

# **CHAPTER - I**

## **INTRODUCTION**

### **1.1 Background of the Study**

For growth and development of Nepal industrialization plays the vital role. Nepal with diminutive per capital income of \$210, has been designated the last developed country. Its predominantly agricultural economy employ more than 80% of the economically active Population in only 18% total arable land, without using any modern technology there is no Specialization agriculture. Therefore regional and rural development Potential of Agriculture. Therefore regional and rural development potential of an agricultural Country such as Nepal may not be fully realized without a well – designed and well – financed industrialization Strategy.

Industrialization Plays crucial role in the process of economic development and its important reason for embarking in performance of industrialization is to increase the rational income. Hence, it is must to increase overall national economy of the country.

Commercial banks plays vital role for the development of such industries by providing financial services. We can say that commercial banks are those banks, which Pool together the savings of the community and arrange for their productive use .They supply the financial needs of modern business by various means. They accept deposits form the public on the condition that they are repayable on demand or on Short notice.

Working capital management is an important aspect of the commercial banks among available Option. Proper management of working capital is the best possible option to improve their operational Viability. Working Capital is the crucial aspect of financial management practice in commercial bank. Thus, the success or Failure of any organization is heavily dependent upon efficiency in its working capital management.

### **1.2 Meaning of Working Capital Management**

There are two kinds of assets: Fixed assets and Current assets. That kind of assets which can't be converted into cash with in the year is fixed assets and those assets which can be

converted into the cash within the year is current assets. The term working capital refers to the current assets of the firm.

Working capital refers to the resources of the firm that are used to conduct operations of day-to-day work that makes the business successful. Without cash, bills cannot be paid, without receivables the firm cannot allow timing between delivering goods to services and collecting the money to pay for them. Without inventories the firm cannot engage in production nor can it stock goods to provide immediate deliveries. As a result of the critical nature of current assets the management of working capital is one of the most important areas in determining whether a firm will be successful.

The term net working capital refers to the difference between current assets and current liabilities. Current assets are the assets, which can be converted into cash within an accounting year, including cash, short-term securities, debtors, bill receivables and stocks. Current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year, including creditors, bills payable and outstanding expenses. Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities and a negative net working capital occurs when current liabilities exceed the interrelationships that exist between them.

### **1.3 Meaning of Commercial Banks**

Commercial banks play an important part for economic development of a country as they provide capital for the development of industry, trade and business by investing the savings collected as deposits from the public. It also renders numerous services to its customers in view of vacillating their economic and social life so that integrated and speedy development of a country is only possible when competitive, reliable banking services are reached and carried to every corner of the country.

Earlier banks were different from modern commercial banks in many respects. The banks that operated in the past combined central banking functions, such as issues of currency with commercial banking functions like accepting deposits and financing business. In

course of time this practice was abandoned and Specialized institutions for the central banking functions were created .Now a central bank cab be easily distinguished from a commercial bank due to their objectives and unique functions.

Modern commercial banks can be identified by different names such as Business Banks, Retail Banks, Clearing Banks, Joint venture Banks and Merchant Banks etc. No matter what names we give to banks, they all perform the same basic functions i.e.. They provide a link between the lenders and the borrowers. Basically by charging a rare of interest to the borrowers slightly higher than they pay to the lenders, the banks make their profit. This is known as financial intermediations.

#### **1.4 Focus of the Study**

Commercial banks are the heart of the financial system. They hold the deposits of many persons, government establishment and business units. They make funds available through their lending and investing activities to borrowers, individuals, business firms and government establishments. In doing so, they assist both the flow of goods and services form the producers to consumers and the financial activities of the government. They provide a large portion of medium of exchange and they are the media through which monetary policy is affected. These facts show that the commercial banking system of the nation is important to the functioning of the economy. Bank is a business organization where monetary transaction occurs. It creates funds from its clients' saving and lends the same to needy person or 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. The working capital management of the bank is different form other type of business enterprises. A bank plays a significant role to fulfill the requirement of working capital of any other type of business enterprises. It also part of current assets of bank's working capital and we can consider deposits and short – term borrowings as a part of current liabilities. so the focus of the study is a reference regarding the working Capital Management.

## 1.5 Statement of the Problem

There are many commercial banks in our country. These banks play important role in the economic development of the country. Wrong decisions on working capital management of commercial banks not only affect the liquidity and profitability of the bank but also economic condition of the country.

Working capital Management on bank is difficult that of other manufacturing and non – manufacturing business organization. Commercial banks are great monetary institutions, which are playing important role to general welfare of the economy. The responsibility of commercial banks is more than any other financial institutions. They must be ready to pay on demand without warning or notice, a good share of their liabilities. Banks collect funds from different types of deposits for providing loan and advances to different sector. To get higher return, banks must try to increase funds from deposits as well as their needy People. But commercial banks always face the problem for utilizing more deposits and disbursement of loans cash balance also decrease profitability of banks. Increase the cash balance on bank, which require paying its large amount of liabilities on its demand without depositors' notice. But large amount of idle

There are many Problems but some of the major problems that have been identified for the Purpose of this study are as follows:

- ) Which of the current assets are more Problematic in commercial bank?
- ) Does current assets management plays significant role in working capital management of Nepalese commercial banks?
- ) Does working capital promotes the financial image of commercial bank?
- ) What is the size of investment in each types of current assets management?
- ) What are the components of working capital, which affect the operating income of commercial bank?

## **1.6 Objective of the Study**

The main objective of this study is to examine the impact of working capital on profitability positions of Nepalese commercial banks. The specific objectives of the study are as follows:

- ) To analyze the liquidity, assets utilization, long term solvency and profitability position of banks.
- ) To study the current assets and current liabilities and their impact on liquidity and profitability.
- ) To provide appropriate recommendation and suggestion for the improvement of the working capital Management and enhancing the profitability scenario of Nepalese Commercial Banks.

## **1.7 Tools for Analysis**

There are different types of tools. For the analysis of the data, all tools are taken as appropriate as possible the related analytical tools are as follows:

- ) Financial tools
- ) Statistical tools
- ) Ratio Analysis
- ) Trend analysis

## **1.8 Significance of the Study**

Certainly, there is an importance of any research work to various fields. The study is a conclusion-oriented study. The research would be helpful to all who are interested to have knowledge in this field any especially to the working capital management of concerned banks as well as other interested parties. The study will be helpful to go seep into the matters as to working capita management of their banks is better (or worse) than their competitors. It may pattern of loan and advances and other investment of those big commercial banks.

There are many commercial banks in Nepal; all of them are operating in the competitive environment. To exist in this competitive environment these banks should have to adopt

suitable strategies. The success and the failure of any organization depend on its strategy, which is affected by working capital management. Therefore, working capital management is the crux of problem to prepare the proper strategy on its favors. The study of working capital management of commercial bank would be beneficial to the banking professionals, investors, teachers, and students of researcher.

### **1.9 Limitation of the Study**

Limitation exists everywhere and this study is also not an exception of it. Following are some limitations:

- ) This study will be based on secondary data.
- ) This study will do for the partial fulfillment of MBS.
- ) It covers only the five financial years. So the conclusions drawn are based on the data.
- ) The study is mainly focus over the working capital are of the bank; it doesn't cover other parts of banks.

### **1.10 Organization of the Study**

This study will consist of five chapters:

Chapter – I Introduction

Chapter – II Review of literature

Chapter – III Research Methodology

Chapter – IV Data presentation and Analysis

Chapter – V Summary, Conclusion and Recommendation

The first chapter begins with the background and introduction; it includes focus of the study, statement of problem, objectives of the study, significance of the study, limitation of the study and its organization.

The second chapter focuses on review of literature.

The third chapter will be the research methodology to be adopted for the study.

The forth chapter will be the data presentation and analysis for the study.

The fifth chapter includes summary, conclusion and recommendation.

## **CHAPTER - II**

### **REVIEW OF LITERATURE**

This chapter highlights upon the literature that is available in this relative topic. This chapter is divided into two parts. First part deals with the conceptual framework of commercial banks and working capital management. Second part deals with relating of some available literature including review of books, journals, articles and dissertation.

#### **2.1 Conceptual Framework**

##### **2.1.1 Meaning of Commercial Bank**

It is difficult to give concise and accurate definition of bank. It is so because a modern bank performs various functions. It is difficult to include all these functions in a single and concise definition. Even though it can be said that a bank is an institution whose business is to trade in money. “Banks are financial intermediaries, similar to credit unions, savings and loans associations and other institutions selling financial services. Banks are those financial institutions that offer the widest range of financial services and perform the widest range of financial functions of any business firm in the economy. It is a institution, which accepts deposits from the public and in turn advances loans by creating credit .Therefore, it should be differentiated from other institutions as they cannot create credit though they accept deposits.”

Today is the age of specialization. The modern economy demands different types of financial services. A single institution cannot fulfill all the services demanded by the customers. Therefore, different types of banks also emerged in the banking industry specializing in different functional areas. Types of banks are:

1. Commercial bank
2. Development bank
3. Central bank
4. Exchange bank
5. Saving bank
6. Industrial bank

7. Co – Operative bank
8. Merchant bank
9. Mutual fund etc.

The commercial banks are those banks that pool together the savings of the community and arrange for their productive use . They supply the financial needs of modern business by various means. They accept deposits from the public on the condition that they are repayable on demand or on short notice. Commercial banks are restricted to invest their funds in corporate securities. Their business is confined to financing, the short term needs of trade and industry such as working capital financing. They cannot finance in fixed assets. They grant loans in the form of cash credits and overdrafts. Apart from financing, they also render services like collection of bills and cheques, safe keeping of valuables, financial advising etc to their customers.

American Institution of banking defines commercial bank as commercial bank is corporation which accept demand deposits subject to cheque and makes short term loans to business enterprises regardless of the scope of its other four function of commercial bank as receiving and handling deposits (Deposit Function), handling payments of money (payment Function), making loans and investment (Loan Function) and creating money by extension of credit (Money Function).

In today's concern the operating function of the commercial bank are (a) to collect working capital (b)to utilized the working capital in various Purposes (c) by utilizing the working capital , it earns profit and (d) part of the profit is distributed as dividend and part of the profit is retained for the expansion of banking transaction. Specialized financial institution supplies credit for the purchase of customer goods and services by purchasing the time-sales contracts of merchants or by granting small loans directly to consumers is termed finance company . Specialized consumer finance agencies are now operating throughout Western Europe, Canada, Australia, Japan, USA and some Latin American Countries. Although they existed in the early 90's their greatest development, come after World War II ([www.studyfinance.com](http://www.studyfinance.com)).



### **2.1.2 Working Capital Management**

The term working capital is originated with the old Yankee Peddler ,who would load up his wagon with goods and then go off on his route to Peddler his wares .The merchandise was called working capital because it was what he actually sold or ‘turned over’ to produce his profit .The wagon and horse were his fixed assets . He generally owned the horses and wagon, so they were financed with ‘equity’ capital but he borrowed the funds to buy the merchandise. These borrowings were called working capital loans, and they had to be repaid after each trip to demonstrate to the bank that the credit was sound (Weston & Brigham, 1984: 333).

The management of funds of business can be described as financial management. Financial management is mainly concerned with two aspects. Firstly, fixed assets and fixed liabilities in other word long - term investment and sources of Funds .Secondly, current assets and current liabilities or short term financing. Short term financial management also term working capital management, which is typically viewed as the management of the current assets and current liabilities of a firm. A firm’s working capital is the money it has available to meet current obligations (those due in less than a year). A firm with a great deal of working capital is in little danger of failing in the near future, but enormous working capital over a prolonged period could also imply excessively conservative management. Working capital, after all, is short-term in nature and hasn’t been put to in work in the company’s profit-making business operations. As with most measures of corporate well being, this is one varies by industry and even by season. Firm’s fails value cannot be maximized in the long run unless it survives the short run. Firm fails most often because they are unable to meet their working needs; consequently, sound working capital management is a requisite for firm survival.

There are two concepts of working capital (i) gross concept and (ii) net concept. The gross working capital, simply called as working capital, refers to the firm’s investment in current assets. Current assets are the assets which can be converted into cash within accounting year (or operating cycle) and include cash, short-term securities, debtors, bills receivable and stocks. The term net working capital refers to the difference between

current assets and current liabilities. The current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year and include creditors, bill payable and outstanding expenses (Pandey, I.P., 1992: 144).

By analyzing the above concept about working capital, we can conclude that, all the firm, whether public or private, manufacturing or non-manufacturing have just adequate working capital to serve in competitive market. Because excessive investment on working capital affects a firm's profitability just as idle investment, earn nothing in other hand, inadequate investment on working capital affects the liquidity position of the firm and leads to financial embarrassment and failure of the firm. So, immature decision made in management of working capital can lead to adverse effects in business and reduce the liquidity, turnover and profitability and increases the cost of financing of the enterprises.

Various study works have been done in different aspects of working capital of different organization. In this sub chapter related some available study work are reviewed. And other available literatures are also reviewed for the purpose of justifying the study Radhe Shyam Pradhan (1986) has published a book on management of working capital in 'Nepalese Public Entrepreneurs'. This book is based on the study of nine manufacturing public enterprises of Nepal for the duration of ten years from 1973-1982 A.D. In this study , he has dealt with various issues viz- type of working capital policy followed by those public entrepreneurs – liquidity position , structure of working capital , nature of working capital , utilization and demand of working capital and its various components with changes volume of sales in those public entrepreneurs. In the study he reveals that most of the selected enterprises achieved a trade off between risk and return there – by following neither an aggressive nor a positive net working capital and much of the growth in net working capital at deflated prices has been much lower. The liquidity measures showed a poor liquidity position in majority of MPEs. It has been noticed that the enterprises had either negative cash flows or earning before tax, or they had excessive net current debts, which could not be paid within a year. Of the current assets, which is, on an average, half of the total assets in public entrepreneurs? The share of inventories is the larges followed by receivables and cash. There had been an improvement in

utilization of current assets in the majority of public entrepreneurs. He also noticed that the adjustment speed of actual to desire balance had been observed as highest for cash followed by inventories .However the speed of adjustment was slower in all these cases. The results were, therefore, surprising, as the adjustment was slower in all these cases. The results were, therefore, surprising, as the adjustment of even cash holding was not immediate. Further more, the inclusion of capacity utilization in the models did not seem to have contributed much to the demand functions of working capital and its various components. Thus, capacity utilization as a significant variable affecting these demand functions was doubtful. This book, thus provides and extensive account for a small portion of the total assets.

At last he added that analysis of financial statements could give a good insight into financial health and performance of bank.

Pandey has described some conceptual ingredients, based on his various research studies .He has explained various aspects of working capital management. He has divided his study into five chapters. First chapter deals with the concepts, needs and determinants of working, dimensions of working capital management, optimum level of current assets and working capital trends in India as well. In the second chapter, he has written about the management of cash and marketable securities. He has described about cash flows, determining the optimum cash balance, investment in marketable securities in the chapter. He has described the management of receivable in chapter third, in which he has dealt with goals of credit management, optimum credit policy, aspects of credit policy, and credit producers for individual accounts. In the fourth chapter, he has written on inventory management techniques, Selective inventory control technique and financial manager's role in inventory management (Pandey, 1992: 280).

Van Horne has categorized the various components of working capital i.e. liquidity, receivable and inventory and current liabilities and grouping them according to the way they affect valuation. He has also described the different methods for efficient management of cash and marketable securities. For the management of receivable,

different credit and collection policies have been described and various principles of inventory have been examined for inventory management and control (Van Horne, 1994: 190).

Weston and Brigham have given some theoretical insights into working capital management on the basis of various researches they had done on it. The conceptual findings of their study provide sound knowledge and guidance for the further study on the field of working capital management. In the beginning, they have explained about on an importance of working capital, concept of working capital, financing of working capital, the use of short term versus long – term debt relationship of current assets to fixed assets. Then next, they have dealt with the various components of working capital (Cash, marketable securities, receivable and inventory) and their effective management techniques. For the efficient management of cash, they have explained the different cash management models. In their study, they have also described the major sources and forms of short – term financing, such as trade credit, loans from commercial banks and commercial paper (Weston and Brigham, 1984: 386).

### **2.1.3 Types of Working Capital**

There are two type of working capital finding in manufacturing company. Those two types of working capital are Permanent Working Capital and Variable Working Capital

#### **2.1.3.1 Permanent Working Capital**

The amount of working capital required for the business to maintain a minimum level of current assets for the whole period is called permanent working capital. Permanent working capital is also known as fixed working capital. It is comprises of minimum cash balance, minimum level of inventory etc. The nature of this capital is similar to the capital invested in the fixed assets. Both these capital cannot be withdraws from the business. Financing of this working capital by using short- term sources needs to renew the loan respectively. If the suppliers of fund of disagree to renew the loans, firm has to go for fresh loan to repay the exiting short-term debt. The compulsion of taking loan within a short period may cause an increase in the rate of interest. Much of the time of

financial manager will spent on the renewal and management of loan. Therefore, it is desirable to finance the permanent working capital by using long- term sources like long –term debt or equity. Requirement of permanent working capital may increase due to inflation or growth in sales. This incremental requirement of permanent working capital can be financed by using internal sources.

### **2.1.3.2 Variable Working Capital**

In most business the required of working capital may be high during a particular season and it comes down during other periods. This additional portion of working capital, which is required during peak business season, is known as variable or temporary or seasonal working capital. Variable working capital is required during peak season only. This portion of working capital can withdraw from the business after end of such season. Therefore, it is desirable to finance the temporary working capital from short- term external sources like trade credit, commercial paper, arrangement of other short term loan from the bank. Because such short- term loans can easily repaid after the peak business season. If this portion of this working capital is financed through permanent or long- term sources, this fund will either remain idle or invested in marketable securities earning at a lower rate. As a result the earning of the company will be adversely affected.

### **2.1.4 Sources of Working Capital**

The required of the working capital depends upon the organization objectives, time situation and time period. This suggests that dependence on only one or specific sources of capital may create obstacles and problems. Therefore, the enterprise has to use combination of one or more sources of capital in management of working capital. After ascertaining the amount of working capital needed to the enterprises, permanent capital can be collected from capital market where as working capital collected from money market. According to nature of working capital, following different sources may be available (Kuchhal, 1998: 42).

#### **2.1.4.1 Sources of Permanent or Fixed Working Capital**

Long term sources are used to meet the requirement for permanent or fixed working capital. Main sources are described as follows:

i. **Issues of Shares**

The enterprises can issues ordinary and preference share taking consideration on capital structure of enterprises for the collection of permanent working capital. Issues of preference share is better than to issues ordinary share to collect working capital because a redeemable preference share can be returned when firm does not need it.

ii. **Issue of Debenture**

When the working capital requirement is permanent and non seasonal, the corporation can issues debenture, being a fixed burden on corporate earning. The managerial board will be free from debenture-holders who have no any right on management and control of enterprises.

iii. **Public Deposit**

The reputed enterprises accept deposit from public for several years. On these deposits certain predetermined interest should be paid in certain time.

iv. **Plouging Back of Profit**

These important sources of permanent working capital are generated from the business operation in profit. Required permanent working capitals are fulfilled from the retained earning which is the same portion of profit without distributing to shareholders.

v. **Special Financial Institution**

The reliable sources of permanent working Capitals are commercial banks, financial institution and other organized institution. They provide short term or mid-term loan facilities.

**2.1.4.2 Sources of Temporary or Variable Working Capital**

The short term sources are used to meet the requirement of working capital. Some special variable working capital sources are as follows:

**i. Private Loans**

Taking loans from personal or private sources fulfills the working capital need of the organization. Firm takes short loans from personal investor, businessmen, landlords, friends and relatives.

**ii. Commercial Banks**

Commercial bank collects small scattered saving from various people and firms, which are invested in industries and business. They provide short term loans in the form of cash credit, overdraft facilities, discounting of bills of exchange, etc.

**iii. Ploughing Back of Profit**

It can be the source of seasonal working capital in addition to permanent working capital. It is very popular and quick source of working capital financing.

**iv. Public deposit**

Public deposit can also be the sources of variable working capital by collecting small scattered saving for operating business.

**v. Financial Institution**

Financial institutions are established with certain objectives, such as NIDB, ADB, RDB, etc. which provides short term, mid term and long term loans as per required for the enterprises.

**vi. Trade Credit**

The trade credit is the most popular sources of working capital. Sellers provide credit to buyers for short period without any mortgage, which is termed as trade credit. "The trade credit means providing credit by one business to another business. The supply of goods or services by producers to other firms like retail traders for some time without making immediate payment is an example to trade credit"(Joshi and Dongol, 2056:126).

### **2.1.5 Issue of Working Capital Management**

The management spends time and resources on working capital management. But some enterprises are successful to earn more profit through balance working capital policy. Generally, working capital management faces the following issues ( Pradhan, 1992:173).

- ) Size of working capital to maintain-size of each type of current assets.
- ) Source of financing-short or long term, and debt or equity financing.
- ) Cost of financing- cost of short term Vs long term financing.
- ) Risk associated with types of financing trade off between cost and risk.
- ) Maintain of current ratio, minimizing the risk of cash flow problem.

### **2.1.6 Goals of Working Capital Policies**

Working capital policies are the basis guidelines or strategies to achieve target financial performance in relation to working capital. Following are the firm's goals of working capital (Hampton, 1998: 219).

#### **2.1.6.1 Adequate Liquidity**

The most important goal of working capital policy is to achieve adequate liquidity for the conduct of day-today operation .With the lack of sufficient cash to pay their bills when due, they will experience continuing problems.

#### **2.1.6.2 Minimization of Risk**

Relatively current liabilities are the source of financing which may involve low costs. The firm must ensure that these near term obligations (current liabilities) do not become excessive compared to the current asset on hand to pay them. The matching of assets and liabilities among current is a task of minimizing the risk.

#### **2.1.6.3 Contribute to Maximum Firm's Value**

The firm retains working capital for the some purpose as it holds any other assets to maximize the present value of common stock and value of the firm. The investment of excess cash, minimization of inventories, speedy collection of receivables, and elimination of unnecessary and costly short-term financing all contribute to maximizing the value of the firm.



