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/61	20.83	4.02	0.7225	0.7089
2061/62	14.18	4,58	33.64	1.9656
2062/63	18.82	2.78	1.3456	0.1584
2063/64	24.75	2.34	22.7529	0.7022
2064/65	25.32	2.17	1.7956	1.0160
N=5	x_1=99.9	x^2=15.89	$d_1$2= 60.2565	$d_2$2=4.5511

SCBNL

Average = 19.98

Std. dev. = 3.8812

C.V. = 0.1942

HBL

Average =3.178

Std. dev = 1.0666

C.V. = 0.3356

Appendix -8

Net working capital

year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/61	2836.92	175.15	1589843.6	4193353.78
2061/62	2974.41	1130.78	1262027.56	1192765.41
2062/63	3837.29	2169.11	67870.67	2895.30
2063/64	5205.57	4752.10	1227132.22	6399796.97
2064/65	5634.86	2886.85	2362522.703	440805.70
N=5	x_1=20489.05	x^2=1114.59	$d_1$2= 6509396.75	$d_2$2=12229617.1

SCBNL

Average = 40979.81

Std. dev. = 1275.676

C.V. = 0.3113

HBL

Average =2222.918

Std. dev = 1748.54

C.V. = 0.7866

Appendix 9

Current Ratio

year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/61	1.14	1.01	0.0016	0.00774
2061/62	1.16	1.06	0.0004	0.00144
2062/63	1.18	1.10	0	0.000004
2063/64	1.22	1.21	0.0016	0.012544
2064/65	1.20	1.11	0.007	0.000144
N=5	x_1=5.9	x^2=5.49	d_1^2= 0.004	d_2^2=0.0021872

SCBNL

Average = 1.18

Std. dev. = 0.0316

C.V. = 0.0268

HBL

Average =1.098

Std. dev = 0.0739

C.V. = 0.06730

Appendix 10

Quick Ratio

year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/2061	0.59	0.322	0.003721	0.002704
2061/062	0.56	0.39	0.000961	0.000324
2062/063	0.55	0.37	0.000441	0.000004
2063/064	0.47	0.43	0.003481	0.003364
2064/065	0.45	0.35	0.006241	0.000484
N=5	x_1=2.62	x^2=1.86	d_1^2= 0.014845	d_2^2=0.00688

SCBNL

Average = 0.529

Std. dev. = 0.0609

C.V. = 0.1152

HBL

Average =0.372

Std. dev = 0.0415

C.V. = 0.1115

Appendix -11

Cash and Bank Balance to Deposit Ratio (Excluding Fixed Deposit)

year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/2061	0.21	0.14	0.0016	0.0001
2061/062	0.19	0.13	0.0004	0
2062/063	0.11	0.14	0.0036	0.0001
2063/064	0.18	0.16	0.0001	0.0009
2064/065	0.16	0.08	0.0001	0.0025
N=5	x_1=0.85	x^2=0.65	d_1^2= 0.0058	d_2^2=0.0036

SCBNL

Average = 0.17

Std. dev. = 0.038

C.V. = 0.2239

HBL

Average =0.13

Std. dev = 0.03

C.V. = 0.2308

Appendix - 12

Fixed deposit to total deposit ratio

year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/2061	0.07	0.21	0.000576	0.0005954
2061/062	0.07	0.25	0.000576	0.0002434
2062/063	0.09	0.24	0.000016	0.0000314
2063/064	0.13	0.27	0.001296	0.0012674
2064/065	0.11	0.202	0.000250	0.001049
N=5	x_1=0.47	x^2=1.172	d_1^2= 0.00272	d_2^2=0.003187

SCBNL

Average = 0.094

Std. dev. = 0.0261

C.V. = 0.277

HBL

Average =0.2344

Std. dev = 0.0282

C.V. = 0.1203

Appendix -13

Saving deposit to total deposit Ratio

year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/2061	0.06	0.53	0.000576	0.000016
2061/062	0.67	0.51	0.002116	0.000576
2062/063	0.63	0.55	0.000036	0.000256
2063/064	0.62	0.52	0.000016	0.000196
2064/065	0.60	0.56	0.000576	0.000676
N=5	x_1=3.12	x_2=2.67	d_1^2= 0.00332	d_2^2=0.00172

SCBNL

Average = 0.624

Std. dev. = 0.029

C.V. = 0.0462

HBL

Average =0.534

Std. dev = 0.0207

C.V. = 0.0388

Appendix -14

Loan and advances to total deposit ratio

year	X	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/2061	0.30	0.54	0.01	0.000196
2061/062	0.42	0/50	0.0004	0.002916
2062/063	0.39	0.55	0.0001	0.00016
2063/064	0.43	0.57	0.0009	0.000250
2064/065	0.46	0.61	0.0036	0.003136
N=5	x_1=2	x_2=2.77	d_1^2= 0.015	d_2^2=0.00652

