Cash & Liquidity Management of Commercial Banks in Nepal

(Comperative Study of Nepal Investment Bank Ltd. & Siddhartha Bank Ltd.)

Submitted By:
Madhusudhan Chaulagai
Campus Roll No : 1543/061
T.U. Regd No. 7-3-39-439-2004
Central Department of Management
Shankar Dev Campus
Putalisadak, Kathmandu.

A Thesis Submitted to
Office of The Dean
Faculty of Management,
Tribhuvan University

In Partial fulfillment of the requirements for the
Degree of Masters in Business Studies (M.B.S)

Kathmandu, Nepal
November, 2009

RECOMMENDATION

This is certify that the thesis

Submitted by
Madhusudhan Chaulagai

Entitled

Cash & Liquidity Management of Commercial Banks in Nepal

(Comperative Study of Nepal Investment Bank Ltd. & Siddhartha Bank Ltd.)

has been prepared as approved by this department in the prescribed format of the Faculty of Management. This is forwarded for examination.

……	……..……	.....….....……..
Shree Bhadra Neupane	Prof. Bisheshwor Man Shrestha	Prof. Dr. Kamal Deep Dhakal
Thesis Supervisor	(Head, Research Department)	(Campus Chief)

Date:_____

VIVA-VOCE SHEET

We have conducted the viva-voce of the thesis

Submitted by
Madhusudhan Chaulagai

Entitled

Cash & Liquidity Management of Commercial Banks in Nepal

(Comperative Study of Nepal Investment Bank Ltd. & Siddhartha Bank Ltd.)

and found the thesis to be the original work of the student and written in according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for the Degree of Master's in Business Studies (MBS)

Viva – Voce Committee:

Head, Research Department: _____

Member (Thesis Supervisor): _____

Member (External Expert): _____

Date: _____

DECLARATION

I hereby declare that the work reported in this thesis entitled "***Cash & Liquidity Management of Commercial Banks in Nepal*** ***(Comperative Study of Nepal Investment Bank Ltd. & Siddhartha Bank Ltd.)*** "submitted to Shankar Dev Campus, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirements of the Master's Degree of Business Study under the supervision of Shree Bhadra Neupane.

Date: 2066/5/30

____

Madhusudhan Chaulagai
T.U. Regd No. 7-3-39-439-2004

ACKNOWLEDGEMENT

Anyone doing a research study of this kind in this level, needs a lot of help and support. I would like to thank those people who contributed to the creation of this thesis report professionally and individually.

I would like to express my deep gratitude and thanks to my thesis supervisor Mr. Shree Bhadra Neupane, for his valuable guidance and supervision while preparing this thesis. I am thankful to Head of Research Department, Shankar Dev Campus for providing necessary ideas. I like to express my gratitude to Mr. Shalik Ram Dahal, who directly and indirectly helped me for the preparation of this thesis. A lot of thanks go to Mr. Jhapendra Raj Kharel, who kindly helped me to collect materials and generating ideas in research writing. I would like to thank all the staffs of Siddhartha Bank Limited, Head Office and Nepal Investment Bank Limited, Head Office, who kindly helped me to collect information related to them. I would like to thank to the Library Staffs of Shankar Dev Campus. I am very grateful to all professors, lecturers and staffs of Shankar Dev Campus.

I am especially grateful to my father Mr. Badri Prasad Chaulagai and Mother Mrs. Durga Devi Chaulagai for their moral support in the preparation of thesis. I am grateful to the respondents of the field survey.

Finally I want to thank all my friends, relatives and well wishers who have directly or indirectly contributed in the preparation of this thesis.

Madhusudhan Chaulagai

Table of Content

Content **Page No**

Chapter-III

RESEARCH METHODOLOGY

Chapter IV

DATA PRESENTATION AND ANALYSIS

List of Tables

List of Figures

ABBREVIATIONS

CRR	Cash Reserve Ratio
C.V.	Coefficient of Variation
DDC	District Development Charge
EBIT	Earning Before Interest Tax
Etc	Etcetera
F.Y	Fiscal Year
i.e	That is
Ltd.	Limited
MBA	Masters in Business Administration
MBS	Masters in Business Studies
NBL	Nepal Bank Limited
NIBL	Nepal Investment Bank Limited
NRB	Nepal Rastra Bank
NTC	Nepal Telecom
P.E	Probable Error
PEs	Public Enterprises
ROA	Return on Assets
SBL	Siddhartha Bank Limited
S.D.	Standard Deviation
SWOT	Strength, Weakness, Opportunity and Threat
T.U.	Tribhuvan University
US$	United States Dollar
VAT	Value Added Tax

CHAPTER – I
INTRODUCTION

1.1 Background of the Study

Financial institution can be considered as the catalyst of the economic growth of the country. The development process of a country involves the mobilization and development of resources. There is range of banking institutions performing different functions. Among the banks, development banks play vital role for the development of the country.

Nepal's economy is in the earlier stage of economic development where financial (Banking) sector need to play crucial role in order to accelerate this pace as these sector can accumulate scattered saving for capital formulation. Developing country such as Nepal aspires for a rapid economic growth, which required additional capital formation with the sufficient amount of investment. No one can deny the fact that a country requires favorable economic environment to achieve economic development. Financial institution plays vital role to support the country's economic development.

Banking system has evolved itself as an integral part of trade, commerce and industry. At present, no banker can survive for long run without appropriate footing of economy and no economy can operate without proper application of banking system in state. Although the business of banking is as old as authentic history, banking institutions have few simple operations up to the satisfaction of individual wants.

Liquidity is a word that can be taken as to perform the life cycle system of finance companies' activities in a perfect manner. It can overall define the securities management of the cash balance in a systematic away. In this regard, the term liquidity management is used to describe money & assets that are readily, convertible into money with a very short span of time. Liquidity measures the current financial position of the company. It's the capacity of the paying money at the time of necessity. Those assets and liabilities, which can be charged in cash immediately, are known as liquidity. The example of liquid assets is cash, marketable securities, short term loans, bills receivables, deposits.

Now there are 26 commercial banks, 57 development banks, and 76 financial companies, many other non-banking financial institutions like citizen investment trust, employee provident fund etc and financial co-operatives in the country.

Liquidity is the most important element to the banks and financial institutions. It has both positive and negative impacts. If there is more liquidity, it loses the opportunity of investment and profit. On the other hand if it keeps less liquidity, then it will loses the goodwill and believe from the customers. So a bank must manage its liquidity properly and efficiently.

Managing the optimum level of liquidity to operate smoothly with sound health in present as well as future is known as Liquidity Management. "The term liquid asset is used to describe money and assets that are readily convertible into money. Different assets may be said to exhibit different degrees of liquidity. Money itself is, by definition, the most liquid assets; other assets have varying degree of liquidity, depending upon which they can be turned into cash." *(James; 2000:359)*

Cash balance is perfectly liquid asset. To hold it in large quantity is not thought good. High cash balance increases the cost. Therefore, any organization doesn't want to hold cash more than it needs. But it is difficult to know what proportion of cash the organization should hold. However, any organization makes cash holding policy and exercises to keep cash as less as it can.

There are so many factors that affect banks' liquidity. These factors are broadly categorized into two. i.e. external environmental factors and internal factors. External factors are such factors they are out of control of the concerned banks or financial institutions. Current Interest Rate, Saving and investment situation, growth and scheming position of the financial market etc are external factors where as internal factors are within the boundary of such institutions. Lending policy of the bank, management capacity, strategic planning and funds flow situation etc are the internal factors.

1.2 Focus of the Study

The concept of financial institutions in Nepal was introduces when first commercial bank, the Nepal Bank Limited (NBL) was established in 30th kartik, 1994 B.S as a semi-

government organization. Bank is a business organization where monetary transaction occurs. It creates fund from its clients saving and lends the same to needy person of business companies in term of loans, advances and investment. So proper financial decision making is more important in banking transaction for its efficiency and profitability.

Most of the financial decisions of a bank are concerned with current assets and current liabilities, so this study is a reference regarding the cash and liquidity position of Nepal Investment Bank Ltd. (NIBL) and Siddhartha Bank Ltd. (SBL).

1.3 Statement of Problem

The management of cash and liquidity is synonymous to the management of working capital. It has been regarded as one of conditioning factor in the decision-making issues. It is very essential to analyze and find out problems and its solutions to make efficient use of funds for minimizing the risks to attain profit objectives.

This study is concentrated to compare various accounting ratios of SBL and NIBL. Cash is the most important current assets for the operation of the business firm, which includes coins, currency and cheques, held by the firm. The adequate level of cash is the secret of success of the every business organization. It is told that commercial banks are not performing well in our country. They have bad-loan flow and banks are going to be bankruptcy. They are not expanding their operation all over the country. Though there are 26 commercial banks, 58 development banks, 78 financial companies and numbers of co-operatives established in Nepal, 70 % people are far from banking service till now. The contradiction between these facts is strongly related with banks' liquidity position.

So, this research paper is expected to seek the answer of following questions.

1. Whether the bank allocates the cash efficiency in bank operation or not?
2. To what extent is it to predict liquidity?
3. Do these banks have given a minimum level of satisfaction to its stakeholders?
4. What is the impact of liquidity on banking transactions?
5. Whether the financial performance of these banks are sound or not?
6. How they are operating in rural areas?

1.4 Objective of the study

The prime objective of this study is to comparatively examine and analysis the liquidity position and cash management practices of SBL and NIBL i.e. management of individual current assets like cash and bank balance. However to drag out finding regarding the objective, this study specifically aimed as follows.

1. To examine and critically analyze the cash management practices of SBL and NIBL.
2. To know the various ratios NIBL and SBL
3. To study solvency & profitability position of NIBL and SBL.

1.5 Significance of the study

This study entitled **"Cash and Liquidity Management of Commercial Banks in Nepal"** is focused on the liquidity management in general and cash management in particular. This study aimed to find out the financial position of selected banks in relation to ratio analysis. So the study might be helpful for the management of the concerned bank as well as it might be valuable for the researcher, scholars, employees, stakeholder and student who want to study into the liquidity management of NIBL and SBL

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

a. Its significance to shareholders

The study might be helpful to aware the shareholders regarding its liquidity profitability of their banks. The comparison will help them to identify the productivity of their funds in each of these two banks.

b. Its significance to the management

The study might be helpful to go deep into the matter as to why the liquidity management of their banks is better than their outsiders.

c. Its significance to the outsiders

Among outsiders, mainly the customers, financing agencies, stock exchange, students and stock trader are interested in the performance of the banks and customers can identify to which bank they should go.

d. Its significance to the policy makers

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

1.6 Limitation of the study

The study has been conducted with certain limitations and constrains. The main limitations are as follows.

1) This study has focused only two banks NIBL and SBL
2) The study is mainly based on secondary data. It is done mostly on the basis of the published financial document, like balance sheet, profit and loss account and other related journals, magazines and books etc.
3) The study follows with specific tools such as ratio analysis, mean, correlation, hypothesis etc.
4) The study has covered only 6 years data from FY 2002/03 to 2008/09.
5) The ratios were analyzed based on previous year's financial statement of the selected banks.

1.7 Organization of the study

Considering the objectives in mind, the study has been organized into the following five chapters.

Chapter I: Introduction

This chapter includes background information on the subject matter, focus of the study, profile of sample banks, statement of the problems, objectives of the study, significance of the study, limitation of the study and organization of the study.

Chapter II: Review of Literature

This chapter includes the relevant previous writing and studies to find the existing gap; review of textbook, dissertation thesis has been included in this chapter.

Chapter III: Research Methodology

This chapter contains research design, population and sample size, data collection procedure and tools used for analysis.

Chapter IV: Data Presentation and Analysis

This chapter consists of systematic presentation and analysis of financial statement employing financial and statistical tools. It also includes major findings.

Chapter V: Summary, Conclusion and Recommendations

This chapter includes the summary, conclusion and recommendations of the study.

CHAPTER II
REVIEW OF LITERATURE

2.1 Conceptual Framework

2.1.1 Meaning of Liquidity Management

Liquidity Management is having cash when needed. For bank, liquidity means having sufficient funds to meet regulator, contractual and relationship obligations when required and at a reasonable cost to the bank. "Liquidity needs of commercial banks are unique because in no other types of business there will be such a large proportions of deposits payable on demand. In other organizations too liquidity is required for various purposes. Inadequate liquidity does damage credit standing of those organizations but if banks fail to repay the deposits on demand, the bank loses the trust of the public. So, liquidity is the lifeline of the bank. In this regard, the term liquidity management is used to describe money and assets that are readily convertible into money within very short span of time." *(Shrestha; Unpublished Thesis; 2007:11)*

"Liquidity is the availability of cash in the amount and at the time needed at a reasonable cost" *(Rose; 2002:345)*

"Liquidity refers to bank's capacity to pay off the liabilities in all those currencies. Maintaining excess liquidity in one currency while demand is for other currencies is not effective liquidity management because the liability in the demanded currency can not be met." *(Dahal and Dahal; 2002:95)*

"Liquidity management is the part of risk management framework of the financial services industry, which concerns all financial institutions whether they are commercial banks or development banks or finance companies or other financial institutions." *(Shrestha; 2061 BS: 16)*

2.1.2 Strategy for Liquidity Management

There are three major strategies for liquidity management. They are Asset Liquidity Management Strategy, Borrowed Liquidity (Liability) Management Strategy and Balanced (Asset and Liability) Liquidity Management Strategy.

2.1.2.1 Asset Liquidity Management Strategy

The oldest approach to meeting bank liquidity needs is known as asset liquidity management. In its purest form, this strategy calls for storing liquidity in the form of holding of liquid assets, predominantly in cash and marketable securities. When liquidity is needed, selected assets are sold for cash until the entire bank's demand for cash are met.
This strategy is used mainly by smaller banks that find it a less risky approach to liquidity management than relying on the borrowings. But asset conversion is not a cost-less approach to liquidity management. First, selling assets means the bank losses the future earnings those assets would have generated had they not been sold off. Thus, there is an opportunity cost to storing liquidity in assets when those assets must be sold. Most assets sales also involve transaction costs paid to security brokers. Moreover, the assets in question may need to be sold in a market experiencing declining prices, subjecting the bank to the risk of substation capital losses. Management must take care that those assets with the least profit potential are sold first in order to minimize the opportunity cost of future earnings foregone. Selling assets to raise liquidity also tends to weaken the appearance of the bank's balance sheet, because the assets sold are often low-risk government securities that give the impression the bank is financially strong. Finally, liquid assets generally carry the lowest rates of return.

2.1.2.2 Borrowed Liquidity (Liability) Management Strategy

This borrowed liquidity strategy often called purchased liquidity or liability management. Borrowing liquid funds has a number of advantages. A bank can choose to borrow only when it actually needs funds, unlike storing liquidity in assets where a storehouse of at least home liquid assets must be held at all times, lowering the bank to leave the volume

and composition of its assets portfolio unchanged if it is satisfied with the assets it currently holds. In contrast, selling assets to provide liquidity shrinks the size of a bank as its total assets holdings decline.

Borrowing liquidity is the most risky approach to solving bank liquidity problems but also has the highest expected return because of the volatility of money market interest rates and the rapidly with which the availability of credit can change. The bank's borrowing cost is always uncertain, which adds greater uncertainty to the bank's net earnings. The principal sources of borrowing liquidity for a bank include large negotiable CDs, federal funds borrowings, repurchase agreements.

2.1.2.3 Balanced (Asset and Liability) Liquidity Management Strategy

"Due to risks inherent in relying on borrowed liquidity and the costs of storing liquidity in assets, most banks compromise in choosing their liquidity management strategy and use both asset management and liability management. Under a balanced liquidity management strategy some of the expected demands for liquidity are stored in assets (principally holdings or marketable securities and deposits at other banks); while other anticipated liquidity needs are backstopped by advance arrangements for lines of credit from correspondent banks or other suppliers of funds." *(Rose; 2002:350-353)*

One of the major responsibilities of management is to plan; control and safe guard the resources of the enterprises. Two kind of resources flow from any business they are cash and non-cash assets. This chapter focuses on the cash planning and control; cash inflows (i.e. cash received) and cash outflows (i.e. payment of cash). The planning and controlling of cash inflows, cash outflows and the related financing decision is important in all enterprises. The cash budgeting is an effective way to plan and control the cash flows and effectively use excess cash.

"For the Commercial bank, sufficient liquid assets should be maintained to meet day to day needs of customers as well as overcome the withdrawal vulnerability of large deposits in the form of cash. At the same time, there are statutory reserve requirements of control bank compelling the development bank to maintain cash in

their vaults and account in order to protect them from liquidity brunch. Commercial bank has to maintain an appropriate cash balance to meet banking transactions and make payment for purchase taxes, operating expressing, dividends, interests etc. in usual course of business, hence the bank manages must be cash conscious."*(Shrestha; 2004:257)*

A primary objective is to plan the liquidity position of the company as a basis for determining future borrowing and future investments. For example, excess cash if not invested, incurs an opportunity cost that is loss of the interest that could be earned. The timing of cash flows can be controlled in many ways by management, such as increasing the effectiveness of credit and collection activities, making payment by time draft rater than cheque, and the last day of discount period batching payments and giving discount on cash sale. Many lending agencies require cash flows projections before granting loan. Cash management is important in all enterprises, whether large or small.

The focus of cash planning, time horizons in cash planning and central approach used to develop a cash budget, financial accounting approach to compute cash flows, central of the cash position, and technique for improving cash flows, planning and controlling cash in a non-manufacturing company.

2.1.3 Cash, Bank Balance and Near Cash Management

Cash is the oil that lubricates the wheels of business. Without adequate oil machines grind to a halt, and a business with inadequate cash will do the same. However carrying cash is expensive because cash is a non-earning asset. A firm that holds cash beyond its minimum requirement lowers its earning potential.

Cash is the most important liquid assets for the operation of the business house. It is the basic input needed to keep the business running in a continuous basis. The term cash includes coins, currency and cheque held by the firm and balances in its bank account. Sometimes near cash items, such as marketable securities or bank deposits are also included in cash.

The firm should keep sufficient cash, neither more nor less. Cash balances reduce the rate of return on equity and hence the value of the firm's stock. So, cash is maintained in optimum level, which maximizes the value of the firm.

Managing the cash is most challenging and important task of financial manager in any types of organization. Financial manager should maintain the ratio of cash inflows and outflows rationally for ensuring the smooth operation of the organization without any interruption. The financial manager has to determine how much cash is needed on hand at any time to ensure normal business operation.

Therefore, for its smooth running and maximum profitability, proper and effective cash management in business is of paramount importance. So, the management of current assets and current liabilities of the business is necessary for day-to-day operation. It is concerned with the decision regarding the short-term funds influencing overall profitability and risk involving in the firm. Management of cash has been regarding one of the important factors in the decision-making. Cash management is a professional highly refined activity.

2.1.4 Motive for Holding Cash

The bank holds cash for various motives, they are:

1. **Transaction Motives**

   The principal motive for holding cash is to conduct day-to-day operations. A cash balance is associated with routine payments and collections like: payments of purchases, labor, taxes, and dividends etc. likewise, in the course of daily business transactions, cash are generated from sales of goods or services, return on outside investment etc.

2. **Precautionary Motives**

   Cash held in reserve for random, unforeseen fluctuation in cash inflow and outflow. For example: flood, strike, inefficiency in collection of debtors, cancellation of order failure of important customers, sharp increase in cost of raw materials etc.

3. **Speculative Motives**

A cash balance that is held to enable the firm to purchase that might arise. For example: purchasing of raw material at a reduced price on payment of immediate cash falls, purchasing at favorable price.