### **2.1.7 Needs for Working Capital**

Most of firms aim at maximizing the wealth of shareholders. The firms should earn sufficient return from its operation. The extent to which profit can be earned naturally depends upon the magnitude of sales among the other things. Specially, working capital required to spend on raw materials, salary, wages, rent, electricity, advertisement and other sales related expenses. The need for working capital can be categorized into the following ways.

#### **2.1.7.1 Transaction Motive**

A business firm holds cash for smooth running of business. The conduct its ordinary business and making purchases and sales, working capital is needed. In the business, where billings are predictable cash inflows, can be scheduled and synchronized with the need for the cash outflow. In a seasonal business more cash may be needed and if firms want to operate transaction smoothly, they have to keep inventory of raw materials and finished goods. Generally, a business firm invests on marketable securities that can be converted into cash in a short time. It is temporary investment. So, to run business smoothly in an uninterrupted basis, a business firm has to manage working capital for transaction motive.

#### **2.1.7.2 Compensation Balance Motive**

The commercial bank performs many functions for business firms. Sometimes, firm pays service charge by direct fee and sometimes by maintaining compensation balance. Compensation balance is the advance deduction bank on loan. It represents that the firm agrees to maintain in its checking account with the bank. With this assurance, the bank can provide such funds as long-term loan.

#### **2.1.7.3 The Precautionary Motive**

Precautionary motive is the need to hold cash and inventories to guard against the risk of unpredictable change in demand and supply forces and other factors such as strike, failure of important customers, unexpected slow down in collection of account receivable, cancellation of some order for goods and some other unexpected emergency. Thus, the firm needs the working capital to meet any contingencies in future.

#### **2.1.7.4 The Speculative Motive**

The working capital is needed to meet the speculative motive, which refers to the desires of a firm to take advantage of the following opportunities.

- a. Opportunities of profit making investment.
- b. An opportunity to purchase raw material at a reduced price on payment of immediate cash.
- c. To speculate on interest rate and
- d. To purchase at favorable price, etc.

To grab these opportunities, the business enterprises have to manage cash and marketable securities. It also represents 'war chest' or pool of funds which a firm may draw quickly to meet a short term opportunity, including acquisition.

#### **2.1.8 Approaches to Estimating Working Capital Needs**

To determine working capital needs, some useful methods are applied in practices. Some appropriate methods of calculating working capital needs of a firm are as follows (Pandey, 1999: 372).

##### **2.1.8.1 Current Assets Holding Period**

It is to estimate working capital requirement on the basis of average holding period of current assets and relating them to costs based on the company's experience in the previous years. This method is essential based on the operating cycle concept.

##### **2.1.8.2 Ratio of Sales**

It is to estimate working capital requirement as a ratio of sales on the assumption that current asset with sales.

##### **2.1.8.3 Ratio of Fixed Investment**

It is to estimate working capital requirement as a percentage of fixed investment

### **2.1.9 Liquidity Vs Profitability: Risk-Return Trade Off**

The firm may follow a conservative or an aggressive policy, which involves risk-return trade off. Determination of the appropriate level of investment in the different components of current assets and the size of current liabilities involves decision concerning the trade off between liquidity, profitability and risks (Gopal, 1996: 121).

The objective of conducting risk-return analysis is to know whether the firms are following an aggressive, a conservative or a moderate approach. When a firm has followed an aggressive approach, the current liabilities are used to finance a position of fixed asset. In the conservative approach the firm uses only long-term funds to finance all kind of current assets and fixed assets without making use of any of the current liabilities .On the moderate approach firm uses long-term funds to finance a portion of current assets. When current assets holding at the minimum level would mean interrupted production, sales and solvency. Its current assets holding will depend on its working capital policy. These policies involve risk return trade-offs (Pandey, 1999: 163).

### **2.1.10 The Cost of Trade-off**

Working capital management involves decision upon the amount and composition of current assets and how to finance these assets. This decision involves trade-off between risk and reputability, cost of maintaining a particular level of current assets. These costs are: the cost of liquidity and the cost of illiquidity. “The cost of liquidity increased with the level of current assets. The cost of illiquidity is the cost of holding insufficient current asset” (Pandey, 1992:169).

The greater the relative proportion of liquid assets, the lesser the risk of running out of cash if all things are equal, result will be less profitability. In determining the optimum level of current assets, the firm should balance the profitability solvency tangent by minimizing total cost –cost of liquidity and cost of illiquidity (Pandey, 1999: 163).

### **2.1.11 Working Capital Cycle**

The working capital cycle can be defined as the period of time, which chapters between the points at which, cash begins to be expended on the production of a product and the collection of from customers. Cash flows with cycle into, around out of business. It is the business life blood, every manager's primary task is to help keep it flowing, and to use the cash flow to generate profits. If a business is operating profitability, then it should, in theory, generate cash surpluses. If it does not generate surpluses, the business will eventually run out of cash and expire.

The faster a business expends the more cash it will need for working capital and Investment. The cheapest and best sources of cash exist as working capital right within business. Good management of working capital will generate cash will help improve profits and reduce risks. Bear in mind that the cost of providing credit to customers and holding stocks can represent a substantial proportion of a firm's total profits. There are two elements in the business cycle that absorb cash-inventory (stocks and working progress) and receivables (debtors owing money). The main sources of cash are payables (our creditors) and equity loans.

Each component of working capital (namely inventory, receivables and payables) has two dimensions TIME... and MONEY...When it comes to managing working capital TIME IS MONEY .If you get money to move faster around the cycle (e.g. collect monies due from debtors more quickly) or reduce the amount of money tied up (e.g. reduce inventory levels relative to sales),the business will generate more cash or it will need to borrow less money to fund working capital .Consequently ,you could reduce the cost of bank interest or you have additional free money available to support additional sales growth or investment .Similarly ,if you can negotiate improved terms with suppliers e.g. .get longer credit or an increased credit limit; you effectively create free finance to help fund future sales. Capital Therefore, if cash is tight, consider other ways of financing capital investment, loans, equity, leasing, etc. Similarly, if you pay dividends or increase

drawings, these are cash outflows and, like water flowing down a plughole, they remove liquidity from the business.

### **2.1.12 Working Capital Policy**

The component of the working capital constitutes the current assets and their way of financing i.e. current liability .In an enterprise, the level and the quality of the current assets and current liabilities is guided by the working capital policy and management adopted by it. Working capital management involves all aspects of the administration of current assets and current liabilities .In other word, “Working capital management is concerned with the problem that arise in attempting to manage the current assets and current liabilities, and the interrelationship that exit between them” (Smith, 1974: 241).

Working capital policy refers to decision relating to the target level investment and the financing mix of current assets working capital policy concern with two basic issues among firms balance sheet item. These two policies are regarding; a) What is the approximate level of current assets, both in the total and by specific accounts, and b) how the required level of current assets should be financed? (Weston, Basley and Brigham, 1996: 192).

The issues, in the WCM, are that firm has to determine how much fund s should be invested in working capital in gross concept. Every firm adopts different financing policy according to the financial manager’s attitude toward the risk-return trade-off. One of the most important decisions of financial manager how much current liabilities should be used to finance current assets .So working capital policy is related to the level of each category of current assets and financing of current liabilities on it.

#### **2.1.12.1 Current Asset Investment Policy**

Current asset investment policy refers to the policy regarding the total amount of current assets to be carried to support the given level of sales. There are three alternative current assets investment policy which are follows (Weston, Basley and Brigham, 1996: 192).

##### **i. Fat-Cat or Relaxed Working Capital Policy**

In this policy, the firm holds a relatively large amount of cash, marketable securities, inventory and receivables to support a given level of sales. This policy creates a longer inventory and cash conversion cycle. It also creates the longer receivables collection period due to the liberal credit policy. Thus, this policy provides the lowest expected return on investment with lower risk.

**ii. Lean and Mean Policy or Restricted Current Asset Investment Policy**

In this WC investment policy, a firm holds the minimum amount of cash, marketable securities, inventory and receivables to support a given level of sales. This policy tends to reduce the conversion cycle. Under this policy, a firm follows a tight credit policy and bears the risk of losing sales.

**iii. Moderate Current Assets Investment Policy**

In this policy, a firm holds the amount of current assets in between the relaxed and restrictive policy. Both risk and return are moderate in this policy.

**2.1.12.2 Current Assets Financing Policy**

Financing the long term or short-term funds to current assets has significant impact on an enterprise's risk or return, liquidity and profitability. Deciding how should current liabilities be used to finance current assets is one of the most important decisions concerning working capital management (Pradhan, 1986: 152).

Long term as well as short term funds involve cost and cost of financing is a deciding factor in the use of different types of funds. Financing policy deals with the optimum financing mix of short term and long-term liabilities. Depending upon attitude towards risk, liquidity and profitability, the management can follow following three alternative working capital financing approaches.

**i. Aggressive or Tight Working Capital Financing Approach**

In this policy, the firm finances not only temporary current assets but also a part of the permanent current assets with short-term financing sources and rest with long term

financing sources. In other word, the firm finances not only temporary current asset but also a portion of permanent current asset with short term financing. Some aggressive firms may even finance a part of their fixed asset with short-term financing. Hence, this sort of mix financing increases the profitability and expense toward risk by financing relatively larger position of its assets through lower cost short term borrowing. Under this policy, higher the risk, higher the return and low liquidity position.

## **ii. Conservative Policy**

Conservative approach refers to a financing mix which is less risky leading to low profitability and high liquidity, the approach would be to finance all funds required from long term funds (Pradhan, 1986:126). The financing policy of firm is said to conservative when it depend more on long term funds for financing needs. Under this financing policy, the firm finances its permanent assets and a part of temporary current assets with long term financing (Pandey, 1999: 164). This policy leads to high level of current assets, with long-term conversion cycle, low level of current liabilities and higher interest cost. The risk and return are lower than that of aggressive one. The risk adverse management follows this policy.

## **iii. Maturity Matching/Hedging/Self Liquidity/Moderate Approach**

This approach of working capital policy entails moderate risk with moderate returns. This firm can adopt a financial plan which involves the matching of the expected life of assets with the expected life of the sources of funds raised to finance assets. When the firm follows matching approach, long term financing will be used to finance fixed assets and permanent current assets and short-term financing to finance temporary or variable current assets this approach tries to achieve trade off between profitability and liquidity with neither too risky nor least risky by financing mix. “It lies in between a low-liquidity, high profitability case and a high –liquidity low profitability case” (Pradhan , 1986:126).

In conclusion, conservative or loose working capital policy refers to that policy under which a firm keeps high level of investment in working capital variables like high level of receivable throughout liberal policy, high inventory and cash/bank balance while

aggressive or tight working capital policy just follows the reverse policy that of former policy. But moderate policy follows the medium way between aggressive and conservative working capital policy.

### **2.1.13 Determinants of Working Capital**

The importance of efficient working capital management is an aspect of over all financial management. Thus a firm plans its operation with adequate working capital requirement or it should neither too excess nor too inadequate working capital. But there are no sets of rules or formulae to determine the working capital requirements of the firm. It's because of a large number of factors that influence the working capital requirement of the firm. A number of factors affect different firm in different ways. Internal policies and environment change also affect the working capital. Generally, the following factors affect the working capital requirements of the firm.

#### **i. Nature & Size of Business**

The working capital requirement of a firm is basically related to size and nature of the business. If the size of the firm is larger, then it requires more working capital. While small firm needs less working capital .Trading and financial require larger amount of working capital relatively to public utilizes.

#### **ii. Manufacturing Cycle**

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

#### **iii. Production Policy**

Working capital requirement is also determined by its production policy. If a firm produces seasonal goods, then its production and sales volume fluctuates with different seasons. This type of fluctuating production policy affects the working capital policy of the firm.



#### **iv. Credit Policy**

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

#### **v. Availability of Credit**

Availability of credit facility is another factor that affects the working capital requirements. If the creditors avail a liberal credit terms, then the firm will need less working capital and vice-versa. In other words, the firm can get credit facility easily on favorable conditions. Thus, it requires less working capital to run the firm otherwise more working capital is required to operate the firm smoothly.

#### **vi. Growth and Expansion**

Growth and expansion also affect the working capital requirement of a firm. However, it is difficult to precisely determine the relationship between the growth and expansion of the firm and working capital needs. But the other things being the same growing firm needs more working capital than those static ones.

#### **vii. Price-level Change**

Price-level change also affects the working capital requirement of a firm. Generally, a firm requires maintaining the higher amount of working capital if the price level rises. Because the same level of current assets needs more funds due to the increasing price. In conclusion, the implications of changing price level on working capital position will vary from firm to firm depending on the nature and other relevant consideration of the operation of the concerned firms.

#### **viii. Operating Efficiency**

Operating efficiency is also important factor, which influences the working capital requirement of the firm. It refers to the efficient utilization of available resources at minimum cost. Thus, financial manager can contribute to strong working capital position through operating efficiency. If a firm has strong operating efficiency then it needs fewer amounts of working capital and vice-versa.

**ix. Profit Margin**

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

**x. Level of Taxes**

The level of taxes also influences working capital requirement. The amount of taxes to be paid in advance is determined by the prevailing tax regulations. But the firm's profit is not constant, or can't be predetermined .Tax liability in a sense of short-term liquidity is payable in cash. Therefore, the provision for tax amount is one of the important aspects of working capital planning .If tax liability increases; it needs to increase the working capital & vice-versa.

**xi. Cash Requirements**

Cash is one of the current assets, which is essential for the successful operations of the production cycle. Cash should be adequate and properly utilized. Adequate cash is also required to maintain good credit relation.

**xii. Business Fluctuations**

This situation whether an organization operating is boom or recession or depression period also determine the working capital needs of the organization.

**xiii. Change in Technology**

Technology developments related to the production process have a sharp impact on the need for working capital. Change in technology will need additional amount of working capital due to fresh investment in new fixed assets.

## **2.2 Reviews of Journals/Articles**

This section is also important for literature review of working capital. For the study of this section many latest information can be derived about related field. This part is mainly focused on the review of journals and research studies published by different management experts about working capital management. Joseph (1962) has presented the article on “Working Capital Concept”. This article looks a fresh at the problem of determining working capital, and purposes a simple yet comprehensive restatement of principle with respect to current assets and current liabilities. The working capital measures the liquidity, the fluidity of capital and serves as an indicator of balance sheet in the assets and liability structure of the company. Bank and the other short-term creditor are vitally interested in the amount of working capital from the stand point of evaluating the prospect of repayment of their claim against the company .Why firms have different level of working capital. The paper dealt with the strategic determinant of working capital (cash, short-term securities, account receivable and inventory) on a product line basis. The factors analysis is to test 1666 variables against the working capital policies of over 1700 business, or product lines, from 1971 to 1978 .his final multiple regression models contained 19 variables pertaining to productions, sales, accounting, competitive position and industry factors.

Working Capital Model= Sales + Production + Accounting + Competitive Position  
+Industry factors. This model was used to explain why working capital levels differ between firms both within and across industries.

Working Capital Management in Public Enterprises and Study the Financial Results and Constraints has considered ten-selected public enterprises and studied the working capital management of those public enterprises. The study states the managers often lack basis knowledge of working capital and its overall impact on the operative efficiency and financial viability of public enterprises. This study has focused on liquidity, turnover and

profitability position of sampled enterprise. Based on those factors, the study has brought certain policy issues of Nepalese public enterprise.

Such as lack of suitable financial planning, negligence toward working capital management, deviation liquidity and turnover of assets and inability to show positive relationship between turnover and return on net working capital. This study has suggested the measures to overcome such policy issues like identifications of needed funds, regular checks and development of management information system, positive attitude towards risk and profit and determination of right combination of short-term and long-term sources to finance working capital requirements.

Radhe S. Pradhan and K.D Koirala (1983) had jointly published an article on “Some Reflections of Working Capital Management in Nepalese Corporations”. This article aims to find out the difficulty, problems and importance of current assets management and also aims to find out the motive for holding cash and inventory. The study use only primary data to find out the basic constraints and distributed 200 questionnaires.

For the purpose of study, they use both manufacturing public corporation as a sample companies. After analyzing the collected data the major findings of this study are as follows:

- ) To provide a reserve for routine net outflows of cash is the major motive for holding cash in Nepalese corporation.
- ) The major reason for holding inventories is to facilitate smooth operation of production and sales.
- ) The major factor affecting the large investment in receivable is found to be the liberal credit policy followed by Nepalese corporation. The large paying practice of customer is also responsible for larger investment in receivable. However, corporations are reluctant to take inefficient collection of trade credit as one of the major factor affecting receivables.

K. Acharya (1985) has published an article on “Problems and Impediment in The Management of Working Capital in Nepalese Enterprises”. This article has presented that working capital management; especially in public sector, has been a relatively weak area. The study has described operational problems as well as organizational problems faced by the Nepalese public enterprises regarding the working capital management. Some of these problems are:

The operational problems are as follows

- ) Public enterprises has slow inventory turnover.
- ) Change in working capital has low impact on profitability.
- ) Current liabilities are increasing largely than current assets.
- ) They have not followed the conventional proportion of debt and equity as 1:1.
- ) Absent and apathetic information management system.
- ) The performance evolution tools and techniques like break even analysis, fund flow analysis, ratio analysis, are either undone or inefficient in most public enterprises.
- ) Monitoring the proper functioning of working capital management has never considered as managerial job.
- ) Secondly, the organizational problems are:
  - ) Lack of regular evaluation of financial as well as regular internal and external audit system.
  - ) Most of public enterprises being unable to present their capital requirements with proper justifications.
  - ) Functioning of finance department was not satisfactory.
  - ) Some of public enterprises are facing the problem of under utilization of capital.

This study is not satisfied with the performance of enterprises. To make an efficient use of funds for minimizing the risk of loss. To make an efficient use of funds for minimizing the risk of loss to attain the profit objectives. This study has made some suggestion and recommendation.

- ) Public enterprises should take care of negatively affecting policies directives from HMG Nepal itself.
- ) Public enterprises should avoid fictitious holding of assets immediately.
- ) Finance staff must be adequate with the modern scientific tools used for the presentation and analysis of data.
- ) Lastly, this study has suggested optimizing its level of investment because both of these situations will erode the efficiency of concern.

Weinurb, Visscher (1998) have carried out a study on industry practice relating to aggressive, conservative working capital policies. This study looked at ten diverse industry groups over an extend time period to examine the relative relationship between aggressive and conservative working capital practices. Results of strongly show that the industries had significantly different current assets management policies. Additionally the relative industry ranking of the aggressive /conservative liability management was also significantly different. Interestingly, it is used where there is a high and significant negative correlation between industry current assets and liability policies. Relatively aggressive working capital management seems balanced by conservative working capital financial management. An empirical study on the working capital channel and cross-sector movement. The paper studied cross-sector co-movement, one of the defining characteristics of business cycle, in a monetary framework. The study argues that monetary factors might be important for understanding this phenomenon through a working capital channel. The study showed that in a strictly portfolio adjustment model where firm borrow to finance working capital, appositve money supply shock drives the nominal interest rate down, thereby stimulating firm's borrowing and causing employment to rise in different sectors. A positive aggressive technology shock can also drive the nominal interest rate down upon impact and reduce co-movement when the elasticity of labor supply is large.

L.D. Mahat (2004) has published article relating to "*Spontaneous Resources Working Capital Management*". The article has defined the three major sources of working capital i.e. equity financing, debt financing and Spontaneous sources of financing, regarding the

working capital management. Debt financing includes short term, bank financing such as bank overdraft, cash credit, bills purchase and discounting, letter of credit etc. where as spontaneous sources of working capital include trade credit, provisions and accrued expenses.

The articles has defined that working capital management is one of the important pillars of corporate finance. However, Nepalese industries are facing difficulty in their survival by the cause of recession, which can bring best and worst in corporate finance such as environment should be enough to cope with the possible worst happening in future for working capital management.

The study has said that managing the working capital resources for a profit making industries are routine affairs of just making payment and arranging collection of debtors. In contrast, the company in debt trouble, it is rather difficult to meet its working capital gap by the way of debt financing, the company should have to bear interest, which may cause to increase in the percentage of operating expenses to the turnover and depletion in the profit. Therefore, spontaneous sources of working capital will better to working capital in order to improve its performance.

Consequently in a changed economic scenario, ever company should realize that inability to manage working capital might land them in a vicious circle that can be hard to get out form. It is indeed essential for industries to tighten their belts and check their financial stability to face and stand in forth coming competitive day.

### **2.3 Review of Thesis**

Besides the review of available books and research studies, a number of studies have been made by student of MBA and MBS relating to working capital management in different PEs and private companies of Nepal. This section will review some of those dissertations.

Shiva Pathak (2005) has done a research on “*An Evaluation of Working Capital Management of Nepal Lube Oil Limited*”. The objectives of this study are to appraise the working capital management of NLO Ltd. and to study the relationship between sales and different variables of working capital. To achieve these objectives, this study has taken five year period and applied the secondary data.

The major findings of the study are:

- )] The growing tendency of investment over current assets could have adverse effects in NLO Ltd’s wealth maximization goals in long run. The study has suggested that NLO Ltd should determine certain rate of return on investment and sales target should be set.
- )] The company should always concern about the current assets and current liabilities and regular check should made. It will control the excess and shortage of working capital of the company.
- )] The company should give attention to manpower planning and should avoid both under staffing and over staffing.

Dependra Raj Sharma (2006) has done a research on “*A Study on Working Capital Management of Nepal Battery Co. Limited*”. Considering five years financial statement (i.e. balance sheet, profit and loss A/C and income statements, etc.) from 1994 to1998. This study has used ratio analysis as tools for the purpose of analyze working capital management in NBC Ltd. The major objectives of this study are to analysis the liquidity composition of working capital, assets utilizations and profitability position of NBC Ltd. This study also focuses on relationship between sales and different variables of working capital of NBC Ltd.