SCBNL

Average = 0. 4

Std. dev. = 0.0612

C.V. = 0.153

HBL

Average =0.555

Std. dev = 0.0404

C.V. = 0.0729

Appendix -15

Loan and advances to fixed deposit Ratio

year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/2061	4.49	2.54	0.012544	0.020736
2061/062	5.75	2.3	1.882384	1.33956
2062/063	4.18	2.31	0.039204	0.007396
2063/064	3.29	2.07	1.183744	0.106276
2064/065	4.16	3.03	0.039204	0.401956
N=5	x_1=21.86	x_2=11.89	d_1^2= 3.15708	d_2^2=0.6706

SCBNL

Average = 4.378

Std. dev. = 0.89

C.V. = 0.203

HBL

Average =2.396

Std. dev = 0.409

C.V. = 0.1709

Appendix -16

Loan and Advance to saving Deposit Ratio

year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/2061	0.50	1.02	0.019044	0.0001
2061/062	0.62	0.97	0.000324	0.0036
2062/063	0.61	1.00	0.000784	0.0009
2063/064	0.69	1.08	0.002704	0.0025
2064/065	0.77	1.08	0.017424	0.0025
N=5	x_1=3.19	x_2=5.15	d_1^2= 0.04028	d_2^2=0.0096

SCBNL

Average = 0.638

Std. dev. = 0.100

C.V. = 0.157

HBL

Average =1.03

Std. dev = 0.049

C.V. = 0.0476

Appendix -17

Interest Earned to total assets Ratio

Year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/61	0.04	0.05	0.00005625	0.00000784
2061/62	0.05	0.05	0.00000625	0.00000784
2062/63	0.05	0.05	0.00000625	0.00005184
2063/64	0.05	0.05	0.00000625	0.00000784
2064/65	0.048	0.054	0.00000025	0.00000144
N=5	$\sum x_1$=0.238	$\sum x_2$=0.264	$\sum d_1^2$=0.00007525	$\sum d_2^2$=0.0000768

For SCBNL

Average=0.0475

Std. dev=0.00434

C.V. =0.0913

For HBL

Average=0.0528

Std.dev =0.004382

C.V.=0.0830

Appendix -18

Net profit to total Assets Ratio

Year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/61	0.02	0.01	0.000004	0.000016
2061/62	0.02	0.01	0.000004	0.000016
2062/63	0.03	0.02	0.000064	0.000036
2063/64	0.02	0.01	0.000004	0.000016
2064/65	0.02	0.02	0.000004	0.000036
N=5	$\sum x_1$=0.11	$\sum x_2$=0.07	$\sum d_1^2$=0.00008	$\sum d_2^2$=0.00012

For SCBNL

Average=0.022

Std. dev=0.0045

C.V.=0.203

For HBL

Average=0.014

Std.dev =0.0055

C.V.=0.39

Appendix -19

Net profit to total Deposit Ratio

Year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/61	0.03	0.01	0	0.000036
2061/62	0.03	0.01	0	0.000036
2062/63	0.03	0.02	0	0.000016
2063/64	0.03	0.02	0	0.000016
2064/65	0.03	0.02	0	0.000016
N=5	$\sum x_1=0.15$	$\sum x_2=0.08$	$\sum d_1^2=0$	$\sum d_2^2=0.00012$

For SCBNL For HBL

Average=0.03 Average=0.016

Std. dev=0 Std.dev =0.0055

C.V.=0 C.V.=0.342

Appendix -20

Cost of services to total assets ratio

Year	X_1	X_2	$d_1^2 (x_1 - \overline{X_1})^2$	$d_2^2 (x_2 - \overline{X_2})^2$
2060/61	0.02	0.03	0	0
2061/62	0.02	0.03	0	0
2062/63	0.02	0.03	0	0
2063/64	0.02	0.03	0	0
2064/65	0.02	0.03	0	0
N=5	$\sum x_1=0.1$	$\sum x_2=0.15$	$\sum d_1^2=0$	$\sum d_2^2=0$

For SCBNL For HBL

Average=0.02 Average=0.03

Std. dev=0 Std.dev =0

C.V.=0 C.V.=0

Appendix 21

Calculation of correlation coefficient between loan and advance and total deposit of SCBNL