4. Compensating Balance/Compensative Motives

The cash balance that a firm must have to maintain with a bank, to compensate that bank for services rendered or for granting a loan. Firm often maintains bank balance in excess of transactions needs as a means of compensating for the various services. These balance are called compensating balance bank provides various services to the firm like; payment of check information of credit, loan etc.

2.1.5 Techniques of Cash Management

1) Cash Budget

The cash budget shows the firm's projected cash inflows and outflows over some specified period. It is most significant device to plan and control cash receipt and payment. It provides much more detailed information concerning firm future cash flows. It is the most important tools for managing cash. It is useful in determining the timing of when cash will surplus and when it shortage. Plans can then, be made to borrow to cover shortages and to invest surpluses.

2) Cash Planning

"Cash panning can help anticipate future cash flows and needs of the firm and reduces the possibility of idle cash. Cash planning is a technique to plan and control the use of cash. The forecasts may be based on the present operation or anticipated future operation. Cash plan are very crucial in developing the overall operation plans of the firms. Cash planning may be done on daily,

weekly or monthly basis. It depends upon the size of the firm and philosophy of management." *(Pandey; 1992:843)*

3) Long-term Cash Forecasting

Long-term cash forecasting are prepared to give an idea of the company's financial requirement of distant future. Once a company has developed long term cash forecast, it can be used to evaluate the impact of new product development on the firm financials condition three, five or more years in future. The major uses of long-term cash forecast are company’s future financial needs, especially for its working capital requirement, to evaluate proposed capital projects and it helps to improve corporate planning. Long term cash forecasting not only reflects more accuracy the impact of any recent acquisitions but also foreshadow financing problems; these new additional may past for the company.

4) Short-term Cash Forecasting

There are two common methods of short-term cash forecasting which is mostly used, that are as follows:

a) Receipt and Disbursement Forecasting

The prime aim of receipt and disbursement forecasts is to summarize these flows during a predetermined period. In case of those companies where cash items of income and expenses involve flow of cash: this method is favored to keep a close control over cash.

b) Adjusted Net Income Method

This method of cash forecasting involves the tracing of working capital flows. Sometime, it is also called the sources and uses approach. Two objectives of this method are; to project the company's need for cash at some future data and to show whether the company can generate this money internally or not, how much give will either borrow or rise in the capital market.

2.1.6 Determining the Optimum Cash Balance

Out of total requirement how much to maintain in cash and how much in marketable securities is the crucial question, which needs the careful analysis of the behavior of cash inflows and outflows. Since the cash inflows and outflow may not synchronize all the time, the cash balance often fluctuates and as a result the balance could be some times more and sometimes less than necessary. It is therefore necessary to adopt a system to correct such fluctuations and maintain and optimal balance all the time.

Liquidity is the most sensible and crucial aspect of banks. The financial manager should have adequate knowledge of surrounding environment for proper management of cash and liquidity portion of a bank. S/he should also be foresighted and able predict future demand and supply of liquidity. Though the cash is most liquid assets, it is not thought good to hold large quantity of cash, because cash involves high cost. If firm maintains less cash balance more than it needs, the firm may loose many opportunities. But it is difficult to know how much cash should organization hold. However, any organization makes holding policy and exercise to keep cash as less as it can. The financial manger should determine the appropriate amounts of cash balance, a trade-off balance, and if not, its liquidity position becomes weak and it suffers from shortage of cash to make payment. But investing released funds in some profitable opportunities can attain a higher profitability. If the firm maintains a high level of cash balance it will have a sound liquidity position but forego the opportunity to earn interests. Thus, the firm should maintain an optimum cash balance. To find out the optimum cash balance the transaction costs should be matched with the opportunity costs. The figure shows this trade-off graphically.

Several models have been developed and being used by business firm to determine cash balance and ways to transfer fund from cash to marketable securities when the balance exceeds the requirement and from marketable securities to cash when the balance slides down below the minimum need. The models are:

2.1.6.1 Optimum Cash Balance under Certainty; Baumol's Model

In view of minimizing the opportunity cost of holding cash and maximizing the return on the available funds, the cash balance should be maintained at a minimum level and the fund which is not required for immediate use be invested in the marketable securities. Baumol model is one of the methods that can be used for this purpose. Baumol model is based on the assumption that;

1) The firm is able to forecasts its cash needs with certainty.
2) The firm's cash payment occurs uniformly over a period of firm.
3) The opportunity cost of holding cash is known and it does not change over time.
4) The firm will incur the same transaction cost whenever it converts securities to cash.

Under this Model Optional Cash Conversion size $C^* = \sqrt{\frac{2bt}{i}}$

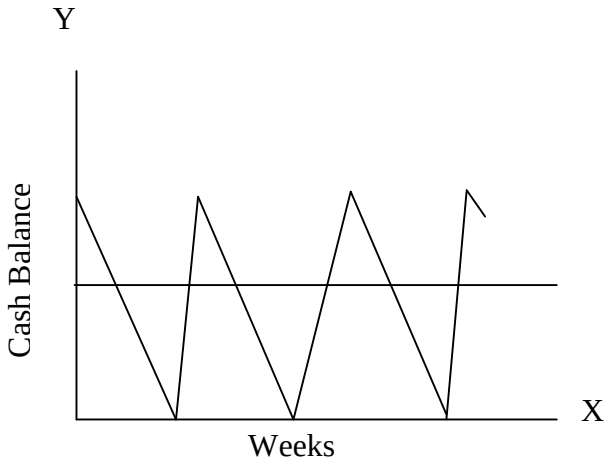
Where,

b = Fixed transaction cost per transaction
T = total cash need over the period

I = opportunity cost period

C^* = Optimal cash conversion size

Figure: 2.1
Baumol's Model for Cash Balance

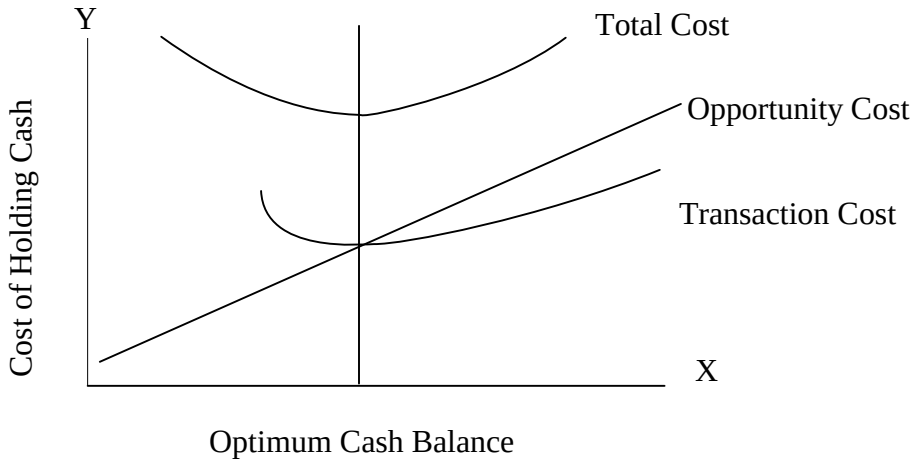


(Source: Kharel; 2008:26)

Given its assumption, the model prescribes an optimal size of cash balance and the optimal size of account of borrowing. What matter for a firm is the total of opportunity cost and the transaction cost? Therefore, the objective of this model is to minimize the total cost.

The figure below shows the relationship between the average size of cash balance and various costs associated with cash maintenance.

Figure: 2.2
Relationship between average size of cash balance & cash maintenance



(Source: Kharel; 2008:29)

2.1.6.2 Optimum Cash Balance under Uncertainty; the Miller – Orr Model

The limitation of the Baumol model is that it does not allow the cash flows to fluctuate. Firms in practice do not use their cash balance uniformly nor are they able to predict daily cash inflows and outflow. The Miller-Orr Model cash flow variation. (Miller et.al1966:413-435). It assumes that net cash flows are normally distributed with a zero value of mean and a standard deviation. As shown in figure below, the miller-Orr Model provides for two controls limits - the upper control limits - the upper control limit as well as lower control limit and return point. If the firm's cash flows fluctuate randomly and hit the upper limit, then it buys sufficient marketable securities to come back to a normal level of cash balance (the return point). Similarly, when the firm's cash flows wander and hit the lower limit, it sells sufficient marketable securities to bring the cash balance back to the normal level (the return point).

Under this model return point (Z) $= 3\sqrt{\frac{3b\pm^{2}}{4i}}$

Where,

b = Fixed transaction cost per transaction

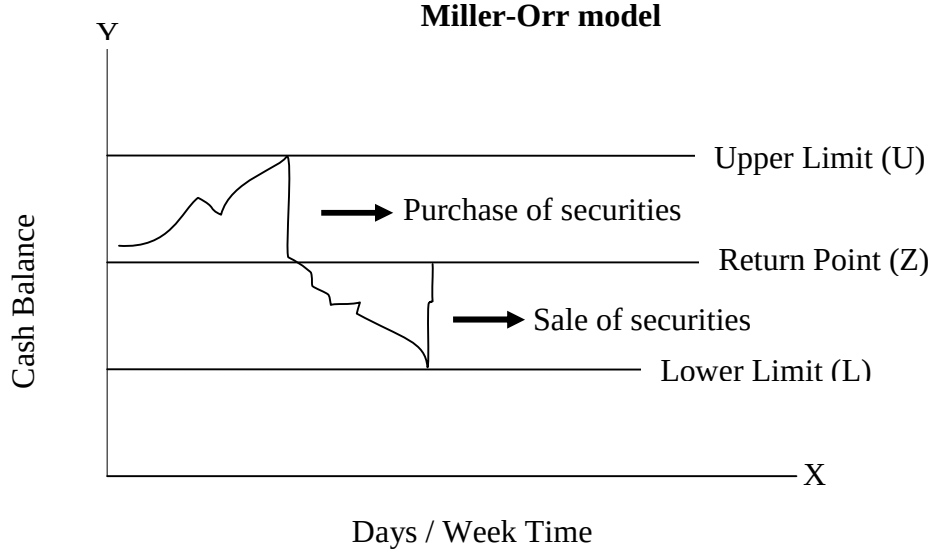
σ = Variance of daily weakly cash flow

I = Dally/weakly interest rate on marketable securities

Z = Collection return point

L = Minimum cash balance

Figure: 2.3
Miller-Orr model



(Source: Quarterly Journal of Economics, no.80, August 1966)

2.1.7 Factors Influencing Bank's Liquidity

a) External Environment Factors:

i) Prevailing interest rate of bank: if interest rate is high demand is low & liquidity need is low.

ii) Saving & investment situation: if income & saving scale of people is high, less liquidity. If investment in commercial field is high, high liquidity.

iii) Growth & scheming position of the financial market: if opposite, high liquidity.

b) Internal Factors:

i) Lending policy of bank: Great quantity for long-term investment needs high liquidity. If short-term loan policy, low liquidity.

ii) Management capacity: If management is efficient & ready to bear risk, low liquidity is needed.

iii) Strategic planning & funds flow situation: Liquidity depends upon planning & strategy. Current A/C needs high liquidity & payment for fixed deposit needs low liquidity.

Demand & supply of Bank Liquidity: Cash at bank and investment, which can be changed into cash immediately, is liquidity is maintained at bank by current saving & fixed deposit collection, specially, to grant loan and to pay Creditors & account holders demand. Generally, banks need liquidity for maintaining following goals.

i) Bank Liquidity for transaction motive
ii) Bank liquidity for security motive
iii) Speculative motive

From the book entitled "Financial Management" written by M. Khan and P.K. Jain, cash management is one of key areas of "working capital management". Apart from the fact that it is the most liquid current assets, can be reduced because the other major liquid assets i.e., receivable and inventory get eventually converted in cash. This underlines the significances of cash management.

For the cash management, Pokharel and Gautam (2061 BS), in their book "*Fundamental of Financial Management"* have given some conceptual ingredients. "Collection cash is accelerated by means of concentration banking, a lock box system and other specific pick plans. A firm can reduce its cash balance by adopting quicker mechanism of transferring fund. The optimal level of cash depends upon the predictability of future cash flows, their volatility, fixed cost of security transaction and the carrying cost of holding cash; that is interest rate foregone and marketable securities." *(Pokharel and Gautam; 2061 BS: 256)*

2.2 Review of Basel Committee

Risk Management Group of the Basel Committee on Banking Supervision in "Sound Practices for Managing Liquidity in Banking Organizations" attributed the Principles for the Assessment of Liquidity Management in Banking Organizations Developing a Structure for Managing Liquidity

Principle 1: Each bank should have an agreed strategy for the day-to-day management of liquidity. This strategy should be communicated throughout the organization.

Principle 2: A bank's board of directors should approve the strategy and significant policies related to the management of liquidity. The board should also ensure that senior management takes the steps necessary to monitor and control liquidity risk. The board should be informed regularly of the liquidity situation of the bank and immediately if there are any material changes in the bank's current or prospective liquidity position.

Principle 3: Each bank should have a management structure in place to execute effectively the liquidity strategy. This structure should include the ongoing involvement of members of senior management. Senior management must ensure that liquidity is effectively managed, and that appropriate policies and procedures are established to control and limit liquidity risk. Banks should set and regularly review limits on the size of their liquidity positions over particular time horizons.

Principle 4: A bank must have adequate information systems for measuring, monitoring, controlling and reporting liquidity risk. Reports should be provided on a timely basis to the bank's board of directors, senior management and other appropriate personnel. *(World Bank; 2000: 2)*

2.3 Review of Journals and Articles

In this section an attempt has been made to review some journals and articles of management, which deals with the management of cash.

Pradhan, (2004), in his article, "*Financial Management*" has given some theoretical insight into the cash management after the various studies on it. In the word of Pradhan "The cash management aims at reducing the amount of cash hold to the minimum necessary to conduit business". He has described the various aspect of cash management which are as follow; significance of cash management, motives for holding cash, function of cash management, advantage of adequate cash, cash forecasting and budgeting cash management techniques and the determinant of the

optimum cash balance. He told that any firm hold the cash with transaction motive, precautionary motive and speculative motive and the cash management techniques generally consist is of speculative motive and the cash management techniques generally consist is of accelerating collections, controlling disbursements and synchronizing cash flows. The technique that be used to speed up collection sere (a) concentration banking and (b) lock box system. Cash management techniques are generally concerned with accelerating collection and slowing down disbursements. Firms can reduce their cash by holding marketable securities, which can be sold on short notice at close to their quote price.

Shrestha (2061 BS) in his articles, *"The Efficiency of Liquidity Monitoring and Forecasting Framework the Nepal Rastra Bank in the Context of Liquidity Management in the Nepalese Banking and Financial System*" has explained that liquidity management is the part of risk management framework of financial services industry. He found taking high liquidity risk as well as high credit risk are two main factors that cause banks to fail. Although high liquidity risk alone is not likely to cause banks failures, a liquidity crisis usually signals a need for change. He concluded proper liquidity management ensures that banks and financial institutions' financial commitments and obligations are met. Maintaining adequate liquidity also helps in avoiding forced sale of assets. The need for bank liquidity stems from seasonal, cyclical trend and short-term irregular movements in deposits and loans. The different sources available to meet these liquidity needs were identified and grouped into asset and liability liquidity sources. The treasury manager must consider the purpose of the liquidity need, the length of time for which funds are needed, the access to liability markets, the cost and the characteristics of various liquidity sources and interest rate forecasts.

Shrestha (2061 BS) in his article *"Working Capital Management in Public Enterprises"* has studied the working capital management of ten selected public enterprises (PE's). He has especially focused on the liquidity, turnover and profitability position of those enterprises. In this analysis, it was found that four PE's

had failed to maintain desirable liquidity position. On the turnover side, two PE's had negative working capital turnover, four had adequate turnover, and one had higher turnover on net working capital. He has also found that out of ten PE's six were operating in losses while only four were getting some percentage of profit. With the reference of his findings, he has brought certain policy issues such as lack of suitable financial planning, negligence of working capital management, deviation between liquidity and turnover of assets and liability to show the positive relationship between turnover and return on net working capital. At end, he had made some suggestive measures to overcome from the above policy issues i.e. identification of needed funds, regular check of accounts, development of management information system, positive attitude towards risk and profit and determination right, combination of short termed and long term sources of funds to finance working capital.

Acharya (2000) in his article "*Doorsanchaar ko Bartaman Abastha ra Nirakaran"* has suggested utilizing NTC funds rather than accepting high interest bearing the loans for capital investment, since the rate of earning in liquid fund is less than the rate of interest it pays for loans. He has suggested utilizing its internal resources. He writes, it has become possible to maximize profit utilizing internal resources with minimum cost in other hand, liquidation position of the corporations is quite as it keeps capacity to pay off whole debt at once circumstances so required. Keeping in view, the increasing service, it can be expected that the further profitability trend will get improve further more in comparison to current trend provided the revenue structure from national and international service remain within a ascertain limit at unchanged tariff situation.

Acharya (2000) in his another article "*Problems and Implements in Management of Working Capital in Nepalese enterprises"* states two major problems –operational problems and organizational problems regarding the working capital management in Nepalese PE's have been described the operational problems, according to him, listed in the first part, are increased of current liability then current assets, not allowing the current ratio 2:1 and slow turnover of inventory. Similarly, change in working capital in relation to fixed capital had very low impact over the profitability, and then

transmutation of capital employed to sales, absence of management information system, break even analysis, funds flow analysis and ratio analysis were either undone or ineffective for performance evaluation. Finally the study points monitoring or the proper functioning of working capital management has never been considered a managerial jobs in the second part, Mr. Acharya has listed the organizational problems in the PE's .in most of the PE's there is a lock of regular internal and external audit system as well as evaluation of financial results. Similarly, while a very few PE's have been able to present their capital requirements, functioning of finance department is know satisfactory and some PE's are even facing the under utilization of capacity .to make and efficient use of funds for minimizing the risks of loss and to attend profit objectives, he has made some suggestions. For example, PE's should avoid the system of crisis decision which prevailed frequently in the operations, avoid fictitious holding of assets, the finance staff should be acquainted with the modern scientific tools used for the presentation and analysis the data Mr. Acharya has also suggested optimizing level of investment at appoint in time. Neither over nor under investment in working capital desired by the management of an enterprises because of these situation will erode the efficiency of the concern.

2.4 Review of NRB Directives

According to the Nepal Rastra Bank Directives No 5- Provision of reducing the risk on activities of commercial banks, NRB has classified the risk related to commercial banks transaction into four sectors:

- Liquid risk
- Interest rate risk
- Foreign exchange risk
- Risk related to loan and investment

Clause 1 Provision of reducing liquidity risk

1. Banks need to classify time interval on the basis of payments period and maturity period

- Assets and liabilities with maturity period from 0 - 90
- Assets and liabialities with maturity period from 91 - 180 days
- Assets and liabialities with maturity period from 180 - 270 days

- Assets and liabialities with maturity period from 271 - 365 days
- Assets and liabialities with maturity period from 1 year.

2. NRB has brought following directives for liquidity are as:

- 7% of current and savings deposits liabilities and 4.5% of fixed deposits liabilities should be balance at NRB.
- 2% of total deposits liabilities should be cash in vault.

3. Cash in vault shall include only the local currency and foreign currency except clearing cheques.

4. Liabilities with unfixed maturity period.

- Core capital from current deposit and compensating balances need to include in time interval above one year.
- Saving deposits should be taken as long-term liabilities.

2.5 Review of Related Thesis

Various studies have been done by MBA and MBS students in different aspects of banking such as financial performance, working capital management etc. studies and reviews on working capital management of other organization and their conclusion are very relevant to my study. Some reviewed previous theses are as follows.