The findings of this study are as follows:

- )] The major component of working capital of NBC Ltd are cash and bank balance, account receivable, inventory, miscellaneous current assets and inventory holds large portion of current assets. The proportion of current assets on total assets and



fixed assets is increasing, it indicates that inventory in current assets is high with respect to its total assets and fixed assets.

- J Inventory to total assets ratio shows fluctuating trend and receivable to total asset position show increasing trend. The turnover position is in fluctuating trend and receivable conversion period and inventory conversation period is long which is unfavorable for the company.
- J Values of current and quick ratios are found nearly equal to standard inefficiency in operation can be seen through wide different between gross profit margin and net profit margin and high level of operating ratio. This study has suggested the company to reduce the inventory level. This study recommends about receivable conversion period, which is necessary to reduce with concerning sales volume because reduction of this period may affect on sales volume. Lastly, this study mentions about operating cost, which must be reduced in proper way so that can maximize its profitability and shareholders return.

Prabin Kunwar (2005) has carried out a research on “*Working Capital Management of Pharmaceutical Industry of Nepal with Reference to Royal Drugs Limited*”. The study has used statistical as well as financial tools to analyze the statement of 2049/50 to 2054/2055. The main objective of this study is to analyze empirical testing affecting working capital of Royal Drugs Limited as well as to know whether adequacy of working capital depends upon the nature of financing current assets or not.

The major findings of this study are:

- J It has used more long term sources of financing than short term sources and followed conservative working capital policy.
- J The major components of current assets in Royal Drugs Limited are cash and bank balance, receivable, inventory. Among these current assets inventory holds largest portion of current assets.
- J Company can not efficiency utilize current assets and there is also inefficient management of receivable policy.

) Liquidity position is satisfactory where as return position is not satisfactory due to negative return. This study has suggested that the company should determine appropriate financing sources. Company should reduce inventory and receivable level for adjusting with sales and production level. To balance them company should improve marketing and credit policy.

Bishnu Prasad Aryal (2002) has done a research on “*A Study on Working Capital Management of Nepal Telecommunication Corporation*”. The specific objectives of this study are to know how far NTC is able to utilize its current assets properly. This study has calculated various financial ratios by taking five years secondary data of NTC.

The major findings of the study are;

- ) There is high liquidity in NTC.
- ) Cash and bank balance holds large amount of current assets
- ) It has followed conservative financing policy.
- ) Turnover ratios of company are not satisfied, profitability position is not satisfied but liquidity condition of NTC is favorable.

Ram Babu Ghimire (2003) has done a research on “*Working Capital Management of Selected Manufacturing Company-Listed in Nepal Stock Exchange*”. The study covers five years historical data from 1997 to 2001 of seven manufacturing companies. This study has focused on the issue of working capital management in relation to selected manufacturing companies. The main objectives of this study are to study working capital practices of listed Nepalese manufacturing companies, to analysis the variable affecting working capital management in Nepalese manufacturing companies and to determine the issue and gaps in working capital management of these companies. For finding the solution to above problem, the study has employed quantitative and qualitative methods. In quantitative method, this study has used financial tools (ratio analysis, cash conversion cycle, predicting power of ratio of success/failure and DU point) and statistical tool (Karl Pearson’s correlation coefficient and simple linear regression). In the qualitative method, this study has used opinion survey method.

The major findings of the study are;

- ) Out of seven, five companies have followed a moderate working capital policy.
- ) The overall average inventory, receivable, payable and cash conversion period are high.
- ) Correlation coefficients between various components of working capital with sales are moderate.
- ) Overall profitability of these selected manufacturing companies is positive, on other hand he has found some issues and gaps i.e. inefficient current assets management, missing working capital policy, high level cost, excessive borrowing, weak liquidity position, high conversion cycle and management inefficiencies. At last the study has suggested that manufacturing companies should make a quarterly working capital plan with effective working capital management. Further they should improve liquidity position, adopt appropriate financing policy, prepare effective sales plan, develop efficiency of personal and staff, and develop appropriate information system.

Purushottam Gautam (2004) has conducted the research on “*Working Capital Management of Soaltee Crowne Plaza*”. This study has covered the period of five years (1998/99 -2002/2003). For the analysis of working capital this study has used different financial and statistical tools like ratio analysis, trend analysis, standard deviation and regression analysis. The main objective of this study is to examine working capital practices and profitability position of Soaltee Crowne Plaza.

The major findings of this study are as given below:

- ) The current ratio of Soaltee Crowne Plaza is in very poor condition because the current asset is than the current liabilities in each year of the study period.
- ) Comparing with standard ratio the calculated current ratio become too small. Therefore, the liquidity position of the company is not satisfactory. Quick assets are pure liquid in nature, but the calculated ratio shows the liquid is insufficient to pay its current payable as its ratio is below standard.

- J Company is losing its ability in respect with investment policy because in the proceeding year it has positive return whereas in the later year it has negative return.
- J The fluctuation cash turnover implies that the Soaltee Crowne Plaza is in efficient in cash management.
- J The proportion of current assets to total assets is nearly consistent. The company has low investment in current assets.
- J Company has followed conservative policy of financing. The receivable turnover is more consistent. The utilization of current assets becomes unsatisfactory. The study has suggested that the company should make the effective plan, which helps for immediate marketability and certainly decrease the problem of overstocking.

Basu Yadav (2006) has conducted the research on “*Working Capital Management of Listed in Nepal Stock Exchange*”. The study has used financial as well as statistical tools to analysis the financial data of 2000 to 2005. The study has also used primary and secondary sources of data. The main objective of this study is to apprise the working capital management of listed hotels and to find out the relationship between the different variables of working capital.

The major findings of this study are:

- J Yak and Yeti, Oriental and Soaltee Crowne Plaza are suffering from excess of current assets over the current liabilities.
- J Yak and Yeti has followed conservative financing policy whereas Soaltee and Oriented have followed aggressive financing policy.
- J The relationship between current assets and current liabilities, current assets and net sales, and net working capital, are found negative and receivables and net sales are positive of all selected hotels.
- J From the primary information, it has also found that Oriental and Yak and Yeti are not implying any credit standard policy and credit payable policy.
- J The liquidity and profitability position of all selected hotels is satisfactory.

## **2.4 Research Gap**

All the above studies are conducted with the research title “*Working Capital Management*”. Some researchers have selected various manufacturing companies for the research and some have concentrated in only one or two companies. As to research gap is concerned, there are many changes taken place in the working capital environment and production process as compared to the last few years. So, fresh study related to working capital management of ULN Ltd has been done in this research. During the period of gap, the company has renamed to Uni-Lever Nepal Ltd .from Nepal Lever Limited .The most of the studies has been considered many more objectives which made their study more complicated but in this research report only four objectives are taken into study. Some researcher uses both primary and secondary data but only secondary data are considered in this research. Both financial as well as statistical tools like ratio analysis, turnover, cash conversion cycle, mean, standard deviation, coefficient of correlation and probable error are used in this research. Almost all the ratios have been applied to cover the analytical part and fulfill the objective of this study. It involves more recent data of ULN Ltd. for five years (2059/060-2063/064).

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

According to Oxford Dictionary, research has been defined as the systematic investigation and study of materials, sources, etc. in order to establish facts and research conclusion. Research refers to various sequential steps to be adopted by a researcher in studying a problem with certain objective in the process of activities to the solution of the problem through planned and systematic dealing with the collection analysis and interpretation of facts and figures. It consists of research design, population and sample study, sources of data, data processing procedure and technique of analysis of data. This chapter describes the methodology employed in this study. The main objective of this study is to analyze, examine, highlight and interpret the working capital management and its impact in financial performance of two commercial banks. i.e. NABIL and NIC. The justification on the present study cannot be obtained without help of proper research methodology.

This study has used financial analysis techniques as well as statistical tools. It is more analytical and empirical. It is mainly based on secondary data gathered from respective annual reports of concerned organization and other publication made by them.

#### **3.2 Research Design**

Research design is a plan structure and strategy of investigation conceived so as to obtain answer to research question and to control variances. It is the arrangement of conditions for collection and analysis of data that aims to combine relevance to the research purpose with economy in procedure. It means an overall framework or plan for the collection and analysis of data. The study aims to portraying accurately upon the working capital and its impact on overall financial performance of these two banks. The research design followed for this study is basically a historical, empirical and descriptive cum analytical research method is followed.

### **3.3 Population and Sample**

Currently there are 26 commercial banks and 58 finance companies which form the population for this study. All those financial institutions are also handling working capital management on their own way. Among them NABIL and NIC commercial banks have been taken as sample for the study. Financial statements of latest 5 years from 2003 to 2008 have been taken as the study period of the comparative study of working capital management. These companies are chosen as they account for the considerable market share of the banking sector.

### **3.4 Nature and Sources of Data**

Data collection is considered as an integral part of the research activity. The sources of information are generally classified as primary and secondary.

- a. Primary Data:** Data collected by researcher or through agent for the first time from related field and processing original character are known as primary data. In preparing this thesis, primary data are lesser used due to time factor and nature of availability.
- b. Secondary Data:** Data collected by some one else, used already and are made available to others in the form of published statistics are known as secondary data.

Different types of data from several sources are necessary for this study. Therefore, both quantitative and qualitative data have been collected. Qualitative data have been collected through office visit and informal interviewing with some staff and Quantitative data are collected through reports etc. published by relevant banks.

### **3.5 Data Processing Procedure**

The obtained data are presented in various tables, diagrams and charts with supporting interpretation. These detail calculations that cannot be shown in the body part of the report are presented in appendices at the end.

### **3.6 Data Collection Technique**

The study is mainly based upon secondary data; the data relative to financial performance and directly obtained from concerned banks. The supplementary data performance records of concerned banks, booklets, journals and other organization.

Data are collected through annual report, minutes and memorandum of association relative websites and several organizations. Concept paper made by few organizations, newsletters, bulletin and brochures also helped in collection of data for the study. Similarly methods like surfing in website and personal visit to bookshops is also used for the collection of data and information.

### **3.7 Method of Data Analysis and Interpretation**

The collected data through various instruments and sources have been edited, coded, processed, analyzed and tabulated using simple financial and statistical methods. Major findings were based on the analysis and interpretation of data. The major data analysis tools used for the analysis and presentation of data are as follows:

#### **3.7.1 Financial Analysis Tools**

Financial ratios are useful indicators of a firm's performance and financial situation. Financial ratios are calculated to ascertain the financial condition of the firm. It is the relationship between financial variables contained in the financial statement. Most ratios can be calculated from information provided by the financial statements. Most ratios can be calculated from information provided by the financial statements. Financial ratios can be used to analyze trends and to compare the firm's financials to those of other firms. In some cases, ratio analysis can predict future bankruptcy. It helps the related parties to spot out the financial strength and weakness of the firm. The related parties may be creditors, long term debt suppliers, investors and the company's management. It is the process of summarizing large quantity of financial data and making qualitative judgment about the firm's financial data and making qualitative judgment about the firm's financial performance.



In the research study various financial tools are employed for the analysis. There are various ratios but in this study some selected ratios among them are used.

### **A. Liquidity Ratio**

Liquid Assets are those that can be easily converted into cash without significant loss of its original value. Converting assets, especially current assets such as inventory and receivables, to cash in the primary means by which a firm obtains the funds needed to pay its current bills. Therefore, a firm's liquid position deals with the question of how well the firm is able to meet its current obligations. Short-term assets or current assets are most easily converted to cash than long-term assets. So, in general, one firm would be considered more liquid than other firm if it has a greater proportion of its total assets in the form of current assets. Liquidity ratio measures the short-term solvency position of the firm. Liquidity ratio is ratio that shows the relationship of a firm's cash and other current assets to its current liabilities. Under this, there are two types of ratios.

#### **a. Current Ratio**

Current assets divided by current liabilities from the most recent quarter. The current ratio is a measure of the firm's immediate financial health and its ability to meet current obligations. Generally, the current ratio should be 2:1 or higher; the higher the current ratio, the more conservative the firm, although a high current ratio can mean less profitability than a competing firm with a leaner current ratio. Also, like so many ratios, this one can vary by industry. Restaurant companies, for example, often have current ratios of less than 1:1, but since there is usually a delay between payment for services (which is immediate) and payments to vendors, who typically grant credit, this low ratio raises few eyebrows.

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

#### **b. Quick Ratio**

The sum of cash and receivables from the most recent quarter divided by the total current liabilities from the most recent quarter. This assessment of a company's ability to meet short-term obligations is also known as the acid test. In general, the quick ratio should be 1 or better. A high quick ratio is usually a sign of a solid, conservatively run company in no danger of imminent demise even if for some awful reason sales immediately ceased. A firm's quick ratio might be of special interest to investors anticipating some kind of downturn in the firm's business or the economy at large.

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventory} - \text{Prepaid expenses}}{\text{Current Liabilities}}$$

**c. Cash and Bank Balance to current, margin and other deposit ratio (Without fixed deposit).**

This ratio is employed to measure whether the bank and cash balance is sufficient to cover its call margin including deposit. It is calculated by dividing cash and bank balance by saving margin and current deposit (excluding fixed deposit). It can be expressed as:

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

**B. Activity Ratio (Turnover Ratio)**

Activity ratio is intended to measure the effectiveness to employment of the resources in a business concern. Activity ratio measure efficiency of the firm. Through these ratios, it is known whether the funds employed have been used effectively in the business activity or not. The following are the ratios, employed to analyze the activeness of the concerned joint venture.

**a. Loan and Advances to total Deposit Ratio**

This ratio assesses to what extent, the banks are able to utilize the depositor's funds to earn profit by providing loans and advances. It is computed dividing the total amounts of loans and advances by total deposit funds. The formula used to compute this ratio is as:

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

High ratio is the symptom of higher/ proper utilization of funds and low ratio is the signal of balance remained unutilized/idle.

**b. Loan and Advances to Fixed Deposit Ratio**

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

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

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

**c. Loan and Advances to Saving Deposit Ratio**

This ratio asset, how many times the fund is used to loans and advances against saving deposits. Saving deposits are interests bearing short term obligation and the major sources of investment in loan and advances for income generating and major sources of investment in loan and advances for income generating purpose by CBs. This ratio indicates how many times the short term interest bearing deposits are utilized for

generating the income, is calculated dividing the amount of loan and advances by total deposit in saving account. The following formula is used to calculate this ratio as:

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

**C. Leverage Ratio or capital Structure**

Financial leverage ratios provide an indication of the long-term solvency of the firm. Unlike liquidity ratios that are concerned with short-term asset and liabilities, financial leverage ratios measure the extent to which the firm is using long-term debt. Debt and equity are long-term obligations and remaining parts in the liability side of the balance sheet are termed as short-term obligations. Both types of obligations are required in forming the capital structure of the firm. The long-term financial position of the firm is determined by the leverage or capital structure. The different leverage ratios are maintained to measure the financial risk or proportion of outsiders fund and owner's capital used by the firm. Following are under leverage ratios.

**a. Debt –Equity Ratio**

It is a test of long-term solvency of a firm. The ratio indicates the relationship between debt and equity. It is related to shareholder's fund indicating the degree of protection against long term creditors. The formula of Debt-Equity ratio is:

$$\text{Debt – Equity Ratio} = \frac{\text{Long Term Debt}}{\text{Total Shareholder's Equity}}$$

**b. Debt to Total Capital Ratio**

It is a test of long term solvency of a firm. The ratio indicates the relationship between long-term debt and total capital. It shows the degree of relation and protection of total capital against long-term or total debt. It is calculated as follows:

$$\text{Debt to Total Capital Ratio} = \frac{\text{Long Term Debt}}{\text{Total Capital}}$$

**D. Profitability Ratio**

Profitability ratios offer several different measures of the success of the firm at generating profits. It indicates of success in achieving desired profit. Various profitability ratios are calculated to measure the operating efficiency of business enterprises. Through profitability ratios the lender and investors want to decide whether to invest in a particular business or not. Some of the important profitability ratios used is as follows:

**a. Interest Earned to Total Assets Ratio**

Interest Earned to Total Assets Ratio formed to find out the percentage of the interest earned investing total assets. This ratio can be calculated by dividing the amount of interest earned by the total assets of the firms. It can be expressed as:

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

**b. Net Profit to Total Assets Ratio**

This ratio is very much crucial for measuring the profitability of funds invested in the bank's assets. It measures the return on assets. It can be calculated by dividing the net profit after tax by total assets. It can be expressed as:

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

**c. Net Profit to Total Deposit ratio**

This ratio is used for measuring the internal rate of return from deposits. It is computed by dividing the net profit by total deposits. This can be expressed as:

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

Higher ratio indicates the return from investment on loans and advances are desirable and lower ratio indicates the funds are not properly mobilizing.

**d. Composition of Working Capital**

- ) Cash and Bank Balance percentage
- ) Loan and advances percentage
- ) Government securities percentage
- ) Miscellaneous current assets percentage.

**3.7.2 Statistical Tool Used**

Statistical methods are the mathematical techniques used to facilitate the analysis and interpretation of numerical data secured from groups of individuals or groups of observations from a single individual. In this research study some statistical tools are also used for analysis. Those tools are as follows:

**A. Trend Analysis**

Different variants change according to change of time. Variation of such variants with time can be systematically studied and analyzed. The tools that are used to show grandly increase or decrease of variables over a period of time is known as trend analysis. The financial statement may be analyzed computing trends of series of information. This method determines the action upwards or downwards and involves the computation of the percentage relationship that each statement item has been extracted from the same item in the base year. The information for a number of years is taken upward first year, generally the first year is taken as a base year. With the help of trend analysis the tendency of variables over the period can be seen clearly. The trend percentage analysis interprets that either increase or decrease in trend percentage may give misleading results. This section expresses the trend of same related items, which have effect in working capital.

**B. Correlation**

Correlation is the statistical tool that refers the closeness of the relationship between two or more variables. We can use correlation to describe the degree to which one variable is linearly related to other variables. The coefficient of correlation deals to determine the degree of relationship between two or more sets of figures. Among the various method of finding out coefficient practice for calculating correlation coefficient, the most widely used in practice for calculating correlation coefficient is Karls Pearson's correlation coefficient. So, Karl Pearson's correlation coefficient method is applied in the study. Correlation coefficient always lies between +1 to -1. When  $r = +1$ , there is perfect positive correlation between two variables and when  $r = -1$ , there is perfect negative correlation. And when  $r = 0$ , there is no correlation. We can calculate correlation of variables with the formula. That is:

$$\text{Correlation (r)} = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}}$$

Where,

$$x = (X - \bar{X})$$

$$y = (Y - \bar{Y})$$

### C. Hypothesis Test

One of the important aspects of statistical inference is test of hypothesis. It is on assumption that is made about the population parameter and then it's validity is tested. The main goal of testing of hypothesis is to test the characteristics of hypothesized population parameter based on sample information whether the difference between the population parameter and sample statistic is significant or not. Smaller the difference, the sample mean is closed to the hypothesized value and larger the differences the hypothesized value has low chance to be correct.

#### Hypothesis 1

$H_0$ : There is no significant difference in composition of working capital between Nabil bank and NIC Bank.

H<sub>1</sub>: There is significant difference in composition of working capital between Nabil bank and NIC Bank.

### **Hypothesis 2**

H<sub>0</sub>: There is no significant difference in liquidity position between Nabil Bank and NIC Bank.

H<sub>1</sub>: There is significant difference in liquidity position between Nabil Bank and NIC Bank.

### **Hypothesis 3**

H<sub>0</sub>: There is no significant difference in profitability position between Nabil Bank and NIC Bank.

H<sub>1</sub>: There is significant difference in profitability position between Nabil Bank and NIC Bank.



## **CHAPTER – IV**

### **DATA PRESENTATION AND ANALYSIS**

The data collected from the various sources have been presented and analyzed in this chapter. Since the conclusions to be drawn and the recommendations to be made from this study are based on the presentation and interpretation of data analyzed here. This chapter constitutes the main part of this study. The presentation and analysis of data measures the various dimensions of the problems of the study.

The entire figure presented here are Rs. in million. The data presented herein are pertained to mid July of each year and the data presented herein are based on the amount mentioned in the annual report of respective years of concerned banks and journals of NRB.

#### **4.1 Introduction**

The major objective of the study is a comparative study of working capital management of NABIL and NIC commercial Banks. The major variables of the study are cash and bank balance, loans and advances and investment in government securities. In this chapter, relevant data and information of working capital as well as financial performance of NABIL and NIC commercial banks are presented, compared and analyzed accordingly. It covers to analyze the ratio as well as trend (the least square method) and composition of current assets. Liquidity turnover, leverages and profitability of these banks. It also uses correlation analysis and hypothesis test.

#### **4.2 Composition of Current Assets**

To operate the business, different kinds of assets are required. The composition of the current assets differs from organization to organization. According to nature of the business and the attitude of the management towards risk. The firm, which has risk advert management, maintains the high liquidity, assets in total working capital. If the organization has aims to maximize return on shareholder investment should earn sufficient return from its operation. So every firm has to maintain the appropriate level of current assets according to their nature of business and attitude of management to run the business smoothly.

The following table shows the composition of current assets used by NABIL and NIC Bank of the study period.

