

CHAPTER-I

INTRODUCTION

1.1 General Background of the study:

Nepal is one of the underdeveloped countries in the world. It covers 0.03 percent area of world and 0.3 percent of Asia. Nepal is a sovereign, independent landlocked, democratic republic country lies on the lap of the highest mountain of the Himalayas, the highest peak of which is known as throughout the world as “Mt. Everest”. It is bordering between the two populous countries of the world, India in the east, west, south and China in the north. It covers an area of 1, 47,181 sq. km. The length of kingdom is 885 km. east west and its breadth varies from 145-241 km north – south. The country can be divided into three main geographical regions of Himal, Pahad and Terai.

The living standard of the people of any country to large extent is determined by the economic development of that country. Being the people of poor country, the living standard of the Nepalese people is also low. The basic function of the economy is to allocate scarce resources to produce goods and services demanded by the society. The production of goods and services require the transformation of resources – Land, Labor, Capital, Technology, Managerial skill and information. Among these resources capital is considered the most important and is known as the life blood of the business for the production of goods and services. Among the three sectors of economy (household, business and government), business sectors produce goods and services which helps in economic development."¹

Though Nepal is one of the richest countries in the world in terms of the natural beauty and resources, it is ranked among the poorest and the least developed countries in the world with 31 percent of its population living

below the poverty line. The annual per cent G.D.P. of Nepal is estimated to be just \$249. This is the lowest among the SAARC member countries. Agriculture is the main stay of the economy, providing a livelihood for over 78% of the population accounting for 40% for its contribution to G.D.P. Industrial activities mainly involves the processing agricultural products including foods processing sugarcane, tobacco and grain.

Banks are intermediaries between the saving units and investing units in the economy. In other words, they act as bridges between the surplus units and deficit units. Small accounts of scattered savings are pooled together which are then lent for the purpose of investments and facilitating other transactions. So, a well regulated, soundly-operating and properly – directed banking system plays a catalytic role in the transformation of the economy. Through their activities of attracting or financialising the savings allocating the pooled resources into the credit worthy and component sector and facilitating the payment process, the bank helps the economy to augment its level of efficiency, productivity and competitiveness. An efficient role of the bank in trapping the resource mobilization and investment process of the economy thus, faster saving, investment employment and economic growth. The bank themselves offers employment opportunities to a large number of educational and skilled hands. The banks are run in accordance with specialized legislation, which in Nepal is presently called the Banks and Financial institutions Act.

Proper financial decision – making is extremely important in banking transactions for efficiency and profitability. Most of the financial decisions of the banks are concerned with current assets and current liabilities. The working capital management of a bank is different from other type of business enterprises. A bank plays a significant role to the requirement of working capital of other type of enterprises. A bank plays a significant role to fulfill the requirement of working capital of other type of business enterprises. It

also needs efficiently manage its own working capital. Investment in working capital of other business enterprises is a part of current assets of banks working capital and we can consider deposits and short-term borrowing as a part of current liabilities.

1.2 Development of Commercial Banks in Nepal:

Banking in Nepal began with the establishment of Nepal Bank Ltd. in 1994 B.S. Before this, Kaushi Toshakhana, set up during the reign of Ranodip Shah, used to carry on very limited banking. There were also moneylenders and merchants partially fulfilling the requirements of the general public.

Nepal Bank Limited is the first commercial bank in Nepal with 51% government equity and 49% owned by public. It was established under special banking Act, 1993 having elementary functions of commercial banks. Because, of the non existence of a commercial bank in the country. Nepal Bank Limited has to act as its own central bank and keep enough resources in hand for meeting emergencies.

Later on, the first central Bank was established in 2031 B.S. under Nepal Rastrya Bank Act, 2012 with an objective of supervising. Protecting and directing the functions of commercial bank activities. After that, NRB concentrated its attention towards the development of banking system by formulating relevant policies and procedures. It is autonomous body and fully owned by the government of Nepal, which works for the development of banking system in the country.

As time elapsed, the service of Nepal Bank limited turned out to be inadequate as the banking requirements of the people kept on increasing. To fulfill the growing credit requirements of the country. The commercial bank “Rastriya Banijaya Bank” was established in 2023 B.S. under RBB Act, 2023 with fully government equity that of authorized capital of Rs 10 million and paid up capital of Rs 2.5 million.

Until 2040 B.S., there were only two commercial banks. The 2040s turned out to be crucial in the history of banking in Nepal. The government then introduced “Financial sectors Reforms” in 2037 B.S., which gave permission for the establishment of private and joint venture banks with up to a maximum of 50% equity participation. In the process, Nabil Bank Limited was established in 2041 B.S. when the sixth plan was running in the country. After the liberalization of the financial sector, financial sector has made a hallmark progress both in term of the number of financial institutions and beneficiaries of financial services. Till no. 32 commercial banks, 59 development banks, 78 finance companies and 13 rural development banks are in operating taking license from Nepal Rastrya Bank.

A joint venture bank is joining of force between two or more enterprises for carrying out specific operation.²

1.3 Profile of the Bank

a. Nabil Bank Limited:

The arrival of Nabil Bank Limited in Nepal on the 12th of July 1984 through first a joint venture with Dubai Bank Ltd. Under a Technical Service Agreement (TSA) marks a new dawn in the Nepalese banking industry. What is more admirable is with the opening of then Nepal Arab Bank Limited, customer service or marketing took a U-turn. That is substance accelerated the evolution in banking products and service there after in Nepal. The bank commenced with a team of about 50 staff members and Rs 28 million as capital.

Today Nabil entering 25th year of operation has proved that it has through its past progressions and through different phases in the banking industry achieved two things we can take pride in: first it has a large clientele base and supportive stakeholders, secondly, it has succeeded in positioning itself robustly in the market for which the credit goes to Team Nabil. Today the

Bank has established itself as the Bank of 1st choice. We are the largest bank in terms of the network and number of branches amongst the commercial bank with wide network of ATMs and offering including in our precedence of excellence that mirrors where we stand in the market. In this span of 24 year of banking operation, Nabil has already distributed rich cash dividends, spectacular return on assets and equity even during the most trying times. All of which indorses the strength and drive with which Nabil proceeds.

We in order ti make our presence felt in every walk of life and serve people across well social strata and segment, have expanded our network by adding 9 more branches that at total 28 points of representation in the nation. We have diversified our realms of business in the interests of our customers and are also being inspired by the noble cause of adding value to economic development. We have multiple sectors in focus to serve host of entrepreneurs as our new strategies are to expand dynamically, exploring new avenues and opportunities. We thus have packaged our service product in to well diversify range consisting of corporate banking, trade finance along with customer and retail banking services specifically, card product, micro finance and the like each out to the masses.

b. SIDDHARTHA BANK

Siddhartha Bank Ltd. (SBL) started its operation in the year 2002, led by a group of distinguished business personalities and respected Nepali Citizens with the objective of providing excellence and professional banking services. The promoters and public are holding 70% and 30% stake of the bank respectively.

In a short period of seven years, SBL has been able to establish itself as a ‘one stop, to its customers. Customers can enjoy a host of modern banking products and services under one roof. In addition to basic banking in the form of loans, deposits and trade finance, customers can enjoy ancillary

services such as remittance, cards, draft issuance, traveler's cheques and internet banking. The bank offers a wide range of deposit and lending products. The bank has an extension clientele. Deposit product has been designed based on the customer requirement. Customer eager to save can open up one of the many savings accounts ranging from normal saving account, Bal Bachat, to Jesta Nagarik Bachat (Senior citizens account). Similarly, customers having stable surplus of funds can go in for high yielding fixed deposits. Most of the banks saving accounts are bundled up with after benefits such as deposits cards, internet banking and locker facilities. The variety of can similarly be enjoy on the credit side. SBL has a multiple of products. The loans product interalia includes corporate loans, retail loans (home loan, auto loan, mortgage loan etc.) and SME loan. The bank credit portfolio has a healthy mix of big and small loans. The bank has a special package for small and medium sized enterprises; this package has been designed to just the smaller business that SBL believes are ones that need growth for the overall growth of the country's economy.

1.4 Focus of the Study:

Bank is a business organization where monetary transactions occurs. It creates funds from its client's savings and lends the same to needy person or business companies in terms of loans advances and investment. So, p[roper financial decision making is more important in banking transactions 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 a bank is different from other types of business enterprises. A bank plays a significant role to fulfill the requirement of working capital of any other type of business enterprises is a part of current assets of bank's working capital and we can consider deposits and short term borrowing as part of current liabilities.

The working capital management in banks plays a vital role to its operation. Because, it is just like lifeblood for running successfully to bank. It is a controlling nerve centre of business organization is heavily dependent upon the short of efficiency in its working capital management. It is the process of planning and controlling the level and mix of current assets of the firm as well as financing these assets.

1.5 Statement of the Problem

The strength and weakness of the company are measured buy analyzing the financial statement of the company using various tools and techniques. Working capital management analysis depicts how well the companies has managed the company's current assets and current liabilities in such a way that satisfactory level of working capital maintained sufficient working capital creates an atmosphere of confidence, certainty and security of the firm and also helps to maintain solvency position, regularity of services, ability to pay salary and wages, debt. Besides there, it's also help to face the crises. In this way, the firm earns reputation and goodwill. There fore to see the importance of working capital, an attempt has been made to illustrate it on commercial bank of Nepal for the past 5 years comparatively.

In this study, basically focuses out attention to analysis of working capital management of two selected joint venture banks. Commercial profit by providing quality services to the customers but there are so many problems in the commercial joint venture bank in Nepal. Besides, it they own name and fame, these are not appropriate training orientation classes in different level of employees. There is another main problem of Nepalese commercial joint venture banks are not effective management of working capital, policy, planning, organization, stating co-ordination, controlling reporting and market information are hindering their respective growth.

The main focus of the statement of the problem is stressed towards the comparative study of working capital management the selected JVBs commercial bank viz Nepal Arab Bank Limited and Siddhartha Bank Limited. Both the bank has been competing in the same economic environment and financial market. So this study diagnoses and analyzes the working capital management of these banks under study. The also point out the areas where necessary and adequate action would be taken to improve the present situation. The main trust of the study has been to make adequate cause and effect study of working capital management of this selected bank.

1.6 Objectives of the Study:

The main objective of the study is to identify the existing problems and is to insight into comparative working capital analysis of sample banks and analysis of some aspects of their working capital management and to make important suggestion and recommendations for their improvement towards achieving greater working capital efficiency of the selected banks. Besides this, some other important objectives have been fixed to make the study more meaningful. They are as follows:

- a. To make an overall comparison of working capital management managed by banks.
- b. To study current assets and current liabilities and their impact on liquidity.
- c. Find the basic reasons of the adequacy of working capital and its management.
- d. On the basis of the analysis, to provide recommendation and suggestions for the improvement of working capital management of NABIL and SBL in the future.

1.7 Significance of the Study:

The study is a conclusion –oriented study. The research would be helpful to all who are interested to have knowledge in this field especially to the working management of concerned areas. The study will be helpful to go deep in to the matters of the working capital management of this bank. The study of working capital management helps not only to the professionals in the industry to have better understanding on the impact of working capital in these form but also the academicians and the researchers.

The study of working capital can be divided in to four boarder headings.

a. To the management:

The study will be helpful to go deeply into the various matters as to why the performance of their bank is better or worse than others. The management will be able to find out the loose areas and gaps, which can be corrected in near future.

b. To the shareholders:

The study will be helpful to aware the shareholders regarding the working capital management i.e. liquidity position and profitability position of the banks. The comparison will help them to identify the productivity of their funds in each of their banks.

- How funds are utilized?
- To what extent they are going?
- Is the productivity of their limited requires satisfactory?

c. To the reader:

It will also provide a helping hand to those who are interested to study or conduct research about working capital management.

d. To the policymaker:

Ministry, officers of government central bank, security exchange and tax office can formulate the appropriate policies, rules and regulations

regarding the operation of commercial banks with the help of this study.

1.8 Organization of the Study:

This study is divided into five chapters each devoted to same aspects for the study of comparative working capital management of Nepalese commercial bank.

The context of each of this chapter as follows:

- a. Introduction
- b. Review of literature.
- c. Research Methodology
- d. Data presentation and Analysis
- e. Summary, conclusions and Recommendation

Chapter one:

This chapter contains the introductory part of the study has as already mentioned, the chapter describes on introduction of research study which the major issues of the study, objectives of the study, significance of the study and limitation of the study.

Chapter two:

This chapter deals with the part content theoretical analysis and review related articles and journals of working capital management in general and financial institution in particular with related to other related functions or variables.

Chapter three:

Three explains about the research methodology, which has been used to evaluate the working capital management of the banks under consideration. It deals with research design, source of data collection and data analysis.

Chapter four:

This chapter includes research design, nature and sources of data, data collection and processing procedure, population and sample of the study, various types of statistical tools and technique along with other reliable method of data analysis.

Chapter five:

The last chapter is concerned with the summery of the study. Various conclusions are drown from the study and recommendations are provided for improving the future performance.

Finally bibliography and appendixes have also been included at the end of the study.

1.9 Limitation of the Study:

There are various Banks in Biratnagar but I have selected only two commercial banks. Result of these two banks may not match to these of others. Here are some limitations are inevitable while conducting the research work.

- a. Due to the shortage of time all area of study has not been covered.
- b. The study is limited to working capital management of banks i.e. NABIL and SBL.
- c. This study covers on 5 years period.
- d. This study is conducting only for suggesting the banks but not directing them.
- e. The study is based on annual reports, websites authorized by selecting banks, which are secondary data in nature.

CHAPTER – TWO

REVIEW OF LITERATURE

2. Introduction:

In this chapter, the focus has made on the review of literature relevant to the working capital management of commercial banks. Every study is very much based on past knowledge or provides foundation to the present study. This chapter helps to take adequate feedback to broaden the information based one input to researcher is study. It also provides insight in to the finding of earlier studies through the review of banks, publication and previous study.

2.1 Conceptual Framework

The term "working capital management" is concerned only with the management of current assets and current liabilities of the business which is necessary for day to day operation. It is controlling of business. Every company has variable working capital and permanent working capital. Hence the success and failure of organization depend on it. So far as the management of the working capital in joint venture bank of Nepal concerned a number of different management exports and students of MBS/MBA have undertaken studies. They have described the working capital management of various enterprises.

The purpose of this chapter is to provide on insight into WC management and to give a bird eye view of different expert's thoughts regarding theory of WC and its implementation. While making review of related literature of WC management, the researcher has gone through different financial books, bulletin, reports and journals thus this chapter has aimed at reviewing an

available literature on working capital management in the context of commercial banks.

2.2 Meaning of Commercial Bank

A commercial bank has been defined as an institution, which receives deposit of money or of credit and which seeks profits through the extension and sale of its own credit. Commercial banks contribute significantly in the financial system of the country.

"The commercial bank has its own role and contribution in the economic development. It is source for economic development; it maintains economic confidences of various segments and extends credit of people."³

"Commercial banks are those institutions that perform all kind of banking function. Such as accepting deposits, advance loans, creating and advancing loan agency function etc. They provided short-term, medium terms and long terms loans agency function etc. They provided short term, medium terms and long terms loans to trade and industry."⁴

The commercial bank Act 2031 B.S has further pointed out that "commercial bank debt whenever necessary for trade and commerce. They take deposits from public and grant loans in different forms. They purchase and discount bills of exchange promissory note and exchange foreign currency. They discharge various function on behalf of their customers providing that they are paid for their services"

As a summary of the above definition, the commercial banks are those financial institutions which perform widest range of economic and financial function of any business firm in the economy moreover they also provide technical help and suggestions relating to the administration suggestions and safe keeping of valuables. Collection of bills, cheque, overdraft facilities, modern banking facilities to industrial and commercial are also carried out by these banks.

Function of commercial banks:

- Creating money
- Facilitating for the financing of foreign trade
- Payment mechanism
- Safe keeping of valuables
- Extension credit
- Remittance services
- Trust services

In today's concern the operating function of the commercial banks are: (a) to collect working capital (b) to utilize 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 profits is retained for the expansion of banking transaction.

2.3 Concept of working capital

A firm needs various types of assets in order to carry out its operation. Some assets are required to meet of regular production and some others are required to meet of regular production and some others are required specially to meet day-to-day expenses and short term obligations.

The assets such as, marketable securities, accounts receivables and inventories which are known as current assets required to be maintain as certain level depending up on the volume of production and sales. The cash and marketable securities are respectively considered as purely liquid and near liquid assets where as the accounts receivables and inventories are not. However, they can be liquidated as and when necessary with a period of less than one year. The capital invested on those assets is known as working capital. In short the working capital is source of financing current assets and includes short as well as long term financing. Working capital reports to a

firm investment in short-term securities, accounts receivables and inventories.

1. Gross Concept

In simple's terms, gross concept of working capital may be defined as the total of current. In other word, if all expenses needed to run day to day operation if business, such as amount to be invested ion the form of cash, finished goods receivable etc. are put together, it is called working capital. This working capital and total current assets are synonyms gross concept in regarding as quantitative nature.