KC, (2000), had done a comparative study entitled *"Comparative Study of Working Capital Management of Nepal Bank Limited and Nepal Arab Bank Ltd"*. The major findings of his study were: The major components of current assets in NBL and NABIL are cash, bank balance, loan advances and government securities. Out of the major three currents assets components, cash and bank balance holds the smallest portion in NBL. In 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 ration, and cash and bank balance to current margin and other deposit ration of NBL and NABIL are decreasing. The liquidity position of NBL was always better than NABIL.

Thapa (2002) has conducted his study on *"Cash and Liquidity Management Practices Before and After Financial Sector Reform Programme in Nepal Bank Ltd."* The objective of the study was comparatively examined and analysis the liquidity position and cash management practices in Nepal Bank Ltd. Before and after financial sector reform programme on liquidity position of the bank. It was found that average cash and bank balance and loan and advances percentages is higher in NBL before FSRP than after FSRP, fixed deposit to total deposit ratio of NBL before and after FSRP is always decreasing trend and the turnover ratios of NBL before FSRP have decreasing trend.

Dangi (2002) conducted his thesis entitled *"A Comparative Study of Financial Performance of Standard Chartered Bank Nepal Limited, NABIL Bank Limited and Himalayan Bank Limited."* His objective was to evaluate the financial position and to analyze SWOT. In his analysis, he found that the liquidity position in term of current ratio of three bank were below the normal standard, which means the three bank showed unsatisfactory liquidity position. Comparatively standard chartered bank Nepal limited was better than other two banks. The researcher has found that Himalayan Bank limited has exceeded in using debts withy respect to total assets and shareholders equity. He found that net profit to net worth ratio of Himalayan Bank limited was slightly higher than Standard Chartered Bank Nepal Limited and NABIL Bank limited.

Poudel (2002) carried out his research work in the topic *"A Study on Investment and Liquidity Position of Joint Venture Commercial Banks in Nepal"*. His main objective of the commercial banks did not have constant and consistent liquidity along with the investment policy. He further suggests that bank should maintain an appropriate level of liquid assets in relation to the sources of fund and statutory obligation. The banks are adopting discretionary fund management approach and are adhering to theory of suitability while investing on marketable securities. Anticipating income approach should also be adopted in case of long term loan.

Lamsal (2004) has done his research work in the topic *"Working Capital Management of Nabil Bank Limited and Standard Charted Bank Limited"*. The main objective of the study was to study the comparative analysis of the working capital as well as financial performance of joint venture banks, i.e. NABIL Bank and Standard Charted Bank Limited. He found that the trend of liquidity ratio, i.e. quick ratio, cash and bank balance to deposit ratio of NABIL and Standard Chartered are decreasing. From the analysis of turnover of these two banks, he found that NABIL has better investment efficiency on loan and advances than Standard Chartered. The profitability position of Standard Chartered is far better although NABIL earned higher interest than Standard Chartered. Lastly, he recommends that NABIL should reduce its cost although reducing high cost deposit and operate in proper way so that it can have least operating cost which further maximize its profitability and maximize shareholder return. He further suggests that by adopting the matching working capital management policy instead of adopting conservative working capital policy NABIL as well as Standard Chartered can improve in its profitability in the short run as well as in the long run.

Moktan (2006) has conducted a research in the topic, *"Liquidity Management of Himalayan Bank Limited"*. The main objective of the study is to visualize and analyze the liquidity position of Himalayan Bank. Analyzing liquidity ratio of HBL, he found that the bank is able to meet its short-term obligations. The bank has also maintained the cash, cash equivalent and bank balance, balance in Nepal Rastra Bank, money at call, investment in government securities to meet daily cash requirements. Lastly, he suggests that HBL has to rethink and reorganize major strategies on resources collection and mobilization.

Shrestha (2007) has conducted her thesis *"Liquidity Management of NABIL Bank"*. The main objective of this report is to analize financial ratio and liquidity trend, to highlight the trend of profit of the bank, to provide suggestions for the future betterment. She found that the bank has sufficient liquidity. Further more the bank has higher profitability and it has deployed the highest proposition of its deposit in income generating activities and has good investment efficiency on loan and advances.

Kharel (2008) has conducted his thesis entitled *"Liquidity Position of Financial Companies in Nepal"*. The main objectives of his report are to evaluate the financial performance of finance companies in the light of cash flow management. His objectives are also to evaluate the trend of utilization of cash flow under various prospects and the trend of deposit mobilization. She found that in Nepalese context, the financial companies have been playing one of the leading roles in the economic development. In his research, he suggests that appropriate rules and regulations should be used in the investment policy of the finance companies to increase the level of profit. Lastly, he has recommended to the concerned authority to improve the cash fluency because in comparison to the deposit mobilization capacity of finance companies lending capability is still to be improved. The demand and supply of liquidity should be properly designed to manage the excessive and shortage of liquidity to increase the level of profit.

Research Gap

Considering above various research studies, articles and other publications to elaborate this current study is based on the liquidity position of Nepal Investment Bank Limited and Siddhartha Bank Limited. The basic objective of this research is to analyze the different aspects of NIBL and SBL by using different financial indicator, out of which profitability and efficiency is also important one. If any firm makes excess profit than the normal level, the firm is said to have successful management, efficient control mechanism. But sometimes, the profit earned by a firm can be affected by external factor like government policies relating to financial sector and inflation. So, this study is also focused on how the banks utilizes the resources properly, liquidity management, loan and advance, credit investment, capital structure, operating income and expenses, resource mobilization. To make the study reliable, relevant data of six years from 2002/03 to 2007/08 have been taken. The latest data, some extra financial indicator's like trend analysis, correlation coefficient, probable error and different materials relating to liquidity have made the analysis of this study more clear.

CHAPTER-III

RESEARCH METHODOLOGY

This chapter deals with the research design, nature of data, data gathering procedure, population and samples and data processing procedures this study has followed.

3.1 Research Design

This research design is basically the cash and liquidity management of NIBL and SBL. Analytical and descriptive approaches were used to evaluate the cash and liquidity position of these banks. The points were discussed basically on the basis of secondary data and financial statement of past six years taken from the banks.

This research is a historical research design because is concerns with the past phenomenon. It is a process of collecting, evaluating and verifying the past evidence systematically to reach in conclusion. So, this study is the analysis of accounting ratios of selected commercial banks on the basis of historical data and records of the banks.

3.2 Banks under Study

Since the study was related with cash and liquidity management of commercial banks. In this study, out of 26 commercial banks established till 2066 Baisakh, only two commercial banks are taken for the study to meet the requirement. The names of the banks under study are as follows:

1. Nepal Investment Bank Ltd. (NIBL)
2. Siddhartha Bank Ltd. (SBL)

Out of 26 commercial banks, the above mentioned banks are selected due to the availability of data and easily accessible to the researcher. So the banks, under study, are selected as convenient sampling within probability sampling.

3.3 Data Collection Procedure

The researcher uses secondary data only. To find out the liquidity position, annual reposts of different years are studied and analyzed. Furthermore balance sheet, profit and loss

accounts of respected banks, NRB bulletins and other related articles, journals and research studies are analyzed as per the requirement of the study. The data is arranged systematically.

3.4 Tools of Data Analysis

Financial as well as the statistical tools are used to make the analysis more convenient, reliable and authentic. For data analysis, different items from the balance sheet and other statements are tabulated. Their ratios, percentages, mean, standard deviations and coefficient of variations are then calculated and presented in the tables. In order to ascertain financial position of a firm, various tools could be used. It is true that suitable of appropriate tools, according to the nature of statement and data make the analysis more effective and significant. Collected data are managed, analyzed and presented in proper table and formats. These data are interpreted and explained whatever they are necessary. The following tools are used in this study:

3.4.1 Financial Tools

Financial ratios are calculated to ascertain the liquidity position of the firm. It is the relationship between financial variables contained in the financial statement (i.e., annual reports, balance sheet, profit and loss account and income statements). It helps the related parties to spot out the financial strength and weakness of the firm. There are several financial tools, which can be applied in order to analyze the liquidity position of commercial banks. In this study following financial tools are used.

3.4.1.1 Ratio Analysis

Ratio analysis is the most important financial to analyzed the liquidity position of banks. The ratios used in this study are as follows: Liquidity ratio, Activity Ratio and Profitability Ratio. Likewise, composition of working capital in terms of cash and bank balance percentage, loan and advances percentage, government securities percentage and miscellaneous current assets percentage are also calculated.

3.4.1.1.1 Liquidity Ratio

Liquidity ratio measures the firm's ability to fulfill its short-term commitments. These ratios focus on current assets and current liabilities and used to ascertain the short-term solvency position of a firm.

In this context, liquidity is measured by the speed with a bank's assets that can be converted into cash to meet deposit withdrawals and current obligations. A bank is subject to have a minimum cash reserve requirement (CRR) imposed by Central Bank to ensure a minimum amount to total assets to meet unexpected withdrawals. The following ratios have been applied to find out liquidity position of the banks.

a. Cash and Bank Balance to Total Deposit Ratio

This ratio is calculated by dividing cash and bank balance by total deposits. Total deposits consist of current deposit, saving deposit, fixed deposit, money at call and short notice and other liabilities. This ratio shows the proportion of total deposits held as compared to the most liquid assets. High ratio shows the strong liquidity position of the bank but very high ratio is not favorable for the bank because it does not produce appropriate profit to bear the high interest.

$$\text{Cash and bank balance to total deposit ratio} = \frac{\text{Total Cash and Bank Balance}}{\text{Total Deposits}}$$

b. 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 indicated the current short-term solvency position of the bank. The current ratios are the ratios of total current assets to current liabilities. Higher current ratio indicates better liquidity position. In other words, current ratio represents a margin of safety. The higher the current ratio, the greater the margin of safety, and the larger the amount of current assets in relation to current liabilities, the more the bank's ability to meet its current obligations, although there is no hard and fast rule, conventionally a current ratio of 2:1 (current assets twice of current liabilities) is considered satisfactory.

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

c. 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 deposit 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. This ratio is calculated in order to find out the proportion of total deposit that has higher interest charge bearing. The higher the ratio, the more the interest bearing deposits as well as better liquidity and lower proportion of current or short-term deposit. It is computed by dividing the amount of fixed deposits by the total deposits amount, which is expressed as follows:

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

d. Saving Deposit to Total Deposit Ratio

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

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

e. Cash and Bank Balance to Current Liabilities Ratio

This ratio is obtained dividing total cash and bank balance by total current liabilities. This ratio indicates how much cash is available to meet the current liabilities. Especially this ratio is useful to lenders.

$$\text{Cash and bank balance to current liabilities ratio} = \frac{\text{Total Cash and Bank Balance}}{\text{Current Liabilities}}$$

f. Cash and Bank Balance to Current Assets Ratio

This ratio is calculated dividing total cash and bank balance by current assets. Cash means the firm's holding of currency and demand deposits. It is most liquid assets because a firm disburses it immediately with out any restriction.

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

g. NRB Balance to Total Deposit Ratio

This ratio is obtained dividing NRB balance by total deposits. Bank has to hold a balance of certain percentage of total deposits. The amount should be deposited in Nepal Rastra Bank in order to satisfy legal requirements.

$$\text{NRB balance to total deposit ratio} = \frac{\text{NRB Balance}}{\text{Total Deposit}}$$

3.4.1.1.2 Activities or Turnover Ratio (Utilization Ratio)

The fund of creditors and owners are invested in various assets to generate sales and profit. Activity ratios are used to evaluate the efficiency with which the firm manages and utilizes its assets. This ratio indicates how quickly certain current 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 ratio 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 ratio is used under the activity ratios.

a. Loan and Advances to Saving Deposit Ratio

This ratio is also employed for the purpose of measuring utilization of saving 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 loan and advances to generate income. Saving deposits are interest-bearing obligation for short-term purpose whereas loan and advances are the short investment for revenue income. This ratio indicates how much short-term interest

bearing deposits are utilized for income generating purpose. The formula for this ratio is as follows:

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

b. Loan and Advances to Fixed Deposit Ratio

This ratio differs slightly from the former one because it includes the fixed deposits only. The ratio measures how many much amount is used in loan and advances in comparison to fixed deposits. Fixed deposits are interest bearing long-term obligations where as loan and advances are the major sources of investment in generating income for Development banks. It is calculated as follows:

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

c. Loans and Advances to Total Deposit Ratio

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

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

d. Investment to Total Deposits Ratio

This ratio is calculated dividing total investment by total deposits. Total investment includes government treasury bills, development bonds, company shares and other investments. This ratio presents how efficiently the resources of the banks have been mobilized. High ratio shows managerial efficiency regarding the utilization of deposits and vice-versa.

$$\text{Investment to total deposit ratio} = \frac{\text{Total Investment}}{\text{Total Deposit}}$$

3.4.1.1.3 Profitability and Leverage Ratio

The profitability ratio, as the name suggests, measures the operating profitability in terms of profit margin return on equity and return on total investment, and reflects the overall efficiency and effectiveness of management. *(Pradhan; 2000:53)* Shareholders, bankers, government, tax collectors, employees are concerned with the profitability of the company; the shareholders and interested with their rate of return, employees in the future prospect of the company, government in companies,' tax payment capacity and bankers in the perspective of the company. A required level of profit is necessary for survival and growth of a firm in a competitive environment.

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 different ratios are called profitability ratios, which are required to support the purpose of study.

Leverage ratio is also known as capital structure ratio, which shows long-term solvency of banks. Generally capital refers to the composition of debt and equity component on overall capital of a firm. These rations are calculated to judge the long-term financial position of the banks. Under this group the following ratios has calculated the following ratios to obtain the stated objectives of the study. The profitability ratios calculated in this study are:

a. Return on Total Assets Ratio (ROA)

This ratio is calculated by dividing net profit by total assets. This ratio represents the relationship between net profit and assets. Net profit indicates the profit after deduction on interest and tax. Total asset means the assets that appear in assets side of balance sheet. The increasing ratio shows favorable situation for the banks. The

higher ratio also shows that the bank could well manage their overall operations. But the lower ratio shows vice-versa.

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

b. Net Profit to Total Deposit Ratio

This ratio measures the percentage of profit earned from the utilization of the total deposit. Deposits are mobilized for investment, loan and advances to the public in generating revenue. Higher ration indicates the return from investment on loans and lower ration indicates that the funds are not properly mobilized.

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

c. Return on Common Shareholders' Equity

This ratio is calculated by dividing net profit by common shareholders' equity. This ratio measures the return on shareholders' investment in the bank. The higher ratio of return on equity is better for shareholders. It builds trustworthiness to the customers as well as reputation of the bank.

$$\text{Return on common shareholders' equity} = \frac{\text{Net Profit}}{\text{Shareholders' Equity}}$$

d. Return on Working capital

This ratio is calculated dividing net profit after tax by working capital. This ratio measures the proportion of net profit after tax and working capital. Working capital is obtained by subtracting current liabilities from current assets. The higher ratio is better which shows little working capitals utilized properly.

$$\text{Return on Working Capital} = \frac{\text{Net Profit}}{\text{Working Capital}}$$

e. Interest Coverage Ratio

This ratio is computed dividing earning before interest and tax (EBIT) by interest charges. This ratio evaluates the debt serving capacity of the banks. The higher ratio shows that bank can pay the interest easily.

$$\text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest Charges}}$$

3.4.2 Statistical Tools

Various financial tools mentioned above were used to analyze the cash and liquidity management of Commercial Banks. Similarly, the relationship between different variables related to the study topics were drowning out using statistical tools.

3.4.2.1 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 value in the series. Since an average is somewhere within 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 dividing this total by the number of items. The formula is given below:

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

Where,

$\overline{X}$ = Arithmetic average,

$\sum X$ = Sum of value of all term and

N = Number of terms

3.4.2.2 Standard Deviation

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

$$s = \sqrt{\frac{\sum d^2}{n - 1}}$$

Where,

s = Standard deviation,

$\sum d^2$ = Sum of the squares of the deviations measured from the arithmetic average,

and,

n = Numbers of items

3.4.2.3 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,

$$V = \frac{s}{\bar{X}},$$

Where

V = Coefficient of variation,

s = Standard deviation, and,

= Arithmetic average

3.4.2.4 Correlation Analysis

The correlation coefficient (r) between two variables X and Y can be obtained by using the following formula.

$$r_{xy} = \frac{n\sum xy - \sum x.\sum y}{\sqrt{n\sum x^2 - (\sum x)^2} \cdot \sqrt{n\sum y^2 - (\sum y)^2}}$$

Where,

n = number of observation in series x and y,

$\sum x$ = Sum of observation in series x,

$\sum y$ = Sum of observation in series y,

$\sum x^2$ = Sum of square observation in series x,

$\sum y^2$ = Sum of square observation in series y,

$\sum xy$ = Sum of the product of observation in series x and y.

Here,

r always lies between -1 and +1

r = +1 implies that two variables are perfectly positively correlated.

r = -1 implies that two variables are perfectly negatively correlated.

r = 0 implies that there is no correlation. Or it does not necessarily mean that the variables are independent. They may however be related in some other form such as quadratic, logarithm of exponential.

In this study, the simple correlations between the following variables are analyzed.

1. Cash and bank Balance and NRB Balance
2. Cash and bank Balance and Saving Deposit
3. Cash and bank Balance and Total Deposit
4. Cash and bank Balance and Net Profit
5. Cash and bank Balance and Loan and Advance
6. Loan and Advances and Total Deposit
7. Cash and bank Balance and Current Liabilities
8. Loan and Advances and Net Profit
9. Quick Assets and Current Liability
10. Working Capital and Total Assets
11. Total Lending and Total Deposit
12. Total Deposit and investment
13. Total Investment and net profit

Probable error of correlation coefficient

It is the measure of testing the reliability of the calculated value of r. If r were the calculated value of r from sample of n pair of observations, then P.E. is defined by:

$$\text{Probable Error (PE)} = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

Here,

If r < P.E. It is not significant. So, perhaps there is no evidence of correlation.

If r > 6.P.E., it is significant.

In other cases, nothing can be concluded.

The problem error of correlation coefficient may be used to determine the limits within which population correlation coefficient lies. Limits for population correlation coefficient are ± PE.

Under the correlation analysis, the intensity of linear relation between the following variables has been measured.

- Total deposit and net profit
- Net worth and net profit
- Total deposit and investment
- Total deposit and loan and advance

3.4.2.6 Test of Hypothesis under t-statistic

To test the validity of 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 at first and compared with the table value of 't' at a certain level of significance for given degree of freedom. If calculated t-value exceeds the table value (say 0.05) we infer that the difference is significant at 5 percent level. But if t-value is less that that of table value the difference is not treated as significant. In this research work, t-value is calculated between earning per share and dividend per share, net profit and dividend per share and market price per share.

The following are the steps to be used in this test:

Step-I Formulation of null hypothesis (H_0) & alternative hypothesis (H_1)

H_0: $\rho = 0$ i.e the variables in the population are not related or uncorrelated or the value of correlation is in significant.

H_1: ϱ ≠ 0 i.e the variables in the population are related or the value of correlation is significant.

Step-II. Level of significant: α = 5%

Step-III Test statistics, under H0

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

Step-IV Table value

(At 5% level of significance for 2 tail at d.f = n-2 is taken from table)

Step-V Decision:

a) If $t_{cal} < t_{tab}$… H_0 is accepted
b) If $t_{cal} > t_{tab}$ … H_1 is accepted

The hypothesis of this study is as follows:

Null Hypothesis (H_0):

i. H_0: ϱ =0 i.e the value of correlation between cash and bank balance and current liability is insignificant.

ii. H_0: ϱ=0 i.e the value of correlation between Working Capital and Total Assets is insignificant.

iii. H_0: ϱ=0 i.e the value of correlation between loan and advances and Total Deposits is insignificant.

iv. H_0: ϱ=0 i.e the value of correlation between Quick Ratio and al Debt Ratio is insignificant.

v. H_0: ϱ=0 i.e the value of correlation between cash & bank balance and Total Deposits is insignificant.

vi. H_0: ϱ=0 i.e the value of correlation between Quick Assets and current liabilities is insignificant.