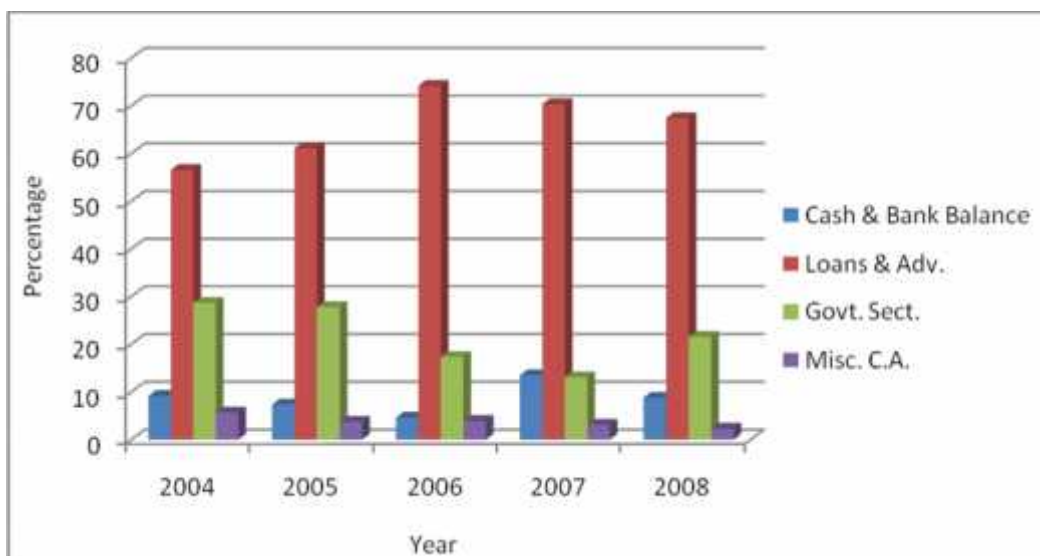
**Table 4.1**  
**Composition of Current Assets of NABIL Bank**

(In Millions)

Year	NABIL Bank Ltd								
	Cash & Bank Balance	%	Loans & Adv.	%	Govt. Sect.	%	Misc. C.A	%	TCA
2004	1144.76	9.14	7077.36	56.53	3588.77	28.67	708.61	5.66	12519.5
2005	970.48	7.35	8076.42	61.13	3672.63	27.80	492.2	3.73	13211.7
2006	639.38	4.59	10338.9	74.19	2413.94	17.32	543.88	3.90	13936.1
2007	2365.14	13.46	12358.6	70.34	2301.46	13.10	544.67	3.10	17569.8
2008	1963.36	8.79	15048.9	67.39	4808.35	21.53	512.05	2.29	22332
<b>Avg.</b>		<b>8.67</b>		<b>65.91</b>		<b>21.68</b>		<b>3.74</b>	

(Source: Appendix I)

**Figure 4.1**  
**Percentage Composition of Current Assets of NABIL Bank**



In the above table, we can see the total amount of current assets components of NABIL Bank. Total amount of current assets components of NABIL Bank has increased from second to last year of the study period, in forth and fifth year it has increased largely.

**Table 4.2**

**Composition of Current Assets of NIC Bank**

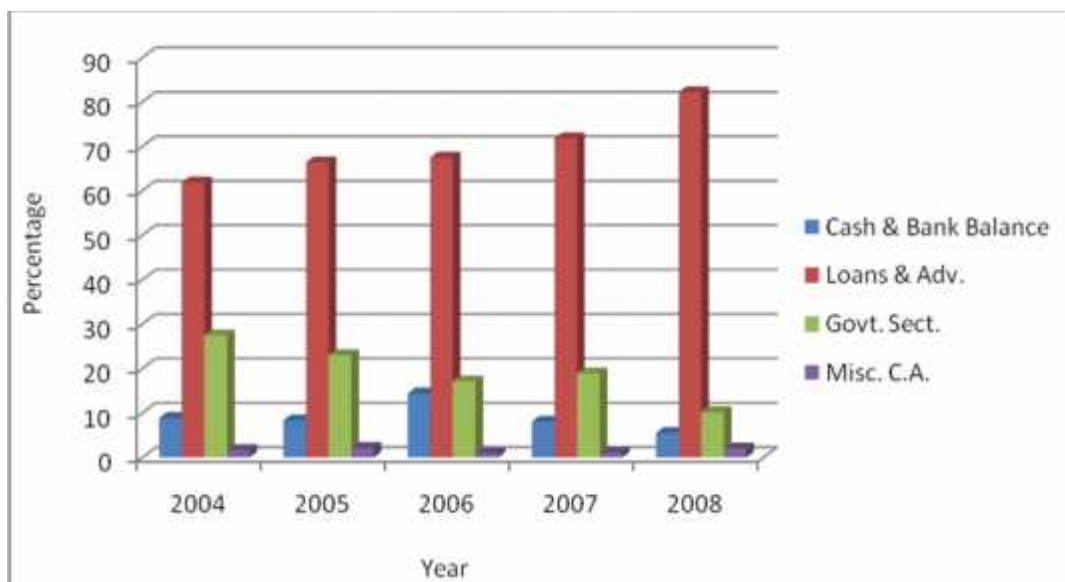
(In Millions)

Year	NIC Bank Ltd								
	Cash & Bank Balance	%	Loans & Adv.	%	Govt. Sect.	%	Misc. C.A	%	TCA
2004	347.96	8.90	2419.52	61.89	1075.19	27.50	66.56	1.70	3909.23
2005	448.96	8.37	3561.41	66.42	1235.28	23.04	115.95	2.16	5361.60
2006	1005.54	14.41	4711.71	67.50	1194.31	17.11	68.53	0.98	6980.09
2007	749.14	8.09	6655.96	71.85	1756.58	18.96	102.56	1.11	9264.24
2008	599.76	5.54	8902.53	82.22	1104.06	10.20	221.51	2.05	10827.8
<b>Avg.</b>		<b>9.06</b>		<b>69.98</b>		<b>19.36</b>		<b>1.60</b>	

(Source: Appendix I)

**Figure 4.2**

**Percentage Composition of Current Assets of NIC Bank**



In the above table, we can see the total amount of current assets components of NIC Bank. Total amount of current assets components of NIC Bank has increased from second to last year of the study period but in second and fourth year it has increased largely. The percentage composition of current assets to total current assets i.e., cash and bank balance, loans and advances, investment in government securities and miscellaneous current assets to total current assets of banks are presented in following chart.

#### 4.2.1 Cash and Bank Balance Percentage

Cash and Bank Balance Percentage of NABIL Bank is fluctuating over the study period. First three year, it is in decreasing trend and then it is increasing in fourth year but again it is in decreasing trend in fifth year. It is highest in the fourth year, i.e., 13.46 % and lowest in the third year of the study period, i.e., 4.59 %. The average cash and bank balance percentage of NABIL Bank is 8.67 %.

The yearly cash and bank balance of NIC Bank is also in fluctuating over the study period. It has decreased in second year, increased in third year and again in decreasing trend in fourth and last year of the study period. It is highest in the year 2006 where it is

14.41 % and lowest in the last year of the study period i.e., 5.54 %. The average cash and bank balance percentage of NIC Bank higher than NABIL Bank.

#### **4.2.2 Loan and Advance Percentage**

In the case of NABIL Bank, loans and advances percentage are increasing till third year and decreasing till last year of the study period. It is highest in the year 2006 i.e., 74.19 % and lowest in the year 2004 i.e., 56.53 %. The average loans and advances percentage is 65.91 %. The yearly loans and advances percentage of NABIL in the year 2004 and 2005 are less than the average i.e., 56.63 % and 61.13 %. But in the year 2006, 2007 and 2008 the loans and advances percentage are higher than the average i.e., 74.19 %, 70.34 % and 67.39 %.

In the case of NIC Bank, loan and advances percentage are increasing till last year of the study period. It is highest in the year 2008, i.e. 82.22% and lowest in the year 2004, i.e. 61.89%. The average loan and advances percentage of NIC Bank is 69.98%. In the first three years, i.e. 2004, 2005, & 2006, the yearly loan and advances percentage is lesser than the average loan and advances percentage. They are 61.89%, 66.42% and 67.50% respectively. But in the last two years of the study, the yearly loan and advances percentage is higher than the average loan and advance percentage, i.e. 71.85% & 82.22%.

#### **4.2.3. Government Securities Percentage**

The percentage of Government Securities percentage of NABIL Bank is in decreasing trend. It is decreasing till fourth year, i.e. 2007. But, the amount of percentage has increased in the last year of the study period, i.e. 2008. It is higher in the year 2004, i.e. 28.67% and lower in the year 2007, i.e. 13.10%. The average percentage of government securities of the bank is 21.68%. It is higher than its yearly government securities percentage of last three years of the study period, i.e. 17.32%, 13.10% & 21.53%, and it is lower than its yearly government securities percentage of first two years of the study period, i.e. 28.67% & 27.80%.

Government securities percentage of NIC Bank is fluctuating over the study period. It is highest in the year 2004, i.e. 27.50% and the lowest government securities percentage is in the year 2008, i.e. 10.20%. The average government securities percentage is 19.36%. The yearly percentage of government securities percentage of the bank is higher than its average percentage in first two years of the study period, i.e. 27.50% & 23.04% and it is lower in last three years of the study period, i.e. 17.11%, 18.96% & 10.20%.

#### **4.2.4. Miscellaneous Current Assets Percentage**

From the table 4.1, we know that NABIL Bank is investing lesser amount in miscellaneous current assets in comparison to other components of current assets over the study period. It is in range between 2.29% and 5.66%. The average miscellaneous current asset is 3.74%. The yearly percentage of miscellaneous current assets percentage is higher than its average percentage in the year 2004 & 2006, i.e. 5.66% & 3.90% and it is lower than its average percentage in the year 2005, 2007 & 2008, i.e. 3.73%, 3.10% & 2.29%. The investment in miscellaneous current asset is stable in comparison to other components of current assets.

Miscellaneous current assets percentage of NIC is also more stable than its other components of current assets just like NABIL. It is in the range between 0.98% & 2.10%. The average miscellaneous current asset of the bank is 1.60%. It is highest in the year 2005, i.e. 2.16% and lowest in the year 2006, i.e. 0.98%. The yearly percentage of miscellaneous current assets percentage of the bank is higher than its average percentage in the year 2004, 2005 & 2008, i.e. 1.70%, 2.16% & 2.05% whereas in the year 2006 & 2007, the yearly percentage is lower than its average percentage, i.e. 0.98% & 1.11%.

Miscellaneous current assets percentage of NIC is always lesser than NABIL and its average miscellaneous current assets percentage is lesser than NABIL as well. From the above analysis, we can conclude that NABIL is investing higher amount in miscellaneous current assets than NIC. It may be good for liquidation position of the bank but may harm for the profitability position of the bank because it is keeping higher idle amount in comparison to NIC.

### **4.3. Composition of Current Liabilities**

Current liabilities are those liabilities that the firm should pay within short time period. Current liabilities include loan and advances, sundry creditors, provision for taxation, miscellaneous current liabilities, etc. A firm should maintain an optimum level of liquidity in order to enable the organization to meet the current obligation of the firm. A firm has to raise funds from short term obligation. Short term sources of funds are raised through different components of current liabilities according to requirement. But the proportion of different components of current liabilities depends upon the financial policy of the firm. Thus, the composition of current liabilities must be analyzed for proper management of working capital.

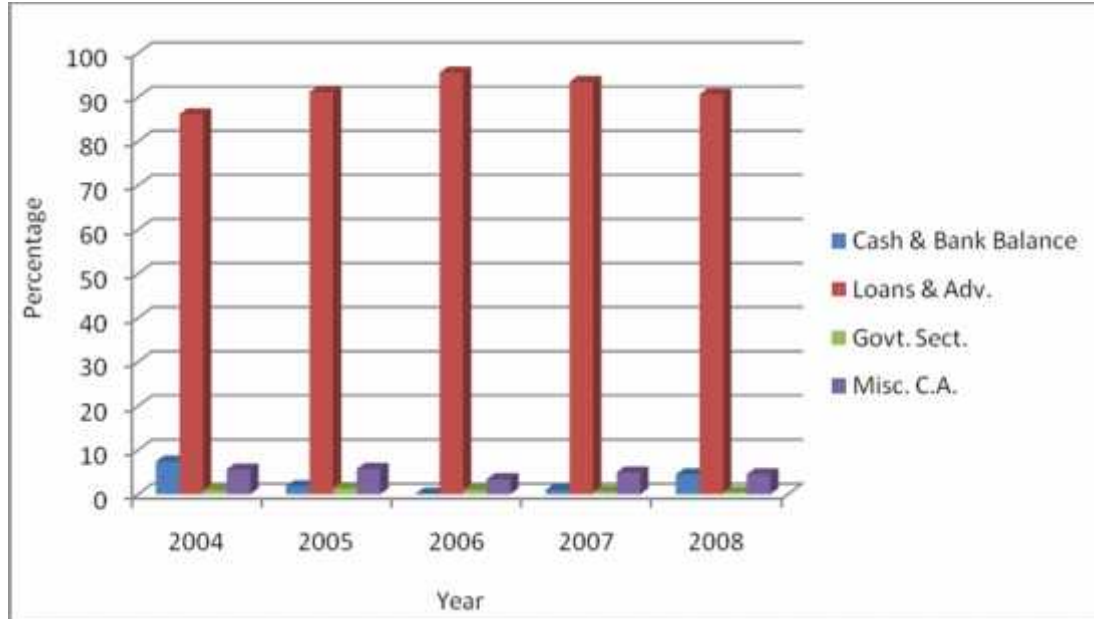
**Table 4.3**  
**Total Amount of Current Liabilities Components of NABIL Bank**

(in millions)

Year	NABIL								T.C.L.
	Borrowings	%	Deposit (Excl. FD)	%	Bills Payable	%	Misc. C.L.	%	
2004	961.46	7.40	11195.12	86.14	108.94	0.84	730.37	5.62	12,995.89
2005	229.66	1.77	11808.46	91.16	173.5	1.34	741.61	5.73	12,953.23
2006	17.06	0.13	12508.07	95.56	119.75	0.91	444.7	3.40	13,089.58
2007	173.2	1.02	15898.31	93.49	92.54	0.54	841.7	4.95	17,005.89
2008	882.57	4.47	17907.01	90.62	83.51	0.42	887.97	4.49	19,761.06
<b>Avg.</b>		<b>2.96</b>		<b>91.39</b>		<b>0.81</b>		<b>4.84</b>	

(Source: Appendix II)

**Figure 4.3**  
**Total Amount of Current Liabilities Components of NABIL Bank**



In the above table, we can see total amount of current liabilities components of NABIL Bank is decreased in second year and after third year; it has started to increase till last year of the study period.



**Table 4.4**  
**Total Amount of Current Liabilities Components of NIC Bank**

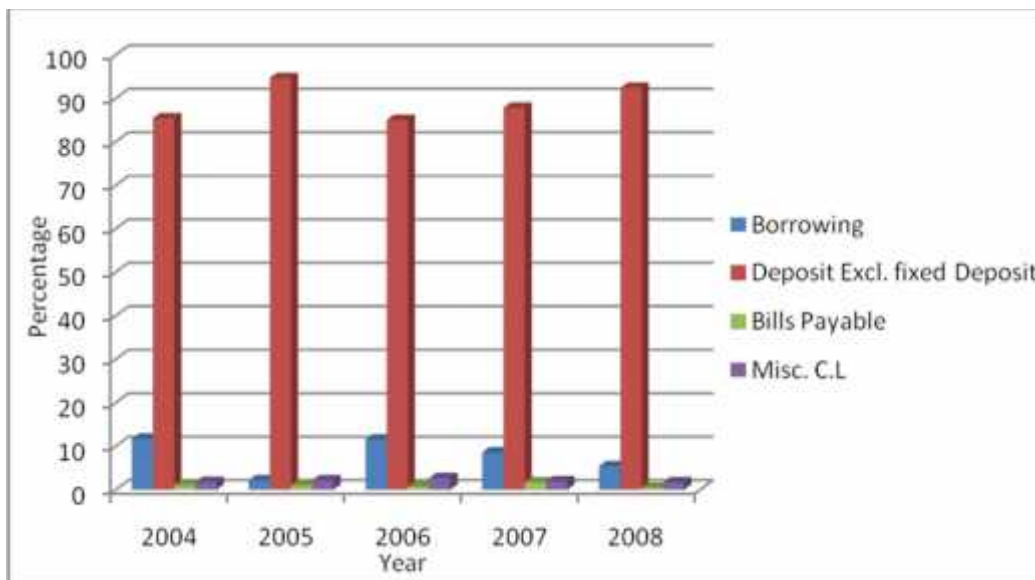
(in millions)

Fiscal Year	NIC								T.C.L.
	Borrowings	%	Deposit (Excl. fixed deposit)	%	Bills Payable	%	Misc. C.L.	%	
2004	274.75	11.73	2001.28	85.44	24.35	1.04	42.00	1.79	2342.38
2005	69.32	2.14	3063.42	94.67	32.92	1.02	70.25	2.17	3235.91
2006	450.37	11.57	3310.76	85.04	28.33	0.73	103.80	2.67	3893.26
2007	457.71	8.55	4701.45	87.83	91.51	1.71	101.97	1.91	5352.64
2008	352.13	5.43	5993.67	92.41	31.69	0.49	108.79	1.68	6486.28
Avg		7.88		89.08		1.00		2.04	

(Source: Appendix II)

In the above table, we can see total amount of current liabilities components of NIC Bank. Total amount of current liabilities components of NIC Bank has increased from beginning till last year of the study period.

**Figure 4.4**  
**Total Amount of Current Liabilities Components of NIC Bank**



#### **4.3.1. Borrowing Percentage**

The borrowing percentage of NABIL Bank is fluctuating over the study period. In the year 2005 and 2006, it decreased and then after it increased till the last year of the study period. It is highest in the first year, i.e. 7.40% and lowest in the year 2006, i.e. 0.13%. The average borrowing percentage of NABIL is 2.96%.

The yearly borrowing percentage of NIC Bank is more fluctuating. It has rapidly decreased in second year and increased in the same way in third year. Then it decreased till the last year of the study period. It is highest in the year 2004, i.e. 11.73% and lowest in the year 2005, i.e. 2.14%. The average borrowing percentage of NIC is 7.88%.

The borrowing percentage of both banks is always fluctuating all over the study period. The average borrowing percentage of NIC is higher than that of NABIL.

#### **4.3.2. Deposit (Excluding Fixed Deposit) Percentage**

The deposit (excluding fixed deposit) percentage of NABIL Bank is fluctuating. It has increased in the year 2005 and 2006 and then it has decreased till the last year of the study period. It is highest in the year 2006, i.e. 95.56% and lowest in the year 2004, i.e. 86.14%. The average deposit (excluding fixed deposit) percentage of NABIL is 91.39%.

In NIC Bank, the deposit (excluding fixed deposit) percentage is increased in second year, decreased in third year and increased then after till the last year of the study period. It is highest in the year 2005, i.e. 94.67% and lowest in the year 2006, i.e. 85.04%. The average deposit (excluding fixed deposit) percentage of NIC Bank is 89.08%.

The deposit (excluding fixed deposit) percentage of both banks is fluctuating all over the study period. The average deposit (excluding fixed deposit) percentage of NABIL is higher than that of NIC.

#### **4.3.3. Bills Payable Percentage**

The bills payable percentage of NABIL Bank is increased in the second year and then, decreased till the last year of the study period. The highest bills payable percentage is 1.34% in the year 2005 and it is lowest in the year 2008, i.e. 0.42%. The average bills payable percentage of NABIL is 0.81%.

In NIC Bank, the bills payable percentage is in decreasing and increasing trend. It decreased till the third year and started increasing in the fourth year but again decreased in the fifth year. It is highest in the year 2007, i.e. 1.71% and lowest in the year 2008, i.e. 0.49%. The average bills payable percentage of NIC is higher than that of NABIL.

#### **4.3.4. Miscellaneous Current Liabilities Percentage**

The above table shows that the miscellaneous current liabilities percentage of the NABIL Bank is fluctuating all over the study period. It is increased in second year, decreased in third year, increased in fourth year and again decreased in the last year of the study period. It is highest in the year 2005, i.e. 5.73% and lowest in the year 2006, i.e. 3.40%. The average miscellaneous current liabilities percentage of NABIL Bank is 4.84%.

In NIC, the miscellaneous current liabilities percentage is increasing till third year of the study period. Then it started to decrease till the last year of the study period. It is highest in the year 2006, i.e. 2.67% and lowest in the year 2008, i.e. 1.68%. The average miscellaneous current liabilities percentage is 2.04%

In both the banks, the yearly percentage of miscellaneous current liabilities is fluctuating. The average miscellaneous current liabilities percentage of NABIL is higher than that of NIC.

#### **Ratio and its Trend Analysis**

Ratio analysis is the powerful financial tool to measure the financial performance of banks and finance companies comparatively. As mentioned in research methodology, liquidity, activity, profitability and leverage ratios are calculated. To find the overall performance as well as general movement of important ratios, trend analysis is also used.

### **a. Liquidity Ratio**

Liquid asset is one that can be easily converted into cash without significant loss of its original value. Converting assets, especially current assets such as inventory and receivables, to cash is the primary means by which a firm obtains the funds needed to pay its current bills. Therefore a firm's liquid position deals with the question of how well the firm is able to meet its current obligations. Short term assets or current assets are more easily converted to cash than long term assets. So, in general, one firm would be considered more liquid than another firm if it has a greater proportion of its total assets in the form of current assets. Liquidity ratio measures the short term solvency position of the firm. Liquidity ratio is a ratio that shows the relationship of a firm's cash and other current assets to its current liabilities. Under this there are two types of ratios.

Liquidity of any business organizations is directly related with working capital or current assets and current liabilities of that organization. In other words, one of the main objectives of working capital management is keeping sound liquidity position. Banks and finance companies are different organizations which are engaged in mobilizations of funds. So, without sound liquidity position, these institutions are not able to operate their functions. To measure the solvency position or ability to meet its short term obligations, various liquidity ratios are calculated and to know the trend of liquidity, trend analysis of major liquidity ratios has been considered.

As per Nepal Rastra Bank's rule, minimum 1 % of total deposit and borrowing should be deposited into Nepal Rastra Bank in current account. Out of total deposit and borrowing, 2% should be deposited into other commercial banks in current or call account. Similarly, 5% of its deposit should be invested in government securities and if pledged to borrower fund, should be deducted while calculating the percentage of investment in government securities.

### **I. Current Ratio**

Current assets are divided by current liabilities from the most recent quarter. The current ratio is a measure of the firm's immediate financial health and its ability to meet current obligations. In other words, current ratio represents a margin of safety, i.e. a 'cushion' of protection for creditors and the higher the current ratio, greater the margin of safety, larger the amount of current assets in relation to current liabilities. Generally, the current ratio should be 2:1 or higher, the higher the current ratio, the more conservative the firm, although a high current ratio can mean less profitability than a competing firm with a leaner current ratio. Also like so many ratios, this one varies by industry. It is calculated as follows:

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

The following table and chart show the current ratio to compare the working capital management of these financial institutions.