"Gross working capital is the administration on of the firm's current assets and the financing needed to support current assets."⁵

"The term working capital refers to the gross working capital and its represents the amount of funds invested in total current assets, thus the gross working capital is the capital invested in total assets of an enterprise".⁶

The consideration of the level of investment in current assets should be avoiding two dangers point-excessive and inadequate. Investment in current assets should be just adequate not more or less to the needs of business firm. Thus, gross concept of working capital is the sum of all current assets, which can be converted in the ordinary course of business, into cash within accounting year and includes:

- a) Cash in hand
- b) Cash at Bank
- c) Bills receivables
- d) Debtors
- e) Marketable securities
- f) Prepaid expenses or paid in advance

- g) Accrued or outstanding income
- h) Short term loan and advances
- i) Short term investment
- j) Inventories
 - Raw material
 - Finished goods
 - Work in progress
 - Supplies

2 Net concept

"Net working capital is commonly defined as the difference between current assets and current liabilities or in the other words; net working capital is the current assets minus current liabilities."⁷

In simple terms, net concept of working capital can be defined as the excess of current assets over current liabilities. Net concept is regarded as qualitative and time concept nature LJ Gilman has defined net concept of working capital as the portion of a firm's current assets which are financed from long term funds."⁸

The net working capital concept focuses attention on two aspects which are listed below:

-) Indicates the liquidity position of the firm
-) Suggest the extent to which working capital needs may be financed by permanent source of funds.

The need for the net concepts arises due to the fact the gross concept fails to consider current liabilities. Current liabilities are those liabilities which are intended to be paid in ordinary course of business within a short period of normally one accounting year. It includes:

- a) Sundry creditors

- b) Bills payable
- c) Notes payable
- d) Account payables
- e) Bank overdraft
- f) Short term loan
- g) Provision for taxation
- h) Outstanding expenses
- i) Advance income
- j) Accrued income
- k) Accrued interest on loan debenture
- l) Long term loan and matures within a year.

Working capital has two concepts. The total of current assets (gross concept) and the excess of current assets over current liabilities (net concept). Both these concept of working capital have their own significance. "If the objectives is to measure the size and extent to which current assets being used, 'gross concept' is useful; where as in evaluating the liquid position of an undertaking 'net concept' becomes pertinent and preferable."⁹

It may be emphasized that gross and net concepts of working capital are two important facts of the working capital management. There is no precise way to determine the exact amount of gross, or net, working capital for every firm. The data and problems of each company should be analyzed amount of working capital.

2.4 Types of working capital

Working capital can be classified into two types as given below;

1) Permanent Working capital

Permanent working capital is the minimum amount of current assets required throughout the year to conduct a business ion a continuous

and uninterrupted basis, even during the dullest season of the year. It will remain permanently in the business and will not be returned until the business is wound up."¹⁰ But it could vary from year to year depending upon the growth of the company and the stage of business cycle in which it operates. Business firm could not be able to survive itself in the competitive market without permanent working capital. For instance, every business enterprises have to maintain a minimum stock of raw materials, work-in-progress, finished product, spare parts etc. It always requires money for the payment of wages and salary throughout the year."¹¹

2) Temporary working capital

Temporary working capital is also known as variable, seasonal and fluctuating working capital. It represents the extra working capital, required at certain times during the operating year to meet some exigency. It may require in seasonal change of business and certain abnormal conditions like strikes, lockout, dull market conditions, cut-throat competition etc. If a firm has sound management of this portion of working capital, it can easily win other competition in the cutthroat of the market.

2.5 Need of working capital

Working capital is need for day-to-day business of a business firm, thus it is required to run the business firm regularly. Every business firm keeps their objectives wither maximum their wealth or shareholders returns on higher profit. To achieve this it is necessary to generate sufficient profits. The extent to which profit can be earned will naturally depend upon the magnitude on the sales among other things. A successful sales program is in other words, necessary for

earning profit by any business enterprises. However sale does not convert into cash instantly; there is invariable a time lag between the sales of goods and receipt of cash. There is, therefore a need for working capital in the form of current assets to deal with the problem arising out of the lack of immediate realization of cash against goods sold. Therefore, sufficient working capital is necessary to sustain sales activity. Technically, this is referred to as the operating or cash cycle. The operating cycle can be said to be at the heart of the need for working capital. "Operating cycle is the time duration required to convert sales, after the conversion of resources into inventories, into cash."

Most of the firms aim at maximizing the wealth of shareholders. The firm should earn sufficient return from its operation. The extent to which profit can be earned naturally depends upon the magnitude of sale among the other things. For constant operation or business, every firm needs to hold the working capital component like cash, receivables, inventories etc. Therefore, every firm needs working capital to meet the following motives:

1. The transactional motive:

According to transitional motive, firm holds cash and inventories to facilitate smooth production and sales operation in regular. Thus the firm needs the working capital to meet the transactional motive.

2. 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 customer, unexpected slow down in collection of account receivable, cancellation of order for goods and some

other unexpected emergency. Thus, the firm needs the working capital to meet any contingencies in future.

3. The speculative motive:

Speculative motive refers to the desire of a firm to take advantages of following opportunities:

- a) An opportunity of profit making investment.
- b) An opportunities of purchasing raw materials at reduced price on payment of immediate cash.
- c) To speculative on interest rate and,
- d) To make purchase at favorable price etc. Thus the firm needs the working capital to meet the speculative motive.

2.6 Determination of working capital

These are no hard and fast rules or certain formulas to determine the working capital requirement of the firm. The importance of efficient working capital management is an aspect of overall financial management. Thus a firm plans its operation with adequate working capital requirement or it should have neither too excess nor too inadequate working capital. A number of factors affect different firms in different ways. Internal policies and environment changes also affect the working capital. Generally the following factors affect the working capital requirement of the firm.

a) Nature and size of business:

The working capital requirement of a firm is basically related to size and nature of business. If the size of the firm is bigger; then, it require more working capital whereas small firm needs less working capital relatively to public utilities.

b) Manufacturing cycle:

Working capital requirement of an enterprises are 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 longer will be working capital requirement and vice-versa.

c) Production policy:

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

d) Credit policy:

Credit policy affects the working capital of a firm. Working capital requirement depends in terms of sales. Different terms may be followed by 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 policy, it requires less working capital.

e) 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 a firm will need a 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.

f) Growth and expansion:

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

g) Price level change:

Price level changes also affect the working capital requirement of a firm. Generally, a firm requires maintaining the higher amount of working capital, if 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 considerations of the operation of the commercial firm.

h) Operating efficiency:

Operating efficiency is also an 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 lesser amount of working capital and vice-versa.

i) Profit margin:

The level of profit margin differs from firm to firm. It depends upon the nature and quality of product, marketing management and monopoly power in the market. If the firm deals with the high quality product has sound marketing management and enjoys the

monopoly power in the market then it earns quite high profit and vice-versa. Profit is the sources of working capital because it contributes towards the working capital as a pool by generation more internal funds.

j) Level of taxes:

The level of taxes also influences working capital requirement of a firm. The amount of taxes to be paid in advances is determined by the prevailing tax regulation. But the firm's profit is not constant or cannot 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 and vice-versa.

2.7 Financing of working capital

The firm working capital assets policy is never set in a vacuum it is always established in conjunction with the firm working capital financing policy. Firm can adopt different financial policies in relation to current assets, three types of financing may mainly be identified, that are long term, short term and spontaneous financing. Long term financing includes share debenture, preference share and retained earning and long term debt from financing institutions etc. Short term financial refers to those sources of short term credit that the firm has to arrange earlier. It comprises of short term bank loan, commercial paper, factoring receivable and public deposit. At last spontaneous financing signifies the automatic sources of short term funds arising in the ordinary courses of business spontaneous financing includes trade credit (creditors and bills payable) and outstanding expenses because of its cost free nature every firm would like to finance its current assets

with spontaneous sources if the fullest extend. Thus, real choice of financing current assets is in between short term verses long term financing there are three basic approaches for determining an appropriate working capital financing mix.

- a) Hedging approach (matching approach)
- b) Conservative approach
- c) Aggressive approach

a) Hedging approach (Matching approach)

If the firm attempts too much assets and liability maturities, then the working capital financing policy is termed moderate (Maturity matching of self liquidating) policy. Hedging approach is the process of financing where each asset would be offset with financing instruments of the same approximate maturity.

"With the hedging approach short term on seasonal variation in current assets would be financed with long term debt or equity With a hedging approach to financing, the borrowing and payment schedule for short term financing would be arranged to correspond to the expected swings in current assets, less spontaneous financing".¹²

b) Conservative approach

"The financing policy of the firm is said to be conservative when it depends more on long term funds for financing needs. Under a conservative plan the firm finances its permanent assets and also a part of temporary current assets with long term financing. In the periods when the firm has no need for temporary current assets the idle long-term- funds can be invested in the tradable securities to conserve liquidity".¹³

According to R.M. Dangol, under the conservative approach, the total funds requirements are financed by the long term fund. The short -

term funds in using only in the situation of emergency. The risk is minimized under this approach. The liquidity position of the firm will be relatively than in hedging approach. The cost of financing under conservative approach, increase because conservative approach uses long term sources for current assets."

c) Aggressive approach

The aggressive approach is in between of hedging approach and conservative approach. Hedging approach mix is riskier than conservative financing mix.

High profit, high risk; is the policy of hedging approach. But low profit, low risk; is the policy of conservative approach. Aggressive approach suggests that the financing mix should be in between of two approaches. A major part of the total current assets should be financed by short term sources and a part of the long term investment also should be financed by short term a sources."¹⁴

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

Under an aggressive approach, the firm finances a part its permanent current assets with short term financing. Some extremely, aggressive firm May event finance a part of that fixed assets with short term financing.

In aggressive policy, the liquidity position will be low and risk will be high. Therefore, when the used more short term financing, it is assumed to follow aggressive policy.

Thus, from above the study, we can make the following generation:

Table-1

Approach	cost	Working capital	Degree of risk	Profitability
Matching	Intermediate	High	High
Conservative	High	High	Low	Low
Aggressive	Low	Intermediate	Intermediate	Intermediate

2.8 Review of literature

Review of literature is an essential part of all research studies. It is way to discover what other research in the area of our problem has uncovered. It is also a way to avoid investigating problem that has already been definitely answered.

Review of literature is the process of reviewing the available material relating to the particular research work. The purpose of review of literature is to receive sources ideas for conducting research and to find out what research studies have been conducting.

2.9 Review of Books

Some available books about working capital management are reviewed here under. The well known professors Western and Brigham have given some theoretical insight into working capital management after their various researches study on it. The bond conceptual findings of their study provide sound knowledge and guidance for the further study in the field of management of working capital in any enterprises and naturally to this study as well. They explain, in the beginning, the importance of working capital, the use of short term verses long term debt, relationship of current assets to fixed assets. In the next chapter they have dealt with the various components of working capital and their effective management techniques. The

component of capital they have dealt with the cash, marketable securities, receivables and inventory for the efficient management of cash, they have explained the major sources and forms of short term financing, such as trade credit, loans from commercial banks and commercial paper.

As per the theoretical concept on the components of working capital from James C. Van Horne, "Working capital management usually is considered to involve the administration of current assets namely cash, marketable securities, receivables and inventories and the administration of current liabilities."¹⁵

Indian Professor I. M. Pandey has described some conceptual ingredients, which are bases on his various researches. We can learn various lessons, from it and also helpful for this study, indeed. He has described various aspects of working capital management into five chapters. The first chapter deals with the concept of working capital need for working capital and determinants of working capital, dimension of working capital management. In the second chapter he has described the management of cash and marketable securities, where he has dealt with fact of cash management, motives for holding cash, investment in marketable securities. In the third chapter, he has described the management of receivable in which he has dealt with the goals of credit policy, credit procedure individual account.

In the fourth chapter, on investment management, he has described need to hold inventories, objectives of inventory management, inventory management techniques selective. Inventories control techniques and financial working capital he has described the commercial recommendation on the fifth chapter."¹⁶

Surendra Pradhan, in this book "Basic of Financial Management ", has shed light financing of working as," There are two ways of financing

working capital requirements i.e. internal and external sources. Internal sources include use of retained earning, depreciation fund and share capital. External sources include trade credit, advances from customer, short term deposit, cash credit, short term government loan etc." 22 Generally sources or a combination of various sources of financing to be used depend on the type of current assets (permanent and variable) to maintain. The long term sources such as stock issues, debts and bond are appropriate to use for the permanent type of the current assets only if the spontaneous type of short term sources are not enough to not available to cover the required of permanent current assets.

2.10 Review of Published Journals and Article

This section includes review of published journals and articles by various management exports and executives relating to working capital requirement.

Mr. Buddhi Prasad Acharya an NIC chartered accountant has suggested utilizing NIC fund rather than accepting high interest banking loans capital investment, since the rate of earning in liquid fund is less than the rate of interest it plays for the loan.

Mr. Acharya, in other article, has again suggested utilizing its internal resources. He writes" It has become possible to maximize profit utilizing internal sources with minimum cost. In other hand, liquidity position of the corporation is quite high as it keeps capacity to pay off while debt as once if the circumstances required, keeping in views the increasing services, it can be expected that the further profitability trend will get improve further more in comparison to current trend provided the revenue structure from national and international services remain with as certain limit at unchanged tariff situation."¹⁷

Dr. Manohar K Shrestha has conducted an empirical observation of twelve selected pes, in this article, he has described the conceptual ingredient concerning. He, some of the major conclusions down from the research is highlighted below:

"The liquidity position of the selected points showed wide deviation.

Based in the sales volume four out seven PES had normal inventory, the three had not satisfactorily maintained and in the rest inventory had exceeded sales.

- a) The collection period relating to the S selected PES exhibited marked differences ranging from 32 days to 75 days.
- b) The profitability position was analyzed through return in net W/C was in embellishment phase.
- c) It has showed lack of foresighted liquidity adjustment strategy in most of the PES.
- d) Large blocking of capital inventories and low capacity utilization all these wee due to inefficient management of WC in three public enterprises."¹⁸

2.11 Review of related research work

This section includes review of related studies made by the students of an MBA, MBS, PHD, relating to working capital management in different PES and private sector in Nepal.

Dr. Khagendra Acharya has studied the working capital management of, manufacturing public enterprises in Nepal with reference to Nepal tea development corporation (NTDC). He looks five year data from 1975/6 to 1982/3. Some of the key findings of the study are highlighted below.

- a) Inventory occupies a large portion in working capital in NIDC.

- b) The turnover of inventory, receivable and current assets of NIDC were lower than average of PES selected.
- c) Receivable are growing rapidly that the responding growing on sales volume.
- d) The break-even analysis of NIDC reveals that due to insufficient working capital the corporation has been selling its product at a far blow rate than it's breakeven.
- e) There should be a close relation between production units of different estates and the ventral materials management department.
- f) The growth of working capital and inventory is correlated negatively as disclosed from the overall adequacy of inventory in NIDC.

Another study in working capital management of Bottlers Nepal is conducted by Raghu Krishna Shrestha. He focused his study in the appropriateness of investment in current assets to its total assets, liquidity position management working capital needs and utilization of current assets in BNL. From the study he found that the proportion of CAS to those assets was increasing the year after year and the proportion of inventories was the highest followed by receivable and cash respectively?

He also found the liquidity position if BNL was very high resoling low profitability and concluded that he efficiency of working capital management in BNL was poor. For more problems the suggested paying proper attention to increase investment. He suggested adopting suitable credit policy and providing discount target rate of return to minimize the gap of achievement."¹⁹

CHAPTER-3

RESEARCH METHODOLOGY

Introduction

Research methodology is another important aspect of the thesis writing. The Research Methodology is process of arriving to the solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of fact and figure. It consists of research design, data processing procedure and technique of analysis of data.

Research is a systematic method of finding out solution to a problem to where as research methodology refers to "various sequential steps to adopt by research in studying a problem with certain objective in view."

Research methodology is systematic way to solve the research problem. In other words, research methodology described the methods and process applied in the entire aspect of the study. Research Methodology refers to the various sequential steps (along with a rationale of each steps) to be adopted by a researcher in studying a problem with certain objective in view)".²⁰

3.1 Research Design

"The research design is one of the most important elements of the thesis. It is the outline of the logic of the study." The research design is the outline of a plan to test the hypothesis and should include all the procedures that follow."²¹

Thus, the research design is plan structure and strategy of investigation conceived to obtain answer to research question and to control variances. It is the arrangement of condition for collection and analysis of data, to achieve the objective of this study, description and analytical research design has been used. The study aims to portraying accurately up on the working capital

(or current asset and current liability) and its impact on overall financial position of these two banks.

3.2 Population and sample

The term 'population' used in statistics denotes the aggregate from which the sample is to be taken and the term "sample" is that part of the population which we select for the purposes of investigation. Population refers not only to people but the totality of all observation that have selected for study. Population is also known as Universe. Sample refers to a part chosen from sack before purchasing any. They decided from the handful of rice (sample) what the sack (population) will contain.

The time limit and unavailability of relevant data had forced the researcher met to make research on the few commercial banks even though there are 26 commercial banks operated now in Nepal. We select only two banks for the study which are NABIL and Siddhartha.

3.3 Nature and Sources of Data

Generally the data are classified into two categories as primary data and secondary data. This research would include both primary and secondary data. Data collected by the researcher through agent for the first time from related field and processing original character are known as primary data. On the other hand, 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. Once primary data have been used, it loses its primary characteristics and becomes secondary.