LA(x)	T.D.(y)	$x=x-\overline{X}$	X^2	$Y=-y-\overline{Y}$	y^2	xy
6410.24	21161.46	-3131.78	9808045.97	-2428.26	589644.63	7604776.103
8143.21	19335.1	-1398.81	1956669.42	-4254.62	18101791.34	5951405.002
8935.42	23061.03	-606.60	367963.56	-528.69	279513.12	320703.354
10502.69	24647.02	960.62	922790.78	1057.3	1117883.29	1015663.53
13718.60	29743.99	4176.58	17443803.8	6154.27	378756039.23	25703801
x=47710.11	y=117948.6		x^2=30499273.53		y=63270673.61	xy= 40596348.99

$$\overline{X} = \frac{X}{N} = \frac{47710.11}{5} = 9542.022$$

$$\overline{Y} = \frac{Y}{N} = \frac{117948.6}{5} = 23589.72$$

Correlation

$$r = \frac{Xy}{\sqrt{x^2 \quad y^2}} = \frac{40596348.99}{\sqrt{30499273.53 \mid 63270673.61}}$$

$$= \frac{40596348.99}{43928459.81}$$

$$= 0.9241$$

$$PEr = 0.6745 \times \frac{1Zr^2}{\sqrt{n}} = 0.6745 \times \frac{1Z(0.9241)^2}{\sqrt{5}}$$

$$X0.6745 \mid \frac{0.14604}{2.2361}$$

$$= 0.044$$

$$6PEr = 6 \mid 0.04405 \quad = 0.264$$

Calculation of correlation coefficient between loan and advances and total deposit of HBL

LA(x)	T.D.(y)	x=x - $\overline{X}$	X^2	Y= y- $\overline{Y}$	y^2	xy
11951.87	22010.34	-3151.02	9928927.04	-5030.94	25310357.28	15852592.56
12424.52	24814	-2678.37	7173665.86	-2227.28	4960776.198	5965479.93
14642.56	26490.85	-460.33	211903.71	-550.43	302973.18	253379.44
16998.00	30048.42	1895.11	3591441.91	3007.14	9042890.98	5698861.08
19497.52	31842.79	4394.63	19312772.84	4801.51	23054498.28	21100859.89
x=75514.47	y= 135206.4		x^2=40218711.36		y^2=62671495.92	xy= 48871172.9

$\overline{X} = \frac{x}{N} = \frac{75514.47}{5} = 15102.89$ $\overline{Y} = \frac{Y}{N} = \frac{135206.4}{5} = 27041.28$

Correlation,

$$r = \frac{xy}{\sqrt{x^2 \mid y^2}} = \frac{48871172.9}{\sqrt{40218711.36 \mid 62671495.92}}$$

$$= \frac{48871172.9}{50205246.79} = 0.973$$

$$PEr = 0.6745 \times \frac{1Zr^2}{\sqrt{n}} = 0.6745 \times \frac{1Z(0.973)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{0.053271}{2.2361} = 0.016$$

$$6PEr = 6 \times 0.016 = 0.096$$

Appendix –22

Correlation coefficient between Government securities and total deposit of SCBNL

GS(x)	T.D.(y)	$x=x-\overline{X}$	X^2	$Y=y-\overline{Y}$	y^2	xy
7948.22	21161.46	139.88	19566.41	-2428.26	5896446.63	-339665.00
7203.07	19335.1	-605.27	366351.77	-4254.62	18101791.34	2575193.85
8644.86	23061.03	836.52	699765.71	-528.69	279513.12	-442259.76
7107.94	24647.02	-700.4	490560.16	1057.3	111788.29	-740532.92
8137.61	29743.99	329.27	108418.73	6154.27	37875039.23	2026416.48
x=39041.7	y=117948.6		x^2=1684662.78		y^2=63270673.61	xy= 3079152.65

$$\overline{X} = \frac{x}{N} = \frac{39041.7}{5} = 7808.34 \qquad \overline{Y} = \frac{Y}{N} = \frac{117948.6}{5} = 23589.72$$

$$\text{Correlation, } r = \frac{xy}{\sqrt{x^2 \mid y^2}} = \frac{3079152.65}{\sqrt{1684662.78 \mid 63270673.61}} = 0.298$$

$$\text{PEr} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - (0.298)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{0.911}{2.2361} = 0.2748$$

$$6\text{PEr} = 6 \times 0.2748 = 1.65$$

Correlation coefficient between Government securities and total deposit of HBL

GS(x)	T.D.(y)	x=x- $\overline{X}$	X^2	Y=y- $\overline{Y}$	y^2	xy
3431.73	22010.34	-2101.71	4417184.92	-5030.94	25310357.28	10573576.91
5469.76	24814	-63.68	4055.14	-2227.28	4960776.20	141833.19
5144.32	26490.85	-389.12	151414.37	-550.43	302973.18	214183.32
6454.88	30048.42	921.44	849051.67	3007.14	9042890.98	2770899.08
7166.53	31842.79	1633.09	2666982.95	4801.51	23054498.28	7841297.97
x=27667.22	y= 135206.4		x^2=8088689.05		y^2=62671495.92	xy= 21541790.47

$$\overline{X} = \frac{x}{N} = \frac{27667.22}{5} = 5533.44 \qquad \overline{Y} = \frac{Y}{N} = \frac{135206.4}{5} = 27041.28$$

$$\text{Correlation, r} = \frac{xy}{\sqrt{x^2 \mid y^2}} = \frac{21541790.47}{\sqrt{8088689.05 \mid 6267149.92}} = 0.957$$

$$\text{PEr} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - (0.957)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{0.0846}{2.2361} = 0.0255$$

$$6\text{PEr} = 6 \times 0.0255 = 0.153$$

Appendix -23

Correlation coefficient between Cash and bank balance and current liabilities of SCBNL

