CHAPTER- 1

INTRODUCTION

1.1 Background of the Study

Financial institution in the economy plays a crucial role in the process of economic growth of the country. Financial institution refers to a business concern that is mainly confined to finance for the development of the trade, commerce and industry. The trade, commerce and industry are the main factors of the economic development. Bank is a financial institution, which primarily deals with borrowing and lending. Banking is an important part of national economy and a vehicle for the mobilization of economy's financial resources and extension of credit to the business and service enterprises.

Commercial banks are the heart of the financial system. They hold the deposits of individuals, government institutions and business units. They make funds available through their lending and investing activities to borrowers: individuals, business firms and government institutions. In doing so, they assist both the flow of goods and services from the producers to consumers and the financial activities of the government. They provide a large portion of medium of exchange and they are the media through which monetary policy is affected. These facts show that the commercial banking system of a nation is very important to the functioning of its economy.

The concept of financial institutions in Nepal was introduced when the first commercial bank, Nepal Bank Limited (NBL) was established in Kartik 30, 1994 B.S. as a semi- government organization. In Baishak 14, 2013 B.S. the first central bank, Nepal Rastra Bank, was established with an objective of supervising, protecting and directing the functions of commercial banking activities. Consequently, another commercial bank fully owned by the government, Rastriya

Bankjya Bank, was established in 2022 B.S. under the Banijya Bank Act 2021 B.S. In the fiscal year 2039/40, new banking policy was introduced for the establishment of new banks by the joint investment of foreign nations. Its objective was to create healthy competitive banking system and to provide better and smoother banking facilities to the people. The establishment of joint venture banks gave a new horizon to the financial sector of the country. Nepal Arab Bank Limited (NABIL) is the first joint venture commercial bank incorporated in 2041 B.S. In 2043 B.S., the second joint venture commercial bank, Nepal Indosuez Bank Ltd (currently Nepal Investment Bank Limited) was established. In the same year, Nepal Grindlays Bank Ltd (currently Standard Chartered Bank Nepal Limited) in the form of joint venture commercial bank was also established. But more joint venture banks came into existence after the initiation of government's policy of economic liberalization and privatization in 2049 B.S. They are Himalayan Bank Ltd (2049), Nepal SBI bank Ltd (2050), Nepal Bangladesh Bank Ltd (2051), Everest Bank Ltd (2051) and Bank of Kathmandu (2052) etc. Under favorable environment, various other banks were established thereafter.

In a global prospective, joint ventures are the mode of trading through partnership among nations and also a form of negotiations between various groups and services for sharing advantages. "A Joint Venture is the joining of forces between two or more enterprises for the purpose of carrying out a special operation (Industrial or Commercial Investment, Production or Trade)" (Gupta, 1984, p.15). These Joint Venture Banks came into existence to accelerate the pace of economic development and financial system of the nation.

Short term financial management is known as working capital management. It deals with management of current assets and current liabilities of firms. Current assets include cash, debtors and bills receivable and current liabilities include

creditors, bills payable and short- term loan. Most of the financial decisions of a bank are concerned with current assets and current liabilities.

1.2 A Brief over view of Joint Venture Banks selected for the Study

There are altogether 27 commercial banks including 20 joint venture banks. However, this study is concerned with first three Joint Venture Banks of Nepal, namely NABIL Bank Limited(NABIL), Nepal Investment Bank Limited(NIBL) and Standard Chartered Bank Nepal Limited (SCBNL).The selected Joint Venture Banks' introduction is as follows:

(A) NABIL Bank Limited (NABIL)

The first Joint Venture Bank of Nepal, Nepal Arab Bank Limited, established in 12/7/1984 under a technical service agreement with Dubai Bank Limited, which merged with Emirates Bank Limited, Dubai was renamed as NABIL Bank Limited (NABIL). In the beginning, the authorized capital of the bank was Rs.100million and paid up capital was RS.28 million 400 thousand. The share of NABIL owned by Dubai Bank Limited was transferred to Emirates Bank international limited. Later on, Emirates bank international limited sold its 50%share to National Bank Limited. According to the agreements, the National Bank limited is managing the NABIL bank with the technical services agreement since July 1995.

Table No 1.2.1

Composition and Ownership of Capital

S.N.	Shareholders	No of shares
1	N.B. International Ltd	50%
2	Nepal Industrial Development Corporation	10%
3	Rastriya Beema Sansthan	9.67%
4	Nepal Stock Exchange	0.33%
5	General Public	30%
	Total	100%

Table no 1.2.2

Capital Amount of NABIL

S.N.	Types of Capital	Amounts
1	Authorized Capital	Rs.500,000,000.00
2	Issued Capital	Rs.491,654,400.00
3	Paid up Capital	Rs.491,654,400.00

(B)Nepal Investment Bank Limited (NIBL)

Nepal Investment Bank Ltd. (NIBL), previously, Nepal Indosuez Bank Limited, was established in 21st January 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50%of the capital of NIBL) was credit Agricole Indosuez, a subsidiary of one of the largest banking groups in the world.