But the data used in this study are basically secondary in nature. The annual reports of commercial banks are taken as basic source of data, which are taken from website of related banks. Similarly, related books magazines, Journals, articles, reports, data from Nepal Stock Exchange and Nepal Rastra

Bank, Banking Directive and financial statistics, related website etc. as well as others supplementary data and various economic surveys are also used.

3.4 Data collection procedure

As the study is based mainly on the secondary data, required facts have been obtained from the annual reports collected from the corporate office of the bank. Data have also been obtained browsing the official website of the banks. Since the data have been obtained from secondary sources, after collection of financial statement, master sheet of financial data have been extracted and tabulated as for the need of this study. In order to process the data, financial statement and other available information have been reviewed. These data have been grouped in different tables and charts according to their nature. Most of the data have been compiled in one form and processed and interpreted as required.

3.5 Method of Analysis

To achieve the objective of the study various financing, accounting and statistical tools have been used. The analysis of data will be done according to the pattern of data available. Due to limited time and resource, simple analytical tools such as Ratio, Trend analysis, Analysis of Variance Test, correlation analysis and percentage graph are used in this study. The various calculated results obtained through financial, accounting and statistical tools are tabulated under different heading. Then they are compared with each other to interpret the results.

3.6 Data Analysis Tools

There are different analytical tools and techniques used in the research studies which are highlighted below:

3.6.1 Ratio Analysis

Financial ratios are just a convenient way to summarize large quantity of financial data. They are simply a means of highlighting in the arithmetic terms the relationship between figures drawn from financial statement. They are two of the expressing ratios one is the percentage methods such as 100 percent and other is the phase methods such as two for one.

"Ratio is the numerical or and individual relationship between two figures. It is expressing one no. in terms of another i.e. one figure divided by another no. in order to calculate the ratio."

"Ratio analysis a part of the whole process of analysis of financial statement of any business or industrial concern especially to take output and credit decision."²²

Ratio analysis is the considered as one of the most important and commonly used techniques in the modern times for the analysis of working capital. It is the basic technique used in judging the liquidity position of a objectives of the firms. It is also very helpful for decision making .From the information provided by ratio analysis with the help of financial statement is useful for making decision on any activity. Thus, ratio analysis is used to compare a firm financial performance and status to that of other firms or to its over time the qualitative judgment regarding financial performance of a firm can be done with the help of ratio analysis.

Even though, there are many ratios; only those ratios have been covered in the study, which are related to working capital of the bank.

3.6.2 Trend Analysis

The tools that are used to show great increase or decrease of variables over a period of time is known as trend analysis. With the help of trend analysis the tendency of variable over the period can be seen clearly.

There are various phenomena, which change with the percentage of time. So the careful study of relative changes that have taken place help to forecast the future trend and tendencies. An index number is statistical device assigned to measure the relative change in the level phenomena (variable or grouping variable) with respect time geographical location is other characteristics. In fact, index number is a device for measuring change in the magnitude of the phenomena from time or event place to place.

3.6.3 Correlation Analysis

Correlation is the statistical tools that can be used to describe the degree to which one variable is linearly related to another. The coefficient correlation measures the degree of relationship between two sets of figures.

"The correlation is defined as the relationship between (Among) the one depended variables (or factor) and one (or more than one) independent variable (s) or factor (s). Other worlds, correlation is the relationship between (or among) two or more variables (i.e. only one variable depended and one or more variables (s) independent)".

Thus, correlation is an statistical tool, with the help of which, we can determine whether or not two or more variable are correlated and if they are correlated the degree (extent) and direction of correlation is determined. It can be used in two or more variables. It shows the positive or negative relationship between the variables. It indicates the relationship between two such variables in which with the change in the value of one variable, the value of the other variable also changes. The result of coefficient of correlation is always between +1 or -1, when $r = +1$, it means that there is perfect relationship between two variables and vice-versa. When $r = 0$, it means that there is no relationship between to variables. It is calculated by the following formula.

$$r = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}}$$

3.6.4 Testing of Hypothesis (T-test)

One of the important applications of statistical inference is test of hypothesis. In testing of hypothesis, an assumption is made about the population parameter. T test whether the assumption or hypothesis is right or not, a sample is selected from the population, sample statistics is obtained; observe the difference between the sample mean and the population hypothesized value, and test whether the difference is significant or insignificant. Smaller the difference, the sample mean is close to the hypothesized value and, large difference of the hypothesized value has low chance to be correct.

3.6.5 Cash Flow Statement

Cash Flow Statement shows all the cash inflows and outflows of a firm during a period. However is the cash flow statement must combine cash flows that are recognized in the balance sheet (for example, change in account receivable) and the income statement (for example, the sales revenue), it is sometimes complicated to prepare. Preparation of this statement is further complicated by differences between the time cash flows occur and when they are recognized as revenue or expenses.

CHAPTER - 4

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction:

The chapter entitled "Presentation and Analysis of Data" is a crucial chapter and has been organized to present the result and analyze them accordingly. The basis objectives of this study are to observe and comparatively analyze the working capital position of the commercial banks named as NABIL and SBL. The presentation and analysis of data in this study have been done to evaluate the working capital position through the financial data available in the web site of [www. Nabilbank.com](http://www.Nabilbank.com) and www. Siddharthabank.com.

For this purpose the collected and organized data should be analyzed through different tools and techniques and interpreted. The data constitute the financial information extracted from the financial statement i.e. income statement, balance sheet and P/L account. The fiscal years of five years periods are the sample year for this study. This data are presented in the form of tabular diagram or the graphical from the analysis through different statistical and financial tools.

As per the tools used in this study the chapter has been divided into sub-chapter such as ratio analysis, Trend analysis, correlation, hypothesis and cash flow statement.

4.2 Analysis of Ratio:

Ratio analysis is a technique of analysis and interpretation of financial statement. To evaluate the performance of an organization by creating the ratios the figure of different accounts consisting in Balance sheet and income statement is known as ratio analysis. From the information provided by ratio

analysis with the help of financial statement are useful for making decision in any activity.

"The ratio analysis provides guides and clues specially in spotting trends towards better or poorer performance and in finding out significant out significant deviation from any average or relatively applicable standard."

Even though, there are many ratios, only those ratios have been covered in this study, which are related to working capital of the selected banks. This study contain following ratios:

4.2.1 Liquidity Ratio

One of the main objectives of working capital management is keeping sound liquidity position. Bank is a different organization, which is engaged mobilization of funds. So without sound liquidity position, bank is not able to operate its function. To measure the bank's solvency position or ability to meet its short-term obligation, various liquidity ratios are calculated and to know the trend of liquidity. Trend analysis of major liquidity ratio has been considered.

4.2.1.1 Current Ratio

This ratio indicates the current short solvency position of bank. Higher current ratio indicates better liquidity p[osition. It is calculated as follows:

Current Ratio = Current Assets/current liabilities

The following table shows the current ratio to compare the working capital management of NABIL and SBL

Table No: 1
Current Ratio (Times) (Rs in million)

Fiscal year	NABIL			SBL		
	Current assets	Current liabilities	Ratio	Current assets	Current liabilities	Ratio
2004/5	16281.21	15528.69	1.048	3010.599	5333.813	0.564
2005/6	21466.21	20454.97	1.049	4656.048	4158.793	1.120
2006/7	26454.44	25196.34	1.049	7834.548	6730.954	1.163
2007/8	35928.32	34455.56	1.042	11507.59	10600.00	1.085
2008/9	42841.71	40437.15	1.047	17769.95	16549.25	1.037
Average			1.047			0.993
CV			0.278			24.63

Source: Appendix-1,2

The above table shows that current assets of NABIL are increasing gradually during the study period. Current liabilities of NABIL are increasing all the times during the study period. In case, of SBL, current assets are increasing all the times during the study period. Current liabilities are also increasing for all the times during the study period except for the 2nd year (2005/6).

In NABIL, current ratios are increasing in the first three years and last year, but decrease in 4th year. The current ratio is higher in 2006/7 i.e.; 1.049 and lower in 2007/8 i.e.; 1.042. The average current ratio of NABIL is 1.047. In the first three and last year of study period, the yearly current ratios are higher than average ratio but in the 4th year, yearly current ratio is lower than the average ratio.

In the case of SBL, current ratios are increasing in first three years and decrease in last two years. The current ratio is higher in 2006/7 i.e.; 1.163

and lower in the 2004/5 i.e.; 0.564. The average current ratio of SBL is 0.993. In the 2nd, 3rd, 4th and 5th years of study periods, the yearly current ratios are higher than average ratios and in 1st year, the yearly current ratios are higher than average ratio. The yearly ratios of NABIL are higher than that of SBL. Therefore, the average ratio of NABIL is higher than the average ratio of SBL.

By considering CV. of current assets and current liabilities for 5 successive year of NABIL is 0.278 times whereas SBL is 24.63 times which shows that NABIL is more consistent than SBL. In other words, there is more fluctuation in current assets and current liabilities of SBL than NABIL because the CV.of SBL is more than NBAIL i.e. $24.63 > 0.278$.

4.2.1.2 Quick Ratio

Quick ratio establishes a relationship between quick or liquid assets and current liabilities. The purpose of ratio is to test the ability of the firm for immediate payment of current liabilities. It is calculated as follows:

Quick Ratio = Quick assets/ current liabilities

For the study, cash and bank balance, and government securities are included in quick assets. The following table shows the quick ratio of NABIL and SBL.

Table – 2**Quick ratio (times)****(Rs in million)**

Fiscal year	NABIL			SBL		
	Quick assets	Current liabilities	Ratio	Quick assets	Current liabilities	Ratio
2004/5	1224.008	15528.69	0.078	403.224	5333.813	0.075
2005/6	1852.707	20454.97	0.090	510.535	4158.793	0.122
2006/7	5485.660	25196.34	0.217	1139.199	6730.954	0.169
2007/8	6495.527	34455.56	0.187	1283.734	10600.00	0.121
2008/9	5211.331	40437.15	0.128	1324.621	16549.25	0.080
Average			0.140			0.113
CV			43.18			33.73

Source: Appendix – 1, 2

The above analysis depicts that the quick ratio of NABIL is increasing in first three years and then decreases in last two year during study period. The quick ratio is higher in 2006/7 i.e.; 0.217 and lower in 2004/5 i.e. 0.078. The average quick ratio is 0.140. The yearly quick ratio in 2006/7 and 2007/8 is higher than average ratio and three years of study period i.e. 2004/5, 2005/6 and 2008/9, the yearly ratio of NABIL are less than average ratio.

In the case of SBL, the quick ratios are always fluctuating over the study period. The ratio is higher in 2006/7 i.e. 0.169 and lower in 2004/5 i.e. 0.075. The average ratio is 0.113. Except first and last year, yearly quick ratios are higher than average ratio, during the study period.

The C.V. of quick assets to current liabilities for 5 successive years of NABIL is 43.18 times where as SBL is 33.73 times. Since the C.V. of SBL is lower than NABIL, SBL is more consistent or uniform than NABIL.

The yearly quick ratio of NABIL is quite higher than the SBL. Therefore, the average quick ratio of NABIL is quite higher than SBL. So the above analysis helps to conclude that the quick ratio of NABIL is quite better than SBL. It shows the quite better liquidity position of NABIL and than SBL.

4.2.1.3 Cash and bank balance to Total Deposit Ratio

This ratio shows the ability of bank immediate to cover their (current, margin, call and saving) deposits. This is calculated as: Cash and Bank balance to Total Deposit ratio = cash and bank balance / total Deposit

The following table shows the cash and bank balance to total deposit ratio of NABIL and SBL.

Table – 3

Cash and bank balance to Total Deposit Ratio (Rs in million)

Fiscal year	NABIL			SBL		
	Cash and bank balance	Total Deposit	Ratio (%)	Cash and bank balance	Total Deposit	Ratio (%)
2004/5	559.380	14586.608	3.8%	130.729	2461.922	5.3%
2005/6	630.238	19347.399	3.2%	115.946	3918.076	2.9%
2006/7	1399.825	23342.285	5.9%	517.226	6625.678	7.8%
2007/8	2671.141	31915.047	8.3%	437.425	10191.440	4.3%
2008/9	3372.512	37348.255	9%	1777.889	15984.934	11.1%
Average			6%			6.28%
CV			43.28			60.11

Source: Appendix – 1, 2

The above analysis shows that the cash and bank balance total deposit ratio of NABIL are increasing in the study period except 2nd year. It is highest in the year 2008/9 i.e. 9% and lowest in the 2005/6 i.e. 3.2%. The average ratio of NABIL is 6%. The ratios are higher than the average only in the 4th and 5th year and rest of the three year of study period has lower than average ratio.

In SBL, ratios are always fluctuating over the year of study period. The highest is 2008/9 i.e. 11.1% and lowest in 2005/6 i.e.; 2.9%. The average ratio of SBL is 6.2%. Only in the third and fifth year i.e. 2006/7 and 2008/9, the ratios are higher than the average ratio. The average ratio of SBL is quite higher than the NABIL. The ratio of both the bank are lower in 2nd year and higher in 5th or last year of the study period.

Cash and bank balance of NABIL is increasing all the times during the study period.

In case of SBL, cash and bank balance is fluctuating over the study period.

The C.V. of cash and bank balance to Total Deposit Ratio for 5 successive years of NABIL is 43.28 times whereas SBL is 60.11 times. By considering C.V., NABIL is more consistent or uniform than SBL because the CV. of NABIL i.e. 43.28 is lower than SBL. In other words, there is fluctuation in cash and bank balance total deposit ratio of SBL than that of NABIL.

The above analysis helps to conclude that SBL holds more cash balance than NABIL. The higher ratio of SBL shows that ability of bank immediate funds to cover its current, margin, call and saving deposit is better than the same of NABIL. In other words the liquidity position of SBL is better than NABIL, but the large idle cash and bank balance badly affect the profitability of bank. From the point view of utilizing cash, NABIL has better position than SBL.

4.2.1.4 Saving Deposit to Total Deposit Ratio:

Saving deposit is interest bearing short term deposit. The ratio is calculated as follows:

Saving deposit to total deposit ratio = saving deposit / total deposit

The following table shows the bank saving deposit to total deposit ratio.

Table-4

Saving to deposit to total deposit ratio (Rs in million)

Fiscal year	NABIL			SBL		
	Saving deposit	Total deposit	Ratio	Saving deposit	Total deposit	Ratio
2004/5	7026.334	14586.608	0.48	525.654	2461.922	0.21
2005/6	10187.354	19347.399	0.53	1128.464	3918.076	0.29
2006/7	12159.966	23342.285	0.52	1881.636	6625.678	0.28
2007/8	8770.793	31915.047	0.27	2622.242	10191.440	0.25
2008/9	14620.407	37348.255	0.39	3732.052	15984.934	0.23
Average			0.43			0.25
CV			24.32			12.55

Source: Appendix – 1, 2

The above analysis depicts that the saving deposit ratio of NABIL are increasing in first two years and then fluctuating remaining last three years during the study period. It is higher in the year 2005/6 i.e.; 0.53 and lower in the year 2007/8 i.e.; 0.27. The average ratio of NABIL is 0.43. First three years, ratios are higher than the average ratio and remaining last two years, the ratios are lower than the average ratio during the study period.

In case of SBL, saving deposit ratio are increasing first two years, then gradually decreases in last three years during the study period. The ratio is highest in year 2005/6 i.e.; 0.29 and lowest In the year 2004/5 i.e; 0.21. The average ratio of SBL is 0.25. The yearly ratios of middle three years are higher than average ratio and first and last year, the yearly ratios are lower than the average ratio.

The yearly ratios of NABIL are always higher than the SBL. So the average ratio of NABIL i.e; 0.43 is also higher than SBL i.e; 0.25.

The C.V. of saving Deposit to Total Deposit ratio for 5 successive years of NABIL is 24.32 times whereas SBL is 12.55 times. By considering C.V., there is more fluctuation in saving Deposit to Total Deposit of NABIL than SBL because NABIL has higher C.V. than that of SBL.

From the above analysis, saving deposit total deposit ratio of NABIL is better than the same of SBL. It implies that NABIL is more liquid bank than SBL. It also shows that NABIL pays higher amount of interest on deposit, which reduce the profitability of NABIL. Increasing ratio of NABIL shows that it is raising more funds from saving deposit.

4.2.2 Profitability Ratio

Profitability ratio shows the combined effects of liquidity assets management and debt management on operating results. It measures the earning of the company for the certain period. Here profitability is measured in term of various ratios as follows:

4.2.2.1 Net Profit to Total Assets Ratio

This ratio is calculated as follows;

Net profit to total assets ratio = $\text{Net profit} / \text{Total assets}$

The following table shows the net profit to total assets ratio of NABIL and SBL.