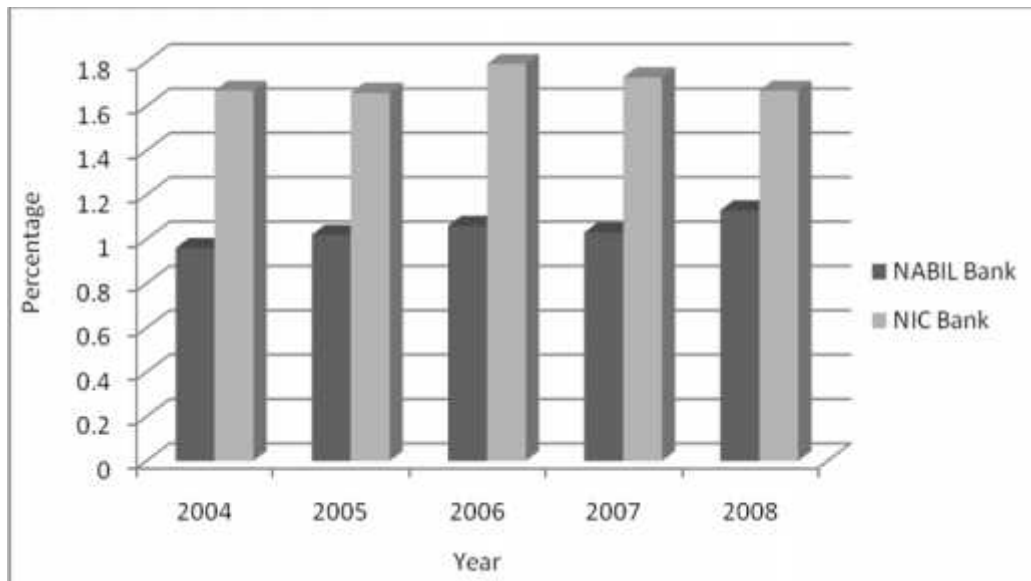
**Table 4.5**  
**Calculation of Current Ratio**

(Rs. in millions)

Year	NABIL Bank			NIC Bank		
	C.A.	C.L.	C.R.	C.A.	C.L.	C.R.
2004	12519.50	12995.89	0.96	3909.23	2342.38	1.67
2005	13211.73	12953.23	1.02	5361.60	3235.91	1.66
2006	13936.07	13089.58	1.06	6980.09	3893.26	1.79
2007	17569.83	17005.89	1.03	9264.24	5352.64	1.73
2008	22332.63	19761.06	1.13	10827.86	6486.28	1.67
Average			1.04			1.70

*(Source: Appendix I & II)*

**Figure 4.5**  
**Current Ratio**



The above depicts that the current assets of NABIL Bank is in increasing trend from 2004 to the last year of the study period. And the current liabilities of NABIL are decreasing in second year and then increasing till last year of the study period. The current ratios of NABIL are increasing till third year. It decreased in fourth year and then after it begins to increase in the year 2008, the current ratio highest in the year 2008 i.e. 1.13 lowest in the year 2004, i.e. 0.96. The average current ratio of NABIL is 1.04.

In NIC Bank, the current assets are in increasing trend from the year 2004 to the last year of the study period. And, the current liabilities of NIC are also in increasing trend from starting to end of the study period. But the current ratio of NIC is in fluctuating trend. It has decreased in second year, increased in the third year and then decreased till the last year of the study period. The current ratio is highest in the year 2006, i.e. 1.79 and lowest in the year 2005, i.e. 1.66. The average current ratio of NIC is 1.70.

The average current ratio of NIC is higher than that of NABIL. It helps to conclude that the liquidity position of NIC is better than that of NABIL. NIC has more ability to meet its current obligation than NABIL.

## II. Quick Ratio

The assessment of a company's ability to meet short term obligations is also known as the acid test. Quick ratio establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably without a loss of value of cash. Cash is the most liquid asset. Other assets, which are considered to be relatively liquid, are booked debts and marketable securities. In general, quick ratio should be 1 or higher. A high quick ratio is usually a sign of solid, conservatively run company which is no danger of imminent demise even if for some awful reasons, sales immediately ceased. A firm's quick ratio might be of special interest to investors anticipating some kind of downturn in the firm's business or the economy at large. The quick ratio can be found out by dividing the total quick assets by total current liabilities.

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

For this study, cash and bank balance, government securities are included in quick assets. The following table and chart show the quick ratio of NABIL Bank and NIC Bank.

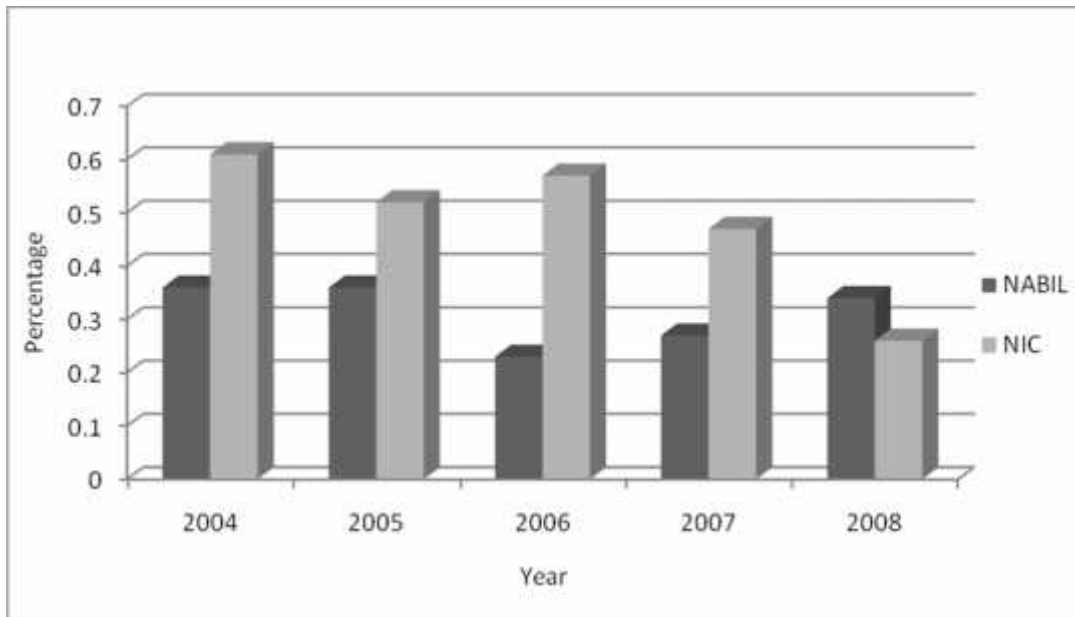
**Table 4.6**  
**Calculation of Quick Ratio**

(Rs. in millions)

Year	NABIL Bank			NIC Bank		
	C.A.	C.L.	C.R.	C.A.	C.L.	C.R.
2004	4733.53	12995.89	0.36	1423.15	2342.38	0.61
2005	4643.11	12953.23	0.36	1684.24	3235.91	0.52
2006	3052.32	13089.58	0.23	2199.85	3893.26	0.57
2007	4666.6	17005.89	0.27	2505.72	5352.64	0.47
2008	6771.71	19761.06	0.34	1703.82	6486.28	0.26
Average			0.31			0.48

(Source: Appendix I & II)

**Figure 4.6**  
**Quick Ratio**



The above table and figure depict that the quick ratios of NABIL are always fluctuating over the study period. The quick ratio of NABIL is constant in second year, decreased in third year and then increased till the last year of the study period. It is highest in the year 2004 and 2005, i.e. 0.36 and lowest in the year 2006, i.e. 0.23. The average quick ratio in NABIL is 0.31.

The quick ratios of NIC are also fluctuating. The quick ratio of NIC is decreased in second year, increased in third year and then declined till the last year of the study period. It is highest in the year 2004, i.e. 0.61 and lowest in the year 2008, i.e. 0.26. The average of quick ratio in NIC is 0.48.

The yearly quick ratios of NIC are always higher than that of NABIL except in the year 2008. The average quick ratio of NIC is higher than that of NABIL (i.e.  $0.48 > 0.31$ ).



**III. Cash and Bank Balance to current, margin and Other Deposit Ratio** (without fixed deposit)

This ratio shows the ability of banks' immediate funds to cover their (current, margin, call and saving) deposits. It is employed to measure whether the bank and cash balance is sufficient to cover its current calls margin including deposit. It can be calculated dividing cash and bank balance by deposits (excluding fixed deposit). It can be expressed as:

Cash & Bank Balance to current, margin and Other Deposit Ratio (without fixed deposit)

$$= \frac{\text{Cash and Bank balance}}{\text{Deposit (excluding fixed Deposit)}}$$

**Table 4.7**

**Cash and Bank Balance to Current, Margin and Other Deposit Ratio  
(Without Fixed Deposit)**

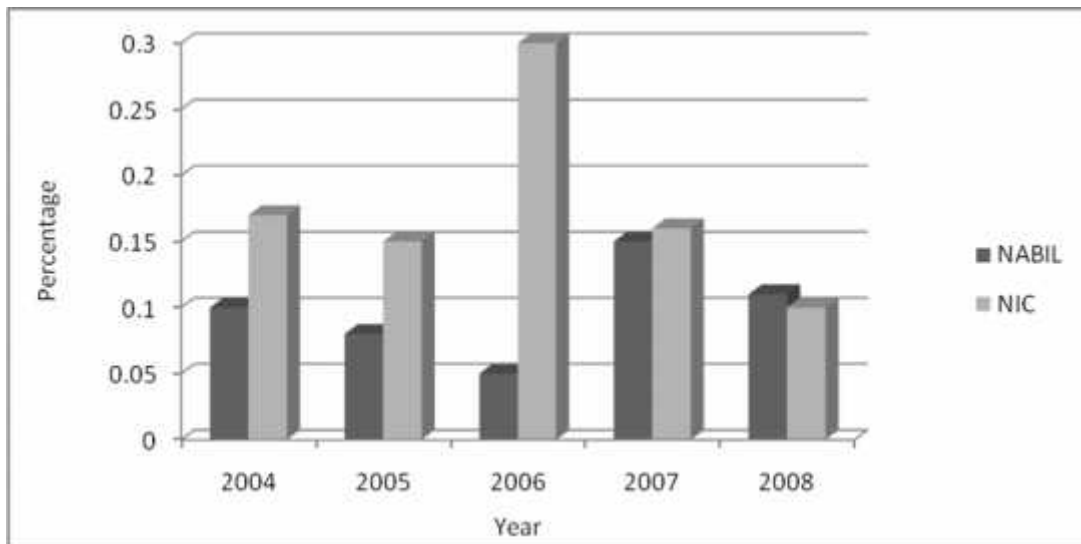
(Rs. in millions)

Year	NABIL Bank			NIC Bank		
	Cash & Bank Balance	Deposit (Excluding fixed deposit)	Ratio	Cash & Bank Balance	Deposit (Excluding fixed deposit)	Ratio
2004	1144.76	11195.12	0.10	347.96	2001.28	0.17
2005	970.48	11808.46	0.08	448.96	3063.42	0.15
2006	639.38	12508.07	0.05	1005.5	3310.76	0.30
2007	2365.14	15898.31	0.15	749.14	4701.45	0.16
2008	1963.36	17907.01	0.11	599.76	5993.67	0.10
Average			0.10			0.480.18

(Source: Appendix I)

**Figure 4.7**

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



The above figure depicts that the cash and bank balance to deposit (excluding fixed deposit) ratios of NABIL are decreasing till the first three years, increasing in fourth year and again decreasing in the last year of the study period. The ratio is higher in the year 2007, i.e. 0.15 and lower in the year 2006, i.e. 0.05. The average cash and bank balance to deposit (excluding fixed deposit) ratio of NABIL is 0.10.

The table shows that the cash and bank balance to deposit (excluding fixed deposit) ratios of NIC is fluctuating over the study period. The highest cash and bank balance to deposit (excluding fixed deposit) ratio is 0.30 in the year 2006 and lowest is 0.10 in the year 2008. The average cash and bank balance to deposit (excluding fixed deposit) ratio of NIC is 0.18. It is higher than the yearly ratios of the year 2004, 2005, 2007 & 2008, i.e. 0.17, 0.15, 0.16 & 0.10, but is lower than the yearly ratio of the year 2006, i.e. 0.30.

The average cash and bank balance to deposit (excluding fixed deposit) ratio of NABIL, i.e. 0.10 is lesser than cash and bank balance to deposit (excluding fixed deposit) ratio of NIC, i.e. 0.18. The above analysis helps to conclude that NIC holds more cash balance than NABIL. The higher cash and bank balance to deposit ((excluding fixed deposit) ratio

of NIC shows that ability of banks' immediate funds to cover its current, margin, call and saving deposit better than the same of NABIL. In another word, the liquidity position of NIC is better than NABIL, but the large amount of idle cash and bank balance badly affect the profitability of the bank. From the point of view of utilizing NABIL has better position than NIC.

#### **b. Activity Ratio (Turnover ratio)**

Activity ratio is needed to measure the effectiveness of employment of the resources in a business concern. Activity ratio measures the effectiveness of the firm. Through these ratios, it is known whether the funds employed have been utilized effectively in the business activities or not. The following are the ratios, employed to analyze the activities of the concerned joint ventures.

#### **I. Loan and Advances to Total Deposit Ratio**

This ratio assesses to what extend, the banks and finance companies are able to utilize the depositor's funds to earn profit by providing loans and advance. It is computed dividing the total amounts of loans and advances by total deposited funds. The formula used to compute this ratio is as follows:

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

High ratio is the symptom of higher and proper utilization of funds and low ratio is the signal of balance remained utilized or idle.

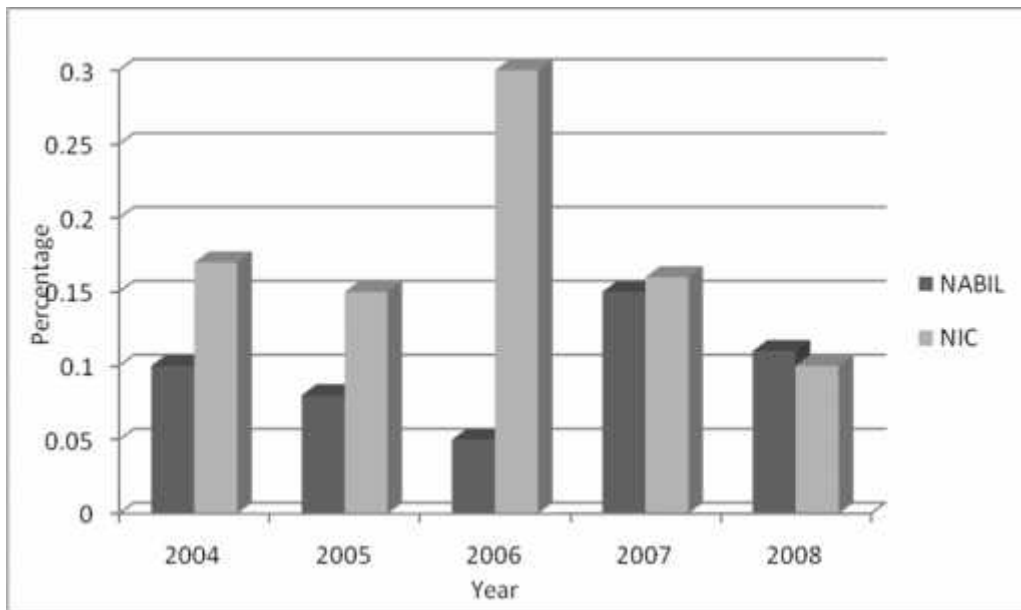
**Table 4.8**  
**Calculation of Loan and Advances to Deposit Ratio**

(Rs. in millions)

Year	NABIL Bank			NIC Bank		
	Loan & Advances	Total Deposit	Ratio	Loan & Advances	Total Deposit	Ratio
2004	7077.36	13447.66	0.53	2419.5	3144.32	0.77
2005	8076.42	14119.13	0.57	3561.4	5146.48	0.68
2006	10338.87	14856.61	0.70	4711.7	6241.38	0.75
2007	12358.56	19345.40	0.64	6656.0	8765.95	0.76
2008	15048.87	10187.35	1.48	8902.5	10068.23	0.88
Average			0.78			0.77

(Source: Appendix I & II)

**Figure 4.8**  
**Calculation of Loan and Advances to Deposit Ratio**



The above chart depicts that loan and advances to total deposit ratios of NABIL Bank are fluctuating during the study period. It is increasing in second and third year, decreasing in fourth year and again increasing in last year of the study period. The bank has the highest loan and advances to total deposit ratio in last year, i.e. 1.48 and the least in first year, i.e.

0.53. But, the yearly amount of loan and advances to total deposit ratios are not much difference during the period of study. The average loan and advances to total deposit ratio of NABIL is 0.78 which is lower than its yearly ratios except last year of the study period, i.e. 1.48.

For NIC, loan and advances to total deposit ratios are more stable than NABIL. The range of ratio is 0.69 to 0.88. The average loan and advances to total deposit ratio is 0.77. The loan and advances to total deposit ratios are decreasing in second year and increased from third year to last of the study period. The yearly ratio is higher, i.e. 0.88 in the year 2008 and lower, i.e. 0.69 in the year 2005.

The average loan and advances to total deposit ratio of NABIL is higher than the same of NIC by 0.01. The above analysis helps to conclude that loan and advances to total deposit ratio or total deposit turnover ratio of NABIL. Thus, NABIL is employing the funds more efficiently for the profit generating purpose on loan and advances than NIC.

## **II. Loan and Advances to Fixed Deposit Ratio**

This ratio examines that how many times the funds is used in loans and advances against fixed deposits. For commercial banks, fixed deposit are long term interests bearing obligations, whereas investment in loans and advances are the main sources of earning. This ratio is compared dividing loans and advances by fixed deposit as under:

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

A low ratio indicates idle cash balance. It means total funds not properly utilized. This ratio examines to what extend the fixed deposits are utilized for income earning purpose.

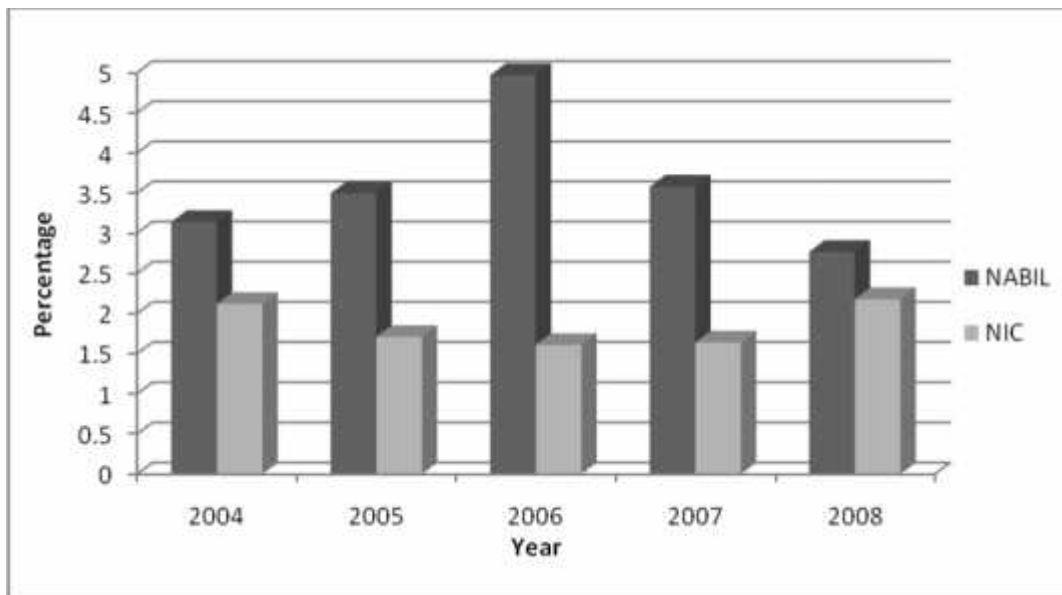
**Table 4.9**  
**Calculation of Loan and Advances to Fixed Deposit Ratio**

(Rs. in millions)

Year	NABIL Bank			NIC Bank		
	Loan & Advances	Fixed Deposit	Ratio	Loan & Advances	Fixed Deposit	Ratio
2004	7077.36	2252.54	3.14	2419.5	1143.04	2.12
2005	8076.42	2310.57	3.50	3561.4	2083.07	1.71
2006	10338.87	2078.54	4.97	4711.7	2930.62	1.61
2007	12358.56	3449.09	3.58	6656.0	4064.50	1.64
2008	15048.87	5435.19	2.77	8902.5	4074.56	2.18
Average			3.59			1.85

(Source: Appendix I)

**Figure 4.9**  
**Loan and Advances to Fixed Deposit Ratio**



The above table depicts that fixed deposits are in rising and falling form. Fixed deposit of NABIL has increased in second year then it has begun to decrease in third year and in fourth and last year of the study period, it has increased highly. Loan and advances to fixed deposit ratios are gradually increasing except in 2007 and 2008. The average ratio

of NABIL is 3.59, which is greater than its yearly ratios of the year 2004, 2005, 2007 and 2008, i.e. 3.14, 3.50, 3.58 and 2.77 respectively. But the average ratio of NABIL is lower than its yearly ratios of the year 2006, i.e. 4.97.

For NIC, the fixed deposits are in rising form. Fixed deposit of NIC has increased highly from beginning to fourth year of the study period. The loan and advances to fixed deposits are fluctuating. The ratio has decreased in second and third year and then after gradually increasing. NIC has highest loan and advance to fixed deposit ratio in the year 2008, i.e. 2.18 and lowest in the year 2006, i.e. 1.61. The average ratio of NIC is 1.85 which is greater than the yearly ratio of the year 2005, 2006 and 2006, i.e. 1.71, 1.61 and 1.64. But it is lesser than the yearly ratio of the year 2004 and 2008, i.e. 2.12 and 2.18.