CB(x)	CL.(y)	x=x-	X^2	Y=y-	y^2	xy
4241.76	20657.71	462.55	213952.50	-1759.03	3094186.54	813639.33
3370.81	18834.78	-408.4	166790.56	-3581.96	12830437.44	1462872.46
3253.51	21825.40	-525.7	276360.49	-591.34	349682.99	310867.44
3782.17	23223.59	2.96	8.76	806.85	651006.92	2388.28
4247.78	27542.23	468.57	219557.84	5125.49	26270647.74	2401650.85
x=18896.03	y= 112083.71		x^2=876670.15		y^2=43195961.63	xy= 3364139.70

$$\overline{X} = \frac{x}{N} = \frac{18896.03}{5} \qquad \overline{Y} = \frac{Y}{N} = \frac{112083.71}{5}$$

$$\overline{X} = 3779.21 \qquad \overline{Y} = 22416.74$$

$$\text{Correlation, r} = \frac{xy}{\sqrt{x^2 \mid y^2}} = \frac{3364139.70}{\sqrt{876670.15 \mid 43195961.63}} = 0.55$$

$$\text{PEr} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - (0.55)^2}{\sqrt{5}} = 0.211$$

$$6\text{PEr} = 6 \times 0.211 = 1.27$$

Correlation coefficient between Cash and bank balance and current liabilities of HBL

CB(x)	CL.(y)	x=x- $\overline{X}$	X^2	Y=y- $\overline{Y}$	y^2	xy
2370.09	18320.71	-226.37	51243.38	-3417.37	11678417.71	773590.05
2455.55	20195.51	-140.91	19855.63	-1542.57	2379522.20	217363.54
2722.63	20984.01	126.17	15918.87	-754.07	568621.56	-95141.01
3467.36	22811.51	870.9	758466.81	1073.43	115225.96	934850.19
1966.67	26378.66	-629.79	396635.44	4640.58	21534982.74	-2922590.88
x=12982.3	y=108690.4		x^2=1242120.13		y^2=37313796.18	xy= -091928.11

$\overline{X} = \frac{x}{N} = \frac{12982.3}{5}$ $\overline{Y} = \frac{Y}{N} = \frac{108690.4}{5}$

$= 2596.46$ $= 21738.08$

Correlation, r $= \frac{xy}{\sqrt{x^2 \mid y^2}} = \frac{Z109128.11}{\sqrt{1242120.13 \mid 37313796.18}}$

$= -0.1604$

PEr $= 0.6745 \times \frac{1Zr^2}{\sqrt{n}} = 0.6745 \times \frac{1Z(Z0.1604)^2}{\sqrt{5}}$

$= 0.294$

6PEr = $6 \times 0.294 = 1.76$

Appendix -24

Calculation of correlation coefficient between loan and advance and net profit of SCBNL

LA(x)	NP(Y)	$x=x-\overline{X}$	X^2	$Y=y-\overline{Y}$	y^2	Xy
6410.24	537.8	-3131.77	9807983.33	-111.47	12425.56	349098.40
8143.24	539.21	-1398.77	195655	-110.06	12113.20	153948.63
8935.42	658.75	-606.59	367951	9.48	89.87	-5750.47
10502.54	691.65	960.53	922617.88	42.38	1796.06	40707.26
13718.60	818.92	4176.59	17443904	169.65	28781.12	708558.49
∑x =47710.04	∑y =3246.33		$\sum x^2$ = 28738111.24		∑y2 =55205.81	∑xy= 1246562.31

$$\overline{X} = \frac{x}{N} = \frac{47710.04}{5} = 9542.01 \qquad \overline{Y} = \frac{Y}{N} = \frac{3246.33}{5} = 649.27$$

$$\text{Correlation, r} = \frac{xy}{\sqrt{x^2 \mid y^2}} = \frac{1246562.31}{\sqrt{28738111.24 \mid 55205.81}}$$

$$= -0.98$$

$$\text{PEr} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - (0.98)^2}{\sqrt{5}}$$

$$= 0.0060$$

$$6\,\text{PEr} = 6 \times 0.0060 = 0.036$$

Calculation of correlation coefficient between loan and advance and net profit of HBL