Table – 5

Net Profit to Total assets Ratio (Rs in million)

Fiscal year	NABIL			SBL		
	Net profit	Total assets	Ratio	Net profit	Total assets	Ratio
2004/5	518.635	17064.082	3%	70.279	3091.102	2.2%
2005/6	635.262	22329.971	2.8%	65.252	4756.935	1.3%
2006/7	673.959	27253.393	2.4%	95.305	7954.664	1.2%
2007/8	746.468	37132.759	2%	143.172	11668.355	1.2%
2008/9	1031.053	43867.397	2.3%	215.602	18060.979	1.1%
Average			2.5%			1.4%
CV			16			32.34

Source: Appendix – 3, 4

The above analysis shows that the profitability ratio i.e.; Net profit to Total assets ratio of NABIL is fluctuating during the study period. The ratio is highest in 2004/5 i.e.; 3% and lowest in 2007/8 i.e.; 2%. The average ratio of NABIL is 2.5%.

The ratios of SBL are gradually decreasing over the 5 years study period. The highest ratio is in 2004/5 i.e.; 2.2% and lowest ratio is in 2008/9 i.e.; 1.1%. The average ratio of SBL is 1.4%.

The above table shows that the C.V. of Net profit to total assets for 5 successive years of NABIL is 16 times whereas SBL is 32.34 times, which shows that NABIL is more consistent or uniform than SBL because the C.V. of NABIL i.e. 16 times is lower than that of SBL. In other words, there is more fluctuation in Net profit to total assets of SBL than that of NABIL.

Net profit of both banks is increasing over the 5 years study period. The yearly ratios of NABIL are always higher than SBL. So the average ratio of NABIL is also higher than SBL.

So the above analysis helps to conclude that the overall profitability of NABIL is better than that of SBL and NABIL is more efficiently using its working capital funds of assets to earn higher ratio of profit.

4.2.2.2 Net profit to Working capital Ratio

This ratio measures the percentage of profit earned from the utilization of working capital.

It is calculated as follows:

Net profit to Working Capital = Net profit /Working capital

The following table shows the net profit to working capital ratios of NABIL and SBL.

Table – 6

Net Profit to Working capital Ratio (%) (Rs in million)

Fiscal year	NABIL			SBL		
	Net profit	Working Capital	Ratio	Net profit	Working Capital	Ratio
2004/5	518.635	752.52	68.91	70.279	-323.214	-3.02
2005/6	635.262	1011.87	62.78	65.252	502.255	13
2006/7	673.959	1258.10	53.57	95.305	1103.594	8.63
2007/8	746.468	1472.76	50.68	143.172	907.588	15.77
2008/9	1031.053	1904.56	54.13	215.602	1220.705	17.66
Average			58.01			10.41
CV			13.07			79.03

Source: Appendix – 1,2,3, 4

The above table highlights the Net profit to Working capital ratio of NABIL and SBL. In the case of NABIL, the ratios for 5 successive year is 68.91%, 62.78%, 53.57%, 50.68% and 54.13%. It shows the highest ratio i.e. 68.91% is in the year of 2004/5 and lowest i.e.; 50.68% in 2007/8. The average ratio of NABIL is 58.01%

In the case of SBL, the ratio for 5 successive year is -3.02%, 13%, 8.63%, 15.77% and 17.66% which shows that he highest ratio is in 2008/9 and i.e.; 17.66% and lowest in 2004/5 i.e.; -3.02%. The average ratio of SBL is 10.41% which is very lower than NABIL i.e.; 58.01%.

The above table shows that the C.V. of Net Profit to working capital for 5 successive years of NABIL is 13.07 times whereas SBL is 79.03. Since the C.V. of SBL is very higher than NABIL. There is more fluctuation in Net Profit to working capital of SBL than that of NABIL.

The yearly ratios of NABIL are always higher than SBL, so the average ratio of NABIL is also higher than SBL.

The above analysis helps to conclude that the net profit to working capital ratio of NABIL is better than SBL. Thus NABIL has better performance on mobilization of total deposit than SBL.

4.2.2.3 Interest Earned to Total Assets Ratio

This ratio is to find out the percentage of the investment earned to total assets. This ratio is calculated as follows:

Interest earned to Total assets Ratio=Interest earned/Total assets

The following table shows the interest to total assets ratio of NABIL and SBL.

Table No – 7**Interest Earned to Total Assets Ratio (Rs in million)**

Fiscal year	NABIL			SBL		
	Interest earned	Total assets	Ratio (%)	Interest earned	Total assets	Ratio (%)
2004/5	825.202	17064.082	4.83	106.203	3091.102	3.43
2005/6	952.837	22329.971	4.26	151.851	4756.935	3.19
2006/7	1032.048	27253.393	3.78	209.812	7954.664	2.63
2007/8	1220.260	37132.759	3.28	321.683	11668.355	2.75
2008/9	1645.206	43867.397	3.75	451.691	18060.979	2.5
Average			3.98			2.9
CV			15.18			13.75

Source: Appendix – 1,2,3, 4

The above analysis shows that, interest is increasing during the study period in both the bank NABIL and SBL. The interest earned to total asset ratio of NABIL are decreasing first four years and increase in last year. The ratio is highest in the year 2004/5 i.e.; 4.83% and lowest in 2007/8 i.e.; 3.28%. The average ratio of NABIL is 3.98%, which is lower than yearly ratio of first two years and higher than yearly ratio of last three years.

In the case of SBL, the ratios are decreasing first three years and increase in 4th year and again decrease in last year. It is highest in 2004/5 i.e.; 3.43% and lowest in 2008/9 i.e.; 2.5%. The average ratio of SBL is 2.9%, which is lower than yearly ratio of first two years and greater than yearly ratio of last three years of study period.

The above table also shows that the C.V. of interest earned to total assets for 5 successive years of NABIL is 15.18 times whereas SBL is 13.75 times. It shows that there is more fluctuation in interest earned to total assets of NABIL than SBL because the C.V. of NABIL is higher than SBL.

So, the above analysis helps to conclude that the interest earned to total assets ratio of NABIL is better than SBL. This implies that NABIL is efficiently using its total assets to earn interest income.

4.2.2.4 Interest Earned to Working Capital Ratio:

This ratio is find to find out percentage of the investment earned to working capital. This ratio is calculated as follows.

Interest earned to working capital ratio = Interest earned/Working capital

The following table shows the interest earned to working capital ratio of NABIL and SBL.

Table – 8

Interest earned to Working capital ratio (%) (Rs in million)

Fiscal year	NABIL			SBL		
	Interest earned	Working capital	Ratio (%)	Interest earned	Working capital	Ratio (%)
2004/5	825.202	752.52	109.65	106.203	-2323.21	-5.71
2005/6	952.837	1011.87	94.16	151.851	502.255	30.23
2006/7	1032.048	1258.10	82.03	209.812	1103.594	19.01
2007/8	1220.260	-467.76	-14.41	321.683	907.588	9.68
2008/9	1645.206	1904.56	86.38	451.691	1220.705	37
Average			71.56			10.04
CV			12.68			220.74

Source: Appendix – 1, 2, 3, 4

The above study depicts that interest earned to working capital ratios are decreasing in the first four years and increasing in last year, in the case of NABIL. The ratio is higher in the year 2004/5 i.e.; 109.65% and lower in the year 2007/8 i.e.; -14.41%. The average ratio of NABIL is 71.56%, which is lower than the 5 year yearly ratios except 4th year yearly ratio.

In the case of SBL, the ratios are always fluctuating over the 5 years study period. The ratio of SBL is higher in the year 2008/9 i.e.; 37% and lower in the year 2004/5 i.e.; -45.71%. The average ratio of SBL is 10.04%, which is very lower than the average ratio of NABIL i.e.; 71.56%.

The above table also shows that the C.V. of interest earned to working capital for 5 successive years of NABIL is 12.68 times whereas SBL is 220.74 times. By considering the C.V., NABIL is more consistent or uniform than that of SBL because the C.V. of NABIL i.e. 12.68 is lower than SBL. In other words, there is more fluctuation in interest earned to working capital ratio of SBL because SBL has very higher C.V. i.e. 220.74 times than that of NABIL.

The yearly ratios of NABIL are always higher than SBL. So the average ratio of NABIL is higher than SBL. Therefore the above analysis helps to conclude that the interest earned to working capital ratio of NABIL is better than SBL. This implies that NABIL is efficiently using its working capital to earn interest income.

4.2.3 Activity or Turnover Ratio

Activity ratios are used for evaluate the efficiency with which the firm manager utilizes their assets. These ratio help in measuring the banks ability to utilize their available resources.

4.2.3.1 Loan and Advances to Total Deposit Ratio:

This ratio measures the extent to which banks are successful in utilizing the outsider's funds for the profit generating purpose. This ratio is calculated as follows:

Loan and Advances to Total Deposit ratio = Loan and Advances / Total Deposit

The following table shows the effectiveness in utilization of total deposit of NABIL and SBL.

Table – 9

Loan and Advances to Total Deposit Ratio (Rs in million)

Fiscal year	NABIL			SBL		
	Loan and advances	Total Deposit	Ratio	Loan and advances	Total Deposit	Ratio
2004/5	10586.17	14586.608	0.72	2570.776	2461.922	1.04
2005/6	19347.39	19347.399	0.67	3789.122	3918.076	0.97
2006/7	15545.78	23342.285	0.66	6222.586	6625.678	0.94
2007/8	21365.05	31915.047	0.67	9335.97	10191.440	0.91
2008/9	27589.93	37348.255	0.73	13330.80	15984.934	0.83
Average			0.69			0.94
CV			4.69			8.13

Source: Appendix – 1, 2

The above analysis shows that Loan and Advances of NABIL are increasing gradually during the study period. Loan and Advances to Total Deposit ratios are always fluctuating over the 5 years study period. In the case of NABIL, the ratios for 5 successive years is 0.72, 0.67, 0.66, 0.64 and 0.73. It

shows that the ratio is highest in 2008/9 i.e. 0.73 and lowest in 2006/7 i.e. 0.66. The average ratio of NABIL is 0.69, which is lower than the yearly ratio of first and last year and higher than the yearly ratio of remaining three years during the study period.

In the case of SBL, the ratios are gradually decreasing during the 5 year study period. The ratio is highest in the year 2004/5 and lowest in the year 2008/9. The average ratio of SBL is 0.94. First three years, the yearly ratios are higher than the average ratio and last two years, the yearly ratios are lower than the average ratio. The yearly ratios of SBL are always higher than NABIL. So the average ratio of SBL is higher than NABIL.

The above table shows that the C.V. of loan and advances to total deposit for 5 successive years of NABIL is 5.69 times whereas SBL is 8.13 times. It shows that the NABIL is more consistent or uniform than SBL because the CV. Of NABIL is lower than SBL.

The above study helps to conclude that Loan and advances to total deposit turnover ratio of SBL is better than NABIL. It implies that, SBL is employing funds more effectively for the profit generation purpose on Loan and Advances than NABIL.

4.2.3.2 Loan and Advances to Fixed Deposit Ratio:

This ratio examines that how many times the fund is used in Loan and Advances against fixed deposit. This ratio is calculated as follows:

Loan and Advances to Fixed Deposit ratio = Loan and Advances / fixed deposit.

The following table shows the ratio of Loan and Advances to Fixed Deposit ratio of NABIL and SBL.

Table – 10
Loan and Advances to Fixed Deposit Ratio

Fiscal year	NABIL			SBL		
	Loan and advances	Fixed Deposit	Ratio	Loan and advances	Fixed Deposit	Ratio
2004/5	10586.17	2078.535	5.09	2570.776	1196.505	2.15
2005/6	19347.39	3449.094	3.74	3789.122	1632.091	2.32
2006/7	15545.78	5435.189	2.86	6222.586	3022.555	2.06
2007/8	21365.05	8464.086	2.52	9335.97	4562.723	2.04
2008/9	27589.93	8310.708	3.32	13330.80	6013.242	2.21
Average			3.50			2.15
CV			28.52			5.33

Source: Appendix – 1, 2

The above analysis depicts that the Loan and advances to fixed deposit ratio of NABIL is decreasing in first four years and increasing in last year. The ratio is highest in 2004/5 i.e. 5.09. The average ratio of NABIL is 3.50, which is lower than the yearly ratios of first two years and higher than the yearly ratio of last three years during the study period.

In the case of SBL, the loan and advances to fixed deposit ratio are always fluctuating during the 5 year study period. It is highest in the year 2005/6 i.e. 2.32 and lowest in the year 2007/8 i.e. 2.04. The average ratio of SBL is 2.15, which is lower than the yearly of 2nd and last year, higher than the yearly ratio of 3rd year and 4th year and equals to the yearly ratio of first year. The above table shows that the CV of loan and advances to fixed deposit for 5 successive years of NABIL is 28.5 times whereas SBL is 5.33 times. By considering CV, loan and advances to fixed deposit of NABIL is more fluctuated than that of SBL because NABIL has higher CV than SBL i.e. $28.52 > 5.33$.

The above analysis helps to conclude that Loan and advances to fixed deposit ratio of NABIL is better than SBL. It shows that NABIL is utilizing its fixed deposit in Loan and advances more efficiently than SBL.

4.2.3.3 Loan and Advances to Saving Deposit Ratio

The ratio is also employed for the purpose of measuring the utilization of saving deposit in generating revenue by giving a Loan and advances to the client i.e. to what extent collected saving deposit amount is deploying in providing loan and advances to generate income. This ratio indicates how many times short term interest bearing deposits are utilized for income generating purpose. It is calculated as follows.

Loan and Advances to Saving Deposit Ratio = Loan & Advances / Saving Deposit

The following table shows the effectiveness in utilization of total deposit of NABIL and SBL.

Table - 11
Loan and Advances to Saving Deposit Ratio

Fiscal year	NABIL			SBL		
	Loan and advances	Fixed Deposit	Ratio	Loan and advances	Fixed Deposit	Ratio
2004/5	10586.17	7026.344	1.50	2570.776	525.654	4.89
2005/6	19347.39	10187.354	1.27	3789.122	1128.464	3.35
2006/7	15545.78	12159.966	1.28	6222.586	1881.663	3.30
2007/8	21365.05	8770.759	2.43	9335.97	2622.242	3.56
2008/9	27589.93	14620.407	1.89	13330.80	3723.937	3.58
Average			1.67			3.73
CV			29.44			17.22

Source: Appendix – 1, 2

The above analysis shows that the Loan and Advances to saving deposit ratio of NABIL is always fluctuating over the study period. It is highest in the year 2007/8 i.e. 2.43 and lowest in the year 2205/6 i.e. 1.27. The average ratio of NABIL is 1.67, which is lower than the yearly ratio of the 4th and 5th year and higher than the yearly ratio of remaining first three years during the study period.

In the case of SBL, the ratio is decreasing first three year and increasing in last two year. It is highest in the year 2004/5 i.e. 4.89 and lowest in the year 2006/7 i.e. 3.30. The average ratio of SBL is 3.73, which is lower than the yearly ratio of first year and higher than the yearly ratio of remaining four years. The yearly ratios of SBL are higher than the NABIL. So the average ratio of SBL is higher than the NABIL.

The above table shows that the CV of loan and advances to saving deposit for 5 successive years of NABIL is 29.44 times whereas SBL is 17.22 times. It shows that there is more fluctuation in loan and advances to saving deposit of NABIL than SBL because NABIL has higher CV than that of SBL.

From the above analysis, it can be concluded that the loan and advances to saving deposit ratios of SBL are better than that of NABIL. It implies the SBL is utilizing short term fund of outsider more effectively than NABIL.

4.3 Composition of Working Capital

For the day – to – day business operation different types of current assets are required. The composition of current assets of NABIL and SBL are cash and bank balance, money at call and short notice, investment and loan and advances.

The following table shows the amount of cash and bank balance, money at call and short notice, investment and loan and advance of NABIL and SBL during the study period.

Table No: 12(A)**Current assets components of NABIL****(Rs in million)**

Fiscal Year	Cash & Bank Balance	Money at call & Short notice	Investment	Loan and Advance	Total current assets
2004/5	559.380	868.42	4275.52	2570.776	16281.21
2005/6	630.238	1734.90	6178.53	3789.122	21466.21
2006/7	1399.825	563.53	8945.31	6222.586	26454.44
2007/8	2671.141	1952.36	9930.77	9335.97	35928.32
2008/9	3372.512	552.88	10826.37	13330.80	42841.71

Table No: 12 (B)**Current assets component of SBL (Rs in million)**

Fiscal Year	Cash & Bank Balance	Money at call & Short notice	Investment	Loan and Advance	Total current assets
2004/5	130.729	22.47	286.62	2570.776	3010.599
2005/6	115.946	100.00	650.97	3789.122	4656.048
2006/7	517.226	229.44	865.18	6222.586	7834.548
2007/8	437.425	584.73	3150.09	9335.97	11507.59
2008/9	1777.889	484.84	2176.42	13330.80	17769.95

Sources: Appendix 1, 2

From the above table i.e. 12(A) cash and bank balance of NABIL is always increasing during the study period. Loan and advances and investment are also increasing during the study 5 study period. Another component of current assets money at call and short notice is always fluctuating during the study period, assets money at call and short notice is always fluctuating during the study period. It is highest in 4th year and lowest in last year over the study period.

In the case of SBL, cash and bank balance is always fluctuating over the study period. Money at call and short notice and investment is increasing first four years and both are decreasing in last year. Another component of current assets loan and advances is increasing during the study period.

From the above analysis total current assets of NABIL is increasing during the study period. Current assets of SBL is also increasing during the study period. So, it can be concluded that the amount of current assets of NABIL is always higher than SBL, which shows that there is higher amount of funds to operate daily operation.