Alternative Hypothesis (H_1):

i. H_1: ϱ≠0 i.e the value of correlation between cash and bank balance and current liability is significant.

ii. H_1: ϱ≠0 i.e the value of correlation between Working Capital and Total Assets is significant.

iii. H_1: ϱ≠0 i.e the value of correlation between loan and advances and Total Deposits is significant.

iv. H_1: ϱ≠0 i.e the value of correlation between Quick Ratio and Debt Ratio is significant.

v. H_1: ϱ≠0 i.e the value of correlation between cash & bank balance and Total Deposits is significant.

vi. H_1: ϱ≠0 i.e the value of correlation between Quick Assets and current liabilities is significant.

CHAPTER-IV

DATA PRESENTATION AND ANALYSIS

This chapter deals with the presentation and analysis of data in readable manner. The collection of data and its analysis tools are used as specified in chapter three. In this study, financial as well as statistical tools are used to achieve the pre-determined objectives.

4.1 Financial Tools

Financial ratios are calculated to ascertain the liquidity position of the firm. It is the relationship between financial variables contained in the financial statement (i.e., balance sheet, profit and loss account and income statements). It helps the related parties to spot out the financial strength and weakness of the firm. There are several financial tools, which can be applied in order to analyze the liquidity position of commercial banks. The financial tools used in this study are as follows: Liquidity ratio, Activity Ratio and Profitability Ratio. Likewise, composition of working capital in terms of cash and bank balance percentage, loan and advances percentage. Following are the major financial tools used for the calculation of various statuses of the Nepalese commercial banks.

4.1.1 Liquidity Ratio

Liquidity ratio measures the firm's ability to fulfill its short-term commitments. These ratios focus on current assets and current liabilities and used to ascertain the short-term solvency position of a firm.

In this context, liquidity is measured by the speed with a bank's assets that can be converted into cash to meet deposit withdrawals and current obligations. A bank is subject to have a minimum cash reserve requirement (CRR) imposed by Central Bank to ensure a minimum amount to total assets to meet unexpected withdrawals. The following ratios have been applied to find out liquidity position of the banks.

4.1.1.1 Cash and Bank Balance to Total Deposit ratio

Cash and bank balance to total deposit ratio is calculated by dividing cash and bank balance by total deposits. Total deposits consist of current deposit, saving deposit,

fixed deposit, money at call and short notice and other liabilities. This ratio shows the proportion of total deposits held as compared to the most liquid assets. High ratio shows the strong liquidity position of the bank but very high ratio is not favorable for the bank because it does not produce appropriate profit to bear the high interest.

$$\text{Cash and bank balance to total deposit ratio} = \frac{\text{Total Cash and Bank Balance}}{\text{Total Deposits}}$$

Table 4.1

Cash and Bank Balance to Deposit Ratio

(Rs. In million)

	Cash and Bank Balance		Total Deposits		Ratios (%)	
F.Y.	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	926.60	65.00	7923.00	392.00	11.70	16.58
2003/04	1227.00	72.00	11525.00	1291.00	10.65	5.58
2004/05	1340.00	131.00	14255.00	2462.00	9.40	5.32
2005/06	2088.00	116.00	18927.00	3918.00	11.03	2.96
2006/07	2241.00	517.00	24489.00	6625.00	9.15	7.80
2007/08	3284.00	437.00	34452.00	10191.00	9.53	4.29
				Mean	10.24	7.09
				Standard Deviation(s)	1.03	4.92
				Coefficient of Variation (CV)	10.05	69.37

Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08.

During the study period, the maximum cash and bank balance to deposit came in the FY 2002/03 for the both banks NIBL & SBL i.e.11.70% &16.58% respectively.

Above table shows the cash and bank balance to total deposit ratios 11.70%, 10.65%, 9.40%, 11.03%, 9.15% & 9.53% in NIBL & 16.58%, 5.58%, 5.32%, 2.96%, 7.80% and 4.29% in SBL bank in the respective year of study period.

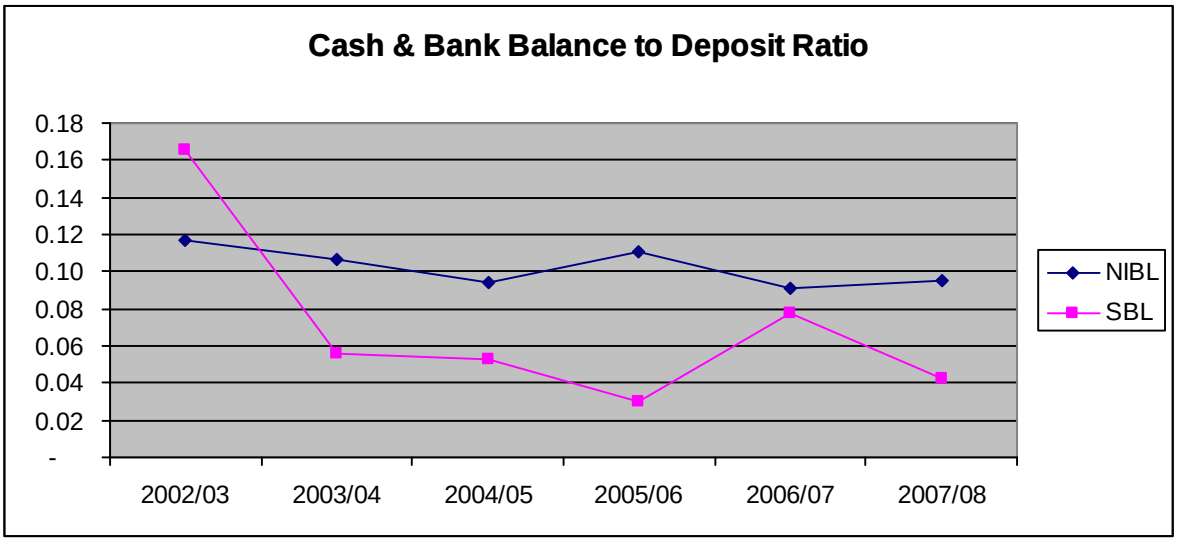
Above table shows the mean, standard deviation and CV of the cash and bank balance to total deposit in NIBL i.e. 10.24, 1.03 &10.05% and 7.09, 4.92 &69.37% in SBL. The mean ratio of NIBL is greater than that of SBL, which means that there is not uniformity in the ratios in CV of NIBL, which signifies greater consistency in it.

The ratios of both banks were in fluctuating trend.

The above table can be presented in the following chart as:

Figure No 4.1

Cash and Bank Balance to Total Deposit Ratio



Finding

The mean ratio of NIBL was greater than that of SBL, which means that there was not uniformity in the ratios in CV of SBL, which signifies greater consistency in it. Cash and bank balance to total deposit ratio of both banks were in fluctuating trend. Standard Deviation of SBL was greater than NIBL which signifies that ratios of different years of SBL were more deviated.

4.1.1.2 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 indicated the current short-term solvency position of the bank. The current ratios are the ratios of total

current assets to current liabilities. Higher current ratio indicates better liquidity position. In other words, current ratio represents a margin of safety.

The higher the current ratio, the greater the margin of safety, and the larger the amount of current assets in relation to current liabilities, the more the bank's ability to meet its current obligations, although there is no hard and fast rule, conventionally a current ratio of 2:1 (current assets twice of current liabilities) is considered satisfactory.

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

Table 4.2
Current Ratio

(Rs. In million)

	Current Assets		Current Liabilities		Ratios(Times)	
F.Y.	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	8823.00	842.00	15230.00	1582.00	57.93	53.22
2003/04	13005.00	1830.00	25010.00	3921.00	52.00	46.67
2004/05	15742.00	3069.00	33184.00	5487.00	47.44	55.93
2005/06	20987.00	4717.00	41731.00	8909.00	50.29	52.95
2006/07	27132.00	7908.00	54328.00	17402.00	49.94	45.44
2007/08	37902.00	11597.00	78002.00	24019.00	48.59	48.28
				Mean	51.03	50.42
				Standard Deviation(s)	3.72	4.20
				Coefficient of Variation (CV)	7.29	8.32

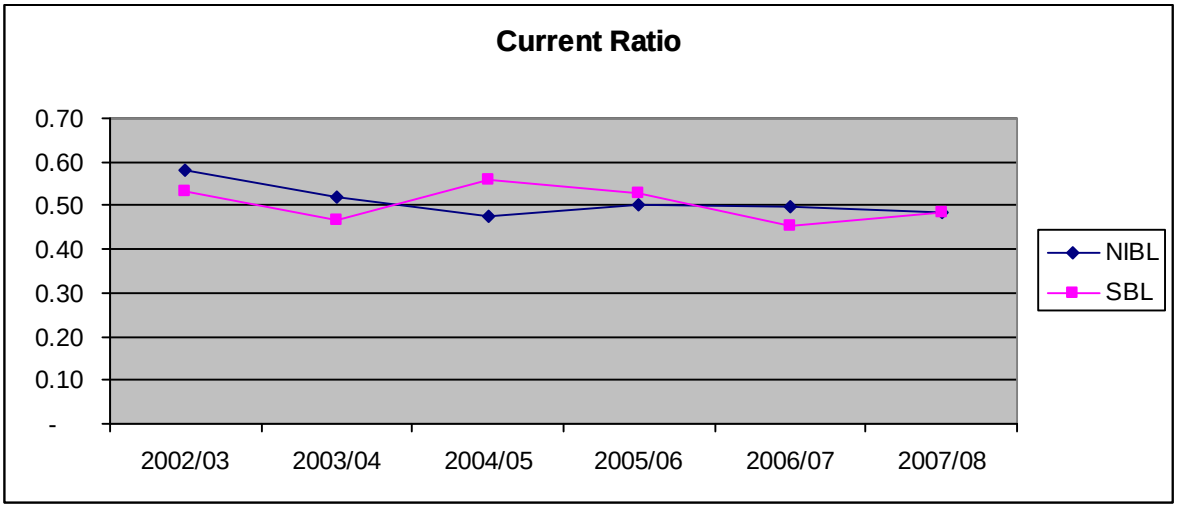
Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08.

Above table shows the current ratio of NIBL and SBL in fluctuating trend through out the study period. Above tables shows both of the banks nearly maintained the conventional standard of 2:1, which shows the banks have proper investment plan.

Above table shows the mean of current ratio of NIBL is higher than SBL. Likewise CV of SBL is higher than NIBL, which means that SBL has more fluctuation in ratios compared with NIBL. The standard deviation, which measures the total risk of particular observation, is 3.72 for NIBL and 4.20 for SBL for the study period, which means there is more risk of particular observations in SBL than NIBL. The above figure of current ratio of both banks is comparatively presented in the following line chart.

Figure No 4.2

Current Ratio



Finding

Current ratio of NIBL and SBL were in fluctuating trend through out the study period. The mean ratio of NIBL was slightly higher than SBL. Like wise CV of NIBL was lower than SBL, which means that SBL had more fluctuation in ratios as compared with NIBL. Mean ratio shows the highly liquid position of NIBL, which shows SBL has far better investment plan than NIBL. Current ratios were in slightly fluctuating trend for NIBL and SBL. Both banks could not maintain the conventional standard of 2:1. However the average ratio of NIBL was greater than that of SBL, which signifies that NIBL was more capable of meeting immediate liabilities in contrast to SBL.

4.1.1.5 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 deposit 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. This ratio is calculated in order to find out the proportion of total deposit that has higher interest charge bearing. The higher the ratio, the more the interest bearing deposits as well as better liquidity and lower proportion of current or short-term deposit. It is computed by dividing the amount of fixed deposits by the total deposits amount, which is expressed as follows:

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

Table 4.3

Fixed Deposits to Total Deposits Ratio

(Rs. In million)

F.Y.	Fixed Deposits		Total Deposits		Ratios(%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	1673.00	83.00	7923.00	392.00	21.12	21.17
2003/04	2294.00	102.00	11525.00	1291.00	19.90	7.90
2004/05	3212.00	150.00	14255.00	2462.00	22.53	6.09
2005/06	5413.00	1632.00	18927.00	3918.00	28.60	41.65
2006/07	7516.00	3022.50	24489.00	6625.00	30.69	45.62
2007/08	7944.00	4563.00	34452.00	10191.00	23.06	44.77
				Mean	24.32	27.87
				Standard Deviation(s)	4.32	18.49
				Coefficient of Variation (CV)	17.78	66.33

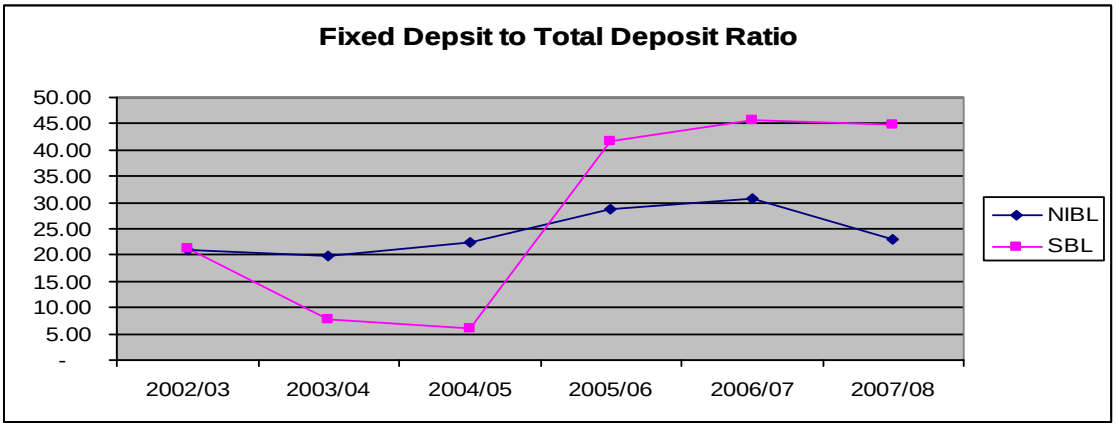
Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08

Above tables shows the Fixed Deposit to Total Deposits ratios of NIBL as 21.12%, 19.90%, 22.53%, 28.60%, 30.69 and 23.06% respectively. Similarly the ratios of SBL came to be 21.17%, 7.90%, 6.09%, 41.65%, 45.62% and 44.77% respectively. Mean of fixed deposit to total deposit of SBL is greater than NIBL i.e.27.87 > 24.32. Likewise CV of SBL is greater than NIBL i.e. 66.33% > 17.78%, which means that SBL has more fluctuation in ratios compared with NIBL. The standard deviation of the same ratio of NIBL is 4.32 and 18.49 for SBL, which indicates SBL has high risk involved than in NIBL. The ratios of both banks revealed fluctuating trend over the period.

The above figure can be presented in the following chart as:

Figure No 4.3

Fixed Deposits to Total Deposits Ratio



Finding

In general, Fixed Deposit To Total Deposit Ratio seems likely to equal in FY 2002/03. After then SBL's ratio rapidly decreased and increased where NIBL's ratio slowly decreased and increased. This means SBL had more fluctuation.

4.1.1.6 Saving Deposit to Total Deposit Ratio

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

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

Table 4.4

Saving Deposits to Total Deposits Ratio

(Rs. In million)

F.Y.	Saving Deposits		Total Deposits		Ratios (%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	2434.00	102.00	7923.00	392.00	30.72	26.02
2003/04	4886.00	637.00	11525.00	1291.00	42.39	49.34
2004/05	6703.00	980.00	14255.00	2462.00	47.02	39.81
2005/06	8082.00	1128.00	18927.00	3918.00	42.70	28.79
2006/07	10742.00	1882.00	24489.00	6625.00	43.86	28.41
2007/08	13688.00	2622.00	34452.00	10191.00	39.73	25.73
Mean					41.07	33.02
Standard Deviation(s)					5.60	9.53
Coefficient of Variation (CV)					13.62	28.85

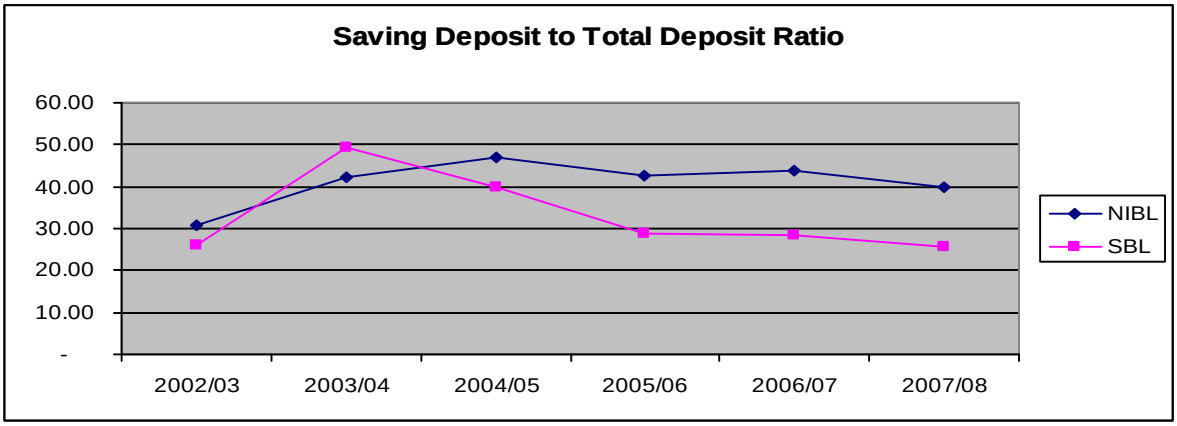
Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08

Above tables shows the Saving Deposit to Total Deposits ratios of NIBL as 30.72%, 42.39%, 47.02%, 42.70%, 43.86% and 39.73%, similarly the ratios of SBL came to be 26.02%, 49.34%, 39.81%, 28.79%, 28.41% and 25.73% in respective years of study period. Mean of saving Deposits to Total Deposit of NIBL is greater than that of SBL i.e. 41.07 < 33.02. Likewise CV of SBL is greater than that of NIBL i.e.28.85 > 13.62%. The Standard Deviation of the ratio is 5.60 and 9.53 respectively of NIBL and SBL, where S.D. of SBL is greater than NIBL i.e. 9.53 > 5.60. It indicates that SBL has higher fluctuation or higher risk on this ratio comparing with NIBL.