NABIL had higher yearly ratios than NIC in the whole study period. NABIL also has higher ratio of loan and advances to fixed deposit ratio than NIC, i.e.  $3.59 > 1.85$ .

The above analysis helps to conclude that loan and advances to fixed deposit ratio of NABIL is better than that of NIC. The ratio implies that NABIL is utilizing its fixed deposit in loan and advances more efficiently.

### **III Loan and Advances to Saving Deposit Ratio**

This ratio assesses how many times the fund is used to loans and advances against saving deposits. Saving deposits are interests bearing short term obligation and the major sources of investment in loan and advances for income generating purpose by CBs. This ratio indicates how many times the short term interest bearing deposits are utilized for generating income. It is calculated by dividing the amount of loan and advances by total deposit in saving account. The following formula is used to calculate the ratio:

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

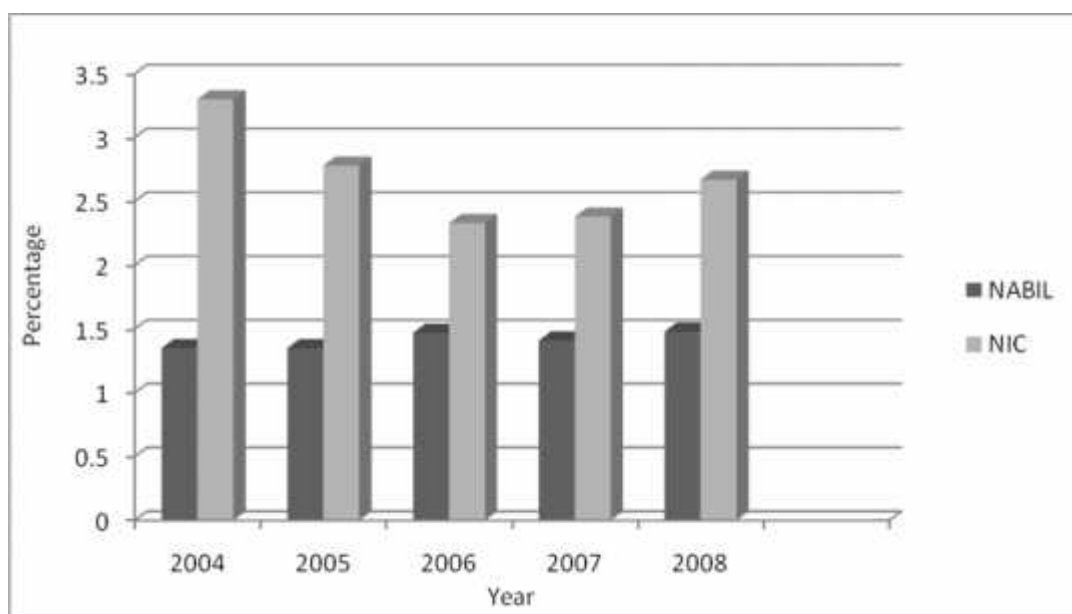
**Table 4.10**  
**Calculation of Loan and Advances to Saving Deposit Ratio**

(Rs. in millions)

Year	NABIL Bank			NIC Bank		
	Loan & Advances	Saving Deposit	Ratio	Loan & Advances	Saving Deposit	Ratio
2004	7077.36	5229.72	1.35	2419.5	734.09	3.30
2005	8076.42	5994.12	1.35	3561.4	1280.48	2.78
2006	10338.87	7026.33	1.47	4711.7	2024.26	2.33
2007	12358.56	8770.76	1.41	6656.0	2797.42	2.38
2008	15048.87	10187.35	1.48	8902.5	3335.67	2.67
Average			1.41			2.69

(Source: Appendix I & II)

**Figure 4.10**  
**Loans and Advances to Saving Deposit Ratio**



The above table depicts that the loan and advances to saving deposit ratios of NABIL bank are fluctuating. The ratio is constant in the second year, increased in the third year, decreased in fourth year and at last increased in the last year of the study period. The ratio is highest in the last year, i.e. 1.48 and lowest in the first and second year, i.e. 1.35. The



average ratio of NABIL, i.e. 1.41 is higher than the yearly ratio of first two years, constant in the year 2007 and lower than the yearly ratio of the year 2006 and 2008.

Loan and advances to saving deposit ratio of NIC is decreased in second and third year, then after it is gradually increased till the last year of the study period. For the NIC, the ratio is highest in the year 2004, i.e. 3.30 and lowest in the year 2006, i.e. 2.33. The average ratio is 2.69, which is lower than its yearly ratios in the year 2004 & 2005 and higher than its yearly ratios in the year 2006, 2007 & 2008

The yearly ratios NIC are always exceeding than NABIL in the study period. So, the average loan and advances to saving deposit of NIC is higher than that of NABIL. From the above analysis, it can be concluded that the loan and advances to saving deposits of NIC are better than the same of NABIL. It implies that NIC is utilizing short term fund of outsider more effectively than NABIL.

### **c. Leverage Ratio or Capital Structure**

Financial leverage ratios provide an indication of the long term solvency of the firm. Unlike liquidity ratios which are concerned with short term assets and liabilities, financial leverage ratios measure the extent to which the firm is using long term debt. Debt and equity are long term obligations and remaining parts in the liability side of the balance sheet are termed as short term obligations. Both types of obligations are required in forming the capital structure of the firm. The long term financial position of the firm is determined by the leverage or capital structure. The different leverage ratios are maintained to measure the financial risk or proportion of outsiders' fund and owner's capital used by the firm. Following ratios fall under leverage ratios.

#### **I. Long Term Debt to Net Worth Ratio**

It is used to test the long term solvency of a firm. The ratio indicates the relationship between debt and equity. It is related to shareholder's fund indicating the degree of protection against long term creditors. Here, long term debt refers to the amount of fixed deposit. It is calculated by dividing the fixed obligations of the banks by owner's claim.

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

The following table and chart shows the long term debt to net worth ratio of the two sample banks.

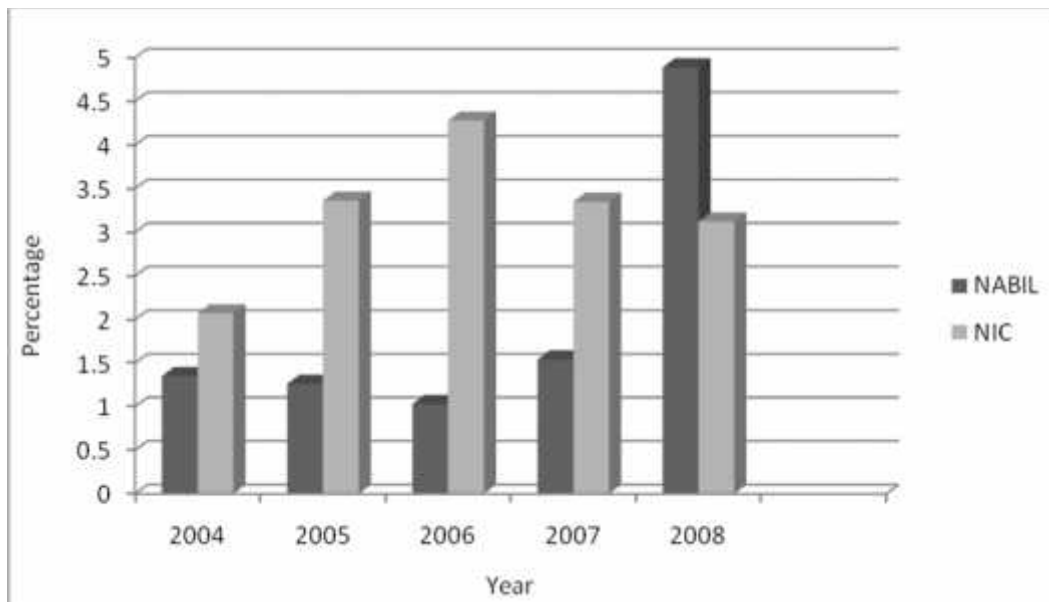
**Table 4.11**  
**Calculation of Long Term Debt to Net Worth Ratio**

(Rs. in millions)

Year	NABIL Bank			NIC Bank		
	Long term debt	Net worth	Ratio	Long term debt	Net worth	Ratio
2004	2252.54	1671.92	1.35	1143.04	552.08	2.07
2005	2310.57	1840.35	1.26	2083.07	620.4	3.36
2006	2078.54	2018.2	1.03	2930.62	684.19	4.28
2007	3449.09	2233.36	1.54	4064.5	1212.62	3.35
2008	5435.19	1111.08	4.89	4074.56	1305.24	3.12
Average			10.82			3.24

(Source: Appendix IV)

**Figure 4.11**  
**Long Term Debt To Net Worth Ratio**



The above table depicts that the long term debt of NABIL are fluctuating and the net worth are gradually increasing till the fourth year of the study period. So, the yearly ratios of NABIL are also fluctuating. It has declined till third year and then increased in fourth and in last year of the study period. It increased very highly, i.e. from 1.54 to 48.93. The highest long term debt to net worth ratio is 48.93 and lowest is 1.03 in the year 2008 and 2006 respectively. The average ratio of NABIL is 10.82.

For NIC, long term debt and net worth are in increasing trend all over the study period. But, the yearly long term debt to net worth is fluctuating over the period. It increased till the third year and then it shows down till the last year of the study period. The highest ratio is 4.28 in the year 2006 and lowest ratio is in the year 2004. The average ratio of NIC is 3.24.

The above table shows that the average ratio of NABIL is very much higher than that of NIC. From this analysis, it can be conducted that the long term debt to net worth ratio of NABIL are greater than NIC, which implies that the proportion of outsiders' claim in total capitalization is higher in NABIL. The large amount of fixed deposit and very low net worth in the last year of the study period makes the ratios very much higher in case of NABIL. So, NABIL has more risky and aggressive capital structure than NIC.

## **II. Long Term Debt to Total Capital**

It is a test of long term solvency of a firm. The ratio indicates the relationship between long term debt and total capital. It shows the degree of relationship and protection of total capital against long term or total debt. It is calculated as follows:

$$\text{Debt to Total Capital Ratio} = \frac{\text{Long Term Debt}}{\text{Total Capital}}$$

**Table 4.12**

### Calculation of Long Term Debt to Total Capital Ratio

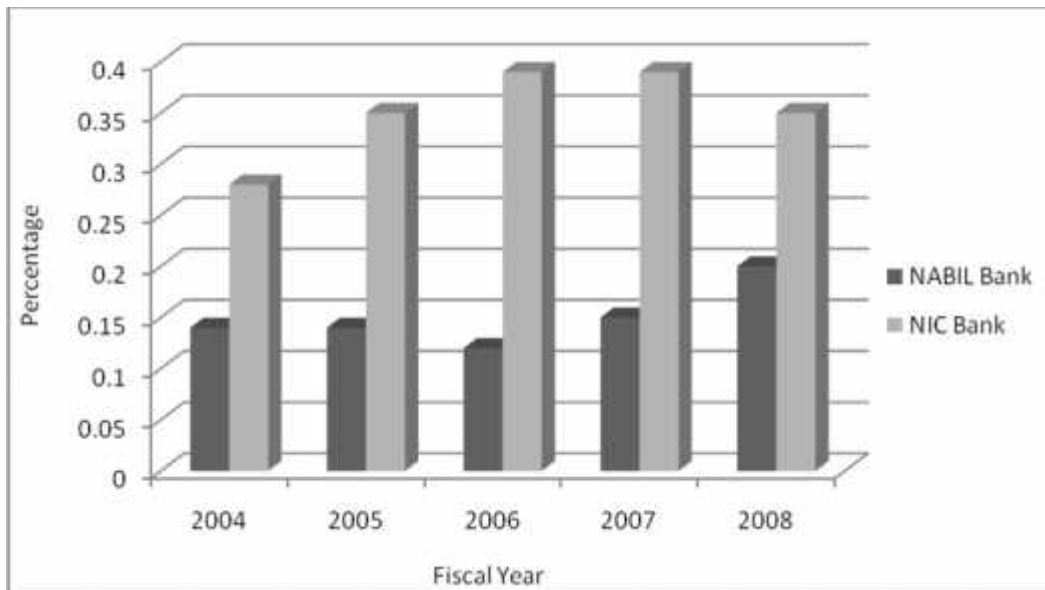
(Rs. in millions)

Year	NABIL Bank			NIC Bank		
	Long term debt	Total Capital	Ratio	Long term debt	Total Capital	Ratio
2004	2252.54	16562.62	0.14	1143.04	4037.51	0.28
2005	2310.57	16745.49	0.14	2083.07	5939.37	0.35
2006	2078.54	16825.76	0.12	2930.62	7508.07	0.39
2007	3449.09	22332.1	0.15	4064.5	10383.6	0.39
2008	5435.19	27264.39	0.20	4074.56	11678.83	0.35
Average			0.15			0.35

(Source: Appendix I & II)

**Figure 4.12**

### Calculation of Long Term Debt to Total Capital Ratio



The above table clearly depicts that the yearly long term debt to total capital ratio of NABIL Bank are fluctuating. It has been constant in second year, decreased in third year then it is in increasing trend till the last year of the study period. The ratio is highest in the year, i.e. 0.12. The average long term debt to total capital ratio of NABIL Bank is 0.15.

For NIC, the yearly long term debt to total capital ratio are in fluctuating trend. It has increased till third year, constant in fourth year and decreased in last year of the study period. The ratio is in range of 0.28 to 0.39. The average long term debt to total ratio of NIC Bank is 0.35.

The yearly ratios as well as the average ratio of NIC bank are higher than that of NABIL. From the above analysis, it can be concluded that total capital covers low portion of long term debt in both banks. In other language, we can say that both banks use high short term liabilities to cover total capital. Due to large amount of long term debt in NABIL, long term debt to total capital is higher in NIC than NABIL.

#### **d. Profitability Ratio**

Profitability ratio offers several different measures of the success of the firm at generating profits. It indicates succession achieving the desired profit. Various profitability ratios are calculated to measure the operating efficiency of business enterprises. Through profitability ratios the lender and investors want to decide whether to invest in a particular business or not. Some of the important profitability ratios used are as follow:

#### **I. Interest Earned to Total Assets Ratio**

Interest earned to total assets ratio formed to find out the percentage of the interest earned investing total assets. This ratio can be calculated by dividing the amount of interest earned by the total assets of the firms. It can be expressed as follows:

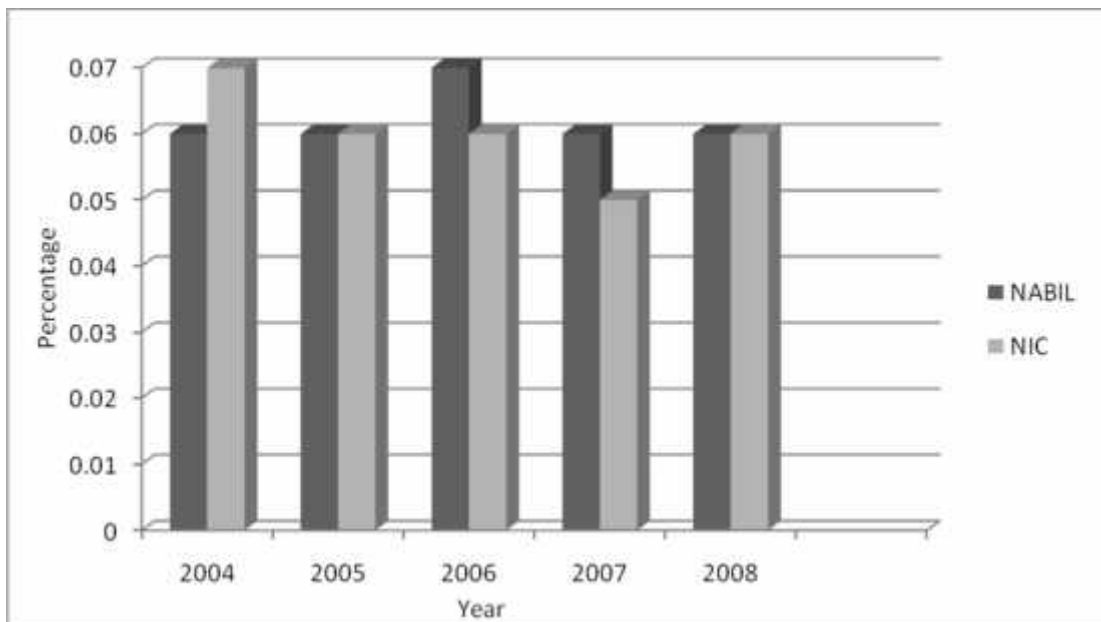
$$\text{Interest Earned to Total Assets Ratio} = \frac{\text{Interest Earned}}{\text{Total Assets}}$$

**Table 4.13**  
**Calculation of Interest Earned to Total Assets Ratio**  
(Rs. in millions)

Year	NABIL Bank			NIC Bank		
	Interest earned	Total Assets	Ratio	Interest earned	Total Assets	Ratio
2004	1017.87	16250.15	0.06	291.14	4037.51	0.07
2005	1001.62	16186.42	0.06	363.04	5939.37	0.06
2006	1068.75	16397.9	0.07	457.61	7508.07	0.06
2007	1310.0	22688.33	0.06	579.98	10629.76	0.05
2008	1587.76	27621.64	0.06	725.82	11866.08	0.06
Average			0.06			0.06

(Source: Appendix III)

**Figure 4.13**  
**Ratio of Interest Earned to Total Assets**



The above figure vividly depicts that interest earned by NABIL is decreasing in the year 2005, and then it has begun to increase till the last year of the study period. The interest earned to total assets ratio of NABIL is in constant form except in the third year of the study period. The average interest earned to total assets ratio of NABIL is 0.06 which is

lower than the yearly ratio of 2006, i.e. 0.07 and constant to the other years of the study period.

For NIC, the interest earned is increasing till the last year of the study period. The interest earned to total assets ratio of NIC is fluctuating. The ratio has decreased in the year 2005, i.e. 0.06, constant in the year 2006, decreased in the year 2007 and then increased in the last year of the study period. NIC has highest ratio in the year 2004, i.e. 0.07 and lowest in the year 2006, i.e. 0.05. The average ratio of NIC is 0.06.

The average ratio of NABIL is equal to that of NIC, i.e. 0.06. From the above analysis, we can conclude that the interest earned to total ratio of NABIL and NIC is equal. So, it implies that both banks are efficiently utilizing their total assets to earn interest income.

## II. Net Profit to Total Assets Ratio

This ratio is very much crucial for measuring the profitability of funds invested in the bank's assets. It measures the return on assets. It can be calculated by dividing the net profit tax by total assets. It can be expressed as:

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

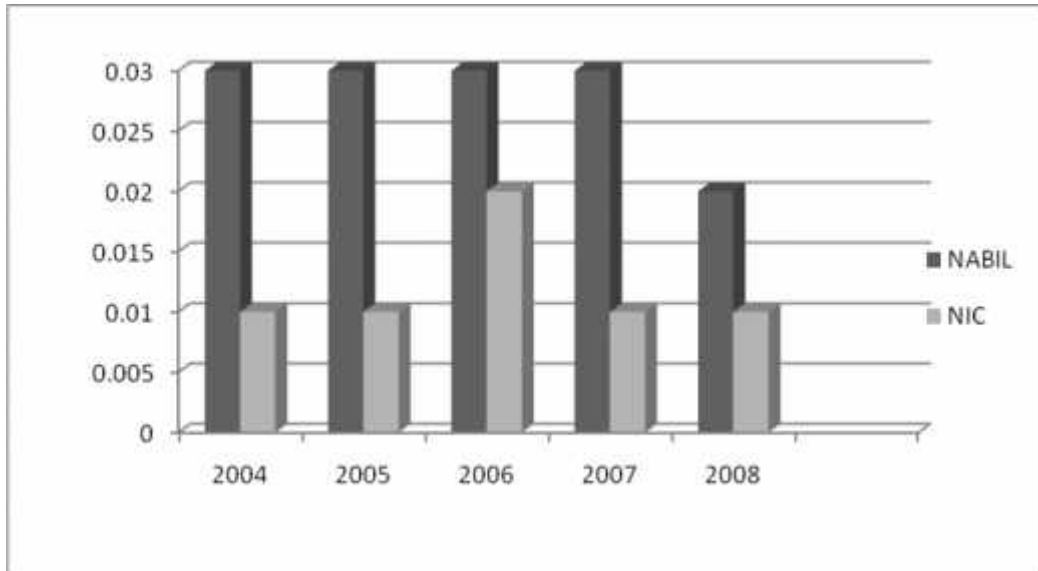
**Table 4.14**  
**Calculation of Net Profit after Tax to Total Assets Ratio**

(Rs. in millions)

Fiscal Year	NABIL Bank			NIC Bank		
	NPAT	Total Assets	Ratio	NPAT	Total Assets	Ratio
2004	416.24	16250.15	0.03	25.94	11866.08	0.01
2005	455.31	16186.42	0.03	68.26	10629.76	0.01
2006	518.64	16397.9	0.03	113.76	7508.07	0.02
2007	635.26	22688.33	0.03	96.59	10629.76	0.01
2008	673.96	27621.64	0.02	158.48	11866.08	0.01
Average			0.03			0.01

(Source: Appendix I & II)

**Figure 4.14**  
**Net Profit After Tax to Total Assets**



The above figure clearly depicts that the overall profitability ratio that is net profit to total assets ratio of NABIL are constant in the last year of the study period. The average ratio of NABIL is 0.03 which is equal to the yearly ratio of first year to fourth year of the study period and higher than the yearly ratio of last year of the study period.

For NIC, the net profit to total ratios is also constant in the year 2006, i.e. 0.02. The highest yearly ratio of NIC is 0.02 in 2006 and constant in the rest of the years of the study period, i.e. 0.01. The average net profit to total assets ratio percentage of NIC is 0.01.