4.4 Net Working Capital

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

The following table shows the net working capital & % change in net working capital.

Table No: 13 (A)**Net working capital of NABIL****(Rs in million)**

Fiscal Year	Current assets	Current Liabilities	Net Working capital	% change in net working capital
2004/5	16281.21	15528.69	752.52	-
2005/6	21466.21	20454.97	1011.87	34.46%
2006/7	26454.44	25196.34	1258.10	24.33%
2007/8	35928.32	34455.56	1472.76	17.06%
2008/9	42841.71	40437.15	1904.56	29.31%
Average			1279.96	
CV			34.45	

Table No: 13 (B)

Fiscal Year	Current assets	Current Liabilities	Net Working capital	% change in net working capital
2004/5	3010.599	5333.813	-2323.22	-
2005/6	4656.048	4158.793	502.25	121.62%
2006/7	7834.548	6730.954	1103.59	119.73%
2007/8	11507.59	10600.00	907.58	17.76%
2008/9	17769.95	16549.25	1220.70	34.50%
Average			282.18	
CV			210.25	

The above table no 13(A) shows that the Net working capital of NABIL is increasing every year of study period. The average net working capital of NABIL is Rs. 1279.96 million. Percentage change in net working capital of NABIL for next 4 year is 34.16%, 24.33% 17.06% and 29.32%.

In the case of SBL, table 13(B) shows that the net working capitals of SBL are always fluctuating over the study period. It is negative in first year i.e. - 2323.22 million and it is highest in last year i.e. 1220.70 million. The average net working capital of SBL is 282.18 million.

From the above analysis, NABIL bank has positive working capital in the whole study period, which implies that here is sufficient amount required for operational requirement in the years. On the other hand SBL has negative working capital ion first year. It shows that here is not sufficient amount required for operational requirement for the years. But after that then, SBL has positive working capital.

The table shows the CV. Of net working capital for 5 successive years of NABIL is 34.45 times whereas SBL IS 210.25 times, which is very higher than NABIL. So the net working capital of SBL is more fluctuated than that of NABIL. In other words, net working of NABIL is more consistent than that of SBL.

4.5 Trend Analysis

In today's world of dynamic change nothing remains constant instead everything changes now and then. As such, business too changes each year. This really makes a Herculean Task to find enough information about business by way of analyzing the financial statement of a single year. In order to succeed in this dynamic world, it is quite important for a business analysis to find out the direction and tendency of business and to determine it the relative part to the problem are studied and the trend is determined.

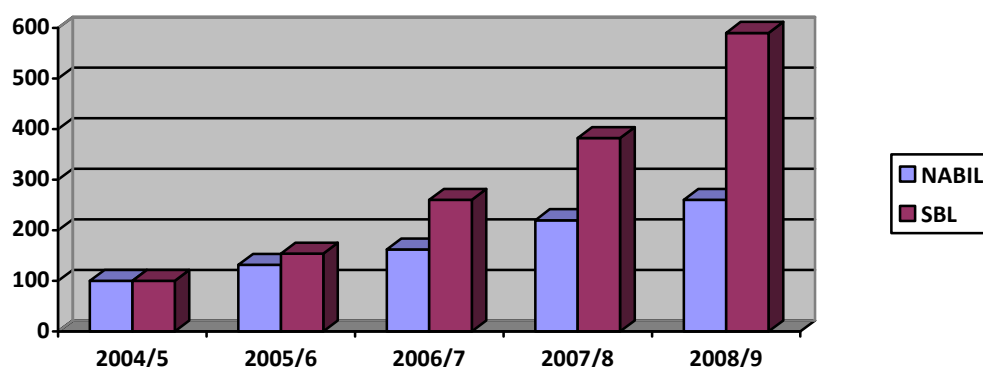
Trend analysis makes it easy to understand the change occurred in an item of group of items over a period of time. Thus, trend analysis is one of the important tool for the bankers as it enable them to indicate the direction in which their business is going and on this basis to forecast its future. There are generally tow method of expressing trends which are listed below:

- Trend Ratio
- Graphs and Diagrams

Here graphs and diagrams have been used to express the trends of different items of two commercial banks.

4.5.1 Trend of Current Assets

Graph No. 1
Trend of Current Assets



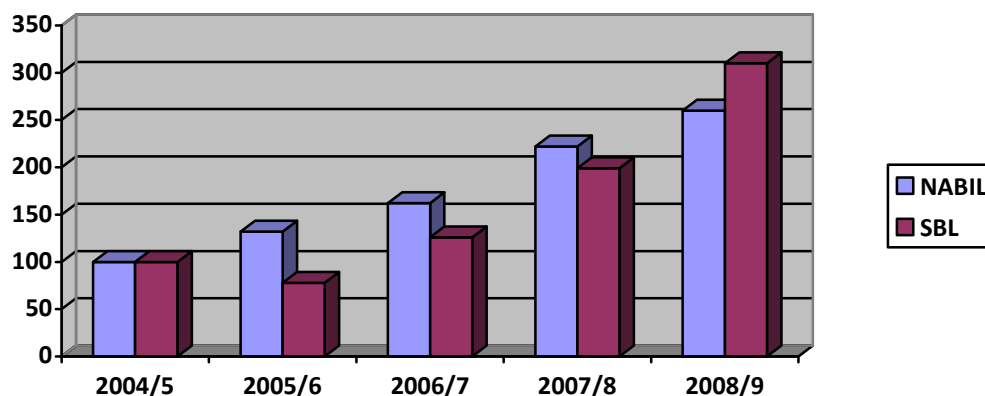
The above graph highlights the current assets trends of two commercial banks from 2004/5 to 2008/9. The growth of current assets in comparison to the base year i.e. 100% (for 2004/5) for 5 successive years of NABIL is 132%, 162%, 220% and 260% respectively whereas of SBL is 154%, 260%, 382% and 590%

The current assets of NABIL and SBL shows an increasing trend through out the study period. But there is highly increasing trends of current assets in SBL than NABIL. This indicates that the current assets management of SBL is better in comparison to the NABIL.

4.5.2 Trend of Current Liabilities

Graph No. 2
Current Liabilities

Trend of Current Liabilities

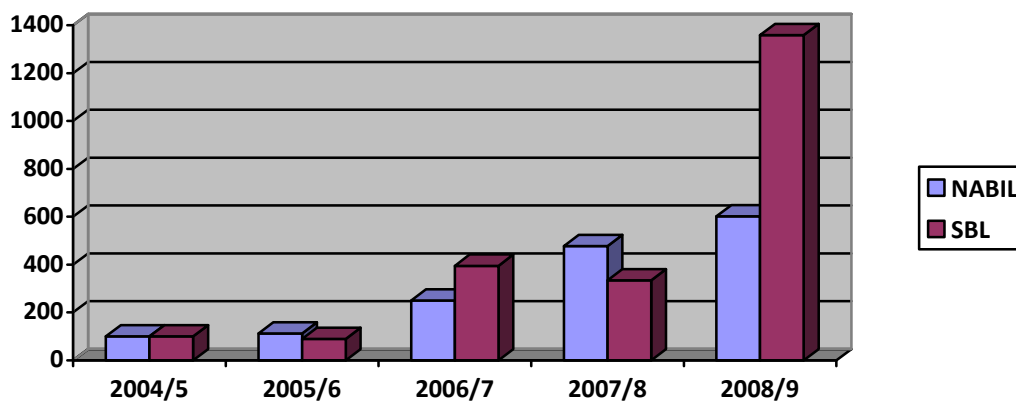


The above graph highlights the current liabilities trend of two commercial banks from 2004/5 to 2008/9. The graph of current liabilities in comparison to the base year (2004/5) i.e. for 5 successive years of NABIL is 132%, 162%, 222% and 260% respectively whereas of SBL is 78%, 126%, 199% and 310% respectively. The current liabilities of NABIL shows the increasing trend during the 5 years study period. Current liabilities of SBL also shows the increasing trend during the study period except in 2005/6. This indicates that the current liabilities of SBL is greater in comparison to the NABIL.

4.5.3 Trend of Cash and Bank Balance

Graph No. 3

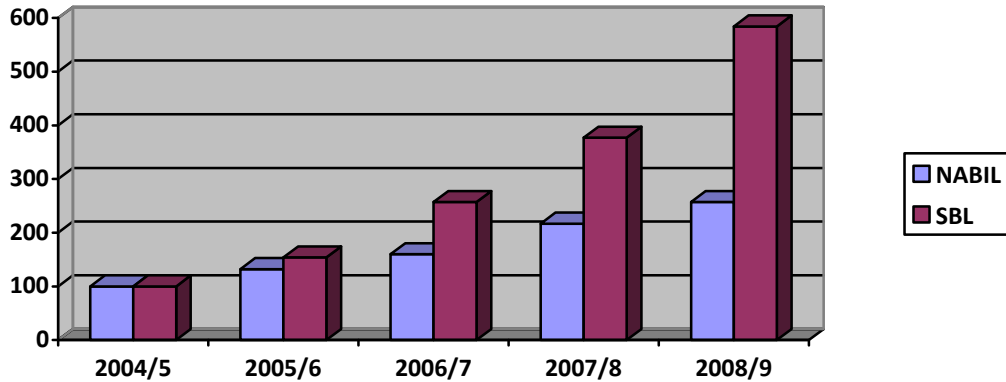
Trend of Cash and Bank Balance



The above graph highlights the cash and bank balance trend of two commercial banks from 2004/5 to 2008/9. The cash and bank balance in comparison is the base year (2004/5) i.e. 100% for 5 successive years of NABIL is 112%, 250%, 477% and 602% respectively whereas of SBL is 89%, 395%, 334% and 1359% respectively. The cash and bank balance of NABIL marked as increasing trend during the 5 years study period. The Cash and Bank balance of SBL, indicates highly fluctuating trend. During the 5 years study period. This indicates that the growth of Cash and bank balance of NABIL is lower in comparison to the SBL which may be termed as both good and worst as greater cash and bank balance is good for the banks because it will increase their working capital and they can perform their operation smoothly whereas it is worst because greater cash balance may indicates idle cash which reduces the profit of banks.

4.5.4 Trend of Total Assets:

Graph No. 4
Trend of Total Assets



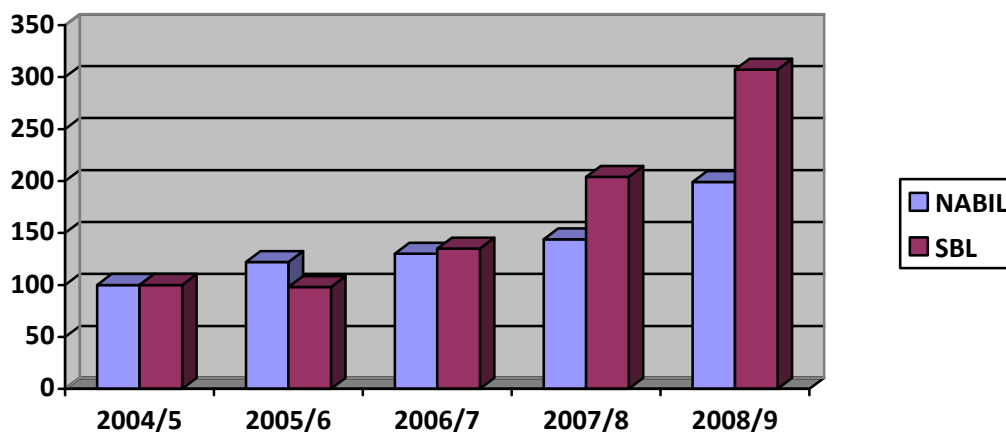
The above graph highlights the total assets of two commercial banks for 2004/5 to 2008/9. The growth of total assets in comparison to the base year (2004/5) i.e. 100% for 5 successive years of NABIL is 132%, 160%, 217% and 257% respectively whereas SBL is 154%, 257%, 377% and 584% respectively. The total assets by NABIL shows the increasing trend during the study period.

The total assets of SBL shows the highly increasing trend during the 5 years study period. This indicates that the total assets management of SBL is better than that of NABIL.

4.5.5 Trend of Net Profit After Tax

Graph No. 5

Trend of Net Profit After Tax

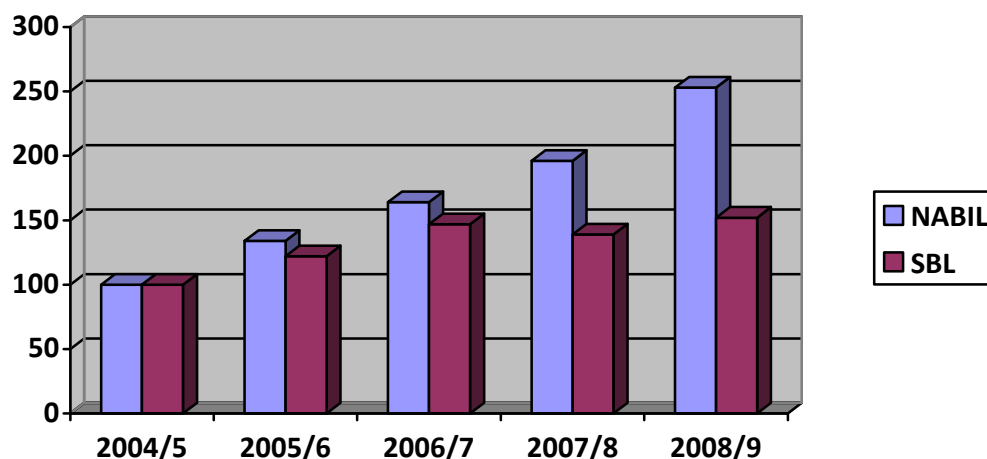


The above graph highlights the Net Profit After Tax trends of two commercial banks from 2004/5 to 2008/9. The growth of Net Profit after Tax in comparison to the base year (2004/5) i.e. 100% for 5 successive years NABIL is 122%, 130%, 144% and 199% respectively whereas SBL is 98%, 135%, 204% and 307% respectively. The Net Profit of NABIL shows increasing trend through out the study period. The Net Profit of SBL shows highly increasing trend throughout the study period except in 2005/6. But there is slow increase in NABIL as compared to the SBL.

4.5.6 Trend of Net Working Capital

Graph No. 6

Trend of Net Working Capital



The above highlights that the trend of Net working capital of two banks from the year 2004/5 to 2008/9. The growth of Net Working Capital in comparison to the base year (2004/5) i.e. 100% 5 successive years of NABIL is 134%, 164%, 196% and 253% respectively, where as SBL is 122%, 147%, 139% and 152%. The net working capital of NABIL shows highly increasing trend during the study period. The Net Working Capital of SBL shows gradually increasing during the study period except the year 2007/8.

From the above analysis, it can be concluded that working capital Management of NABIL is better than that of SBL.

4.6 Correlation Analysis and Probable Error:

In simple terms the word correlation may be defined as a statistical tool which helps to determine whether or not two or more variable are correlated and if the yare correlated, what is the degree and direction of correlation.

"When the relationship is a quantitative nature, the appropriate statistical tool for discovering and measuring the relationship and expressing it in a brief formula, is known as correlation".

Thus correlation analysis gives the extent to which two variables correlate and the direction of movement. As mentioned earlier the value of correlation lies between -1 or +1 the more is the value of correlation coefficient, the more it approaches to 1. In the case of positive correlation, the variable changes to the same direction and vice-versa.

Among the various methods of findings out coefficient of correlation Karl Pearson's method is applied in the study. If value of correlation r is less than $6PEr$; it means correlation is not significant at all. If 'r' is greater than six times of PEr ; it means 'r' is significant.

4.6.1 Coefficient of correlation between current assets and current liabilities

The coefficient of correlation between current assets and current liabilities is to measure the degree of relationship between two variables.

The following table shows the coefficient correlation between current assets and current liabilities i.e; r, PEr and $6PEr$ of NABIL and SBL.

Table No: 14

Banks	Correlation (r)	PEr	$6PEr$	Correlation
NABIL	0.99	0.006	0.036	$r > 6PEr$; Significant
SBL	0.97	0.0178	0.107	$r > 6PEr$; Significant

Source: Appendix 5&6

From the above table, we know that the coefficient correlation between current assets and current liabilities of NABIL is 0.99, which shows highly positive relationship between these two variables. By considering the probable error, since the value of r i.e; 0.036 is higher than 6PEr; it shows that the relationship between these two variables is highly significant.

In case of SBL, it is observed that Coefficient between current assets and current liabilities to be 0.99, which is more than 6PEr i.e; 0.036, we can say that the value of ' r ' is significant.

From the above analysis it can be concluded that here is highly significant relationship between current assets and current liabilities of NABIL and SBL.

4.6.2 Coefficient of correlation between Loan and Advances and Total Deposit:

The coefficient correlation between Loan and Advances and Total deposits is to measure the degree of relationship between major components of current assets i.e., Loan and advances and major sources of fund in bank advances and major sources of bank's fund i.e; total deposit . The purpose of computing coefficient correlation is to justify whether there is any relationship between these two variables.

The following table shows the coefficient correlation between Loan and advances and total deposits i.e; r , PEr, 6PEr of NABIL and SBL during the study period.