The above table can be presented in the following chart as:

Figure No 4.4

Saving Deposits to Total Deposits Ratio



4.1.1.7 Cash and Bank Balance to Current Liabilities (CL) Ratio

This ratio is obtained dividing total cash and bank balance by total current liabilities. This ratio indicates how much cash is available to meet the current liabilities. Especially this ratio is useful to lenders.

$$\text{Cash and Bank Balance to CL Ratio} = \frac{\text{Total Cash and Bank Balance}}{\text{Current Liabilities}}$$

Table 4.5

Cash and Bank Balance to Current Liabilities Ratio

(Rs. In million)

F.Y.	Cash and Bank Balance		Current Liabilities		Ratios (%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	926.60	65.00	15230.00	1582.00	6.08	4.11
2003/04	1227.00	72.00	25010.00	3921.00	4.91	1.84
2004/05	1340.00	131.00	33184.00	5487.00	4.04	2.39
2005/06	2088.00	116.00	41731.00	8909.00	5.00	1.30
2006/07	2241.00	517.00	54328.00	17402.00	4.12	2.97
2007/08	3284.00	437.00	78002.00	24019.00	4.21	1.82
Mean					4.73	2.40
Standard Deviation(s)					0.78	1.01
Coefficient of Variation (CV)					16.53	42.03

Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08

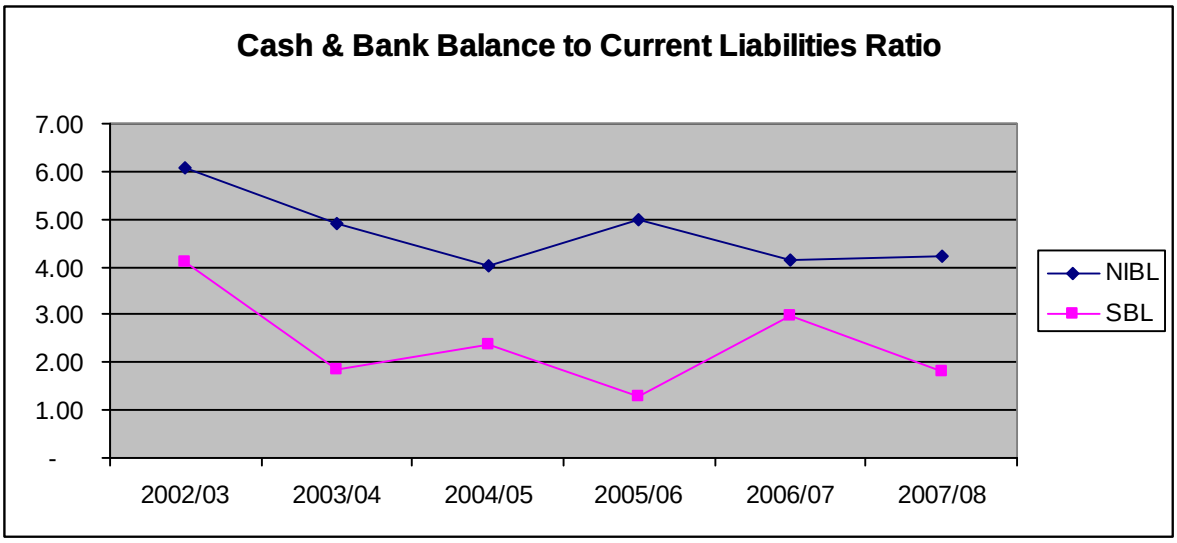
The ratios of both banks revealed fluctuating trend over the period. Above tables shows Cash and bank balance to current liabilities ratios of NIBL is 6.08%, 4.91%, 4.04%, 5%, 4.12% & 4.21% & similarly the ratios of SBL came to 4.11%, 1.84%, 2.39%, 1.30%, 2.97%, and 1.82% in respective years of study period.

The above table shows the mean, standard deviation and CV of cash and bank balance to current liabilities of NIBL came 4.73, 0.78 & 16.53 & SBL came to be 2.40, 1.01 & 42.03, Mean of SBL is greater than NIBL i.e.4.73 > 2.40 whereas S.D & CV of SBL is greater than NIBL i.e. 1.01 > 0.78 & 42.03 > 16.53. Above ratio shows both banks had not constant proportion of cash balance and current liabilities through out the study period.

The above table can be presented in the following chart as:

Figure No 4.5

Cash and Bank Balance to Current Liabilities Ratio



4.1.1.8 Cash and Bank Balance to Current Assets (CA) Ratio

This ratio is calculated dividing total cash and bank balance by current assets. Cash means the firm's holding of currency and demand deposits. It is most liquid assets because a firm disburses it immediately with out any restriction.

This ratio measures the total portion of cash and bank balance included in current assets. Current assets include cash and bank balance as well as other assets that can immediately converted into the cash. So, the main reason for calculating this ratio is to find out the portion of cash and bank balance included in current assets.

$$\text{Cash and Bank balance to CA Ratio} = \frac{\text{Total Cash and Bank balance}}{\text{Current Assets}}$$

Table 4.6

Cash and Bank Balance to Current Assets Ratio

(Rs. In million)

F.Y.	Cash and Bank Balance		Current Assets		Ratios (%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	926.60	65.00	8823.00	842.00	10.50	7.72
2003/04	1227.00	72.00	13005.00	1830.00	9.43	3.93
2004/05	1340.00	131.00	15742.00	3069.00	8.51	4.27
2005/06	2088.00	116.00	20987.00	4717.00	9.95	2.46
2006/07	2241.00	517.00	27132.00	7908.00	8.26	6.54
2007/08	3284.00	437.00	37902.00	11597.00	8.66	3.77
Mean					9.22	4.78
Standard Deviation(s)					0.89	1.96
Coefficient of Variation (CV)					9.64	40.90

Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08

Above table shows the cash and bank balance to current assets ratios of NIBL and SBL. There should be certain percentage of current assets as cash and bank balance to have the liquidity. This ratio is fluctuating in NIBL and SBL. The ratios in NIBL remained 10.50%, 9.43%, 8.51%, 9.95%, 8.26% & 8.66% respectively through out the study period. Similarly the ratios in SBL came 7.72%, 3.93%, 4.27%, 2.46%, 6.54% & 3.77% in the respective study period.

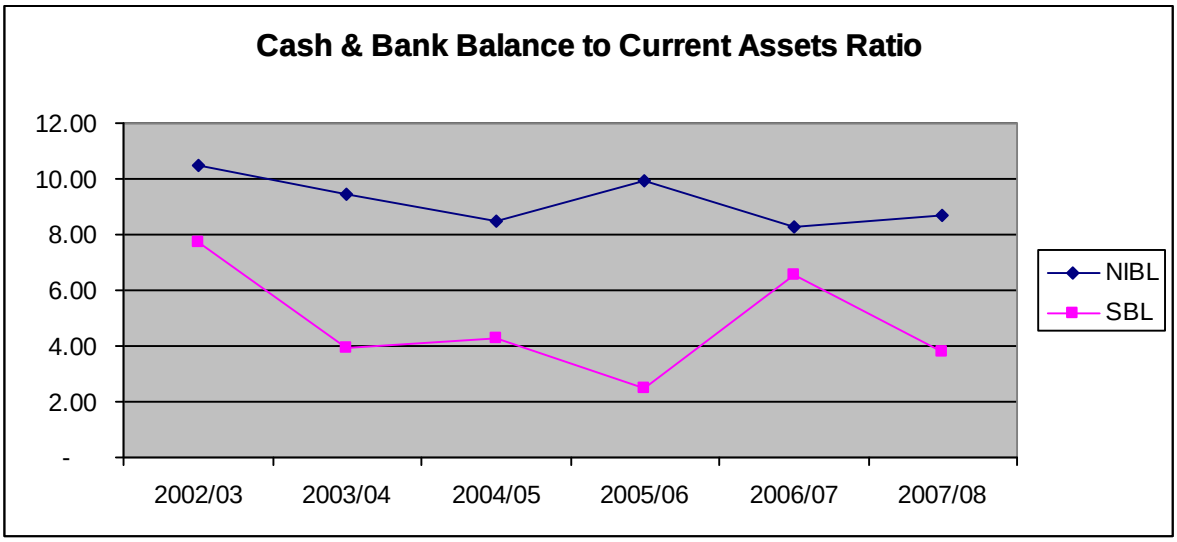
Mean, standard deviation and CV of cash and bank balance to current assets ratio of NIBL came 9.22, 0.89 & 9.64% respectively. Similarly mean, standard deviation and CV of cash and bank balance to current assets ratio of SBL came 4.78, 1.96 & 40.90% respectively. The average ratio of NIBL is higher than that of SBL, which shows that NIBL has more liquidity of cash than that of SBL. CV of SBL is higher than NIBL i.e.9.22 > 4.78.

The ratios are fluctuating trends for the both banks for the study period.

It can be clearly shown by the following chart-

Figure No 4.6

Cash and Bank Balance to Current Assets Ratio



Finding

Cash and bank balance to current assets ratios of both banks were in slightly fluctuating trend. The average ratio of NIBL was higher than that of SBL, which tells that NIBL had more liquidity of cash than that of SBL. The ratios in NIBL found to be more consistent.

4.1.1.9 NRB Balance to Total Deposit Ratio

This ratio is obtained dividing NRB balance by total deposits. Bank has to hold a balance of certain percentage of total deposits. The amount should be deposited in Nepal Rastra Bank in order to satisfy legal requirements.

$$\text{NRB balance to Total Deposit Ratio} = \frac{\text{NRB Balance}}{\text{Total Deposit}}$$

Table 4.7

NRB Balance to Total Deposits

(Rs. In million)

F.Y.	NRB Balance		Total Deposits		Ratios (%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	450.00	29.00	7923.00	392.00	5.68	7.40
2003/04	545.00	37.00	11525.00	1291.00	4.73	2.87
2004/05	780.00	40.00	14255.00	2462.00	5.47	1.62
2005/06	1526.00	48.00	18927.00	3918.00	8.06	1.23
2006/07	1381.00	102.00	24489.00	6625.00	5.64	1.54
2007/08	1820.00	220.00	34452.00	10191.00	5.28	2.16
				Mean	5.81	2.80
				Standard Deviation(s)	1.16	2.32
				Coefficient of Variation (CV)	19.89	82.94

Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08

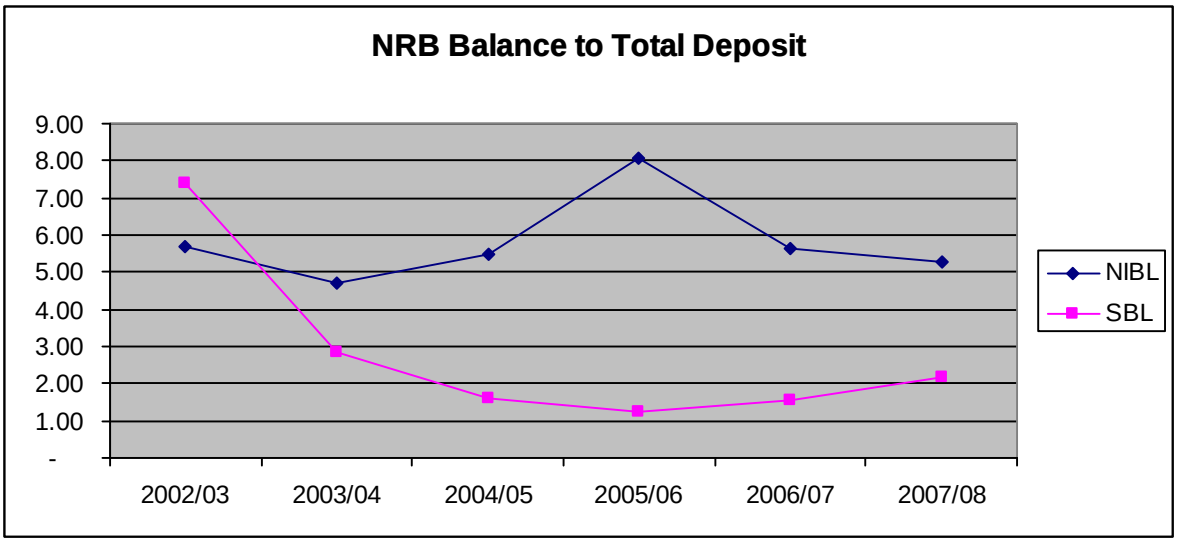
Above table shows that the ratios of NIBL as 5.68%, 4.73%, 5.47%, 8.06%, 5.64% and 5.28% respectively. Similarly the ratios of SBL came to be 7.40%, 2.87%, 1.62%, 1.23%, 1.54% & 2.16% respectively. Mean, standard deviation and CV of NRB balance to total deposit ratio of NIBL came 5.81, 1.16 & 19.89% & 2.80, 2.32 & 82.94% of SBL, where Mean of NIBL is greater than SBL i.e. 5.81 > 2.80, which indicates that NIBL has the higher mean ratio of balance at NRB to total deposit. It means that liquidity position of NIBL regarding with this ratio is better than that of SBL during the study period.

& Standard Deviation & CV of SBL is greater than NIBL i.e. 2.32 > 1.16 & 82.94 > 19.89 respectively, which means that SBL has more fluctuation in ratios compared with NIBL.

The above table can be presented in the following chart as:

Figure No 4.7

NRB Balance to Total Deposits



4.1.2 Utilization Ratio

The fund of creditors and owners are invested in various assets to generate sales and profit. Activity ratios are used to evaluate the efficiency with which the firm manages and utilizes its assets. This ratio measures a firm's efficiency in utilization of its assets. These ratios look at the amount of various types of assets and attempt to determine if they are too high or too low with regard to current operating levels.

This ratio indicates how quickly certain current 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 ratio 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. Mostly utilization ratios are used to evaluate managerial efficiency and proper utilization of assets. Following ratio is used under the activity ratios.

4.1.2.1 Loan and Advances to Saving Deposit Ratio

This ratio is also employed for the purpose of measuring utilization of saving 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 loan and

advances to generate income. This ratio indicates to what extent of saving deposits has been turned over to loans and advances.

Saving deposits are interest-bearing obligation for short-term purpose whereas loan and advances are the short investment for revenue income. This ratio indicates how much short-term interest bearing deposits are utilized for income generating purpose. If the ratio is high the firm is assumed to be successful in utilizing its saving deposits to generate profit. The formula for this ratio is as follows:

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

Table 4.8

Loans and Advances to Saving Deposits Ratio

(Rs. In million)

F.Y.	Total Loan and Advance		Saving Deposits		Ratios (%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	5772.00	623.00	2434.00	102.00	237.14	610.78
2003/04	7130.00	1484.00	4886.00	637.00	145.93	232.97
2004/05	10453.00	2571.00	6703.00	980.00	155.95	262.35
2005/06	13178.00	3789.00	8082.00	1128.00	163.05	335.90
2006/07	17769.00	6320.00	10742.00	1882.00	165.42	335.81
2007/08	27529.00	9936.00	13688.00	2622.00	201.12	378.95
				Mean	178.10	359.46
				Standard Deviation(s)	34.43	134.23
				Coefficient of Variation (CV)	19.33	37.34

Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08

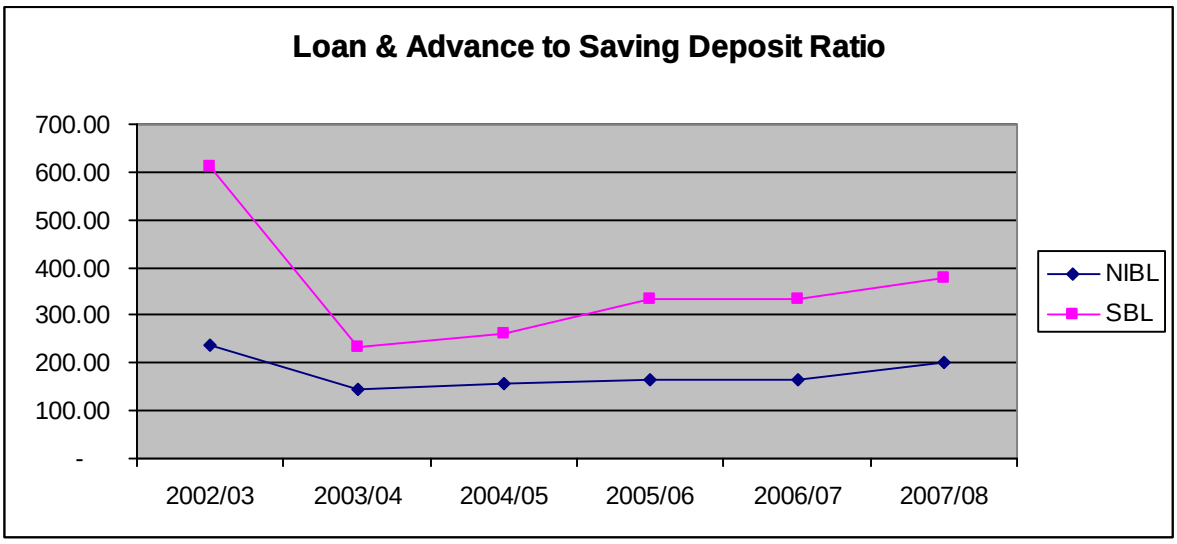
Above table shows loans and advances to saving deposit ratio in NIBL as 237.14%, 145.93%, 155.95%, 163.05%, 165.42% & 201.12% respectively for the study period.

Similarly the ratios in SBL were 610.78 %, 232.97%, 262.35%, 335.90%, 335.81% & 378.95% respectively.

Average ratio of SBL seemed to be greater than that of NIBL, which indicates that SBL has mobilized its saving deposits in term of loans and advances more successfully. But CV shows the ratios in NIBL were more consistent than that of SBL. Similarly, the standard deviation, which measures the total risk of particular observation, is greater in SBL than that of NIBL.

Figure No 4.8

Loans and Advances to Saving Deposits Ratio



4.1.2.2 Loan and Advances to Fixed Deposit Ratio

This ratio differs slightly from the former one because it includes the fixed deposits only. The ratio measures how many much amount is used in loan and advances in comparison to fixed deposits. Fixed deposits are interest bearing long-term obligations where as loan and advances are the major sources of investment in generating income for Development banks. It is calculated as follows:

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

Table 4.9

Loans and Advances to Fixed Deposits Ratio

(Rs. In million)

F.Y.	Total Loan and Advance		Fixed Deposits		Ratios (%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	5772.00	623.00	1673.00	83.00	345.01	750.60
2003/04	7130.00	1484.00	2294.00	102.00	310.81	1,454.90
2004/05	10453.00	2571.00	3212.00	150.00	325.44	1,714.00
2005/06	13178.00	3789.00	5413.00	1632.00	243.45	232.17
2006/07	17769.00	6320.00	7516.00	3022.50	236.42	209.10
2007/08	27529.00	9936.00	7944.00	4563.00	346.54	217.75
				Mean	301.28	763.09
				Standard Deviation(s)	49.37	673.67
				Coefficient of Variation (CV)	16.39	88.28

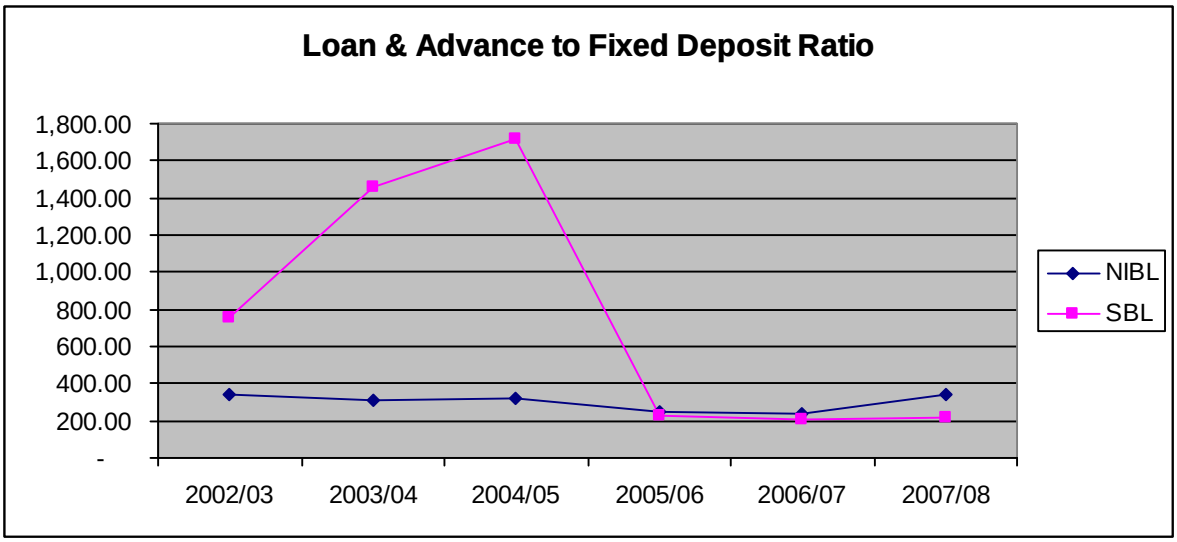
Source: Annual Reports of NIBL & SBL from FY 2002/03to 2007/08.