With the decision of credit Agricole Indosuez to divest, a group of companies comprising of bankers, professional, industrialists and businessmen acquired on April 2002 the 50%of shareholding of credit Agricole Indosuez Bank Ltd .The name of the bank thereafter has been changed to Nepal Investment Bank Ltd. upon approval of banker's annual general meeting.

Table No 1.2.3

Composition and ownership of capital

S.N.	Shareholders	No of Directors	No of Shares
1	A Group of Companies(Group A)	4	50%
2	Rastriya Banijya Bank(group B)	1	15%
3	Rastriya Beema Sansthan(group C)	1	15%
4	General Public	1	20%
5	Independent Professional Director	1	-
	Total		100%

Table No 1.2.4

Capital Amount of NIBL

S.N.	Types of Capital	Amounts
1	Authorized Capital	Rs.590,000,000.00
2	Issued Capital	Rs.295,293,000.00
3	Paid up Capital	Rs.295,293,000.00

(C) Standard Chartered Bank Limited (SCBNL)

The third joint venture Bank of Nepal, Nepal Grindlays Bank Ltd., established in 1985 under a technical services agreement with ANZ Grindlays Bank of UK was renamed as Standard Chartered Bank Ltd. in16th July 2001. The bank originally started its operation in 1986.The 50% of equity share capital was originally owned by ANZ Grindlays Bank, which managed and controlled the overall activities of the Bank. Later on, the ownership of 50%share of ANZ Grindlays Bank has been transferred to Standard Chartered Bank Ltd., U.K. in the August 2000. The bank at present is managed and controlled by Standard Chartered Bank Ltd, U.K.

Table no 1.2.5

Shareholders Pattern of SCBNL

S.N.	Shareholders	No of shares
1	Standard Chartered Group, U.K.	75%
2	Nepal Public	25%
	Total	100%

Table No 1.2.6

Capital Amount of SCBNL

S.N.	Types of Capital	Amounts
1	Authorized Capital	Rs.339,548,800.00
2	Issued Capital	Rs.339,548,800.00
3	Paid up Capital	Rs.339,548,800.00

1.3 Statement of the Problem

Commercial banks are monetary institutions that are playing important role to general welfare of the economy; the responsibility of commercial banks is more than other financial institutions. Commercial banks always face the problem of utilizing more deposits as investment fully and productively. The gap between collection of deposits and disbursement of loans increase the cash balance of the bank, which requires paying its large amount of idle cash balance also decreases profitability of banks.

Three banks are taken as sample from joint venture banks i.e. NABIL Bank Ltd (NABIL), Nepal Investment Bank Ltd. (NIBL) and Standard Chartered Bank Ltd. (SCBNL). Many problems may occur in working capital management of those banks. The major problems that have been identified for the purpose of this study are as follows:

1) What are the position of current assets and current liabilities of the NABIL, NIBL and SCBNL, and their impact on liquidity?
2) What is the management attitude towards risk?
3) How to utilize the liquidity in NABIL, NIBL and SCBNL?
4) How to build the image of Bank through working capital management?
5) What are the major factors affecting the management of working capital of NABIL, NIBL, and SCBNL?
6) Which of the current assets are more problematic in NABIL, NIBL, and SCBNL?

1.4 Objectives of the Study

In the context of above mentioned background, the main objective of the study is to analyze the management of working capital of NABIL, NIBL and SCBNL. The specific objectives of the studies are pointed out as follows:

(1) To study the position of current assets and current liabilities of the NABIL, NIBL and SCBNL, and their impact on liquidity.

(2) To analyze the composition of working capital and liquidity utilization of NABIL, NIBL and SCBNL.

(3) To analyze the composition of working capital and assets utilization of NABIL, NIBL and SCBNL.

(4) To analyze the comparative study of working capital management among NABIL, NIBL and SCBNL.

(5) On the basis of the analysis, to provide recommendations and suggestions for the improvement of working capital management of NABIL, NIBL and SCBNL in the future.

1.5 Research Hypothesis

There are two types of hypothesis i.e. null hypothesis (H_0) and alternative hypothesis (H_1). Among these two hypotheses if one is accepted, then the other is rejected. To fulfill the objectives of the research following hypothesis is formulated for testing.

Hypothesis 1

H_0: there is no significant difference in composition of working capital among NABIL, NIBL and SCBNL.

H_1: There is significant difference in composition of working capital among NABIL, NIBL and SCBNL.

Hypothesis 2

H_0: There is no significant difference in liquidity position among NABIL, NIBL and SCBNL.

H_1: there is significant difference in liquidity position among NABIL, NIBL and SCBNL.