LA(x)	NP(Y)	$x=x-\overline{X}$	X^2	$Y=y-\overline{Y}$	y^2	Xy
11951.87	263.05	-3151.02	9928927.04	-168.25	28308.06	530164.16
12424.52	308.28	-2678.37	7173665.86	-123.02	15133.92	329493.08
14642.56	457.46	-460.33	211903.71	26.16	684.34	-12042.23
16998.00	491.82	1895.11	3591441.91	60.52	3662.67	114692.06
19497.52	635.87	4394.63	19312772.84	204.57	41848.88	899009.46
$\sum x$ = 75514.47	$\sum y$ = 2156.48		$\sum x^2$ = 40218711.36		$\sum y$ = 89637.87	$\sum xy$ = 1861316.53

$$\overline{X} = \frac{x}{N} = \frac{75514.47}{5} = 15102.89 \qquad \overline{Y} = \frac{Y}{N} = \frac{2156.48}{5} = 431.30$$

$$\text{Correlation, } r = \frac{xy}{\sqrt{x^2 \mid y^2}} = \frac{1861316.53}{\sqrt{40218711.36 \mid 89637.87}}$$

$$= 0.9803$$

$$PEr = 0.6745 \times \frac{1Zr^2}{\sqrt{n}} = 0.6745 \times \frac{1Z(0.9803)^2}{\sqrt{5}}$$

$$= 0.01176$$

$$6PEr = 6 \times 0.01176 = 0.0706$$

Appendix -25

Calculation of mean t -value Cash and Bank percentage of total current assets

SCBNL			HBL		
CB(x)	x=x - $\bar{X}$	(x- $\bar{X}$)^2	CB (y)	y= y- $\bar{Y}$	(y- $\bar{Y}$)^2
18.05	3.59	12.888	12.81	1.734	.007
15.45	0.99	0.9801	11.51	0.434	0.1883
12.68	-1.78	3.1684	11.76	0.684	0.4678
13.30	-1.16	1.3456	12.58	1.504	2.2620
12.80	-1.66	2.7556	6.72	4.356	18.9747
x=72.28		(x- $\bar{X}$)^2 =21.1377	y=55.38		(y- $\bar{Y}$)^2 = 24.898

$$\bar{X} = \frac{x}{N} = \frac{72.28}{5} \qquad \bar{Y} = \frac{Y}{N} = \frac{55.38}{5}$$

$$= 14.46 \qquad = 11.076$$

$$s^2 = \frac{(x - \bar{x})^2 + (y - \bar{y})^2}{N_1 + N_2 - 2} = \frac{21.1377 + 24.898}{5 + 5 - 2}$$

$$= 5.75$$

Test Statistic,

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}} = \frac{14.46 - 11.076}{\sqrt{5.75\left(\frac{1}{5} + \frac{1}{5}\right)}} = \frac{3.384}{1.5166}$$

t cal = 2.23

Appendix -26

Calculation of mean t value Loan & advance percentage of total current assets

SCBNL			HBL		
LA(x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	LA(y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
27.28	-8.27	68.929	64.62	1.74	.0276
37.34	1.79	.2041	58.26	-4.62	21.344
34.82	-0.73	0.5329	63.24	0.6	0.1296
36.95	1.4	1.96	61.66	3.74	13.9876
41.35	5.8	33.64	66.62	3.74	13.9876
x=177.74		(x- $\overline{X}$)^2 =107.73	y=314.4		(y- $\overline{Y}$)^2 = 39.9772

$$\overline{X} = \frac{x}{N} = \frac{177.74}{5} \qquad \overline{Y} = \frac{Y}{N} = \frac{314.4}{5}$$

$$= 35.55 \qquad = 62.88$$

$$s^2 = \frac{(x - \bar{x})^2 + (y - \bar{y})^2}{N_1 + N_2 - 2} = \frac{107.73 + 39.9772}{5 + 5 - 2}$$

$$= 18.46$$

Test Statistic,

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}} = \frac{35.55 - 62.88}{\sqrt{18.46\left(\frac{1}{5} + \frac{1}{5}\right)}} = \frac{-27.33}{2.7173}$$

t cal = -10.06

\t\ = 10.06

Appendix -27

Calculation of mean t value Government securities Percentage of total current assets

SCBNL			HBL		
Gs(x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	Gs (y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
33.84	3.83	14.6229	18.55	-4.316	18.6278
33.03	3.014	9.0841	25.65	2.784	7.7506
33.68	3.664	13.4248	22.22	-0.646	0.4173
25.00	-5.016	25.1602	23.42	0.554	0.3069
24.53	-5.486	30.0961	24.49	1.624	2.6373
x=150.08		(x- $\overline{X}$)^2 =92.388	y=114.33		(y- $\overline{Y}$)^2 = 29.739

$\overline{X} = \frac{x}{N} = \frac{150.08}{5}$ $\overline{Y} = \frac{Y}{N} = \frac{114.33}{5}$

$= 30.016$ $= 22.866$

$s^2 = \frac{(x - \bar{x})^2 + (y - \bar{y})^2}{N_1 + N_2 - 2} = \frac{92.388 + 29.739}{5 + 5 - 2}$