Above table shows the loans and advances to fixed deposit ratio of NIBL and SBL. The ratios in NIBL came 345.01%, 310.81%, 325.44%, 243.45%, 236.42% and 346.54% where as the ratios in SBL came 750.60%, 1454.90%, 1714 respectively in the study period. The ratios in both banks are in fluctuating trend.

Mean, standard deviation and CV for loan and advances to fixed deposit of NIBL is 301.28, 49.37 and 16.39. Similarly, 763.09, 673.67 and 88.28% respectively of SBL. The average of the ratios in SBL seemed greater than NIBL which indicates that SBL has more successfully utilized the high interest bearing deposit in term of loans and advances. Moreover, turnover position of SBL is better than that of NIBL. CV also shows that SBL has more consistent ratio than that of NIBL

Figure No 4.9

Loans and Advances to Fixed Deposits Ratio



4.1.2.3 Loans and Advances to Total Deposit Ratio

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

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

Table 4.10

Loans and Advances to Total Deposits Ratio

(Rs. In million)

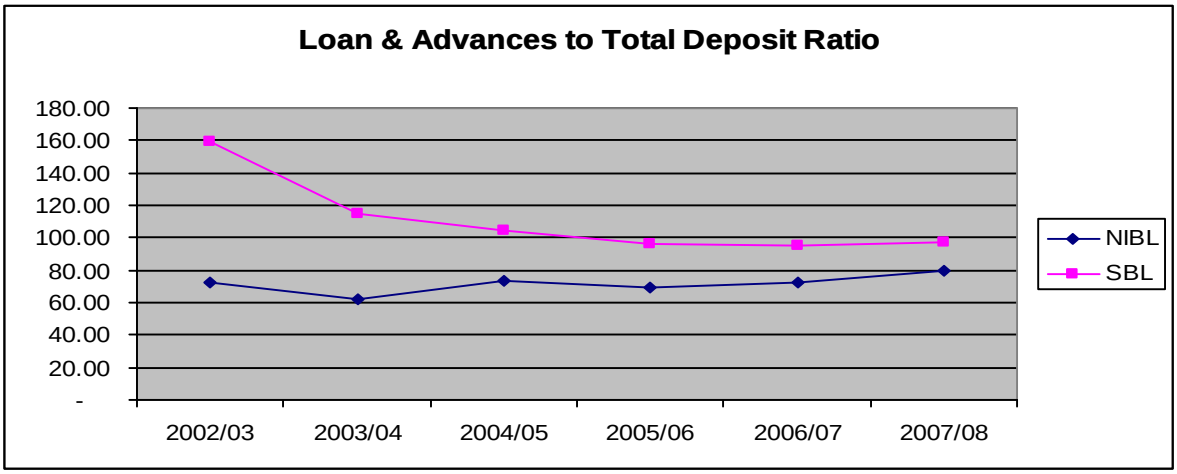
F.Y.	Total Loan and Advance		Total Deposits		Ratios(%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	5772.00	623.00	7923.00	392.00	72.85	158.93
2003/04	7130.00	1484.00	11525.00	1291.00	61.87	114.95
2004/05	10453.00	2571.00	14255.00	2462.00	73.33	104.43
2005/06	13178.00	3789.00	18927.00	3918.00	69.63	96.71
2006/07	17769.00	6320.00	24489.00	6625.00	72.56	95.40
2007/08	27529.00	9936.00	34452.00	10191.00	79.91	97.50
				Mean	71.69	111.32
				Standard Deviation(s)	5.88	24.44
				Coefficient of Variation (CV)	8.21	21.95

Source: Annual Reports of NIBL & SBL from FY 2002/03to 2007/08.

From the above table the ratio in NIBL came 72.85, 61.87, 73.33, 69.63, 72.56 and 79.91% for the study period. Similarly the ratios in SBL came 158.93, 114.95, 104.43, 96.71, 95.40, 97.50 and 97.50% respectively in the study period. The ratios of NIBL and SBL are in fluctuating trend. Mean, standard deviation and CV for loan and advances to total deposit ratio of NIBL is 71.69, 5.88 and 8.21%. Similarly these ratios are 111.32, 24.44 and 21.95% respectively of SBL. Mean ratio of SBL appeared considerably higher which signifies that SBL is more successful in utilizing the resources in profitable sectors than NIBL. CV of the ratios depicted that the ratio remained more consistent in SBL as compared to NIBL.

Figure No 4.10

Loans and Advances to Total Deposits Ratio



Finding

Loans and advances to total deposits ratios of NIBL were in fluctuating trend and SBL had the ratios in fluctuating trend. Similarly Loans and advances to fixed deposits ratio in both banks were in fluctuating trend.. Loan and advance to total deposit ratio appeared significantly higher in SBL. It indicates the better utilization of total deposits in SBL than in NIBL. The ratios remained more uniform in NIBL. The mean loan and advance to fixed deposit ratio appeared higher in NIBL, which indicates that turnover of fixed deposits in form of loan, and advance was better in NIBL. The ratio varied less in same bank. The mean loan and advance to saving deposit ratio found higher in SBL, which indicates that turnover of saving deposits in form of loan and advance, was better in SBL. The ratios varied less in NIBL. Similarly Loans and advances to fixed deposit ratio were in fluctuating trend in both banks. The ratio of SBL was highest in FY 2004/05 i.e. 1714%. Average ratio of SBL is very much higher than the average ratio of NIBL i.e. 763.09>301.28.

4.1.2.4 Investment to Total Deposits Ratio

This ratio is calculated dividing total investment by total deposits. Total investment includes government treasury bills, development bonds, company shares and other investments. This ratio presents how efficiently the resources of the banks have been mobilized.

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

Table 4.11

Investment to Total Deposits Ratio

(Rs. In million)

F.Y.	Total Investment		Total Deposits		Ratios(%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	1705.00	4.00	7923.00	392.00	21.52	1.02
2003/04	3862.00	42.00	11525.00	1291.00	33.51	3.25
2004/05	3934.00	287.00	14255.00	2462.00	27.60	11.66
2005/06	5603.00	651.00	18927.00	3918.00	29.60	16.62
2006/07	6506.00	865.00	24489.00	6625.00	26.57	13.06
2007/08	6874.00	1150.00	34452.00	10191.00	19.95	11.28
				Mean	26.46	9.48
				Standard Deviation(s)	5.05	6.03
				Coefficient of Variation (CV)	19.10	63.64

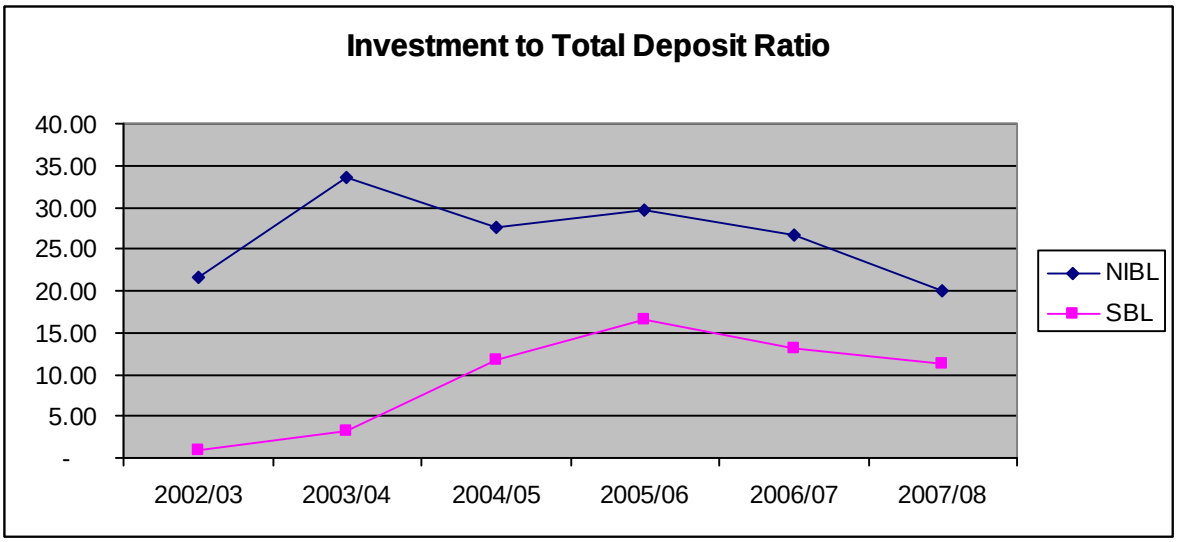
Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08

Above table shows the investment to total deposit ratio of NIBL and SBL. The ratios for NIBL came 21.52%, 33.51%, 27.60%, 29.60%, 26.57% and 19.95% in the study period. Similarly the ratios in SBL came 1.02%, 3.25%, 11.66%, 16.62%, 13.06% and 11.28% for the respective years. The ratios are in fluctuating trend for NIBL and SBL.

Mean, standard deviation and CV for the investment to total deposit ratio of NIBL is 26.46, 5.05 and 19.10%. Similarly mean, standard deviation and CV of SBL is 9.48, 6.03 and 63.64%. The average ratio of investment to total deposit of NIBL was considerably higher than that of SBL. Similarly CV of NIBL was lower than that of SBL. NIBL was more uniform than that of SBL. In conclusion, it can be said that NIBL had better utilization of its deposits in term of investment in comparison of SBL.

Figure No 4.11

Investment to Total Deposits Ratio



Finding

Investment to total deposit ratios of NIBL as well as SBL were in fluctuating trend. As depicted by higher investment to total deposits ratio in NIBL, it seems more successful to utilize the depositor's fund in investment. The ratio disappeared slightly to greater extent in SBL. The ratios varied in SBL.

4.1.3 Profitability Ratio

The profitability ratio, as the name suggests, measures the operating profitability in terms of profit margin return on equity and return on total investment, and reflects the overall efficiency and effectiveness of management. Shareholders, bankers, government, tax collectors, employees are concerned with the profitability of the company; the shareholders and interested with their rate of return, employees in the future prospect of the company, government in companies,' tax payment capacity and bankers in the perspective of the company. A required level of profit is necessary for survival and growth of a firm in a competitive environment.

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. The profitability of banks should be evaluated in terms of its investment in assets and in term of capital contributed by creditors. A bank should be able to produce adequate profit on each

rupee of investment. If investment do not generate sufficient profits, it would be very difficult for the banks to cover operating expenses and interest charges.

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

4.1.3.1 Return on Total Assets Ratio (ROA)

This ratio is calculated, dividing net profit by total assets. This ratio represents the relationship between net profit and assets. Net profit indicates the profit after deduction on interest and tax. Total asset means the assets that appear in assets side of balance sheet. The increasing ratio shows favorable situation for the banks. The higher ratio also shows that the bank could well manage their overall operations. But the lower ratio shows vice-versa.

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

Table 4.12

Return on Total Assets Ratio (ROA)

(Rs. In million)

F.Y.	Net Profit		Total Assets		Ratios(%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	117.00	-1.00	9014	864	1.30	(0.12)
2003/04	153.00	-31.00	13255	1858	1.15	(1.67)
2004/05	232.00	70.00	16063	3099	1.44	2.26
2005/06	351.00	65.00	21330	4757	1.65	1.37
2006/07	501.00	95.00	27891	7955	1.80	1.19
2007/08	697.00	143.00	38873	11669	1.79	1.23
Mean					1.52	0.71
Standard Deviation(s)					0.27	1.39
Coefficient of Variation (CV)					17.52	195.83

Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08

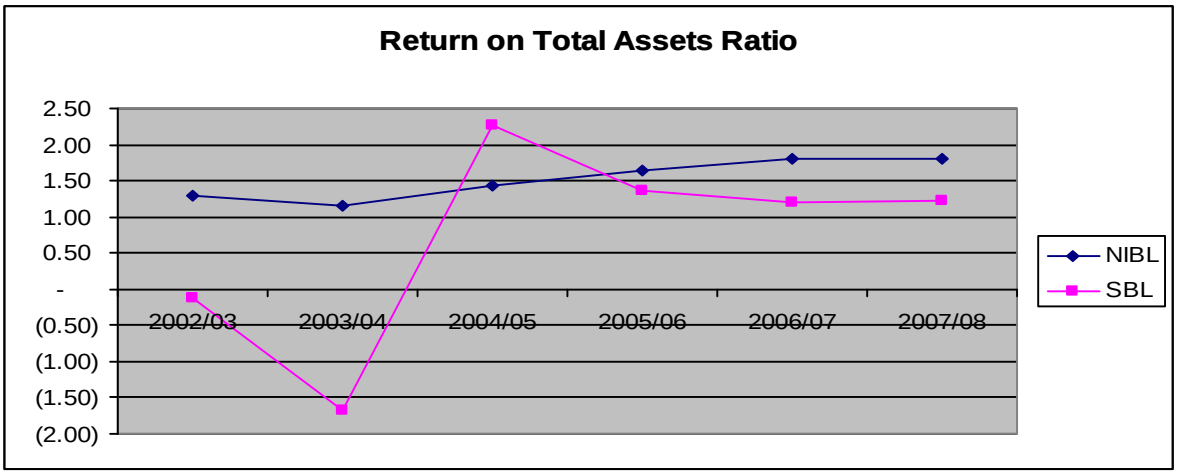
Above table shows the return on total assets of NIBL and SBL. Above tables shows the ratios 1.30%, 1.15%, 1.44%, 1.65%, 1.80% and 1.79% in NIBL for the study period. Similarly the ratios of SBL came -0.12%, -1.67%, 2.26%, 1.37%, 1.19% and 1.23% for the study period.

Above the table shows the return on total assets of NIBL and SBL. The average ratio of NIBL was higher than that of SBL, which implies that NIBL had more efficient operation of optimal utilization of the resources in comparison with same period of SBL. Like wise CV of NIBL was less than that of SBL, which indicates that, the variability of the ratio of NIBL was more uniform than that of SBL.

The profit of SBL was negative in first and second year due to the increment of fixed cost in the previous years while starting its business.

Figure No 4.12

Return on Total Assets Ratio (ROA)



4.1.3.2 Net Profit to Total Deposit Ratio

This ratio measures the percentage of profit earned from the utilization of the total deposit. Deposits are mobilized for investment, loan and advances to the public in generating revenue. Higher ration indicates the return from investment on loans and lower ration indicates that the funds are not properly mobilized.

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

Table 4.13

Net Profit to Total Deposits Ratio

(Rs. In million)

F.Y.	Net Profit		Total Deposits		Ratios(%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	117.00	-1.00	7923.00	392.00	1.48	(0.26)
2003/04	153.00	-31.00	11525.00	1291.00	1.33	(2.40)
2004/05	232.00	70.00	14255.00	2462.00	1.63	2.84
2005/06	351.00	65.00	18927.00	3918.00	1.85	1.66
2006/07	501.00	95.00	24489.00	6625.00	2.05	1.43
2007/08	697.00	143.00	34452.00	10191.00	2.02	1.40
Mean					1.73	0.78
Standard Deviation(s)					0.30	1.85
Coefficient of Variation (CV)					17.14	236.50

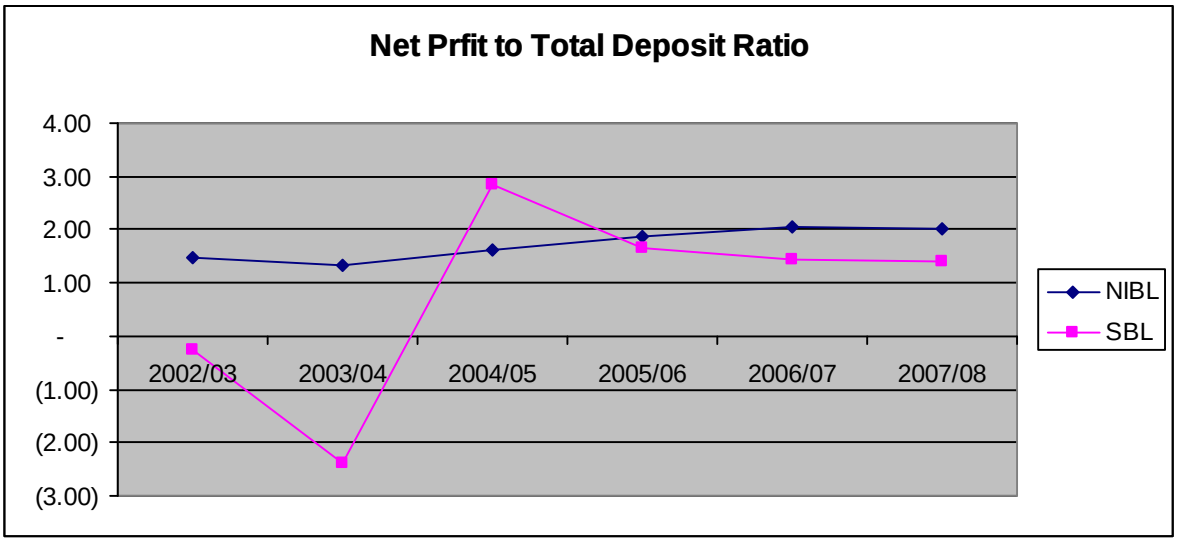
Source: Annual Reports of NIBL & SBL from FY 2002/03to 2007/08

Above table shows the return on total deposit of NIBL and SBL. The ratios of bth banks are in fluctuating trend. The ratios in NIBL remained 1.48%, 1.33%, 1.63%, 1.85%, 2.05% and 2.02% in the study period. Similarly the ratios in SBL came -0.26%, 2.40%, 2.84%, 1.66%, 1.43% and 1.40% in the study period.

The mean Standard Deviation and CV net profit to total deposits of NIBL were 1.73, 0.30 and 17.14% respectively. Similarly mean, standard deviation and CV of SBL were 10.78, 1.85 and 236.50%. The average ratio of NIBL was higher than that of SBL. Similarly CV of NIBL was lower than that of SBL, which mean that there was more consistency in the ratio of NIBL in respect of return to total deposit. Finally it can be concluded that SBL had utilized its outsider's fund in better way to generate return and it was increasing its profit every year.

Figure No 4.13

Net Profit to Total Deposits Ratio



Finding

Return on total deposit ratios in NIBL were in fluctuating trend in both banks. The average ratio of NIBL was lower than that of SBL.