Table No: 15

Banks	Correlation (r)	PEr	6PEr	Correlation
NABIL	0.99	0.006	0.036	$r > 6PEr$; Significant
SBL	0.99	0.006	0.036	$r > 6PEr$; Significant

Sources: Appendix 7& 8

The above table shows that the coefficient correlation between loan and advances and total deposit of NABIL and SBL is 0.99, which shows the highly positive relationship between the two variables. By considering the probable error, since the value of 'r' i.e.; 0.99 is more than six times of PEr i.e.; 0.036, we can say that the value of 'r' is highly significant i.e., there is significant relationship between total deposits and loan and advances of NABIL and SBL.

From the above analysis, it can be concluded that there is highly significant relationship between loan and advances and total deposits in both the banks. Both banks have utilized its total deposit in loan and advances effectively.

4.6.3 Coefficient of correlation between Loan and Advances and Net profit:

The coefficient of correlation between loan and advances and net profit is to measure the degree of relationship between these two variables. The purpose of computing the correlation of the coefficient is to justify whether the loan and advances are significantly generate profit or not and whether there is any relationship between these two variables.

The following table shows the 'r', PEr and 6PEr of NABIL and SBL during the 5 year study period.

Table No: 16

Banks	Correlation (r)	PEr	6PEr	Correlation
NABIL	0.977	0.0137	0.0823	r>6PEr; Significant
SBL	0.983	0.0101	0.061	r>6PEr; Significant

Source: Appendix 9& 10

From the above table it is found that the coefficient correlation between loan and advances and net profit of NABIL is 0.977, which shows highly positive relationship between these two variables. By considering the probable error, since the value of 'r' i.e. 0.977 is higher than 6PEr i.e. 0.082, it shows that the relationship between these two variables is highly significant.

In the case of SBL, coefficient correlation between loan and advances and net profit has been found that the value of 'r' is 0.983, which also shows the highly positive relationship between these two variables. Since the value of 'r' is higher than 6PEr, it shows there is highly significant relationship between those two variables.

From the above analysis, it can be concluded that there is highly significant relationship between loan and advances and net profit of both the banks.

4.6.4 Coefficient of correlation between Current assets and Total Assets:

The coefficient correlation between current assets and total assets is to measure the degree of relationship between current assets and total assets i.e. 'r', PEr and 6PEr of NABIL and SBL during the 5 year study period.

Table No: 17

Banks	Correlation (r)	PEr	6PEr	Correlation
NABIL	0.99	0.006	0.036	$r > 6PEr$; Significant
SBL	0.99	0.006	0.036	$r > 6PEr$; Significant

The above table shows that the coefficient correlation between current assets and total assets of NABIL is 0.99, which shows the highly positive relationship between the two variables. By considering the probable error, since the value of 'r' i.e. 0.99 is more than 6PEr i.e. 0.036, we can say that the value of 'r' is highly significant i.e. there is significant relationship between current assets and total assets.

In the case of SBL, we observe coefficient correlation between current assets and total assets is 0.99, which shows the highly positive relationship between these two variables. On the basis of value of 6PEr i.e. 0.036, it can further conclude that the relationship between current assets and total assets are highly significant because 'r' is more than 6PEr i.e. $0.99 > 0.036$.

From the above analysis, it can be concluded that there is highly significant between current assets and total assets in both banks. Both banks have utilized its total assets in current assets effectively.

4.7 Test of Hypothesis (t-test)

Test of Hypothesis is a process of testing of significance regarding the parameter of the population on the basis of sample drawn from the population. In testing hypothesis, we examine; on the basis of sample

statistics computed from the sample draws, whether the sample draw belongs to the parent population with certain specified characteristics or not.

There are various methods of testing hypothesis; for example: z- test, t-test, f-test etc. To test the validity of our assumption, if sample size is less than 30; 't' test is used. A method for dealing with small sample was developed by a British statistician W.S. Gosset in 1908. Later on it was extended by Professor R.A. Fisher. The dealing method is called t-distribution or student t-distribution or t-test. In order to apply t-test in the context of small sample, the 't' value is calculated first and compared with the table value 't' at a certain level of significance (say in 5%) for given degree of freedom. If calculated value of 't' exceeds the table value, we infer that the null hypothesis is rejected that is there is significant differences at 5% level of significance. If 't' value is less than corresponding table value of 't' the null hypothesis is accepted i.e. there is no significant difference at 5% level of significance.

4.7.1 Testing of Hypothesis on the basis of Net Working Capital:

To judge whether there is significant difference in Net Working Capital between NABIL and SBL, following null hypothesis and alternative hypothesis are formulated and tested, Null hypothesis:

H_0 : There is no significant difference in Net Working Capital between NABIL and SBL.

Alternative Hypothesis

H_1 : There is significant difference in Net Working Capital between NABIL and SBL.

Calculation of test Statistic:

Calculation of 't' value Net Working Capital of NABIL & SBL

NABIL			SBL		
NWC(X)	(X - \bar{X})	(X - \bar{X}) ²	NWC(Y)	(Y - \bar{Y})	(Y - \bar{Y}) ²
752.52	-27.44	278192.95	-2323.22	-605.4	6788109.16
1011.87	-68.09	71872.24	502.25	220.03	48413.20
1258.10	-21.86	477.86	1103.59	821.41	674714.38
1472.76	192.8	37171.84	907.58	625.4	391125.16
1904.56	624.6	390125.16	1220.70	938.52	880819.79
6399.81		777840.05	1410.9		8783181.69

$$\bar{X} = \frac{\sum X}{N} = \frac{6399.81}{5} = 1279.86$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{1410.9}{5} = 282.18$$

$$S^2 = \frac{(\sum X - \bar{X})^2 + (\sum Y - \bar{Y})^2}{N_1 + N_2 - 2}$$

$$= \frac{777840.05 + 8783181.69}{5 + 5 - 2}$$

$$= 1195127.72$$

$$\text{Test Statistic } t = \frac{\bar{x} - \bar{y}}{\sqrt{S^2 \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}}$$

$$= \frac{1279.86 - 282.18}{\sqrt{1195127.72 \left(\frac{1}{5} + \frac{1}{5} \right)}}$$

$$= \frac{997.78}{691.41}$$

$$= 1.44362$$

Tabulated value of 't' at 5% level of significance and D.F. = 5+5-2=8, =2.31

Table No-18
t-value of Net working Capital

NABIL (Mean)	SBL (Mean)	Cal 't' value	Tabulated 't' Value	Result/ Decision
1279.96	282.18	1.44	2.31	H ₀ : is accepted

From the above table, it is clear that there is no significant difference in Net Working Capital between NABIL and SBL. Because its calculated 't' value is less than tabulated value of t i.e. H₀: is accepted.

4.7.2 Testing of Hypothesis on the basis of Liquidity Position:

To judge whether is significant differences in liquidity position between NABIL and SBL, following null hypothesis and alternative hypothesis are formulated and tested.

Null Hypothesis:

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

Alternative Hypothesis:

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

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

Table No: 19**t-value of liquidity position**

S.N.	Composition	NABIL (Mean)	SBL (Mean)	Cal 't' value	Tabulat ed 't' value	Result/ Decision
1.	Current Ratio	1.047	0.994	0.484	2.31	H ₀ : is accepted
2.	Quick Ratio	0.14	0.113	0.845	2.31	H ₀ : is accepted
3.	Cash & Bank Balance to Total Deposit Ratio	0.060	0.042	1.11	2.31	H ₀ : is accepted
4.	Saving Deposit to Total Deposit Ratio	0.438	0.255	3.68	2.31	H ₀ : is rejected

Source: Appendix 13, 14, 15 &16

From the above table, it is clear that the current ratio, quick ratio and cash and bank balance to total deposit ratio of NABIL and SBL are not significantly difference because their calculated 't' value is less than the tabulated value, i.e.: is accepted. On the other hand saving deposit to total deposit ratio of NABIL and SBL are significant difference because its calculated 't' value is more than the tabulated value, i.e. H₀: is rejected.

4.7.3 Testing of Hypothesis on the basis of Profitability Position:

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

Null Hypothesis:

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

Alternative Hypothesis:

H₁: There is significant difference in profitability of NABIL and SBL.

The following table shows the mean value of various ratios measuring the profitability of NABIL and SBL and their student 't' value.

Table No: 20
t-value of profitability position

S.N.	Composition	NABIL (Mean)	SBL (Mean)	Cal. 't' value	Tabulated 't' value	Result/ Decision
1.	Net Profit to Total Assets Ratio	2.5	1.4	4.07	2.31	
2.	Net Profit to Working Capital Ratio	46.08	8.1	2.62	2.31	
3.	Interest Earned to	3.94	2.88	3.31	2.31	

	Total Assets Ratio					
4.	Interest Earned to Working Capital Ratio	71.5	10	2.32	2.31	

Source: Appendix 17, 18, 19 & 20

From the above table, it is clear that there is significant difference in Net Profit to total assets ratio and Net Profit to Working capital ratio of NABIL and SBL, because their calculated 't' value is more than the tabulated i.e. H_0 : is rejected. It is also velar that interest earned to total assets ratio and interest earned to working capital ratio of NABIL and SBL are significantly difference as their calculated 't' value are more than the tabulated value. From the above analysis, it can be concluded that there is significant difference in overall profitability position between NABIL and SBL.

CHAPTER – 5

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter attempts to provide a summary and conclusion after comparatively analyzing the working capital management of two commercial Banks NABIL and SBL. It also tries to provide some recommendation to the concerned banks from the conclusion derived from the study.

5.1 Summary

Banks are very important segment of financial infrastructure of any country. The economic history of many countries reveals that economic development and growth of financial infrastructure go hand by hand. Banks tailor made deposit facilities rightly meet our needs in today's fast paced business world, ensures attractive returns to our surplus fund making our personal banking convenient and efficient returns to our surplus fund making our personal banking convenient and efficient thus diversifying our portfolio to best suit our investment plan. Thus, led by its vision to become a significant contribution to the economic development of the nation, banks have devised various deposits, loans and other facilities hat suit the banking requirements of its valuable customers, assisting them to cope with their personal and business requirements, an endeavor to grow stronger mutually.

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 basis function i.e. they provide a link between the lenders and the borrowers. Basically by charging a rate of interest to the borrowers

slightly higher than they pay to the lenders, the banks make their profit. This is known as financial intermediation.

After the restoration of multiparty democracy in Nepal, government took this step permitting opening up the commercial banking sectors for foreign participation in 1984, thus, many JVBs established thereafter. Joint Venture Bank is an efficient of strategic alliance-arrangement in which two cooperative combine forces to form a cooperative partnership in order to share risk of development, to offset one's weakness with strengths of order to and alike others.

In Nepal, the competitiveness among the commercial bank has grown considerably. Thus, the banks have to develop various strategies, to gain competitive edge over the rest of the banks. Among various strategies, the bank has to develop one of the most important strategies to develop its efficient and effective working capital management. As working capital management is regarded as the life-blood and nerve knot of a business firm, the present study aims to analyze the help of secondary data for the period 2004/5 to 2008/9.

"Analysis of working capital management with respect to Nepal Arab Bank Limited and Siddhartha Bank Limited" is an exciting and challenging study with special reference to banking sectors. The study mainly aimed at examining the working capital position of banking companies for purpose of the study, the necessary data on working capital and other related variables have been collected from secondary sources and presented in previous chapter. To fulfill the objectives of the study, an appropriate research methodology has been developed, which includes ratio analysis, as financial tools and trend analysis, correlation analysis and test of hypothesis as statistical tools. The major ratio analysis consists of the liquidity position, profitability position, turnover position and composition of working capital.

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 calculated and analyzed. Some null hypothesis formulated in chapter three is tested in appendix and results are analyzed in chapter four.

Now in this chapter an attempt has been made to present summary of findings, conclusions some suggestions and recommendations.

5.2 Conclusions

This study is based on the different aspect of working capital management. The major findings or conclusions derived from study of analysis of ratios, trends, correlation analysis and probable error and the test of hypothesis are summarized below.

5.2.1 Analysis of Ratios

The major findings or conclusion derived from the study of ratio analysis are summarized below:

1. The liquidity position of bank is analyzed with current ratio, quick ratio, cash and bank balance to deposit ratio.

After the study of current assets to current liabilities ratio of two commercial banks, it has been found that the average ratio of NABIL i.e. 1.047 seems greater than SBL i.e. 0.993. It shows that the liquidity position or short term solvency of NABIL is better than SBL during the study period. Again on the basis of CV. of the ratio, there is higher fluctuation in the ratio of SBL than NABIL.

After the study of quick ratio, it has been found that the average quick ratio of NABIL i.e. 0.14 seems quite greater than SBL i.e. 0.113. It also shows

that the liquidity position of NABIL is better than SBL. On the basis of CV of the quick ratio, there is more fluctuation in the ratio of SBL than SBL because NABIL has higher CV than SBL.

After the study of cash and bank balance to total deposit ratio, it has been found that the average ratio of SBL i.e. 0.062 seems quite greater than NABIL i.e. 0.060. It shows that the liquidity position of SBL is quite better than NABIL. Again on the basis of CV. of the ratio, there is more fluctuation in the ratio of SBL than NABIL because SBL has higher CV i.e. 60.11 times than NABIL i.e. 43.28 times.

After the study of saving deposit to total deposit ratio, it has been found that the average ratio of NABIL i.e. 0.438 seems greater than SBL i.e. 0.255. It is concluded that NABIL has more short term and less costly sources of fund than SBL. Again on the basis of CV of this ratio, there is more fluctuation in the ratio of NABIL than SBL because NABIL has higher CV than SBL i.e. $24.32 > 12.55$.

2. The profitability position of the banks is analyzed by the net profit to total assets ratio, net profit working capital ratio, interest earned to total assets ratio and interest earned to working capital ratio.

After the study of net profit to total assets ratio, it has been found that the average ratio of NABIL i.e. 2.5% seems greater than SBL i.e. 10.4%, so it is concluded that the profitability position of NABIL is better than SBL. Again on the basis of CV of the ratio, there is more fluctuation in ratio of SBL because SBL has higher CV than NABIL i.e. $32.34 > 16$.

After the study of net profit to working capital ratio, it has been found that the average ratio of NABIL i.e. 58.01% seems greater than SBL i.e. 10.40% so it is concluded that the profitability position of NABIL is better than SBL. Again on the basis of CV, there is more fluctuation in the ratio of SBL than NABIL because SBL has greater CV than NABIL i.e. $79.03 > 13.07$

After the study of interest earned to total assets ratio, it has been found that the average ratio of NABIL i.e. 3.98% seems greater than SBL i.e. 2.9%. So it is concluded that the profitability position of NABIL is better than SBL. Again on the basis of CV, there is more fluctuation in the ratio of NABIL because NABIL has greater CV than SBL i.e. $15.18 > 13.75$.

After the study of interest earned to working capital ratio, it has been found that the average ratio of NABIL i.e. 90.98% seems greater than SBL i.e. 15.19%. So it is concluded that the overall profitability position of NABIL is better than SBL. Again on the basis of CV, there is more fluctuation in the ratio of SBL because SBL has very higher than NABIL i.e. $220.74 > 12.68$.

3. Activity or turnover position of the banks is analyzed with loan and advances to deposit ratios.

After the study of loan and advances to total deposit ratio, it has been found that the average ratio of SBL i.e. 0.94 seems greater than NABIL i.e. 0.69. So it is concluded that the SBL is employing its fund more efficiently on the profit. Again on the basis of CV, there is more fluctuation in the ratio of SBL because SBL has greater CV than NABIL i.e. $8.13 > 4.69$.

After the study of loan and advances to fixed deposit ratio, it has been found that the average ratio of NABIL i.e. 3.50 seems quite greater than SBL i.e. 2.15. So it can be concluded that NABIL is utilizing its fixed deposit in loan and advances more efficiently than SBL. Again on the basis of CV, there is more fluctuation in the ratio of NABIL because NABIL has higher CV than SBL i.e. $28.52 > 5.33$.

After the study of loan and advances to saving deposit ratio, it has been found that the average ratio of SBL i.e. 3.73 seems greater than NABIL i.e. 1.67. So it is concluded that SBL is utilizing short term fund of outsider more effectively than NABIL.

5.2.2 Main components of working capital of NABIL and SBL are cash and bank balance, money at call and short notice, investment and law and advances.

After the study of composition of working capital. It has been found that total current assets of NABIL and SBL is increasing during the study period. It can also be concluded that the amount of current assets of NABIL is always higher than SBL, there is higher amount of funds to operate daily operation.

5.2.3 After the study of Net Working Capital, it has been found that the average of Net Working Capital of NABIL i.e. 1279.96 seems greater than SBL i.e. 282.18. So it is concluded that NABIL has sufficient amount of required for operational requirement is the years. Again on the basis of CV, there is more fluctuation in Net Working Capital of SBL because SBL has greater CV than SBL i.e. $210.25 > 34.45$.

5.2.4 Trend Analysis

The major findings or conclusion derived from the study of trend analysis are summarized below:

After the study of current assets trends of two Banks from 2004/5 to 2008/9, it has been found that the current assets of NABIL and SBL shows an increasing trend through out the study period. But there is highly increasing trend of current assets in SBL in comparison to NABIL. So it indicates that current assets management of SBL is better in comparison to the NABIL.