The yearly as well as the average ratio of NABIL is greater than that of NIC. The above analysis helps to conclude that the overall profitability of NABIL is better than the same of NIC. NABIL is more efficiently utilizing its total assets to earn higher rate of profit.

### **III. Net Profit to Deposit Ratio**

This ratio is used for measuring the internal rate of return from deposits. It is computed by dividing the net profit by total deposits. This can be expressed as:

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



Higher ratio indicates the return from investment on loans and advances are desirable and lower ratio indicates the funds are not properly mobilizing.

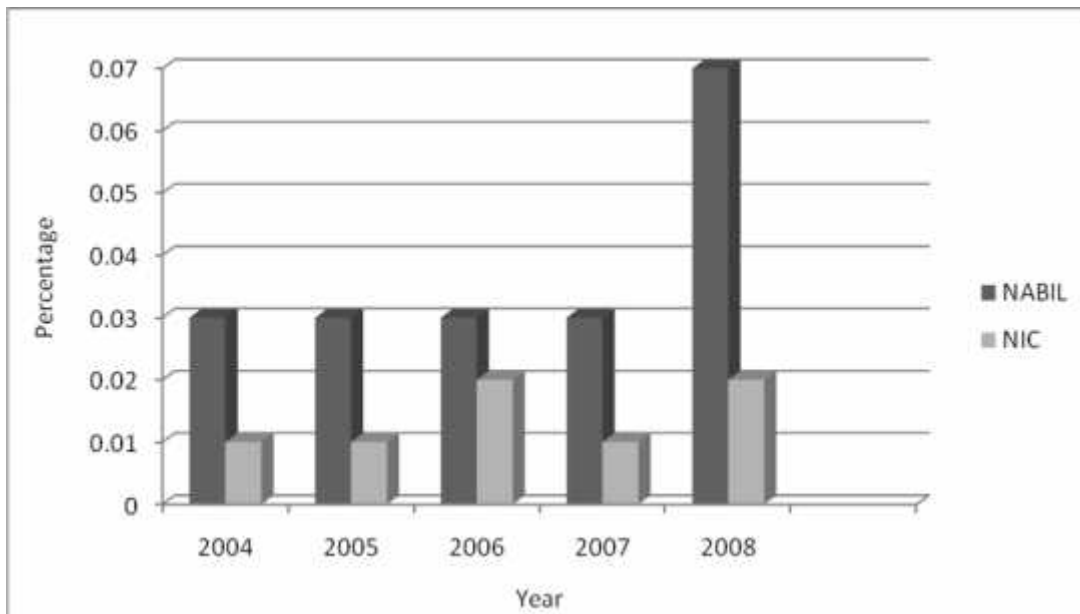
**Table 4.15**  
**Calculation of Net Profit After Tax to Total Assets Ratio**

(Rs. in millions)

Year	NABIL Bank			NIC Bank		
	NPAT	Total Deposits	Ratio	NPAT	Total Deposits	Ratio
2004	416.24	13447.66	0.03	25.94	3144.32	0.01s
2005	455.31	14119.13	0.03	68.26	5146.48	0.01
2006	518.64	14856.61	0.03	113.76	6241.38	0.02
2007	635.26	19347.4	0.03	96.59	8765.95	0.01
2008	673.96	10187.35	0.07	158.48	10068.23	0.02
Average			0.04			0.01

(Source: Appendix III)

**Figure 4.15**  
**Ratio of Net Profit After Tax to Total Deposit**



The above figure shows that net profits of NABIL bank have increased from first to last year of the study period. The net profit to total deposits ratio are constant till fourth year, i.e. 0.03 and increased in the last year of the study period. The highest net profit ratio is 0.07 in the last year. The average ratio of NABIL is 0.04 which is lower than the yearly ratio of the yearly ratio of the year 2008, i.e. 0.07 and higher than the yearly ratio of rest of the year of the study period.

For NIC, the net profit to total deposit ratio is in rising and falling term. In second year, it has been constant, i.e. 0.01, and then in the third year, it increased. It decreased in fourth year of the study and at last in the fifth year, it again has risen. The range is 0.01 to 0.02. The average net profit to total deposit ratio is 0.01.

The yearly as well as the average ratio of NIC is less than that of NABIL. The above analysis helps to find out that the net profit to deposit ratio of NABIL are better than NIC. Mobilization of outsider fund is important to earn profit for commercial banks. Thus, we can say NABIL has better performance on mobilization of total deposits.

#### **4.4 Correlation**

Correlation is statistical tool that refers to the closeness of the relationship between two or more variables. We can use correlation to describe the degree to which one variable is linearly related to other variables. The coefficient of correlation deals with determining the degree of relationship between two or more sets of figures. Among the various methods of finding out coefficient practice for calculating correlation coefficient, the most widely used in practice for calculating correlation coefficient is Karl Pearson's correlation coefficient. So, Karl Person's correlation coefficient method is applied in the study. Correlation coefficient always lies between +1 to -1. When  $r = +1$ , there is perfect positive correlation between two variables and when  $r = -1$ , there is perfect negative correlation. And, when  $r = 0$ , there is no correlation.

#### 4.4.1 Coefficient of Correlation between Cash and Bank Balance and Current Liabilities

Cash and bank balance is most liquid component of current assets. This is required to meet the unexpected short term obligation, i.e. current liabilities. The coefficient of correlation between cash and bank balance and current liabilities is to measure the degree of relationship between cash and bank balance and current liabilities. To find out the correlation, various calculations are done. The following table shows the coefficient of correlating between cash and bank balance and current liabilities, i.e.  $r$ ,  $PEr$  and  $6PEr$ .

**Table 4.16**  
**Calculation of Coefficient of Correlation between Cash & Bank**

<b>Balance Current</b>	<b>Bank</b>	<b>r</b>	<b>PEr</b>	<b>6 PEr</b>	<b>and Liabilities</b>
	<b>NABIL</b>	0.83412352	0.0917	0.5502	
<b>NIC</b>	0.37886235	0.2585	1.551		

From the above table 4.16, we can find that coefficient of correlation between cash and bank balance and current liabilities ( $r$ ) in NABIL is 0.8341. It shows positive relationship between these two variables. By considering the probable error, since the value of ' $r$ ' is 0.8341, which is greater than its 6 PEr, i.e. 0.5502, we can say that the value of ' $r$ ' is significant in NABIL.

On the other hand, when we observe coefficient of correlation between cash and bank balance and current liabilities ( $r$ ) in case of NIC, it has found that the value is 0.3789, which shows the positive relationship between these two variables. On the base of value of 6 PEr, i.e. 1.551 which is higher than the value of ' $r$ ', we can further conclude that the relationship between coefficient of correlation between cash and bank balance and current liabilities is not significant.

From the above analysis, it can be concluded that there is no significant relationship between cash and bank balance and current liabilities in NIC, but it is highly significant in NABIL.

#### 4.4.2 Coefficient of Correlation between Loan and Advances and Net Profit

The basic function of commercial banks is to collect deposit and invest these funds on loan and advance to generate higher profit. Large amount of loan and advances generate higher profit. The coefficient of correlation between loan and advances and net profit is to measure the degree of relationship between loan and advances and net profit. In correlation analysis, loan and advance is independent variable (Y) and net profit is dependent variable ( X ). The purpose of computing the correlation of the coefficient is to justify whether the loan and advance are significant to generate profit or not and whether there is any relationship between these two variables. The following table.

**Table 4.17**  
**Calculation of Coefficient of Correlation between Loan and**

<b>Advances &amp;</b>	<b>Bank</b>	<b>r</b>	<b>PEr</b>	<b>6 PEr</b>	<b>Net Profit</b>
	<b>NABIL</b>	0.982556774	0.010	0.06	
	<b>NIC</b>	0.91039333	0.051	0.306	

From the above table 4.17, we can find that coefficient of correlation between loan and advances and net profit ( r ) of NABIL is 0.983 and same of NIC is 0.910, which shows highly positive relationship between these variables in both banks. By considering the probable error, since the value of 'r' , i.e. 0.983 is greater than its 6 PEr, i.e. 0.06 in NABIL and the value of 'r' is significant in both banks.

From the above analysis, it can be concluded that there is highly significant relationship between loan and advances and net profit in NABIL and NIC.

#### 4.4.3 Coefficient of Correlation between Net Working Capital and Net Profit

The main objective of any firm is to achieve its profit goal. Banks and finance companies are also not exemption from that. Current asset minus current liabilities is equal to net working capital. Working capital management is very crucial function of management team of any type of organization. Its management fails to keep adequate current assets, it can effect liquidation position of the firm but if it keeps more than its need, it can affect the profitability position of the firm. The coefficient of correlation between net working capital and net profit is to measure the degree of relationship between net working capital and net profit in these companies. In the correlation analysis, net working capital is independent variable (Y) and net profit is dependent variable (X). The purpose of computing the correlation coefficient is to justify whether the net working capital generates profit or not and whether there is any relationship between these two variable. the following table shows the r,PEr and 6PEr of concern companies during the study period.

**Table 4.18**  
**Calculation of Coefficient of Correlation between**

Net Capital and	Bank	r	PEr	6 PEr	Working Net Profit
	<b>NABIL</b>	0.826726016	0.095	0.57	
	<b>NIC</b>	0.90918782	0.052	0.312	

From the above table 4.18, we can find that coefficient of correlation between net working capital and net profit of NABIL is 0.827 and same of NIC is 0.827 and same of NIC is 0.907, which shows highly positive relation between these variable in both banks. by considering the probable error, since the value of are r i.e. 0.827 is greater than its 6 PEr i.e 0.909 is greater than its 6 PEr i.e.0.312 in NIC, we can say that the value of "r" is significant in both banks. From the above analysis ,it can be concluded that there is highly significant relationship between net working capital and net profit in NABIL and NIC.

#### **4.5 Test of Hypothesis**

A hypothesis is a conjectural statement of the relation between two or more variables. Hypothesis always is a declarative sentence form and they relate either generally or specifically variable or variables. There are two criteria for "good" hypothesis and hypothesis statement. One hypothetical statement is about the relations between variables, second hypothesis carries a clear implication for testing and stated relation. These criteria mean that hypothesis statements contain two or more variables that are measurable and they specify how the variables are related.

As stated in chapter one, some conceptual framework for null and alternative hypothesis between NABIL and NIC, in various variables are formulated and tested as follows:

##### **Hypothesis 1**

H : There is no significant difference in composition of working capital between NABIL bank and NIC bank.

H1: There is significant difference in composition of working capital between NABIL bank and NIC bank.

##### **Hypothesis 2**

H0: There is no significant difference in liquidity position between NABIL bank and NIC bank.

H1: There is significant difference in liquidity position between NABIL bank and NIC bank.

##### **Hypothesis 3**

H0: There is no significant difference in profitability position between NABIL bank and NIC bank.

H1: There is significant difference in profitability position between NABIL bank and NIC bank.

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

#### 4.5.1. Composition of Working Capital

Following null hypothesis and alternative hypothesis are formulated and tested to find whether there is significant difference in composition of working capital between NABIL and NIC.

##### Null Hypothesis

Ho: There is no significant difference in composition of working capital between NABIL bank and NIC bank.

##### Alternative hypothesis

H1: There is significant difference in composition of working capital between NABIL bank and NIC bank.

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

**Table 4.19**  
**Composition of working capital**

S.N.	Composition	Nabil mean	NIC mean	Cal 't' Value	Tabulated 't' value	Result
1	Cash & bank balance	8.67	9.06	0.1932	2.31	Ho is accepted.
2	Loan & advances	65.91	69.98	0.8668	2.31	Ho is accepted.
3	Government Securities	21.68	19.36	0.5567	2.31	Ho is accepted.

4	Misc. current assets	3.74	1.60	3.5176	2.31	Ho is accepted.
---	----------------------	------	------	--------	------	-----------------

From the above table, it is clear that the cash and bank balance, Loan and advances & Government Securities percentage of NABIL and NIC are not significantly difference but Misc. current assets percentage of the banks are significantly different.

#### 4.5.2. Liquidity Position

To judge whether there is significant difference in liquidity position between NABIL and NIC bank, these null hypothesis and alternative hypothesis are formulated and tested.

H<sub>0</sub>: There is no significant difference in liquidity position between NABIL bank and NIC bank.

H<sub>1</sub>: There is significant difference in liquidity position between NABIL bank and NIC bank.

The following table exhibits the mean value of various ratios measuring the liquidity of NABIL and NIC bank and their 't' value.

**Table 4.20**  
**Liquidity Position**

S.N.	Composition	NABIL mean	NIC mean	Cal 't' Value	Tabulated 't' value	Result
1	Current ratio	1.04	1.70	17.8355	2.31	Ho is rejected
2	Quick ratio	0.31	0.48	2.6113	2.31	Ho is rejected
3	Cash & bank balance to deposit ratio (Excluding fixed deposit)	0.10	0.18	2.0996	2.31	Ho is accepted

From the above table, it is clear that the cash and bank balance to deposit ratio (excluding fixed deposit) of NABIL and NIC is not significantly different. On other hand, current ratio and quick ratio of banks are significant different.



### 4.5.3 Profitability Position

The following null hypothesis and alternative hypothesis is formulated and tested to judge whether there is significant difference in profitability between NABIL bank and NIC bank.

H<sub>0</sub>: There is no significant difference in profitability position between NABIL and NIC Bank.

H<sub>1</sub>: There is significant difference in profitability position between NABIL and NIC Bank.

The following table exhibits the mean value of various ratios measuring the profitability of NABIL and NIC Bank and their “t” value.

**Table 4.21**  
**Profitability Position**

S.N.	Composition	NABI L mean	NIC mean	Cal 't' Value	Tabulated 't' value	Result
1	Interest earned to total assets	0.062	0.06	0.5345	2.31	Ho is accepted
2	Net profit to total assets	0.028	0.012	5.6568	2.31	Ho is rejected
3	Net profit to total deposit	0.038	0.014	2.8685	2.31	Ho is rejected

From the above table it is clear that interest earned to total assets ratio is not significantly different of NABIL and NIC. But net profit to total assets and net profit to total deposits ratio are significantly different of the banks.

## 4.6 Major Findings

The major findings of the study during the period of five years from the analysis are summarized below.

1. The major components of current assets are cash and bank balance, loans and advances and government securities in concerned bank, i.e., NABIL and NIC Banks. On the study period, the proportion of cash and bank balance, loans and advances and government securities to total current assets on an average are 8.67 %, 65.91% and 21.68 % respectively in NABIL and 9.06% , 69.98 % and 19.36 % respectively in NIC . So, it is found at the average cash and bank balance percentage and loans and advances percentage are higher in NIC then NABIL. But the average government securities percentage is higher in NABIL then NIC.
2. The liquidity positions of these banks are analyzed with the current ratio, quick ratio and cash and bank balance to deposit ratio. The current ratio of NABIL is lowest in first year i.e, 0.96 and highest in last year of the study period i.e., 1.13. NIC is ranging between 1.66 to 1.79. NABIL and NIC are able to maintain its current ratio of 1.04 and 1.70 in an average respectively on the study period. The average quick ratio of NABIL and NIC are 0.31 and 0.48 respectively. Cash and bank balance to deposit (Excluding fixed deposit) ratio of NIC is higher than the same of NABIL. So it is found that the liquidity position of NIC is better then NABIL. The trend of liquidity ratio i.e., quick ratio and cash and bank balance ratio of both banks are decreasing. It shows that both the banks tried to reduce it's idle money, however, it is shown that liquidity position of NIC is always better than that of NABIL throughout the study period. It means NIC is bearing lower risk, which means lower profit in commercial banks; higher liquidity is not always the cause of lower profitability.
3. Activity ratio is intended to measure the effectiveness to employment of the resources in a business concern. Loans and advances to total deposit ratio, Loans and advances to fixed deposit ratios and loans and advances to saving deposit ratio are calculated. The average value of loans and advances to total deposit ratio ratio,

and loans and advances to fixed deposit ratios are 0.78, 3.59 and 1.41 in NABIL Bank and 0.77, 1.85 and 2.69 in NIC Bank. The trends of this ratio of both the banks are fluctuating. From the analysis of turnover of these banks, it is found that the NABIL has better turnover than NIC. Thus NABIL has better utilization of deposits in income generating activity than NIC. However, NIC is utilizing its saving deposit in loans and advances more effectively than NABIL.

4. Profitability measures the efficiency of the firm. The profitability position of NABIL and NIC are analyzed from various angles. The average value of interest on to total asset ratio of NABIL i.e., 0.06 is equal to that of NIC. The trend values of interest on both banks are quite fluctuating. The net profits of total assets ratio on both banks are quite fluctuating. Net profit to total assets ratio are always higher on NABIL than NIC. So it is found that profitability position of NABIL is far better than NIC although the interest earned by NABIL and NIC is equal.
5. The average long term debt to net worth ratio of NABIL is higher than that of NIC i.e., 10.82 of NABIL is greater than 3.24 of NIC. So it is found that NABIL has higher proportion of outsiders claim in total capitalization than NIC or we can say NABIL has more risky and aggressive capital structure than NIC from the analysis of long term debt to total capital ratio, we can find out that the average long term debt to total capital ratio of NABIL is 0.15 and same of NIC is 0.35 this implies that both banks are using high short term liabilities to cover total capital but due to large amount of long-term debt, long term debt to total capital is higher of NIC than that of NABIL.
6. Correlation between cash and bank balance and current liabilities in NABIL Bank is positive which shows the positive relationship between these two variables. On the other hand, coefficient of correlation between cash and bank balance to current liabilities in case of NIC also shows positive relationship. Considering probable error, we found correlation between cash and bank balance and current liabilities is not significant and that in NABIL is highly significant. Correlation between loans and advances and net profit in NABIL and NIC i.e., 0.982 and 0.910 respectively shows the higher positive relationship between these two variables. Considering the probable error we found correlation between loans and advances and net profit in

both banks are highly significant. Coefficient of correlation between net working capital and net profit in NABIL and NIC are 0.8267 and 0.909 respectively. That shows positive relationship between these two variables. After considering the probable error we find that there is highly significant relationship between net working capital and net profit in both banks.

7. While testing the hypothesis of compositions of the working capital, it has been observed that the mean value of proportion of misc. current assets to total current assets of NABIL is significantly different than NIC and it is also clear that the proportion of cash and bank balance, loans and advances and government securities on total current assets of NABIL and NIC are not significantly different. Significant difference on misc. current assets to total current assets of NABIL and NIC shows that the management is willing to invest its fund more on misc. assets for interest earning purpose.
8. While testing the hypothesis of liquidity position of both banks, it has been observed that the mean value of current ratio and quick ratio of NABIL are statistically different than NIC. But the cash and bank balance to deposit ratio (excluding fixed deposit are not significantly different.
9. While testing the hypothesis of profitability positions, it is found that the mean value of interest earned to total assets ratio is not significantly different, but net profit to total assets and net profit to total deposit are significantly different of NABIL and NIC.

## **CHAPTER – V**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

The final and most important task of the researcher is to enlist finding issues and gaps of the study and give suggestions for the further improvement. This chapter contains summary , conclusions and recommendation s. Summary gives the brief introduction of all chapters , conclusion are based on the consequence of the study of the analysis of relevant data and recommendation are presented in terms of suggestions that are prepared on the basis of the findings.

#### **5.1 Summary**

Financial institutions are currently viewed as catalyst in the process of economic growth of a country. A key factor in the development of an economy is the mobilization of the domestic resources. The financial institution helps the process of resources mobilization. However, Nepal is been late in recognizing this true fact. Nepal, being the developing country cannot ignore the important of finance for its economic development. After restoration of democracy in 2046 B.S. and announcement of government’s liberalization policy, private sector investors are attracted to invest in different organized commercial ventures. As a result, numbers of public and private limited companies were established in a short span of time to reap the benefit of economic liberalization policy of the nation.

After implementation of the open market policy, various joint venture commercial banks and finance companies are opened. The main objective of the study was to study the comparative analysis of working capital management as well as its impacts in financial performance of commercial banks in Nepal. Due to many limitation or restriction. I have taken two commercial banks they are NABIL and NIC for this study. To fulfill this objective and other specific objective as described in chapter one, an appropriate research methodology has developed that include the ratio analysis as a financial tools and trend analysis, correlation coefficient and test of hypothesis as a statistical tools. The major ratio analysis consists of the composition of working capital position, liquidity position,

profitability position, activity position and capital structure position. Under these, main ratios and their trend position are studied in the chapter four. In order to test the relationship between the various components of working capital, Karl Pearson's correlation coefficient "r" is calculated and analyzed. Some hypothesis formulated in the chapter three tested in appendix and results are analyzed in chapter four.

The basic objective of this study is to analyze the working capital management of the commercial banks and to give some remedial thereto. The financial statement of the last five year i.e., from 2004 to 2008 have been examined for the analysis of the subject working capital of the NABIL and NIC banks. Financial statements are sorted, tabulated and interpreted by using appropriate ratios. Since the study is based on the historical data, the research design is historical and explanatory type.

The study has been organized into five chapters consisting of introduction, review of literature, research methodology, presentation of data and summary, research findings, conclusion and recommendation. The necessary data are derived from the balance sheet and profit and loss statement of concerned bank i.e., NABIL and NIC banks for the period of 2004 to 2008. Now in this chapter, an attempt has been made to present summary of major findings, conclusions and recommendations. Recommendations are presented in terms of suggestions that are prepared on the basis of the finding.