4.1.3.3 Return on common shareholders' equity

This ratio is calculated by dividing net profit by common shareholders' equity. This ratio measures the return on shareholders' investment in the bank. The higher ratio of return on equity is better for shareholders. It builds trustworthiness to the customers as well as reputation of the bank.

$$\text{Return on common shareholders' equity} = \frac{\text{Net Profit}}{\text{Shsreholders' Equity}}$$

Table 4.14

Return on Common Shareholder's Equity (ROE)

(Rs. In million)

F.Y.	Net Profit		Shareholder's Equity		Ratios(%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	117.00	(1.00)	639.00	349.00	18.31	(0.29)
2003/04	153.00	(31.00)	729.00	318.00	20.99	(9.75)
2004/05	232.00	70.00	1180.00	388.00	19.66	18.04
2005/06	351.00	65.00	1415.00	603.00	24.81	10.78
2006/07	501.00	95.00	1878.00	794.00	26.68	11.96
2007/08	697.00	143.00	2686.00	862.00	25.95	16.59
				Mean	22.73	7.89
				Standard Deviation(s)	3.53	10.79
				Coefficient of Variation (CV)	15.52	136.70

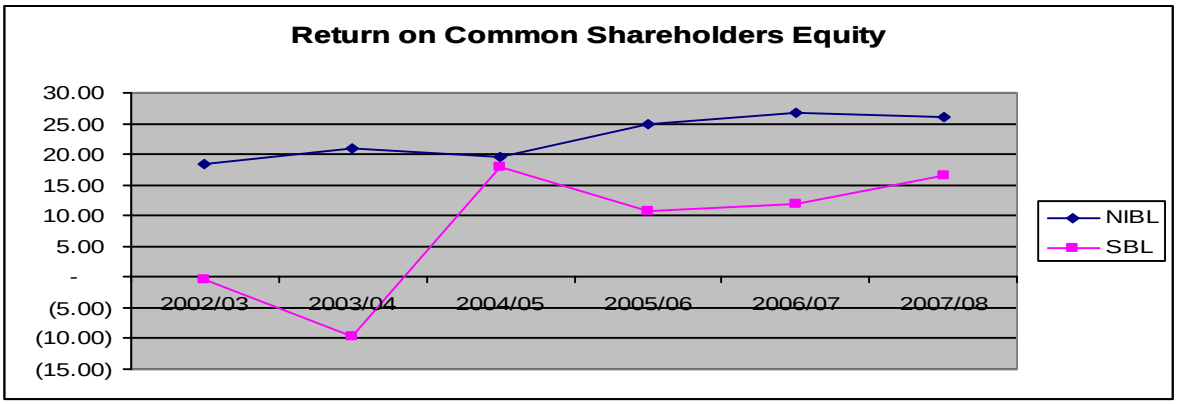
Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08

Above table shows the return on shareholder equity of NIBL and SBL. The ratios of NIBL in the study period were 18.31%, 20.99%, 19.66%, 24.81%, 26.68% and 25.95%. Similarly the ratios of SBL were -0.29%, -9.75%, 18.74%, 10.78%, 11.96% and 11.59% respectively for the study period.

Mean, standard deviation and CV for the return on shareholders equity of NIBL is 22.73, 3.53 and 15.52% and 7.89, 10.79 and 136.70% respectively of SBL. The average ratio of NIBL for return on shareholders equity was higher than that of SBL. Likewise the CV was lower. This shows the return on shareholders equity of NIBL was more consistent.

Figure No 4.14

Return on Common Shareholder's Equity (ROE)



Finding

Return on shareholder's equity ratio measures the return on shareholder's investment in the bank. The average ratio of NIBL for the return on shareholders equity was higher than that of SBL. Likewise the CV of SBL was higher. The ratios of both banks were in fluctuating trend through out the study period. But the ratios of NIBL were in fluctuating trend. Average return on shareholders equity ratio of NIBL found to be greater than SBL because of the negative net profit and negative shareholders equity for the FY 2002/03 and 2003/04.

4.1.3.4 Return on Working capital

This ratio is calculated dividing net profit after tax by working capital. This ratio measures the proportion of net profit after tax and working capital. Working capital is obtained by subtracting current liabilities from current assets. The higher ratio is better which shows little working capitals utilized properly.

$$\text{Return on Working Capital} = \frac{\text{Net Profit}}{\text{Working Capital}}$$

Table 4.15

Return on Working Capital Ratio

(Rs. In million)

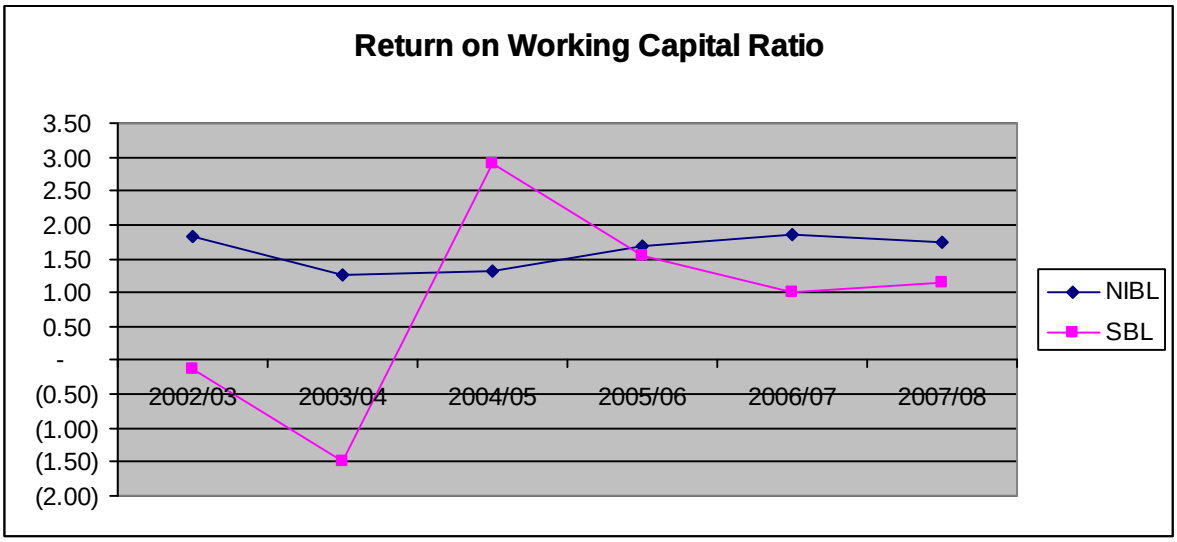
F.Y.	Net Profit		Net Working Capital		Ratios(%)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	117.00	-1.00	6407.00	740.00	1.83	(0.14)
2003/04	153.00	-31.00	12005.00	2091.00	1.27	(1.48)
2004/05	232.00	70.00	17442.00	2418.00	1.33	2.89
2005/06	351.00	65.00	20744.00	4192.00	1.69	1.55
2006/07	501.00	95.00	27196.00	9494.00	1.84	1.00
2007/08	697.00	143.00	40100.00	12422.00	1.74	1.15
				Mean	1.62	0.83
				Standard Deviation(s)	0.25	1.50
				Coefficient of Variation (CV)	15.51	180.29

Source: Annual Reports of NIBL & SBL from FY 2002/03to 2007/08

Mean, standard deviation and CV for the return on working capital of NIBL is 1.62, 0.25 and 15.51% and 0.83, 1.50 and 180.29% respectively of SBL for the study period. The mean ratio of NIBL was higher that that of SBL which shows that NIBL had higher return on working capital. SBL had higher CV, which indicated that NIBL had more consistency in ratios.

Figure No 4.15

Return on Working Capital Ratio



Finding

Working capital of both banks was in increasing trend. It means both of the banks had fewer current assets than current liabilities. There should have current assets twice-current liabilities. Return on working capital was considerably higher in NIBL, which signifies that NIBL was more successful to utilize the working capital for making profit. The ratio varied more in SBL.

4.1.3.4 Interest Coverage Ratio

This ratio is computed dividing earning before interest and tax (EBIT) by interest charges. This ratio evaluates the debt serving capacity of the banks. The higher ratio shows that bank can pay the interest easily.

$$\text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest Charges}}$$

Table 4.16

Interest Coverage Ratio

(Rs. In million)

F.Y.	EBIT		Interest Charges		Ratios(Times)	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
2002/03	203.00	-1.00	299.00	6.00	67.89	(16.67)
2003/04	237.00	-31.00	326.00	46.00	72.70	(67.39)
2004/05	474.00	97.00	459.00	92.00	103.27	105.43
2005/06	648.00	101.00	742.00	154.00	87.33	65.58
2006/07	795.00	153.00	835.00	272.00	95.21	56.25
2007/08	1121.00	239.00	948.00	408.00	118.25	58.58
Mean					90.78	33.63
Standard Deviation(s)					18.94	63.32
Coefficient of Variation (CV)					20.86	188.27

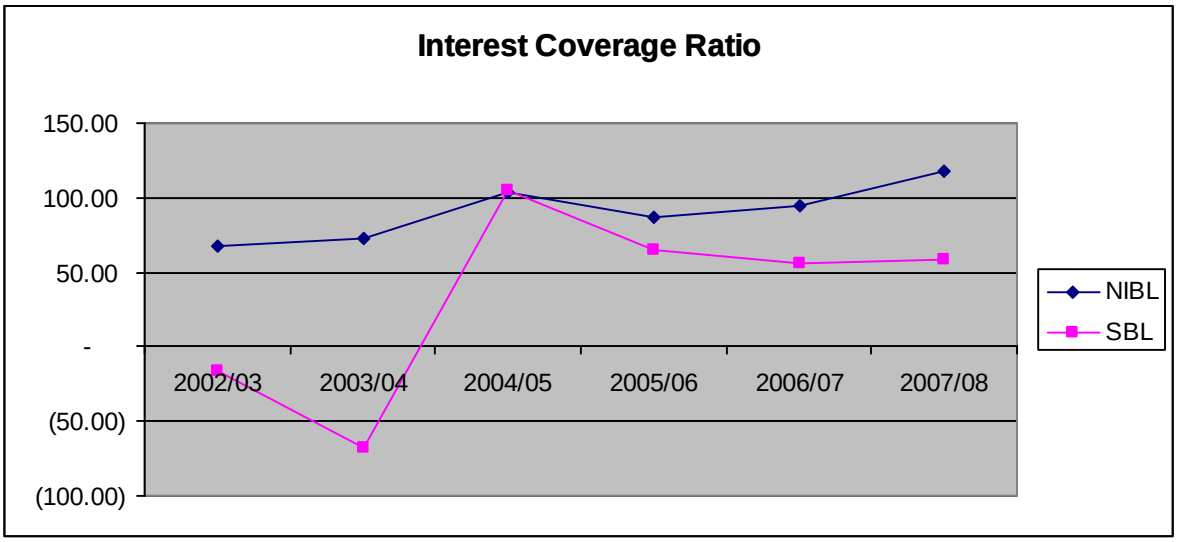
Source: Annual Reports of NIBL & SBL from FY 2002/03 to 2007/08

The interest coverage ratios for NIBL remained 67.89, 72.70, 103.27, 87.33, 95.21 and 118.25 times in respective years of study period. Similarly the ratios in SBL came -16.67, 67.39, 105.43, 65.58, 56.25 & 58.58 times in the corresponding year. The ratios are seen in fluctuating trend for both banks.

Mean, standard deviation and CV for the interest coverage ratio of NIBL is 90.78, 18.94 & 20.86% and 33.63, 63.32 and 188.27% respectively of SBL. The mean ratio of SBL was much lower than that of NIBL, which reveals the better debt servicing capacity of NIBL. By comparing CV of the ratios of SBL for different five years varied considerably because of higher CV ratio.

Figure No 4.16

Interest Coverage Ratio



Finding

Interest coverage ratio evaluates the debt serving capacity of the banks. The higher ratios show that bank can pay the interest easily. The ratios were in fluctuating trend for both banks during the study period. Average interest coverage ratio in NIBL remained greater than in SBL, which reveals that interest-paying capacity of NIBL was considerably better than that of SBL.

4.2 Statistical Analysis

Various financial tools mentioned above were used to analyze the cash and liquidity management of Development Banks. Similarly, the relationship between different variables related to the study topics were drowning out using statistical tools.

4.2.1 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 value in the series. Since an average is somewhere within 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 dividing this total by the number of items. The formula is given below:

$$\overline{X} = \frac{\sum X}{N}$$

Where,

$\overline{X}$ = Arithmetic average,

$\sum X$ = Sum of value of all term and

N = Number of terms

4.2.2 Standard Deviation

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

$$s = \sqrt{\frac{\sum d^2}{n - 1}}$$

Where,

s = Standard deviation,

$\sum d^2$ = Sum of the squares of the deviations measured from the arithmetic average, and,

n = Numbers of items

4.2.3 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,

$$CV = \frac{s}{\overline{X}}$$

Where,

CV = Coefficient of variation,

s = Standard deviation, and,

$\overline{X}$ = Arithmetic average

4.2.4 Simple Correlation Coefficient

Correlation analysis is a statistical tool, which is used to describe the degree to which one variable is related to another. The Correlation is a statistical tool which studies the relationship between two variables. Different methods and techniques are used in correlation analysis for measuring the extent of relationship between two variables. Karl Pearson's co-efficient of correlation is a commonly used to measure the linear association of two variables.

In this study the correlation between the following variables are analyzed. The main objective of this analysis is to find out the relationship between the selected variables.

Table 4.17

The simple correlation analysis of NIBL & SBL between different variables

Variables	Correlation		6 P.E.		Signi/Insigni	
	NIBL	SBL	NIBL	SBL	NIBL	SBL
Cash and Bank Balance and Deposit	0.9896	0.8761	0.0341	0.3839	Signi	Signi
Current Assets and Current Liabilities	0.9986	0.9971	0.0045	0.0095	Signi	Signi
Quick Assets and Current Liabilities	0.9970	0.9957	0.0100	0.0142	Signi	Signi
Fixed Deposits and Total Deposits	0.9530	0.9838	0.1516	0.0532	Signi	Signi
Saving Deposits and Total Deposits	0.9871	0.9886	0.0425	0.0376	Signi	Signi
Cash and Bank Balance and Current Liabilities	0.9857	0.9124	0.0468	0.2769	Signi	Signi
Cash and Bank Balance and Current Assets	0.9897	0.8856	0.0339	0.3563	Signi	Signi
NRB Balance and Total Deposits	0.9266	0.9504	0.2336	0.1599	Signi	Signi
Net Profit and Total Assets	0.9963	0.9037	0.0122	0.3029	Signi	Signi
Net Profit and Total Deposits	0.9970	0.8805	0.0100	0.3713	Signi	Signi
Net Profit and Shareholder's Equity	0.9946	0.8844	0.0179	0.3598	Signi	Signi
Net Profit and Net Working Capital	0.9871	0.8582	0.0424	0.4352	Signi	Signi
EBIT and Interest Charge	0.9718	0.9452	0.0920	0.176	Signi	Signi
Loans and Advances and Saving Deposits	0.9721	0.9876	0.0909	0.0406	Signi	Signi
Loans and Advances and Fixed Deposits	0.9288	0.9815	0.2269	0.0607	Signi	Signi
Loans and Advances and Total Deposits	0.9950	0.9996	0.0164	0.0014	Signi	Signi
Investment and Total Deposits	0.9165	0.9732	0.2643	0.0873	Signi	Signi
Net Profit and Total Assets	0.9963	0.9037	0.0122	0.3029	Signi	Signi

To find out the quantitative relationship between different variables, correlation analysis is conducted in the study. There are 18 correlation analyses in the study which is shown in the above table. During the study period, relationships between above mentioned variables

have higher degree of positive correlation. And correlation coefficient of the variables are higher than their respective probable error multiplied by 6 (i.e. 6 P.E.), which means there is evidence of correlation or correlation is significant.

Finding

Simple correlation coefficient analysis showed that the variables of both banks have highly correlated i.e. Cash & bank balance & total deposit, Current assets & current liabilities , Quick assets & current liabilities, fixed deposit & total deposit, saving deposit & total deposit, cash & bank balance & current liabilities, cash & bank balance & current assets & NRB balance & total deposit, net profit & total assets, net profit & total deposits, net profit & shareholder's equity, net profit & working capital, EBIT & Interest charge, loan & advance & saving deposits, loan & advance & fixed deposits, Investment & total deposits, net profit & total assets.

4.2.6 Test of Hypothesis

Hypothesis test is used to find the dependency of one variable to another variable. In other words, hypothesis test determines the validity of the assumption with a view to choose between two conflicting hypothesis about the value of population parameter. It helps to decide on the basis of a sample data, whether a hypothesis about the population is likely to be true or false. There are two criteria for good hypothesis statement one hypothetical statement is above the relation between variables. Second hypothesis carries a clear implication for testing the stated relation. These criteria mean hypothesis statement certain two or more variables that are measurable and they specify how the variables are related. For the study some ser of null hypothesis have been formulated and tested.

Hypothesis Testing of NIBL

The value of correlation between cash and bank balance and total deposit is insignificant.

Hypothesis Setting

H_0: ρ =0 i.e. the value of correlation between cash and bank balance and total deposit is insignificant.

H_1: $\rho \neq 0$ i.e. the value of correlation between cash and bank balance and total deposit is significant.

Test Statistics under H_0

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

Or, $$t = 0.9896\sqrt{\frac{6-2}{1-(0.9896)^2}}$$

= 9.7292

Table Value of (t): At 5% significance level & degree of freedom d.f. =2, (two tailed) 2.132 (from t-table).

Decision: Hence, calculated value of t is greater than tabulated value. So, H_o is rejected & H_1 is accepted i.e. the value of correlation between cash & bank balance & total deposit is significant.

The value of correlation between Current Asset and Current Liability is insignificant.

Hypothesis Setting

H_0: ρ=0 i.e. the value of correlation between Current Asset and Current Liability is insignificant.

H_1: $\rho \neq 0$ i.e. the value of correlation Current Asset and Current Liability is significant.

Test Statistics under H_0

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

Or, $t = 0.9986\sqrt{\frac{6-2}{1-(0.9986)^2}}$

= 26.6981

Table Value of (t): At 5% significance level & degree of freedom d.f. =2, (two tailed) 2.132 (from t-table).

Decision: Hence, calculated value of t is greater than tabulated value. So, H_o is rejected & H_1 is accepted i.e. the value of correlation between current assets & current liabilities is significant.

The value of correlation between loan and advances and Total Deposits is insignificant.

Hypothesis Setting

H_0: ϱ=0 i.e. the value of correlation between loan and advances and Total Deposits is insignificant.

H_1: ϱ≠0 i.e. the value of correlation between loan and advances and Total Deposits is significant.

Test Statistics under H_0

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

Or, $t = 0.995\sqrt{\frac{6-2}{1-(0.995)^2}}$

= 14.0890

Table Value of (t): At 5% significance level & degree of freedom d.f. =2, (two tailed) 2.132 (from t-table).

Decision: Hence, calculated value of t is greater than tabulated value. So, H_o is rejected & H_1 is accepted i.e. the value of correlation between loan & advances & total deposit is significant.

The value of correlation between Quick Assets and current liabilities is insignificant.

Hypothesis Setting

H_0: ρ=0 i.e. the value of correlation between Quick Assets and current liabilities is insignificant.

H_1: ρ≠0 i.e. the value of correlation between Quick Assets and current liabilities is significant.

Test Statistics under H_0

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

Or, $$t = 0.995\sqrt{\frac{6-2}{1-(0.995)^2}}$$

= 14.0890

Table Value of (t): At 5% significance level & degree of freedom d.f. =2, (two tailed) 2.132 (from t-table).

Decision: Hence, calculated value of t is greater than tabulated value. So, H_o is rejected & H_1 is accepted i.e. the value of correlation between Quick assets & current liabilities is significant.

Hypothesis Testing of SBL

The value of correlation between cash and bank balance and total deposit is insignificant.

Hypothesis Setting

H_0: ρ =0 i.e. the value of correlation between cash and bank balance and total deposit is insignificant.

H_1: $\rho \neq 0$ i.e. the value of correlation between cash and bank balance and total deposit is significant.

Test Statistics under H_0

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

Or, $$t = 0.8761\sqrt{\frac{6-2}{1-(0.8761)^2}}$$

= 2.5698

Table Value of (t): At 5% significance level & degree of freedom d.f. =2, (two tailed) 2.132 (from t-table).

Decision: Hence, calculated value of t is greater than tabulated value. So, H_o is rejected & H_1 is accepted i.e. the value of correlation between cash and bank balance and total deposit is significant.

The value of correlation between Current Asset and Current Liability is insignificant.

Hypothesis Setting

H_0: ρ=0 i.e. the value of correlation between Current Asset and Current Liability is insignificant.

H_1: ϱ≠0 i.e. the value of correlation Current Asset and Current Liability is significant.