$= 15.266$

Test Statistic

$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2(\frac{1}{N_1} + \frac{1}{N_2})}} = \frac{30.016 - 22.866}{\sqrt{15.266(\frac{1}{5} + \frac{1}{5})}} = \frac{7.15}{2.4711}$

t cal = 2.893

Appendix -28

Calculation of Mean t value Miscellaneous Current Assets Percentage of total current assets

SCBNL			HBL		
MCA(x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	MCA (y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
20.83	0.85	0.7225	4.02	0.842	0.7089
14.18	-5.8	33.64	4.58	1.402	1.9656
18.82	-1.16	1.3456	2.78	-0.398	0.1584
24.75	4.77	22.7529	2.34	-0.838	0.7022
21.32	1.34	1.7956	2.17	-1.008	1.0160
x=99.9		(x- $\overline{X}$)^2 =60.2565	y=15.89		(y- $\overline{Y}$)^2 = 4.5511

$$\overline{X} = \frac{x}{N} = \frac{99.9}{5} \qquad \overline{Y} = \frac{Y}{N} = \frac{15.89}{5}$$

$$= 19.98 \qquad = 3.178$$

$$s^2 = \frac{(x - \overline{x})^2 + (y - \overline{y})^2}{N_1 + N_2 - 2} = \frac{60.2565 + 4.5511}{5 + 5 - 2}$$

$$= 8.1009$$

Test Statistic,

$$t = \frac{\overline{x} - \overline{y}}{\sqrt{s^2\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}} = \frac{19.98 - 3.178}{\sqrt{8.1009\left(\frac{1}{5} + \frac{1}{5}\right)}} = \frac{16.802}{1.800}$$

t cal = 9.33

Appendix -29

Calculation of mean t value current Ratio

SCBNL			HBL		
CR(x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	CR (y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
1.14	0.04	0.0016	1.01	-0.088	0.00774
1.16	-0.02	0.0004	1.06	-0.038	0.00144
1.18	0	0	1.10	0.002	0.000004
1.22	0.04	0.0016	1.21	0.112	0.012544
1.20	0.02	0.0004	1.11	0.012	0.000144
x=5.9		(x- $\overline{X}$)^2 =0.004	y=5.49		(y- $\overline{Y}$)^2 = 0.021872

$$\overline{X} = \frac{x}{N} = \frac{5.9}{5} \qquad \overline{Y} = \frac{Y}{N} = \frac{5.49}{5}$$

$$= 1.18 \qquad = 1.098$$

$$s^2 = \frac{(x - \bar{x})^2 + (y - \bar{y})^2}{N_1 + N_2 - 2} = \frac{0.004 + 0.021872}{5 + 5 - 2}$$

$$= 0.003234$$

Test Statistic,

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}} = \frac{1.18 - 1.098}{\sqrt{0.003234\left(\frac{1}{5} + \frac{1}{5}\right)}} = \frac{0.082}{0.0359666}$$

t cal = 2.28

Appendix -30

Calculation of mean t value Quick Ratio

SCBNL			HBL		
QR(x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	QR (y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
0.59	0.066	0.004356	0.32	-0.052	0.002704
0.56	0.036	0.001296	0.39	0.018	0.000324
0.55	0.026	0.000676	0.37	-0.002	0.000004
0.47	-0.054	0.002916	0.43	0.058	0.003364
0.45	-0.074	0.005476	0.35	-0.022	0.000484
x=2.62		(x- $\overline{X}$)^2 =0.01472	y=1.86		(y- $\overline{Y}$)^2 = 0.00688

$\overline{X} = \frac{x}{N} = \frac{2.62}{5}$ $\overline{Y} = \frac{Y}{N} = \frac{1.86}{5}$

$= 0.524$ $= 0.372$

$s^2 = \frac{(x - \overline{x})^2 + (y - \overline{y})^2}{N_1 + N_2 - 2} = \frac{0.01472 + 0.00688}{5 + 5 - 2}$

$= 0.0027$

Test Statistic,

$t = \frac{\overline{x} - \overline{y}}{\sqrt{s^2(\frac{1}{N_1} + \frac{1}{N_2})}} = \frac{0.524 - 0.372}{\sqrt{0.0027(\frac{1}{5} + \frac{1}{5})}} = \frac{0.152}{0.03286}$

t cal = 4.62

Appendix -31

Calculation of mean t value Cash and bank balance to deposit ratio (CBDR, Excluding fixed deposit)

SCBNL			HBL		
CBDR(x)	x=x - $\bar{X}$	(x- $\bar{X}$)^2	CBDR (y)	y= y- $\bar{Y}$	(y- $\bar{Y}$)^2
0.21	0.04	0.0016	0.14	0.01	0.0001
0.19	0.02	0.0004	0.13	0	0
0.11	-0.06	0.0036	0.14	0.01	0.0001
0.18	0.01	0.0001	0.16	0.03	0.0009
0.16	-0.01	0.0001	0.08	-0.05	0.0025
x=0.85		(x- $\bar{X}$)^2 =0.0058	y=0.65		(y- $\bar{Y}$)^2 = 0.0036