After the study of Current Liabilities trends of two Commercial Banks from 2004/5 to 2008/9. It has been found that Current Liabilities of NABIL shows an increasing trends during the study period, where SBL is also increasing

except the years 2005/6. But there is high growth in Current Liabilities of SBL in comparison to NABIL.

After the study of Cash and Bank Balance trend of two commercial Banks from 2004/5 to 2008/9, it has been found that the Cash and Bank Balance of NABIL shows in increasing trend during the study period. But in the Cash of SBL there is highly fluctuation in Cash and Bank Balance during the study period. It shows highly fluctuating trends of Cash and Bank Balance of SBL.

After the study of Total Assets Trend of two Banks from 2004/5 to 2008/9. It has been found that the Total Assets of NABIL shows gradually increasing trend during the study period. But in the case of SBL, Total Assets of SBL shows highly increasing trend than NABIL during the study period. This indicates that total assets management of SBL is better than that of NABIL.

After the study of Net Profit after Tax trend of two banks from 2004/5 to 2008/9, it has been found that the Net Profit Tax of NABIL shows an increasing trend during the study period. But in the case of SBL, Net Profit after Tax shows highly fluctuating trend during the study period. It shows NABIL is more consistent or uniform in Net Profit after Tax than SBL.

After the study of Net Working Capital trend of two commercial banks from 2004/5 to 2008/9, it has been found that the Net Working Capital of NABIL shows highly increasing trend in comparison to the SBL. In the case of SBL, Net Working Capital shows fluctuating trend during the study period. So it can be concluded that the working capital management of NABIL is better than that of SBL.

5.2.5 Correlation Analysis and Probable Error

The major findings or conclusion derived the study correlation analysis and probable errors are summarized below:

After the study of correlation coefficient and probable error between current assets and current liabilities of NABIL is highly positive relationship between current assets and current liabilities. By considering probable error, the relationship between these two variables is highly significant i.e. $r > 6PE$. In the case of SBL, it is found that the correlation coefficient between current assets and current liabilities is 0.97, which also shows that there is highly positive relationship between these two variables. On the basis of probable error, it can be concluded that the relationship between these two variables is significant. i.e. $r > 6PE$.

After the study of correlation coefficient and probable error between Loan and advances and Total Deposit of both banks is 0.99, which shows highly positive relationship between Loan and Advances and Total Deposit. By considering the probable error, it can be concluded that the relationship between those two variables of both banks NABIL and SBL is significant i.e. $r > 6PE$.

After the study of correlation coefficient between Loan and Advance and Net Profit, it has been found that the value of 'r' is 0.909 on NABIL and 0.985 on SBL. It shows that there is highly positive relationship between Current Assets and Total Assets of both the banks. On the basis of probable error, since the both banks have higher 'r' than $6PE$, the relationship is significant. It indicates that the change in current assets affects the volume of Total Assets in both the bank.

5.2.6 Testing of Hypothesis (T-test)

The major findings or conclusions derived from the study of testing hypothesis are summarized below:

After the testing of hypothesis on the basis of liquidity position, it has been found that the current ratio, quick ratio and cash and bank balance to total deposit ratio of NABIL are not significantly different from SBL. Because their

calculated (t) value is less than tabulated value i.e. H_0 , accepted on the other hand, Saving Deposit to Total Deposit ratio of NABIL and SBL are significant difference. Because its calculated (t) value is more than tabulated value. In overall, it shows that the two banks are not more different (Significant) in terms of the Liquidity position.

After the testing of hypothesis on the basis of profitability position, it has been found that, Net Profit to Total Assets ratio, Net Profit to Working capital ratio, Interest earned to Total Assets ratio and Interest earned to Working Capital Ratio of NABIL are significantly different from SBL. Because their calculated 't' value is more than tabulated value. i.e. H_0 is rejected. In overall, it can be concluded that there is significant difference in overall profitability position between two banks NABIL and SBL.

After the testing of hypothesis on the basis of Net Working Capital, it has been found that Net Working Capital of NABIL is not significantly different from SBL. Because its calculated 'L' value is less than tabulated value O . H_0 is accepted. So it can be concluded that there is no significant difference in Net Working Capital between NABIL and SBL.

Hence, from the above all conclusions, it can be concluded that both banks are not much different. Comparatively, NABIL is financially better and sound than SBL. But it does not mean that SBL is not performing well. Both banks are striving for better performance by adopting various new strategies and providing additional new services.

Recommendations

Based on the analysis and the findings of the study of two Commercial Banks, following recommendations are advanced to overcome weakness and inefficiency and continue with proper, systematic and smooth operation of the bank:-

1. SBL is recommended to increase its short term solvency or liquidity position and it shows also maintain its liquidity position more consistent.
2. NABIL is recommended that it should increase its Cash and Bank Balance to fulfill the demand of its customers.
3. Since SBL has the less amount of short term and less costly sources of fund, in order to fulfill the need of short term fund and not to spent its income in paying high interest, it should increase it short term fund or saving deposit than fixed deposit.
4. Although Net Profit Total Asset ratio, Interest Earned Total Assets Ratio and Net Profit to Working Capital Ratio of NABIL is higher than SBL. Therefore, NABIL should try to reduce its cost by reducing high cost deposits and operating cost, which further maximizes its profitability and shareholders return. So SBL is also recommended to improve its strategy and operating in proper and efficient way so that it can have least operating cost, which further maximizes its profitability and shareholders return.
5. Total Deposit turnover position of both banks is more than unity. Saving that there is satisfactory turnover position in both the banks. So it is recommended that both banks should maintain this turnover, position in next years.
6. Since there is higher fluctuation in working capital on SBL, it can net operate its operation smoothly and soundly. So SBL is recommended to improve its Working Capital Management which helps it to operate in proper and efficient way.
7. In order to preserve the banking and saving habits of the lowers level people of the kingdom, NABIL and SBL are suggested not to be surrounded and limited to the interest and status of big clients (e.g. multinational companies, large industries, manufacturing and exporters,

NGO's, INGO's etc.) Reducing the minimum required threshold balance and extension of its service towards rural areas and priority sectors of the kingdom is the most boosting all the lower level people.

8. Besides giving priority of interesting of Government securities, NABIL and SBL are recommended to invest its fund in the purchase of shares and debentures of other financial, non financial companies, hotels and other government companies. This also helps in the maintenance of a sound portfolio of the banks.
9. The sampled banks should go on to strengthen their human resources which is taken as the heart of the organization. On the other hand the banks should develop its technologies in order to give quick services to their customers on one hand and to gain competitive advantages.

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APPENDIX NO.1

NABIL Bank Limited five years B/S

(Rs in million)

Particulars	2004/5	2005/6	2006/7	2007/8	2008/9
<u>Assets:</u>					
Cash & Bank Balance	559.380	630.238	1399.82	2671.14	3372.51
Money at call & short notice	868.428	1734.90	563.532	1952.36	552.888
Investment	4275.52	6178.53	8945.51	9939.77	10826.3
Loan and advances	10586.1	12922.5	15545.7	21365.0	27589.9
Total Current Assets	16281.5	21466.2	26454.6	35928.3	42341.7
Fixed Assets	361.235	319.086	286.895	598.038	660.988
Non-Banking Assets	-	-	-	-	-
Other Assets	413.339	544.668	512.050	606.393	864.695
Total Assets	17064.0	22329.9	27253.3	37132.7	43867.3
<u>Current Liabilities:</u>					
Borrowing	17.062	173.201	882.572	1360.00	1681.03
Deposits	14586.6	19347.3	23342.2	31915.0	37348.2
Bill Purchase	85.419	112.606	83.514	238.421	463.138
Proposed & undistributed dividend	361.221	435.604	509.417	437.373	361.325
Income tax liabilities	15.345	34.304	-	38.776	80.232
Other Liabilities	340.786	352.079	378.552	465.940	502.899
Total Current Liabilities	15528.6	20454.9	25196.3	34455.5	40437.1
Share Capital	491.654	491.654	491.654	689.216	965.747
Reserve and Surplus	1043.73	1383.34	1565.39	1747.98	2164.49
Debenture & bond	-	-	-	240.0	300.00
Total capital & liabilities	17064.0	22329.9	27253.3	37132.7	43867.3

APPENDIX NO.2

Siddhartha Bank Limited five years B/S

(Rs in million)

Particulars	2004/5	2005/6	2006/7	2007/8	2008/9
<u>Assets:</u>					
Cash & Bank Balance	130.729	115.946	517.226	437.425	1777.889
Money at call & short notice	22.471	100.000	229.446	584.735	484.840
Investment	286.623	650.979	865.188	1150.095	2176.428
Loan and advances	2570.776	3789.122	6222.586	9335.597	13330.802
Total Current Assets	3010.599	4656.048	7834.548	11507.597	17769.959
Fixed Assets	30.217	39.692	16.667	72.398	112.106
Non-Banking Assets	0.720	0.480	10.173	-	-
Other Assets	49.565	60.714	63.375	88.103	178.914
Total Assets	3091.102	4765.935	7954.664	11668.355	18060.979
<u>Current Liabilities:</u>					
Borrowing	190.000	181.150	430.000	205.132	327.600
Deposits	2461.922	1918.076	6625.078	10191.440	15984.934
Bill Purchase	0.429	-	14.239	15.884	-
Proposed & undistributed dividend	-	-	4.736	6.536	-
Income tax liabilities	17.083	1.112	5.203	11.155	4.904
Other Liabilities	33.778	53.454	81.695	169.859	231.812

Total Current Liabilities	5333.813	4153.793	6730.954	10600.009	16549.250
Share Capital	350.000	500.000	600.000	828.000	952.200
Reserve and Surplus	37.888	103.141	193.709	240.364	331.759
Debenture & bond	-	-	-	-	227.770
Total capital & liabilities	3091.102	4756.935	7954.664	11668.355	18060.979

Appendix No. 3

NABIL Bank Limited Five years P/L A/C

(Rs in million)

Particulars	2004/5	2005/6	2006/7	2007/8	2008/9
Interest Income	1068.746	1309.998	1587.758	1978.696	2789.486
Interest expenses	243.544	357.161	557.710	758.436	1153.280
Net Interest income	825.202	952.837	1032.048	1220.260	1645.206
Commission & Discount	128.376	138.293	150.608	156.234	179.693
Other Operating Income	56.440	82.897	87.574	97.444	144.164
Exchange income	184.878	185.483	209.926	169.487	252.919
Total Operating income	1194.898	1359.512	1480.157	167.427	2220.983
Personal Expenses	199.516	219.780	240.161	262.907	339.897
Other operating Expenses	190.299	182.696	188.183	220.750	265.158
Exchange losses	-	-	-	-	-
Operating profit before provision for possible	805.082	957.035	1051.813	1186.769	1615.927
	8.662	3.769	14.206	64.055	45.722
	769.420	953.265	1037.606	1122.713	1570.204

income	(0.048)	0.735	5.280	24.083	2.190
Provision for possible loss	4.454	7.792	10.926	11.100	10.617
Operating Profit	800.827	961.730	1053.813	1157.898	1583.012
Non-operating income/expenses	41.156	26.073	40.736	39.990	43.521
Provision for possible losses write back	841.983	987.804	1094.550	1197.889	1626.534
Profit from regular activities	84.198	89.800	99.504	108.899	147.866
Income from extra activities	237.671	262.741	321.086	342.521	447.614
Profit from all activities	239.149	262.562	314.526	342.468	447.701
Provision for staff bonus	1.478	0.178	6.559	0.052	0.918
Provision for income tax	-	-	-	-	24.006
This year	520.114	635.262	673.959	746.468	1031.053
Up to previous year					
Differed tax					
Net profit/loss					

Appendix No. 4

Siddhartha Bank Limited five years P/L A/c

(Rs in million)

Particulars	2004/5	2005/6	2006/7	2007/8	2008/9
Interest Income	198.184	305.560	481.523	729.872	1265.310
Interest expenses	91.980	153.706	271.710	408.188	813.619

Net Interest income	106.203	151.851	209.812	321.683	491.691
Commission & Discount	7.552	13.774	20.177	21.494	72.888
Other Operating Income	7.981	9.701	18.659	31.294	6.005
Exchange income	7.170	12.050	14.245	27.487	38.683
Total Operating income	128.908	187.378	262.895	401.919	569.267
Personal Expenses	20.310	26.087	33.620	48.247	179.421
Other operating Expenses	30.898	44.124	55.721	71.480	113.429
Exchange losses	-	-	-	-	-
Operating profit before provision for possible income	77.700	117.166	173.553	282.192	376.417
Provision for possible loss	-	16.472	20.544	48.048	28.757
Operating Profit	77.700	100.693	153.009	234.142	347.660
Non-operating income/expenses	-	0.003	0.035	0.506	-
Provision for possible losses write back	19.369	-	-	4.031	-
Profit from regular activities	97.070	100.697	153.045	238.680	347.660
Income from extra activities	97.070	-	-	-	8.857
Profit from all activities	9.707	100.697	153.045	238.680	338.803
Provision for staff bonus	17.083	9.154	13.913	21.658	30.800
Provision for income tax	17.083	26.290	43.826	71.721	92.401
This year	-	26.290	43.826	71.721	-
Up to previous year	-	-	-	-	-
	-	-	-	2.087	-
	70.279	65.252	95.305	143.172	215.602

Differed tax					
Net profit/loss					

Appendix- 5(A)

Calculation of correlation coefficient between current assets (CA) only current liabilities (CL) of NABIL

CA (X)	CL (Y)	$X - \bar{X}$	X^2	$Y - \bar{Y}$	Y^2	XY
1628.122	15528.69	-12213.16	149161277.2	-11685.85	136559090.2	142721155
21466.21	20454.97	-7028.17	4939517.3	-6759.57	4569178658	47507407.0
26454.44	25196.34	-2039.94	4161355.2	-2018.20	4073131.24	4117006.90
35928.32	34455.56	7433.94	55263508.5	7241.02	52432370.64	53829308.2
42341.71	40457.15	13847.33	191748548.1	13222.61	174837415.2	183097844
142471.90	136072.71		449729862.6		413593793.9	431272700

$$\bar{X} = \frac{\sum X}{N} = \frac{142471.90}{5} = 28494.38 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{136072.71}{5} = 27214.54$$

$$r = \frac{\sum XY}{\sqrt{\sum x^2 \sum y^2}} = \frac{431272722.1}{\sqrt{449729862.6 \times 413393753.9}} = 0.99$$

$$PER = 0.6745 \frac{1}{\sqrt{N}} = 0.6745 \left| \frac{1}{\sqrt{3}} \right| = 0.006$$

$$6PER = 6 \times 0.006 = 0.036$$

Appendix 5 (B)

Calculation of correlation between Current assets (CA) and current liabilities (CL) of SBL

CA (X)	CL (Y)	$X - \bar{X}$	X^2	$Y - \bar{Y}$	Y^2	XY
3010.59	5333.81	-5945.15	35344808.5	-3339.75	11153930.0	19855314.7
4656.04	4153.79	-4299.70	18487420.0	-4519.77	20428320.85	19433655.0
7834.54	6730.75	-1121.20	1257089.44	-1942.61	3773733.61	2178054.33
11507.59	10600.01	2551.85	6511938.42	1926.45	3711209.60	4916011.43
17769.96	16549.25	8814.22	77690474.2	7875.69	62026492.98	69418064.3
44778.72	43367.81		139291730.7		101093687.1	115801099.9

$$\bar{X} = \frac{\sum x}{N} = \frac{44778.72}{5} = 8955.74$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{43367.81}{5} = 8673.56$$

$$r = \frac{\sum XY}{\sqrt{\sum x^2 \sum y^2}} = \frac{115801099.9}{\sqrt{139291730.7 \cdot 101093687.1}} = 0.97$$

$$PER = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.674 \left| \frac{1-0.97^2}{\sqrt{5}} \right| = 0.178$$

$$6PER = 6 \left| PER \right| = 6 \left| 0.178 \right| = 0.107$$

Appendix 6 (A)

Calculation of correlation between loan and Advances (LA) and total deposit (TD) of NABIL

LA (X)	TD (Y)	X X(X Z \bar{X})	X ²	Y X(Y Z \bar{Y})	Y ²	XY
10586.17	14586.60	-7015.73	499220467.43	-10721.32	1149946702.5	75217889.3
12922.54	19347.40	-4679.36	21896410.01	-8960.52	35527798.67	27891418.8
15545.78	23342.30	-2056.12	4227629.45	-1965.62	3863661.98	4041550.60
21365.05	31915.05	3763.15	14161297.92	6607.13	43654166.84	24863621.2
27589.93	37348.25	9988.03	9976074328	12040.33	144969546.5	120259177
88009.47	126539.6		189066548.1		34296187.5	252273654

$$\bar{X} = \frac{\sum x}{N} = \frac{88009.15}{5} = 17601.90$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{126539.6}{5} = 25307.92$$

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} = \frac{252273654.4}{\sqrt{189266548.1 \times 342961876.9}} = 0.95$$

$$PER = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \left| \frac{1-0.99^2}{\sqrt{5}} \right| = 0.006$$

$$6PER = 6 \left| PER \right| = 6 \left| 0.006 \right| = 0.036$$

Appendix 6 (B)