Test Statistics under H_0

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

Or, $t = 0.9971\sqrt{\frac{6-2}{1-(0.9971)^2}}$

= 18.5291

Table Value of (t): At 5% significance level & degree of freedom d.f. =2, (two tailed) 2.132 (from t-table).

Decision Hence, calculated value of t is greater than tabulated value. So, H_o is rejected & H_1 is accepted i.e. the value of correlation between current assets & current liabilities is significant.

The value of correlation between loan and advances and Total Deposits is insignificant.

Hypothesis Setting

H_0: ϱ=0 i.e. the value of correlation between loan and advances and Total Deposits is insignificant.

H_1: ϱ≠0 i.e. the value of correlation between loan and advances and Total Deposits is significant.

Test Statistics under H_0

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

Or, $t = 0.999\sqrt{\frac{6-2}{1-(0.999)^2}}$

= 49.985

Table Value of (t): At 5% significance level & degree of freedom d.f. =2, (two tailed) 2.132 (from t-table).

Decision Hence, calculated value of t is greater than tabulated value. So, H_o is rejected & H_1 is accepted i.e. the value of correlation between loan and advances and total deposits is significant.

The value of correlation between Quick Assets and current liabilities is insignificant.

Hypothesis Setting

H_0: ϱ=0 i.e. the value of correlation between Quick Assets and current liabilities is insignificant.

H_1: ϱ≠0 i.e. the value of correlation between Quick Assets and current liabilities is significant.

Test Statistics under H_0

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

Or, $$t = 0.995\sqrt{\frac{6-2}{1-(0.995)^2}}$$

= 14.0890

Table Value of (t): At 5% significance level & degree of freedom d.f. =2, (two tailed) 2.132 (from t-table).

Decision: Hence, calculated value of t is greater than tabulated value. So, H_o is rejected & H_1 is accepted i.e. the value of correlation between Quick assets & current liabilities is significant.

Finding

In hypothesis under t test value of correlation coefficient between different variables i.e. cash and bank balance and total deposit, current asset and current liability, loan and advances and total deposit, quick assets and current liabilities, cash are significant.

4.3 Major Findings

From the above analysis and interpretation of data, the major findings of this study during the study period are summarized below:

1. Cash and bank balance to total deposit ratio was calculated by dividing cash and bank balance by total deposits. The mean ratio of NIBL was greater than that of SBL, which means that there was not uniformity in the ratios in CV of SBL, which signifies greater consistency in it. Cash and bank balance to total deposit ratio of both banks were in fluctuating trend. Standard Deviation of SBL was greater than NIBL which signifies that ratios of different years of SBL were more deviated.
2. Current ratio of NIBL and SBL were in fluctuating trend through out the study period. The mean ratio of NIBL was slightly higher than SBL. Like wise CV of NIBL was lower than SBL, which means that SBL had more fluctuation in ratios as compared with NIBL. Mean ratio shows the highly liquid position of NIBL, which shows SBL has far better investment plan than NIBL. Current ratios were in slightly fluctuating trend for NIBL and SBL. Both banks could not maintain the conventional standard of 2:1. However the average ratio of NIBL was greater than that of SBL, which signifies that NIBL was more capable of meeting immediate liabilities in contrast to SBL.
3. In general, Fixed Deposit To Total Deposit Ratio seems likely to equal in FY 2002/03. After then SBL's ratio rapidly decreased and increased where NIBL's ratio slowly decreased and increased. This means SBL had more fluctuation.
4. Return on shareholder's equity ratio measures the return on shareholder's investment in the bank. The average ratio of NIBL for the return on shareholders equity was higher than that of SBL. Likewise the CV of SBL was higher. The ratios of both banks were in fluctuating trend through out the study period. But the ratios

of NIBL were in fluctuating trend. Average return on shareholders equity ratio of NIBL found to be greater than SBL because of the negative net profit and negative shareholders equity for the FY 2002/03 and 2003/04.

5. Working capital of both banks was in increasing trend. It means both of the banks had fewer current assets than current liabilities. There should have current assets twice-current liabilities. Return on working capital was considerably higher in NIBL, which signifies that NIBL was more successful to utilize the working capital for making profit. The ratio varied more in SBL.
6. Return on total deposit ratios in NIBL were in fluctuating trend in both banks. The average ratio of NIBL was lower than that of SBL.
7. Interest coverage ratio evaluates the debt serving capacity of the banks. The higher ratios show that bank can pay the interest easily. The ratios were in fluctuating trend for both banks during the study period. Average interest coverage ratio in NIBL remained greater than in SBL, which reveals that interest-paying capacity of NIBL was considerably better than that of SBL.
8. Loans and advances to total deposits ratios of NIBL were in fluctuating trend and SBL had the ratios in fluctuating trend. Similarly Loans and advances to fixed deposits ratio in both banks were in fluctuating trend.. Loan and advance to total deposit ratio appeared significantly higher in SBL. It indicates the better utilization of total deposits in SBL than in NIBL. The ratios remained more uniform in NIBL. The mean loan and advance to fixed deposit ratio appeared higher in NIBL, which indicates that turnover of fixed deposits in form of loan, and advance was better in NIBL. The ratio varied less in same bank. The mean loan and advance to saving deposit ratio found higher in SBL, which indicates that turnover of saving deposits in form of loan and advance, was better in SBL. The ratios varied less in NIBL. Similarly Loans and advances to fixed deposit ratio were in fluctuating trend in both banks. The ratio of SBL was highest in FY 2004/05 i.e. 1714%. Average ratio of SBL is very much higher than the average ratio of NIBL i.e. 763.09>301.28.
9. Investment to total deposit ratios of NIBL as well as SBL were in fluctuating trend. As depicted by higher investment to total deposits ratio in NIBL, it seems more

successful to utilize the depositor's fund in investment. The ratio disappeared slightly to greater extent in SBL. The ratios varied in SBL.

10. Cash and bank balance to current assets ratios of both banks were in slightly fluctuating trend. The average ratio of NIBL was higher than that of SBL, which tells that NIBL had more liquidity of cash than that of SBL. The ratios in NIBL found to be more consistent.
11. Simple correlation coefficient analysis showed that the variables of both banks have highly correlated i.e. Cash & bank balance & total deposit, Current assets & current liabilities , Quick assets & current liabilities, fixed deposit & total deposit, saving deposit & total deposit, cash & bank balance & current liabilities, cash & bank balance & current assets & NRB balance & total deposit, net profit & total assets, net profit & total deposits, net profit & shareholder's equity, net profit & working capital, EBIT & Interest charge, loan & advance & saving deposits, loan & advance & fixed deposits, Investment & total deposits, net profit & total assets.
12. In hypothesis under t test value of correlation coefficient between different variables i.e. cash and bank balance and total deposit, current asset and current liability, loan and advances and total deposit, quick assets and current liabilities, cash are significant.

CHAPTER –V

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter is a complete conclusive and suggestive package, which contains summary, conclusions and recommendation. This would be meaningful to the top management of the bank to initiate action and achieve the desire result. This chapter is dedicated to provide conclusions after the comparatively analyzing the cash and liquidity management of Nepalese commercial bank with reference to NIBL and SBL. This chapter shows the final report of the study. The chapter is divided into three sections. First section deals with the summary of the study. Shortcut of the decision that is found in previous chapter is presented in short manner. Summary gives the brief introduction to the entire chapter of the study and shows the actual facts of the present situation under the topic of the study. This is called summary of the study. The details of the findings are not better to show. So, the short forms of the previous chapter are presented here to make easy to the reader as well as the researcher to show the final report. The second section is related with the conclusion of the study in which overall decision made under the study are presented. The third section of this chapter is remedies of recommendation of the study. The details of this section are presented below.

5.1 Summary

After adopting the economic liberalization policies by the government, various commercial banks, development banks, financial companies, insurance companies, co-operatives and other have been setup within a short period in Nepal. The basic objective of the liberalization policy was to bring healthy competition in financial sector and attract the investment from private sectors. As a result many commercial and development banks have been established. Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world. With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, has acquired on April 2002 the 50%

shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd. The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

Siddhartha Bank Limited (SBL) commenced operations in 2002. The Bank is promoted by a group of highly reputed Nepalese dignitaries having wide commercial experience. Its head office is located in Kamaladi, kathmandu. It provides a full range of commercial banking services through its head office as well as ten branches established in Kathmandu, Birgunj, Biratnagar, Pokhara, Damak, Narayangadh and Patan.

The study mainly deals with the comparative analysis of the liquidity position and cash management practices of NIBL and SBL i.e. management of individual current assets like cash and bank balance. This study aimed to find out the financial position of selected banks in relation to ratio analysis. Its main objective is to find out the liquidity position of selected bank and evaluate its major significance from findings of the study. It also gives priority to make comparative study of profitability position of NIBL and SBL

As mentioned earlier, this study concentrated on the comparative analysis of cash and liquidity management practices of aforementioned bank NIBL and SBL. From the perspective of the researcher the commercial banks of Nepal are chosen for the study & among 26 commercial banks, SBL & NIBL are chosen mainly because of the involvement of the researcher in the bank as an employee. These were chosen due to the easier availability of the information.

To fulfill the objectives, an appropriate research methodology has been developed, which includes financial tools and statistical tools. In the ratio analysis, three different categories have been tested with their sub-division. The ratios tested were liquidity ratio, profitability ratio, and utilization ratio.

Liquidity ratio measures the firm's ability to fulfill its short-term commitments. These ratios focus on current assets and current liabilities and are used to ascertain the short-term solvency position of a firm.

In chapter fourth, data collection through various sources have been presented. It mainly consists the analysis of various types of data regarding cash and liquidity management of selected commercial banks. On the basis of study, the preceding chapter has brought certain conclusions and recommendations are summarized below.

5.2 Conclusions

In conclusion, it can be said that cash and liquidity management is one of the most important parts of every financial institution. Liquidity is the most sensible and crucial aspect of the bank, which is often compared to lifeblood of the human being. Lack of adequate liquidity is often one of the first signs that a bank is in serious financial trouble and lead to the loss of public faith upon banks. Thus, ensuring adequate liquidity is a never-ending problem for the bank management that will always have significant implications for the bank's profitability. After analyzing the sample bank NIBL and SBL, using various important conclusions have been derived from the study.

Liquidity position of NIBL was stronger than that of SBL, which shows NIBL had readiness to serve its customers more efficiently in comparison with SBL for the purpose of meeting current liabilities. Although higher liquidity means lower risk as well as lower profit but higher liquidity is not always the cause of lower profitability.

Net profit to total deposit ratio was considerably higher in SBL, which signifies that SBL was more successful to utilize deposit for making profit.

Debt to total assets ratio was increasing trend for both banks in different proportion. This showed both of banks employed varying proportion of interest bearing debt for the purpose.

Interest coverage ratio of NIBL for different six years varied considerably because of higher CV ratio.

However, holding high level of cash and bank balance seems satisfactory from the viewpoint of profit making organization. SBL was found good in matter of creating credit to earn fixed rate of return. NIBL was also found taking high-risk strategy as it had employed higher proportion of outsiders fund in its capital structure. NIBL was more efficient to utilize its resources in profitable sector than that of SBL. The utilization ratios

of both banks found satisfactory. However NIBL was seen more efficient to utilize its assets in profit generating areas as compared to SBL.

Average return on total assets ratio of NIBL was much higher than in SBL. It implies that the profitability position of SBL in the study period proved to be not enough stronger as compared with NIBL. The ratios varied more in SBL.

Average return on shareholders equity ratio of NIBL found to be greater than SBL because of the negative net profit and negative shareholders equity of SBL in FY 2002/03 & 2003/04.

Return on working capital was considerably higher in NIBL, which signifies that NIBL was more successful to utilize the working capital for making profit. The ratio varied more in SBL.

As depicted by higher investment to total deposits ratio in NIBL, it seems more successful to utilize the depositor's fund in investment. The ratio disappeared slightly to greater extent in SBL. The ratios varied in SBL.

The mean loan and advance to fixed deposit ratio appeared higher in SBL, which indicates that turnover of fixed deposits in form of loan, and advance was better in SBL. The ratio varied less in same bank.

There is high degree of positive correlation between different elements of both banks, which were tested in the analysis chapter i.e. NRB balance, total deposit, net profit, loan & advances and current liabilities while it has positive correlation with its saving deposit etc.

In hypothesis under t-test the value of correlation between cash & bank balance & total deposit, current assets & current liabilities, loans & advance & total deposit, Quick assets & current liabilities are significant in both banks.

5.3 Recommendations

After completing the research entitled “Cash and Liquidity Management of Development banks in Nepal” and presenting, analyzing, concluding the data and related topics, some recommendations are presented below:

Both banks have very low liquidity position because the both current and quick ratios are below the standard. Both banks cannot pay short-term liability at the time of its creditor’s

demand. It may create difficult situation in future. So, both banks should keep sufficient level of current and quick assets to maintain its liquidity position.

The investment positions of SBL and NIBL, out of its total deposit are not satisfactory because the investment to total deposit ratio are too much low. The study shows minimums of total deposits are used for investment. So, it is recommended that both banks should have to give priority to invest in profitable investment opportunity than providing maximum unsecured loan.

Both bank used very high proportion of debt in its capital structure. The NIBL have very high debt to total assets. Similarly, SBL have also very high debt to total assets. So, this indicates the very poor and critical financial condition of both banks. The ratio of NIBL is very critical than SBL. So, both banks should either increase its own equity capital or decrease debt financing of present situation.

Both bank have provided more loan and advance from its saving, fixed, and total deposit. So, both banks should review its loan policy.

The government has not given any consideration to legislate legal rule regarding the liquidity position as well as debt financing. So, they should pay their attention for providing certain legal framework in liquidity maintaining policy as well as debt financing policy.

Profitability position of NIBL was much weaker than SBL. It should improve overall efficiency by investing in more returnable sectors i.e. risky area proper risk analysis.

Debt servicing capacity of NIBL appeared poor. So, it is better to search more profitable sectors for investment and utilizing of the deposit collected. The capital adequacy position of NIBL seem to be less satisfactory then SBL. So, it needs to raise the net worth.

The quality of assets owned by NIBL seen to be proper in comparison to SBL. Therefore NIBL is suggested to advance the loans only after the proper analysis of customers.

Earning of NIBL could not grow proportionately. Therefore NIBL is suggested to invest in other current assets rather than in the lower yielding treasury bills on which interest rate is decline at present. If the liquidity position doesn't appear weaker, it will be better for the banks to increase the investment in long-term loan after analyzing risk.

It will be better for both banks, to open branches in other cities and rural areas in order to find profitable opportunities.

Government should formulate plans and policies and launch various programs for the growth of development banks focusing on private sector development banks.

Bibliography

Acharya, B.P. (2000), "*Doorsanchaar ko Bartaman Abastha ra Nirakaran",* Kathmandu, Silver Jubilee Special Issue, Nepal Telecom.

Acharya, K. (1985), *"Problems and Implements in Management of Working Capital in Nepalese enterprises",* ISDOC Volume 10,.

Bajracharya, B.C. (2053 BS). "*Business Statistic and Mathematics*" 1st edition, Kathmandu, M.K Publisher and Distributors.

Bank and Financial Institution Act, 2063, Law Book Commission, Kathmandu, Nepal

Bhandari, Dilli Raj (2054 BS) "*Banking and Insurance Management*" 1st edition, Kathmandu, Aayush Publication

Dipendra Raj Sharma, (1999), *"A Study of Working Capital Management of Nepal Battery Co.Ltd" :* Master's Thesis, Kathmandu, University Campus, Tribhuvan University.

Gadtula, Keshav Prasad (2051 B.S.), *"Working Capital Management of Nepal Tea Development Corporation":* Master's Thesis, Kathmandu, University Campus, Tribhuvan University.

Gupta, S.C. (1995) "*Fundamental of Statistics",* New Delhi, Himalaya Publishing House.

Investment Bank Limited, *"Annual Report"* (2002/03 - 2007/08)

James, C. and Van Horne (2000), "*Financial Management and Policy",* New Delhi: Prentice Hall of India.

Kandel, Kiran (2006). entitled *"Study on the Liquidity Management of Development Banks of Nepal*" *:* Master's Thesis, Kathmandu, University Campus, Tribhuvan University.

Kharel, Sudip Raj, (2008), *"Liquidity Management of Finance Companies of Nepal"* : Master's Thesis, Nepal Commerce Campus, Kathmandu.

Kolb, Robert W and Rodriguez, Ricardo J, (1996). *"Financial Institution and Markets"* U.K, Blackwell Publisher Ltd.

Kothari, C.R., (1984) *"Quantitative Techniques"*, New Delhi, Vikash Publishing Pvt. Ltd.

Lawrence, J Gitman (1998). *"Principles of Managerial Finance"* 5th edition, Harper and Raw Publishing.

Miller, M.H and Orr, D.A. (1966), *Model for the Demand for Money by Firms",* Quarterly journal of economics.

Ministry of finance (2008) "*Liquidity Measurement Rules"* NRB research department Kathmnadu.

Nepal Rastra Bank, "*Macro Economic Indicators of Nepal"*, NRB research department Kathmandu, April 2009

Nepal Rasttra Bank act 2058, Law Book Commission, Kathmandu, Nepal

Neupane, Puskar (2002). *"Prospects of finance companies in Nepal" :* Master's Thesis, Kathmandu, University Campus, Tribhuvan University.

Pandey I.M, (1992), *"Finanacial Management"*, New Delhi, Vikash Publishing House.

Pandey, Bikram (2001). *"A Comparative Assessment of Financial Performance Among Selected Nepalese Finance Companies"*: Master's Thesis, Kathmandu, Shankar Dev Campus, Tribhuvan University.

Pokharel, Bihari Binod & Gautam, Ujwal Raj, (2061 BS) *"Fundamentals of Financial Management"*, Kathmandu, M.K. Publishers & Distributors.

Poudel, Kishor (2002). "*A study on liquidity and investment position of joint venture commercial banks in Nepal*" *:* Master's Thesis, Kathmandu, University Campus, Tribhuvan University.

Pradhan, Radhe Shyam (2004), "*Financial Management",* Kathmandu, Buddha Academic Publishers.

Pradhan, Radheshyam (1994). *"Financial Management Practice in Nepal"* New Delhi India, Vikash Publishing House.

Pradhan, Surendra (2000), *"Basic of Financial Management,"* Kathmandu, Education Enterprise.

Sapkota, Jivan Nath, (1994) *"A Study on Working Capital Management of Himal Cement Co. Ltd.", :* Master's Thesis, Kathmandu, University Campus, Tribhuvan University.

Shrestha, Manohar K. (1980). *"Financial management",* Kathmandu Curriculum Development Centre.

Shrestha, Manohar Krishna (2004), "*Finanacial Market & Institution"*, Kathmandu: Asmita Books Publishers & Distributors.

Shrestha, Manohar Krishna,(2005), "*Working Capital Management in PEs, A Study on Financial Results and Constraints"*, ISDOC, Kathmandu, 8 (1) 82- 83.

Shrestha, Prem Kumar (2002), *"A Study of Working Capital Management in Bhrikuti Paper Mill Ltd.",* Unpublished Master's Degree Thesis, T.U.

Siddhartha Bank Limited, *"Annual Report"* (2002/03 - 2007/08)

Thapa, Nar Bahadur (2006) "*Some Cash Reserve Ratio Issues",* The Kathmandu Post 13 Aug.

World Bank (2000), "*Sound Practices for Managing Liquidity in Banking Organizations",* New York, USA.

Yogi, Dhruba Nath(1999), *"A Study on Working Capital Management of Nepal Liver Limited", :* Master's Thesis, Kathmandu, University Campus, Tribhuvan University.