$\bar{X} = \frac{x}{N} = \frac{0.58}{5}$ $\bar{Y} = \frac{Y}{N} = \frac{0.65}{5}$

$= 0.17$ $= 0.13$

$s^2 = \frac{(x - \bar{x})^2 + (y - \bar{y})^2}{N_1 + N_2 - 2} = \frac{0.0058 + 0.0036}{5 + 5 - 2}$

$= 0.001175$

Test Statistic,

$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2(\frac{1}{N_1} + \frac{1}{N_2})}} = \frac{0.17 - 0.13}{\sqrt{0.001175(\frac{1}{5} + \frac{1}{5})}} = \frac{0.04}{0.02168}$

t cal = 1.85

Appendix -32

Calculation of mean t value fixed deposit to total deposit ratio (FDTDR),

SCBNL			HBL		
FDTDR (x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	FDTDR (y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
0.07	-0.024	0.000576	0.21	-0.0244	0.000595
0.07	-0.024	0.000576	0.25	0.0150	0.000243
0.09	-0.004	0.000016	0.24	0.0056	0.00003136
0.13	0.036	0.001296	0.27	0.0356	0.001267
0.11	0.016	0.000256	0.202	-0.0324	0.001049
x=0.47		(x- $\overline{X}$)^2 =0.00272	y=1.172		(y- $\overline{Y}$)^2 = 0.003187

$\overline{X} = \frac{x}{N} = \frac{0.47}{5}$ $\overline{Y} = \frac{Y}{N} = \frac{1.172}{5}$

$= 0.094$ $= 0.2344$

$s^2 = \frac{(x - \bar{x})^2 + (y - \bar{y})^2}{N_1 + N_2 - 2} = \frac{0.00272 + 0.003187}{5 + 5 - 2}$

$= 0.0007$

Test Statistic,

$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2(\frac{1}{N_1} + \frac{1}{N_2})}} = \frac{0.094 - 0.2344}{\sqrt{0.0007(\frac{1}{5} + \frac{1}{5})}} = \frac{-0.1404}{0.0172} = -8.163$

t cal = -8.163

\t\ = 8.163

Appendix -33

Calculation of mean t value saving deposit to total deposit ratio (SDTDR),

SCBNL			HBL		
SDTDR (x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	SDTDR (y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
0.60	-0.0240	0.0006	0.53	-0.004	0.000016
0.67	0.0460	0.0021	0.51	-0.024	0.000576
0.63	0.0060	0.000036	0.55	0.016	0.000256
0.62	-0.004	0.000016	0.52	-0.014	0.000196
0.60	-0.0244	0.000595	0.56	0.026	0.000676
x=3.12		(x- $\overline{X}$)^2 =0.003347	y=2.67		(y- $\overline{Y}$)^2 = 0.00172

$\overline{X} = \frac{x}{N} = \frac{3.12}{5} = 0.624$ $\quad \overline{Y} = \frac{Y}{N} = \frac{2.67}{5} = 0.534$

$s^2 = \frac{(x - \overline{x})^2 + (y - \overline{y})^2}{N_1 + N_2 - 2} = \frac{0.003347 + 0.00172}{5 + 5 - 2}$

$= 0.000633$

Test Statistic,

$t = \frac{\overline{x} - \overline{y}}{\sqrt{s^2(\frac{1}{N_1} + \frac{1}{N_2})}} = \frac{0.624 - 0.534}{\sqrt{0.00633(\frac{1}{5} + \frac{1}{5})}} = \frac{0.09}{0.01592}$

t cal = 5.65

Appendix -34

Calculation of t-value

Interest Earned to total Assets Ratio (ITEAR)

SCBNL			HBL		
ITEAR(x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	ITEAR(Y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
0.04	-0.0076	0.000058	0.05	-0.0028	0.00000784
0.05	0.0024	0.000005	0.05	-0.0028	0.00000784
0.05	0.0024	0.000005	0.06	0.0072	0.00005184
0.05	0.0024	0.000005	0.05	-0.0028	0.00000784
0.048	0.0004	0.00000016	0.054	0.0012	0.00000144
∑x = 0.238		∑(x - $\overline{X}$)^2= 0.00007525	∑y = 0.264		∑(y- $\overline{Y}$)^2 = 0.0000768

$$\overline{X} = \frac{x}{N} = \frac{0.238}{5} \qquad \overline{Y} = \frac{Y}{N} = \frac{0.264}{5}$$

$$= 0.0476 \qquad = 0.0528$$

$$s^2 = \frac{(x - \overline{x})^2 + (y - \overline{y})^2}{N_1 + N_2 - 2} = \frac{0.00007525 + 0.0000768}{5 + 5 - 2}$$

$$= 0.0000190$$

Test Statistic,

$$t = \frac{\overline{x} - \overline{y}}{\sqrt{s^2(\frac{1}{N_1} + \frac{1}{N_2})}} = \frac{0.0476 - 0.0528}{\sqrt{0.0000190(\frac{1}{5} + \frac{1}{5})}} = \frac{-0.0052}{0.002757}$$

t cal = -1.89

\t\ = 1.89

Appendix-35

Calculation of t-Value

Net profit to total Assets Ratio(NPTAR)