Calculation of correlation between loan and Advances (LA) and total deposit (TD) of SBI

LA (X)	TD (Y)	X X(X Z \bar{X})	X ²	Y X(Y Z \bar{Y})	Y ²	XY
2570.77	2461.92	-4479	20061441	-5374.36	28883745.4	24071758.4

3789.12	3918.07	-3260.65	10631838.4	-3918.21	15252369.6	12775911.4
6222.58	6625.08	-827.19	684243.30	-1211.2	1467005.44	1001892.53
9335.60	10191.44	2285.83	5225018.80	2355.16	554677862	5383495.50
13330.80	15984.93	6281.03	399451337.86	9148.65	66400496.82	51181915.1
35248.87	39181.44		76053879.30		117650395.9	94414972.9

$$\bar{X} = \frac{\sum x}{N} = \frac{35248.87}{5} = 7049.77$$

$$\bar{Y} = \frac{\sum y}{N} = \frac{39181.44}{5} = 7836.28$$

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} = \frac{94414972.92}{\sqrt{76053879.30 \times 117630395.9}} = 0.99$$

$$PER = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \left| \frac{1-0.99^2}{\sqrt{5}} \right| = 0.006$$

$$6PER = 6 \left| PER \right| = 6 \left| 0.006 \right| = 0.036$$

Appendix 7(A)

Calculation of correlation between loan and Advances (LA) and total net profit of NABIL

LA (X)	NP (Y)	$X - \bar{X}$	X^2	$Y - \bar{Y}$	Y^2	XY
10586.17	518.63	-7015.73	49220467.43	-202.44	40981.95	1420264.3
12922.54	635.26	-4679.36	21896410.01	-85.81	7363.35	401535.88
15545.78	673.96	-2056.12	4227670.58	-47.11	2219.35	96864.28
21365.05	746.49	3763.15	14161297.92	25.40	644.65	95584.01
27589.93	1031.05	9988.03	99760743.28	309.98	96087.60	3096089.5
88009.47	3605.37		185461686.2		147296.90	5110338.0

$$\bar{x} = \frac{\sum x}{N} = \frac{88009.47}{5} = 17601.90 \quad \bar{y} = \frac{\sum y}{N} = \frac{3605.37}{5} = 721.07$$

$$r = \frac{\sum XY}{\sqrt{\sum x^2 \sum y^2}} = \frac{252273654.4}{\sqrt{189266548.1 \times 342961876.90}} = 0.977$$

$$PER = \frac{1-r^2}{\sqrt{N}} = \frac{1-0.977^2}{\sqrt{5}} = 0.0137$$

$$6PER = 6 \times 0.0137 = 0.0823$$

Appendix 7(B)

Calculation of correlation between loan and Advance and net profit of SBI

CA (X)	NP (Y)	$X - \bar{X}$	X^2	$Y - \bar{Y}$	Y^2	XY
2578.77	70.27	-4479	2061441	-47.65	2270.52	213424.35

3789.12	65.25	-3260.65	1063183842	-52.67	2774.13	171738.43
6222.58	95.30	-827.19	684243.30	-22.62	511.66	18711.03
9335.60	143.17	2285.83	5225018.79	25.25	637.56	57717.20
13330.80	215.60	6281.03	39451337.86	97.68	9541.38	613531.07
35248.87	589.59		76053879.37		15735.25	1075122.02

$$\bar{x} \times \frac{x}{N} \times \frac{8824.87}{5} \times 7049.77$$

$$\bar{y} \times \frac{y}{N} \times \frac{589.99}{5} \times 117.92$$

$$r \times \frac{XY}{\sqrt{x^2 + y^2}} \times \frac{1078122.02}{\sqrt{76083879.37 + 15735.25}} \times 0.983$$

$$6PER \times 0.6745 \times \frac{1 \cdot r^2}{\sqrt{N}} \times 0.6745 \times \frac{1Z097^2}{\sqrt{5}} \times 0.0101$$

$$6PER \times 6 \times PER \times 6 \times 0.0101 \times 0.061$$

Appendix 8(A)

Calculation of correlation between curriculum Assets (CA) and total (PA) of NABIL

CA (X)	TA (Y)	X X(X Z \bar{X})	X ²	Y X(Y Z \bar{Y})	Y ²	XY
16281.22	17064.08	-12213.16	149161277.2	-1246543	155386945.1	152242291.1
21466.21	22329.97	-7028.17	49395173.5	-7199.54	51833376.2	50599591.0
26454.44	27253.39	-2039.94	4161355.20	-2276.15	5180722.25	4643148.23
35928.32	37132.76	7433.94	55263508.53	7603.25	57809410.56	56522104.3
42741.71	43867.39	13847.33	191748548.1	14337.88	205574802.9	198541355.9
421471.90	147647.59		449729862.6		475785757	462548490.6

$$\bar{x} = \frac{\sum x}{N} = \frac{142471.90}{5} = 28494.38$$

$$\bar{y} = \frac{\sum y}{N} = \frac{147647.39}{5} = 29529.51$$

$$r = \frac{\sum XY}{\sqrt{\sum x^2 \sum y^2}} = \frac{462848490.6}{\sqrt{449729862.6 \times 475785757}} = 0.99$$

$$PER = \frac{1-r^2}{\sqrt{N}} = \frac{1-0.99^2}{\sqrt{5}} = 0.0137$$

$$6PER = 6 \times 0.0137 = 0.0822$$

Appendix 8(B)

Calculation of correlation between current Assets and (CA) and total assets of SBI.

CA (X)	TA (Y)	X X(X Z \bar{X})	X ²	Y X(Y Z \bar{Y})	Y ²	XY
3010.59	3091.10	-5945.15	35344808.52	-6015.3	36183834.09	35761860.8

4656.04	4756.93	-4299.70	18487420.09	-4349.47	18917889.28	187701416.1
7834.54	7954.66	-1121.2	1257089.44	-1151.74	13265050.03	1291330.88
11507.59	11668.35 18060.98	2551.85	651938.42	2561.95	6563587.80	6537712.10
17769.96	45532.02	8814.22	77690474.21	8954.58	80184502.98	78927638.13
44778.72	45532.02		139291730.7		143176319.2	141219958.1

$$\bar{x} \times \frac{x}{N} \times \frac{44778.72}{5} \times 8955.74$$

$$\bar{y} \times \frac{y}{N} \times \frac{45839.02}{5} \times 9106.40$$

$$r \times \frac{XY}{\sqrt{x^2 y^2}} \times \frac{141219958.1}{\sqrt{139291730.7 | 143176319.2}} \times 0.99$$

$$6PER \times 0.6745 \frac{1.r^2}{\sqrt{N}} \times 0.6745 | \frac{1Z0.99^2}{\sqrt{5}} \times 0.006$$

$$6PER \times 6 | PER \times 6 | 0.06 \times 0.036$$

Appendix 9

Calculation of 't' value of correlation rate (CR)

CA(X)	$(xZ\bar{x})$	$(xZ\bar{x})^2$	CR(Y)	$(yZ\bar{y})$	$(yZ\bar{y})^2$
1.048	0.001	0.000001	0.564	-0.43	0.11849
1.049	0.002	0.000004	1.120	0.126	0.015876
1.049	0.002	0.000004	1.164	0.17	0.0289
1.042	-0.005	0.000025	1.085	0.091	0.008281
1.047	0	0	10.37	0.043	0.001849
5.225		0.000034			0.239806

$$\bar{x} \times \frac{x}{N} \times \frac{5227}{5} \times 1.047$$

$$\bar{y} \times \frac{y}{N} \times \frac{4.97}{5} \times 0.994$$

$$r \times \frac{(xZ\bar{x})^2 \sum (yZ\bar{y})^2}{N_2 \Gamma N_2 \sum 2} \times \frac{0.000034 \sum 0.239806}{5 \Gamma 5 \sum 2} \times 0.0299$$

$$\text{Test Statistic } t \times \frac{\bar{x}Z\bar{y}}{\sqrt{S^2 \frac{1}{N_1} \Gamma \frac{1}{N_2}}} \times \frac{1.047 \sum 0.994}{\sqrt{0.299 \frac{1}{5} \Gamma \frac{1}{5}}} \times \frac{0.053}{0.1093} \times 0.484$$

Appendix 10

Calculation of 't' value of quick ration (QR)

QR(X)	$(xZ\bar{x})$	$(xZ\bar{x})^2$	QR(Y)	$(yZ\bar{y})$	$(yZ\bar{y})^2$
0.078	-0.062	0.003844	0.075	-0.038	0.001444
0.090	-0.05	0.0025	0.122	0.009	0.000081
0.217	0.077	0.005929	0.169	0.056	0.003136
0.187	0.47	0.002209	0.121	0.008	0.000064
0.128	-0.012	0.000144	0.080	-0.033	0.001089
0.7		0.014626	0.567		0.005814

$$\bar{x} \times \frac{x}{N} \times \frac{0.7}{5} \times 1.14$$

$$\bar{y} \times \frac{y}{N} \times \frac{0.567}{5} \times 0.113$$

$$r \times \frac{(xZ\bar{x})^2 \times (yZ\bar{y})^2}{N_2 \times N_2 \times 2} \times \frac{0.014626 \times 0.003814}{5 \times 5 \times 2} \times 0.00255$$

$$\text{Test Statistic } t \times \frac{\bar{x}Z\bar{y}}{\sqrt{S^2 \times \frac{1}{N_1} \times \frac{1}{N_2}}} \times \frac{1.14 \times 0.113}{\sqrt{0.00255 \times \frac{1}{5} \times \frac{1}{5}}} \times \frac{0.027}{0.03193} \times 0.845$$

...t X0.485

Appendix 11

Calculation of 'Y' value of cash & Bank Balance to total deposit ration (CBTDR)

QR(X)	$(xZ\bar{x})$	$(xZ\bar{x})^2$	QR(Y)	$(yZ\bar{y})$	$(yZ\bar{y})^2$
0.038	-0.022	0.000484	0.053	0.011	0.000121
0.032	-0.028	0.000784	0.029	-0.013	0.000169
0.059	-0.001	0.000001	0.078	0.036	0.001296
0.083	0.023	0.000529	0.043	0.002	0.000004
0.090	-0.03	0.0009	0.011	-0.031	0.000961
0.302		0.002698	0.214		0.00255

$$\bar{x} \times \frac{x}{N} \times \frac{0.302}{5} \times 0.060$$

$$\bar{y} \times \frac{y}{N} \times \frac{0.214}{5} \times 0.042$$

$$r \times \frac{(xZ\bar{x})^2 \sum (yZ\bar{y})^2}{N_2 \Gamma N_2 \sum 2} \times \frac{0.002698 \sum 0.00255}{5 \Gamma 5 \sum 2} \times 0.00255$$

$$\text{Test Statistic } t \times \frac{\bar{x}Z\bar{y}}{\sqrt{S^2 \frac{1}{N_1} \Gamma \frac{1}{N_2}}} \times \frac{0.060 \sum 0.042}{\sqrt{0.0006565 \frac{1}{5} \Gamma \frac{1}{5}}} \times \frac{0.018}{0.01619} \times 1.11$$

Appendix 12

Calculation of 'T' value of saving deposit to total deposit ratio (SDTDR)

SDTRD(X)	$(x - \bar{x})$	$(x - \bar{x})^2$	SDTRD(Y)	$(y - \bar{y})$	$(y - \bar{y})^2$
0.481	-0.043	0.001849	0.214	-0.041	0.001681
0.526	-0.088	0.007744	0.288	0.033	0.001089
0.520	0.082	0.006724	0.284	0.029	0.000841
0.274	-0.164	0.026896	0.257	0.002	0.000004
0.391	-0.047	0.002209	0.233	0.022	0.000484
2.19		0.045422	1.276		0.004099

$$\bar{x} = \frac{\sum x}{N} = \frac{2.19}{5} = 0.438$$

$$\bar{y} = \frac{\sum y}{N} = \frac{1.276}{5} = 0.255$$

$$r = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}} = \frac{0.04522}{\sqrt{0.04522 \times 0.004099}} = 0.00619$$

$$\text{Test Statistic } t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}} = \frac{0.438 - 0.255}{\sqrt{0.00255 \left(\frac{1}{5} + \frac{1}{5} \right)}} = \frac{0.183}{0.0479} = 3.68$$

Appendix 13

Calculation of value of Net Profit to total assets ratio (NPTAR)

NPTAR(X)	$(x - \bar{x})$	$(x - \bar{x})^2$	NPTAR (Y)	$(y - \bar{y})$	$(y - \bar{y})^2$
3	0.5	0.25	2.2	0.8	0.64
2.8	0.3	0.09	1.3	-0.1	0.01
2.4	-0.1	0.01	1.2	-0.2	0.04
2	-0.5	0.25	1.2	-0.2	0.04
2.3	-0.2	0.04	1.1	-0.2	0.09
12.5		0.64	7	-0.3	0.82

$$\bar{x} = \frac{\sum x}{N} = \frac{12.5}{5} = 2.5$$

$$\bar{y} = \frac{\sum y}{N} = \frac{7}{5} = 1.4$$

$$s^2 = \frac{\sum (x - \bar{x})^2}{N} = \frac{0.64}{5} = 0.128$$

$$\text{Test Statistic } t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}} = \frac{2.5 - 1.4}{\sqrt{0.128 \left(\frac{1}{5} + \frac{1}{5} \right)}} = \frac{1.1}{0.27}$$

...t = 4.07

Appendix 14

Calculation of 't' value of Net Profit to Working Capital Ratio (NPWCR)

NPWCR(X)	$(x - \bar{x})$	$(x - \bar{x})^2$	NPWCR (Y)	$(y - \bar{y})$	$(y - \bar{y})^2$
68.9	10.92	119.24	-3.0	-13.4	179.56
62.7	4.72	22.27	13	2.6	6.76
53.5	-4.48	20.07	8.6	1.8	3.24
50.68	-7.3	53.29	15.77	5.37	28.83
54.13	-3.85	14.82	17.6	7.2	51.84
289.81		229.69	52.03		270.23

$$\bar{X} = \frac{\sum X}{N} = \frac{289.81}{5} = 57.98$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{52.03}{5} = 10.40$$

$$S^2 = \frac{(\sum X - \bar{X})^2}{N_1} + \frac{(\sum Y - \bar{Y})^2}{N_2} = \frac{229.69}{5} + \frac{270.23}{5} = 62.49$$

$$\text{Test Statistic } t = \frac{\bar{x} - \bar{y}}{\sqrt{S^2 \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}} = \frac{57.98 - 10.40}{\sqrt{62.49 \left(\frac{1}{5} + \frac{1}{5} \right)}} = \frac{47.58}{4.99} = 9.53$$

Appendix 15

Calculation of CL value of internet earned to total assets rate (IETAR)

IETAR(X)	$(x - \bar{x})$	$(x - \bar{x})^2$	IETAR(Y)	$(y - \bar{y})$	$(y - \bar{y})^2$
4.8	0.86	0.7396	3.4	0.52	0.2074
4.2	0.26	0.0676	3.1	0.32	0.1024
3.8	-0.14	0.0196	2.6	-0.28	0.0784
3.2	-0.74	0.5476	2.7	0.18	0.0324
3.7	-0.24	0.0576	2.5	-0.38	0.1444
19.7		1.432	14.4		0.628

$$\bar{X} = \frac{\sum X}{N} = \frac{19.7}{5} = 3.94$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{14.4}{5} = 2.88$$

$$S^2 = \frac{(\sum X - \bar{X})^2}{N_1} + \frac{(\sum Y - \bar{Y})^2}{N_2} = \frac{1.432}{5} + \frac{0.628}{5} = 0.257$$

$$\text{Test Statistic } t = \frac{\bar{x} - \bar{y}}{\sqrt{S^2 \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}} = \frac{3.94 - 2.88}{\sqrt{0.257 \left(\frac{1}{5} + \frac{1}{5} \right)}} = \frac{1.06}{0.32} = 3.31$$

Appendix 16

Calculation of 't' value of Interest Earned to Working Capital Ratio (IEWCR)

IEWCR(X)	$(x - \bar{x})$	$(x - \bar{x})^2$	IEWCR(Y)	$(y - \bar{y})$	$(y - \bar{y})^2$
109.6	18.72	350.43	-45.7	-60.88	3706.37
94.1	3.12	9.73	30.2	15.02	225.60
82.0	-8.88	78.85	19.0	3.82	14.59
82.4	-8.48	71.91	35.94	20.76	430.97
86.3	-4.58	20.97	37	21.82	476.11
4254.4		531.89	75.94		4853.64

$$\bar{X} = \frac{\sum X}{N} = \frac{4254.4}{5} = 90.88$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{75.94}{5} = 15.18$$

$$S^2 = \frac{(\sum (X - \bar{X})^2) + (\sum (Y - \bar{Y})^2)}{N_1 + N_2 - 2} = \frac{531.89 + 4853.64}{5 + 5 - 2} = 673.19$$

$$\text{Test Statistic } t = \frac{\bar{x} - \bar{y}}{\sqrt{S^2 \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}} = \frac{90.88 - 15.18}{\sqrt{673.19 \left(\frac{1}{5} + \frac{1}{5} \right)}} = \frac{75.81}{16.40} = 4.62$$