## **5.2 Conclusion**

The liquidity positions of these banks are analyzed with the current ratio, quick ratio and cash and bank balance to deposit ratio. The current ratio of NABIL is lowest in first year i.e, 0.96 and highest in last year of the study period i.e., 1.13. NIC is ranging between 1.66 to 1.79. NABIL and NIC are able to maintain its current ratio of 1.04 and 1.70 in an average respectively on the study period. The average quick ratio of NABIL and NIC are 0.31 and 0.48 respectively. Cash and bank balance to deposit (Excluding fixed deposit) ratio of NIC is higher than the same of NABIL. So it is found that the liquidity position of NIC is better than NABIL. The trend of liquidity ratio i.e., quick ratio and cash and bank balance ratio of both banks are decreasing. It shows that both the banks tried to

reduce its idle money, however, it is shown that liquidity position of NIC is always better than that of NABIL throughout the study period. It means NIC is bearing lower risk, which means lower profit in commercial banks; higher liquidity is not always the cause of lower profitability. Activity ratio is intended to measure the effectiveness to employment of the resources in a business concern. Loans and advances to total deposit ratio, Loans and advances to fixed deposit ratios and loans and advances to saving deposit ratio are calculated. The average value of loans and advances to total deposit ratio, and loans and advances to fixed deposit ratios are 0.78, 3.59 and 1.41 in NABIL Bank and 0.77, 1.85 and 2.69 in NIC Bank. The trends of this ratio of both the banks are fluctuating. From the analysis of turnover of these banks, it is found that the NABIL has better turnover than NIC. Thus NABIL has better utilization of deposits in income generating activity than NIC. However, NIC is utilizing its saving deposit in loans and advances more effectively than NABIL.

Profitability measures the efficiency of the firm. The profitability position of NABIL and NIC are analyzed from various angles. The average value of interest on to total asset ratio of NABIL i.e., 0.06 is equal to that of NIC. The trend values of interest on both banks are quite fluctuating. The net profits of total assets ratio on both banks are quite fluctuating. Net profit to total assets ratio are always higher on NABIL than NIC. So it is found that profitability position of NABIL is far better than NIC although the interest earned by NABIL and NIC is equal. The average long term debt to net worth ratio of NABIL is higher than that of NIC i.e., 10.82 of NABIL is greater than 3.24 of NIC. So it is found that NABIL has higher proportion of outsiders claim in total capitalization than NIC or we can say NABIL has more risky and aggressive capital structure than NIC from the analysis of long term debt to total capital ratio, we can find out that the average long term debt to total capital ratio of NABIL is 0.15 and same of NIC is 0.35 this implies that both banks are using high short term liabilities to cover total capital but due to large amount of long-term debt, long term debt to total capital is higher of NIC than that of NABIL. Correlation between cash and bank balance and current liabilities in NABIL Bank is positive which shows the positive relationship between these two variables. On the other hand, coefficient of correlation between cash and bank balance to current liabilities in

case of NIC also shows positive relationship. Considering probable error, we found correlation between cash and bank balance and current liabilities is not significant and that in NABIL is highly significant. Correlation between loans and advances and net profit in NABIL and NIC i.e., 0.982 and 0.910 respectively shows the higher positive relationship between these two variables. Considering the probable error we found correlation between loans and advances and net profit in both banks are highly significant. Coefficient of correlation between net working capital and net profit in NABIL and NIC are 0.8267 and 0.909 respectively. That shows positive relationship between these two variables. After considering the probable error we find that there is highly significant relationship between net working capital and net profit in both banks. While testing the hypothesis of profitability positions, it is found that the mean value of interest earned to total assets ratio is not significantly different, but net profit to total assets and net profit to total deposit are significantly different of NABIL and NIC. The major components of current assets are cash and bank balance, loans and advances and government securities in concerned bank, i.e., NABIL and NIC Banks. On the study period, the proportion of cash and bank balance, loans and advances and government securities to total current assets on an average are 8.67 %, 65.91% and 21.68 % respectively in NABIL and 9.06% , 69.98 % and 19.36 % respectively in NIC . So, it is found at the average cash and bank balance percentage and loans and advances percentage are higher in NIC then NABIL. But the average government securities percentage is higher in NABIL then NIC.

While testing the hypothesis of compositions of the working capital, it has been observed that the mean value of proportion of misc. current assets to total current assets of NABIL is significantly different than NIC and it is also clear that the proportion of cash and bank balance, loans and advances and government securities on total current assets of NABIL and NIC are not significantly different. Significant difference on misc. current assets to total current assets of NABIL and NIC shows that the management is willing to invest it's fund more on misc. assets for interest earning purpose. While testing the hypothesis of liquidity position of both banks, it has been observed that the mean value of current



ratio and quick ratio of NABIL are statistically different than NIC. But the cash and bank balance to deposit ratio (excluding fixed deposit are not significantly different.

### **5.3 Recommendations**

After the detailed analysis of working capital in commercial banks in Nepal following recommendations are made:

1. A large portion of total current assets of both NABIL and NIC Banks have cover by loans and advances and it is decreasing in NABIL and increasing in NIC. As, banks should give priority to invest their fund on loans and advances to get higher return, NABIL has not as much of loans and advances proportion on total current assets than NIC. So, NABIL should seriously adjust it's policy of investment on loans and advances
2. Total deposits turns over position of studied banks are less than one which is not satisfactory. Fixed deposits and saving deposits turn over position are satisfactory on both NABIL and NIC Banks. Though, saving deposits turn over of both NABIL and NIC is satisfactory, NABIL is not utilizing short term fund of outsider more effectively than NIC.
3. Although interest earned to total assets ratio is equal on both banks, Net profit ratio is higher in NABIL than NIC. It may be due to higher cost on NIC. So, NIC should give an attention of reducing cost of operation so that it can have least operation cost, which further maximize it's profitability and maximize share holder's return.
4. The average current ratio of NIC is higher than that of NABIL .It helps to conclude that the liquidity position of NABIL is worse than that of NIC .So , the NABIL should give attention to increase the current assets to build ability to meet its current obligation .
5. Due to the large amount of term debt and low net worth, the proportion of outsiders' claim in total capitalization is higher in NABIL .NABIL has more risky and aggressive capital structure than NIC .Though both banks use high short term liabilities to cover total capital, NABIL should decrease the long term debt to increase the degree of protection against long term creditors and to protect total capital against long term debt

## BIBLIOGRAPHY

### Books:

- Bajracharya, B.C. (2061). *Business Statistic*. Kathmandu: M. K. Publishers and Distribution.
- Brigham, L., Gapanski, C. & Michael, C. E. (2002). *Financial Management: Theory and Practice*. New Delhi: Harcourt Asia Pvt. Ltd.
- Brown, I.L. & Howard, L.R. (1991). *Managerial Accounting and Finance*. London: The ECBS of Macdonald and Erasus Ltd.
- Gitman, L.J. (1998). *Principles of Managerial Finance*. New York: Harper Collins Publishers.
- Gopal, K.P. (1976). *Inventory and Working Capital Management Handbook*. New Delhi: MacMillan India Ltd.
- Hampton, J. J. (1998). *Financial Decision Making: Concepts, Problem and Cases*. New Delhi: Prentice Hall of India Pvt. Ltd.
- Jain, S. (1996). *Financial Management*. Jaipur: Pointer Publication.
- Pandey, I.M (1992). *Financial Management*. New Delhi: Bikash Publishing House.
- Pradhan, S. (1992). *Basis of Financial Management*. Kathmandu: Educational Enterprises Pvt. Ltd.
- Shrestha, K.N. & Manandhar, K.D. (2056). *Statistics and Quantitative Techniques for Management*. Kathmandu: Valley Publisher.
- Shrestha, S. & Silwal, D.P (2059). *Statistical Methods for Management*. Kathmandu: Teleju Prakashan.
- Shrivastava, R.M. (1984). *Financial Decision Making: Text Problem and Cases*. New Delhi: Sterling Publishing Pvt. Ltd.
- Shyam, J. and Dangol, R.M. (2056). *Business Finance*. Kathmandu: Teleju Prakashan.
- Smith, K.V. (1974). *Management of Working Capital*. New York: West Publishing Company.
- Thapa, K. (2007). *Fundamental of Financial Management*. Kathmandu: Asmita Books Publishers and Distributors.
- Van Horne, J.C. (1996). *Financial Management and Policy*. New Delhi: Prentice Hall of India Pvt. Ltd.

Weston, J.F., Breley, S., & Brigham, E.F (1996). *Essential of Managerial Finance*. Tokyo: The Dryden Press.

### **Journal and Articles**

Acharya, K. (1985). Problems and Implement in the Management of Working Capital in Nepalese Enterprises: *A Quarterly ISDOS Bulletin*, I (3)

Government of Nepal, National Planning Commission. *Tenth Plan (2002-2007)*. Kathmandu: National Planning Commission.

Joseph, A.M. (1962). *Working Capital Concepts*. Financial Management and Research (FMR).

Pradhan, R.S. & Koirala, K.D. (1983). Some Reflection on Working Capital Management In Nepalese Corporation: *A Journal On Management and Economic: FOM*, III (I).

Shrestha, M.K. (1983). Working Capital Management in PEs. A Study on Financial Results and Constraints. *ISDOS Bulletins*, VIII: 1-4.

Weinraub, Vicher (1998). Industry Practice Relatively To Aggressive Conservative Working Capital Policies. *Journal of Finance and Strategic Decision* V-H (2).

### **Thesis:**

Aryal, B.P. (2002). A Study on Working Capital Management of Nepal Tele Communication Corporation. An Unpublished Master's Degree Thesis. Kathmandu: Shanker Dev Campus, T.U.

Gautam, P. (2002). A Study on Working Capital Management of Soaltee Crown Plaza. An Unpublished Master's Degree Thesis. Kathmandu: Shanker Dev Campus, T.U.

Ghimire, R.B. (2003). *Working Capital Management of Selected Manufacturing Company Listed In Nepal Stock Exchange Limited*. An Unpublished Master's Degree Thesis. Kathmandu: Shanker Dev Campus, T.U.

Kunwar, P. (2005). *Working Capital Management of Pharmaceutical Industry of Nepal with Reference to Royal Drugs Limited*. An Unpublished Master's Degree Thesis. Kathmandu: Shanker Dev Campus, T.U.

- Pathak, S. (2005). *An Evaluation of Working Capital Management of Nepal Lube Oil Limited*. An Unpublished Master's Degree Thesis. Kathmandu: Shanker Dev Campus, T.U.
- Sharma, D.R. (1999). *A Study on Working Capital Management of Battery Co. Limited*. An Unpublished Master's Degree Thesis. Kathmandu: Central Department of Management, T.U.
- Yadav, B. (2006). *Working Capital Management of Listed in Nepal Stock Exchange*. An Unpublished Master's Degree Thesis. Kathmandu: Shanker Dev Campus, T.U.

## APPENDIX - I

### From Asset Side of Balance Sheet

Source: <http://www.nabilbank.com/annualrep.php>

<http://www.nicbank.com.np/quick-access/annual.php>

*Banking and Financial Statistics of NRB*

*Annual Report of NABIL & NIC*

[www.nepalstock.com](http://www.nepalstock.com)

[http://en.wikipedia.org/wiki/Nabil\\_Bank](http://en.wikipedia.org/wiki/Nabil_Bank)

#### Cash and Bank Balance

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	1144.76	970.48	639.38	2365.14	1963.36
NIC	347.96	448.96	1005.54	749.14	599.76

#### Loans and Advances

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	7077.36	8076.42	10338.9	12358.6	15048.9
NIC	2419.52	3561.41	4711.71	6655.96	8902.53

#### Government Securities

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	3588.77	3672.63	2413.94	2301.46	4808.35
NIC	1075.19	1235.28	1194.31	1756.58	1104.06

#### Money at call and short notice

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	-	-	80	1734.90	563.53
NIC	92.56	129.66	89.88	353.52	163.01

### Investments

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	6031.18	5835.95	4267.23	6180.66	8956.31
NIC	1542.32	1760.72	1572.90	2479.91	1599.48

### Risk Assets

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	7808.12	8309.20	10465.27	13033.25	15659.96
NIC	3557.02	4773.45	5501.94	6902.12	9107.58

### Bill Purchased

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	305.57	239.46	120.90	245.53	243.07
NIC	-	1.69	1.81	-	21.07

### Fixed Assets

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	251.92	338.13	361.24	319.09	286.90
NIC	61.72	43.29	59.50	39.86	153.68

### Current Assets

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	12,519.50	13,211.73	13,936.07	17,569.83	22,332.60
NIC	-	5,361.60	6,980.09	9,264.24	10,827.80

### Other Assets

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	708.61	492.20	543.88	544.67	512.05
NIC	66.56	115.95	68.53	102.56	221.51

### Total Assets

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	16,250.15	16,186.42	16,397.90	22,688.33	27,621.64
NIC	4037.51	5,939.37	7,508.07	10,629.76	11,866.08

### Quick Assets

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	4,733.53	4,643.11	3,053.32	4,666.60	6,771.71
NIC	1,423.15	1,684.24	2,199.85	2,505.72	1,703.82

## APPENDIX - II

### From Capital & Liabilities side of Balance Sheet

Source: <http://www.nabilbank.com/annualrep.php>  
<http://www.nicbank.com.np/quick-access/annual.php>  
Banking and Financial Statistics of NRB  
Annual Report of NABIL & NIC  
[www.nepalstock.com](http://www.nepalstock.com)  
[http://en.wikipedia.org/wiki/Nabil\\_Bank](http://en.wikipedia.org/wiki/Nabil_Bank)

#### Total Capital

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	16,562.62	16,745.49	16,825.76	22,332.10	27,264.39
NIC	4,037.51	5,939.37	7,508.07	10,383.60	11,678.83

#### Borrowings

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	961.46	229.66	17.06	173.20	882.57
NIC	274.75	69.32	450.37	457.71	352.13

#### Total Deposit

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	13,447.66	14,119.13	14,856.61	19,347.40	10,187.35
NIC	3,144.32	5,146.48	6,241.38	8,765.95	10,068.23

#### Fixed Deposit

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	2,252.54	2,310.57	2,078.54	3,449.09	5,435.19
NIC	1,143.04	2,083.07	2,930.62	4,064.50	4,074.56



### Saving Deposit

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	5,229.72	5,994.12	7,026.33	8,770.76	10,187.40
NIC	734.09	1,280.48	2,024.26	2,797.42	3,335.67

### Bills Payable

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	108.94	173.50	119.75	92.54	83.51
NIC	24.35	32.92	28.33	91.51	31.69

### Other Liabilities

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	730.37	741.61	444.70	841.84	887.97
NIC	42.00	70.25	103.80	101.97	108.79

### Total Current Liabilities

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	12,995.89	12,953.23	13,089.58	17,005.80	19,761.00
NIC	2,342.38	3,235.91	3,893.26	5,352.64	6,486.20

## APPENDIX - III

### From Profit & Loss Account

Source: <http://www.nabilbank.com/annualrep.php>  
<http://www.nicbank.com.np/quick-access/annual.php>  
*Banking and Financial Statistics of NRB*  
*Annual Report of NABIL & NIC*  
[www.nepalstock.com](http://www.nepalstock.com)  
[http://en.wikipedia.org/wiki/Nabil\\_Bank](http://en.wikipedia.org/wiki/Nabil_Bank)

#### Interest Earned

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	1017.87	1001.62	1068.75	1310.00	1587.76
NIC	291.14	363.04	457.61	579.98	725.82

#### Net Profit after Tax

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	461.24	455.31	518.64	635.26	673.96
NIC	25.94	68.26	113.76	96.59	158.48

## APPENDIX - IV

Source: <http://www.nabilbank.com/annualrep.php>  
<http://www.nicbank.com.np/quick-access/annual.php>

*Banking and Financial Statistics of NRB*

*Annual Report of NABIL & NIC*

[www.nepalstock.com](http://www.nepalstock.com)

[http://en.wikipedia.org/wiki/Nabil\\_Bank](http://en.wikipedia.org/wiki/Nabil_Bank)

### Net Worth

(In million Rs.)

Banks	2004	2005	2006	2007	2008
NABIL	1,671.92	1,840.35	2,018.20	2,233.36	111.08
NIC	552.08	620.40	684.19	1,212.62	1,305.24

## APPENDIX - V

### Calculation of Correlation Coefficient

Correlation between Cash and Bank Balance and Current Liabilities of NABIL Bank

Fiscal Year	Cash & Bank Balance (X)	Current Liabilities (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004	1144.76	12995.89	1310475.46	168893156.9	14877175.04
2005	970.48	12953.23	941831.43	167786167.4	12570850.65
2006	639.38	13089.58	408806.78	171337104.6	8369215.66
2007	2365.14	17005.89	5593887.22	289200294.7	40221310.67
2008	1963.36	197610.6	3854782.49	390499492.3	38798074.76
N=5	X=7083.12 7083.12	Y= 75805.65	X <sup>2</sup> = 12109783.38	Y <sup>2</sup> = 1187716216.0	XY= 114836626.8

$$\text{Correlation Coefficient (r)} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2} \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 114836626.8 - (7083.12 \times 75805.65)}{\sqrt{5 \times 12109783.38 - (7083.12)^2} \sqrt{5 \times 1187716216 - (75805.65)^2}}$$

$$\therefore r = 0.83$$

For the calculation of probable Error (PEr);

$$\text{PEr} = 0.6745 \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.83412352)^2}{\sqrt{5}}$$

$$\therefore \text{PEr} = 0.0917$$

### Correlation between Loans and Advances and Net Profit of NABIL Bank

(In million Rs.)

Fiscal Year	Net Profit (X)	Loans and Advances (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004	416.24	7077.36	173255.74	50089024.57	2945880.33
2005	455.31	8076.42	207307.20	65228560.02	3677274.79
2006	518.64	10338.9	268987.45	106892853.2	5362167.10
2007	635.26	12358.6	403555.27	152734994.0	7850924.24
2008	673.96	15048.9	454222.08	226469391.2	10142356.64
N=5	X=2699.41	Y=52900.18	X <sup>2</sup> =1507327.7 3	Y <sup>2</sup> =601414823	XY=29978603.09

$$\text{Correlation Coefficient (r)} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2} \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 29978603.09 - (2699.41)(52900.18)}{\sqrt{5 \times 1507327.73 - (2699.41)^2} \sqrt{5 \times 601414823 - (52900.18)^2}}$$

$$\therefore r = 0.9825$$

For the calculation of probable Error (PEr);

$$\text{PEr} = 0.6745 \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.9825)^2}{\sqrt{5}}$$

$$\therefore \text{PEr} = 0.010$$

### Correlation between Cash and Bank Balance and Current Liabilities of NIC Bank

Fiscal Year	Cash & Bank Balance (X)	Current Liabilities (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004	347.96	2342.38	121076.16	5486744.06	815054.54
2005	448.96	3235.91	201565.08	10471113.53	1452794.15
2006	1005.54	3893.26	1011110.69	15157473.43	3914828.66
2007	749.14	5352.64	561210.74	38650754.97	4009876.73
2008	599.76	6486.28	359712.06	42071828.24	3890211.29
N=5	X= 3151.36	Y=21310.47	X <sup>2</sup> =2254674.73	Y <sup>2</sup> =101837914.2	XY=14082765.38

$$\text{Correlation Coefficient (r)} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2} \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 14082765.38 - (3151.36)(21310.47)}{\sqrt{5 \times 2254674.73 - (3151.36)^2} \sqrt{5 \times 101837914.2 - (21310.47)^2}}$$

$$\therefore r = 0.37886$$

For the calculation of probable Error (PEr);

$$\text{PEr} = 0.6745 \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.37886)^2}{\sqrt{5}}$$

$$\therefore \text{PEr} = 0.2585$$

### Correlation between Loans and Advances and Net Profit of NIC Bank

(In million Rs.)

Fiscal Year	Net Profit (X)	Loans and Advances (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004	25.94	2419.52	672.88	5854077.03	62762.35
2005	68.26	3561.41	4659.43	12683641.19	243101.85
2006	113.76	4711.71	12941.34	22200211.12	536004.13
2007	96.59	6655.96	9329.63	44301803.52	642899.18
2008	158.48	8902.53	25115.91	79255040.4	1410872.95
N=5	X=463.03	Y=26251.13	X <sup>2</sup> =52719.19	Y <sup>2</sup> =164294773.3	XY=2895640.46

$$\text{Correlation Coefficient (r)} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2} \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 2895640.46 - (463.03)(26251.13)}{\sqrt{5 \times 52719.19 - (463.03)^2} \sqrt{5 \times 164294773.3 - (26251.13)^2}}$$

$$\therefore r = 0.9104$$

For the calculation of probable Error (PEr);

$$\text{PEr} = 0.6745 \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.9104)^2}{\sqrt{5}}$$

$$\therefore \text{PEr} = 0.051$$

### Calculation of Net Working Capital

(In million Rs.)

NABIL			NIC		
Current Assets	Current Liabilities	Net Working Capital	Current Assets	Current Liabilities	Net Working Capital
12519.50	12995.89	(476.39)	3909.23	2342.38	1566.85
13211.73	12953.23	258.40	5361.60	3235.91	2125.69
13936.07	13089.58	846.49	6980.09	3893.26	3086.83
17569.83	17005.89	563.94	9264.24	5352.64	3911.60
22332.63	19761.06	2571.057	10827.86	6486.28	4341.58

### Correlation between Net Working capital Net Profit of NABIL Bank

(In million Rs.)

Fiscal Year	Net Profit (X)	Net Working Capital (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004	416.24	(476.39)	173255.74	226947.43	(198292.57)1
2005	455.31	258.5	207307.20	66822.25	117697.64
2006	518.64	846.49	268987.45	716545.32	439023.57
2007	635.26	563.94	403555.27	318028.32	358248.52
2008	673.96	2571.57	454222.08	6612972.265	1733135.32
N=5	X=2699.41	Y=3764.11	X <sup>2</sup> =1507327.73	Y <sup>2</sup> =7941316	XY=2449812.477

$$\text{Correlation Coefficient (r)} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2} \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 2449812.477 - (2699.41)(3764.11)}{\sqrt{5 \times 1507327.73 - (2699.41)^2} \sqrt{5 \times 7941316 - (3764.11)^2}}$$

$$\therefore r = 0.8267$$

For the calculation of probable Error (PEr);

$$\text{PEr} = 0.6745 \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1-(0.8267)^2}{\sqrt{5}}$$

$$\therefore \text{PEr} = 0.095$$