SCBNL			HBL		
NPTAR (x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	NPTAR (Y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
0.02	-0.002	0.000004	0.01	0.004	0.000016
0.02	-0.002	0.000004	0.01	0.004	0.000016
0.03	0.008	0.000064	0.02	0.006	0.000036
0.02	-0.002	0.000004	0.01	0.004	0.000016
0.02	-0.002	0.000004	0.02	0.006	0.000036
∑x =0.11		∑(x - $\overline{X}$)^2 =0.00008	∑y =0.07		∑(y- $\overline{Y}$)^2 =0.00012

$$\overline{X} = \frac{x}{N} = \frac{0.11}{5} \qquad \overline{Y} = \frac{Y}{N} = \frac{0.07}{5}$$

$$= 0.022 \qquad = 0.014$$

$$s^2 = \frac{(x - \bar{x})^2 + (y - \bar{y})^2}{N_1 + N_2 - 2} = \frac{0.00008 + 0.00012}{5 + 5 - 2}$$

$$= 0.000024$$

Test Statistic,

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}} = \frac{0.022 - 0.014}{\sqrt{0.000024\left(\frac{1}{5} + \frac{1}{5}\right)}} = \frac{0.008}{0.003098}$$

t cal = 2.58

Appendix-36

Calculation of t-value

Net profit to total Deposit Ratio (NPTDR)

SCBNL			HBL		
(NPTDR) (x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	NPTDR) (Y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
0.03	0	0	0.01	-0.006	0.000036
0.03	0	0	0.01	-0.006	0.000036
0.03	0	0	0.02	0.004	0.000016
0.03	0	0	0.02	0.004	0.000016
0.03	0	0	0.02	0.004	0.000016
∑x =0.15		∑(x - $\overline{X}$)^2 = 0	∑y =0.08		∑(y- $\overline{Y}$)^2 = 0.00012

$\overline{X}$ = $\frac{x}{N}$ = $\frac{0.15}{5}$ $\overline{Y}$ = $\frac{Y}{N}$ = $\frac{0.08}{5}$

= 0.03 = 0.016

s^2 = $\frac{(x - \overline{x})^2 + (y - \overline{y})^2}{N_1 + N_2 - 2}$ = $\frac{0.00012}{5 + 5 - 2}$

= 0.000015

Test Statistic,

t = $\frac{\overline{x} - \overline{y}}{\sqrt{s^2(\frac{1}{N_1} + \frac{1}{N_2})}}$ = $\frac{0.03 - 0.016}{\sqrt{0.000015(\frac{1}{5} + \frac{1}{5})}}$ = $\frac{0.014}{0.00245}$

t cal = 5.71

Appendix-37

Calculation of t-Value

Cost of Services to total Assets Ratio(CSTAR)

SCBNL			HBL		
CSTAR (x)	x=x - $\overline{X}$	(x- $\overline{X}$)^2	CSTAR (Y)	y= y- $\overline{Y}$	(y- $\overline{Y}$)^2
0.02	0	0	0.03	0	0
0.02	0	0	0.03	0	0
0.02	0	0	0.03	0	0
0.02	0	0	0.03	0	0
0.02	0	0	0.03	0	0
∑x =0.1		∑(x - $\overline{X}$)^2 = 0	∑y =0.15		∑(y- $\overline{Y}$)^2 = 0

$\overline{X}$ = $\frac{x}{N}$ = $\frac{0.1}{5}$ = 0.02

$\overline{Y}$ = $\frac{Y}{N}$ = $\frac{0.15}{5}$ = 0.03

s^2 = $\frac{(x \text{ Z} \overline{x})^2 \text{ Γ } (y \text{ Z} \overline{y})^2}{N_1 \text{ Γ } N_2 \text{ Z} 2}$ = $\frac{0}{8}$

= 0

Test Statistic,

t = $\frac{\overline{x} \text{ Z} \overline{y}}{\sqrt{s^2(\frac{1}{N_1} \text{ Γ } \frac{1}{N_2})}}$ = $\frac{0.02 \text{ Z} 0.03}{\sqrt{0(\frac{1}{5} \text{ Γ } \frac{1}{5})}}$ = $\frac{\text{Z} 0.01}{0}$

t cal = -0.0-1

\t\ = 0.0-1