1.6 Significance of the Study

Any research study can have its own significance. This study is concerned with working capital management of the three joint venture banks, namely NABIL, NIBL and SCBNL. The findings of the study will help various concerned aspects. They are as follows:

1) Its significance to the shareholders: The study might be helpful to aware the shareholders regarding the working capital management, i.e. liquidity and profitability of their banks. The comparison will help them to identify the productivity of their funds in each of these three banks.
2) Its significance to the management: The study might be helpful to go deep into the matters as to why the working capital management of their banks is better (or worse) than their competitors.
3) Its significance to the policy makers: Policy makers here refer to the government and Nepal Rastra Bank. The study will be helpful to them while formulating the policy regarding commercial banks.
4) Its significance to the students: The study will play the role of reference to the students making similar study in the future.

1.7 Limitations of the Study

The scope of the present study has been limited in terms of period of study as well as sources and nature of data. The period covered by the study extends over 5 years from 2061/62 to 2065/66 B.S. The limitations of this study are as follows:

1) This study is conducted to fulfill the requirement of Master's degree in business studies (MBS). So the study may not cover all the dimensions of the subject matter.
2) Lack of sufficient time and resources is another limitation of the study. The study is fully based on the student's financial resources and is to be completed within limited time. The report covers only 5 years data for the study from year 2061/61 to 2065/66 B.S.
3) The study is based mainly on secondary data. It is done mostly on the basis of published financial documents, like Balance Sheet, P/L account and other Journals, Magazines and Books, etc.
4) Out of various joint venture banks, this study is concerned only with the three joint venture banks, i.e. NABIL, NIBL and SCBNL.
5) Although there are various aspects of financial management, this study is mainly concerned with the working capital management of the sample banks.
6) The study follows with specific tools such as Ratio analysis, Mean, CV, Correlation and Hypothesis.

1.8 Organization of the Study

This study has been organized into five different segments or chapter to make the study more systematic. The following is the division of chapters:

1) **Introduction:-** The first chapter contains the introductory part of the study . It describes the major issues and background of the study; it also deals with the scope of the study, statement of the problem, objectives of the study, hypothesis setting, significance of the study, limitation of the study and organization of the study.

2) **Review of Literature:-**The second chapter deals with the conceptual frame work, review of empirical works, relevant research studies, review of majors studies in Nepal and finally concluding remarks of the literature.
3) **Research Methodology:-** The third chapter contains research methodology employed in the study. It explains the research methods, research design, nature and sources of data, data processing, procedure, the basic tools and techniques and definitions of key terms.
4) **Presentation and Analysis of Data:-** The fourth chapter contains presentation and analysis of data. In this chapter, data is collected through different sources such as Balance Sheet, Profit and Loss account and presented in tables. Ratio analysis and statistical tools are used to perform analysis and interpretations of data.
5) **Summary, Conclusion and Recommendation:-** The fifth chapter contains summary and conclusion of the study. After that all necessary recommendation are presented for the improvement of the further study and research.

CHAPTER-2
REVIEW OF LITERATURE

2.1 Introduction

Review of literature means reviewing research studies or other related proposition in related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. Under this section of the study, the conceptual review related to the working capital management, the review of journal and articles, and the review of thesis have been presented.

2.2 Meaning of Working Capital

Working capital is a controlling nerve of business. It is an important and integral part of financial management as short term survival is a prerequisite to long term success. As pointed out by Ralph Kennedy and Steward MC Mullas, “the inadequacy or mismanagement of working capital is the heading cause of business failure. Unless the payment is made of the maturity of the particular debt, the firm is at worst and the creditors may force the firm to terminate its business” (Flink and Donald, 1964, p13).

Working Capital therefore is:

Working capital = Current Assets - Current Liabilities

Where,

Current Assets = stock + debtors + cash

Current liabilities = creditors + bills payable + bank overdraft

“There are two concepts of working capital - gross concept and net concept. The gross working capital, simply called as working capital, refers to the firms’

investment in current assets. Current assets are the assets which can be converted into cash within one accounting year (or operating cycle) and include cash, short term securities, debtors, bills receivable and stocks. The term net working capital refers to the difference between current assets and current liabilities. Current liabilities are those of outsiders, which are expected to mature for payment within an accounting year include creditors, bills payable, bank overdraft and outstanding expenses or accrued income. Net working capital can be positive or negative. A positive net working capital can be arised when current assets exceed current liabilities and negative net working capital occurs when current liabilities are in exceed of current assets. Net working capital concept also covers the question of judicious of long term and short term funds for financing current assets" (Pandey, 1992, pp.796-797).

"In simple words working capital is the excess of current Assets over current liabilities. Working capital has ordinarily been defined as the excess of current assets over current liabilities. Working capital is the heart of the business. If it is weak, business cannot proper and survives. Cash is the lifeline of company. If this lifeline deteriorates so does the companies ability to fund operation, reinvest do meet capital requirements and payment. Understanding Company's cash flow health is essential to making investment decision. A good way to judge a company's cash flow prospects is to look at its working capital management. The company must have adequate working capital as much as needed by the company. It should neither be excessive or nor inadequate." (Hampton and Wagner, 1989, p.34).

Generally, the banks employ their funds in the following assets. They are given in the order of liquidity.

(1) Cash and bank balances

(2) Money at call and short notice

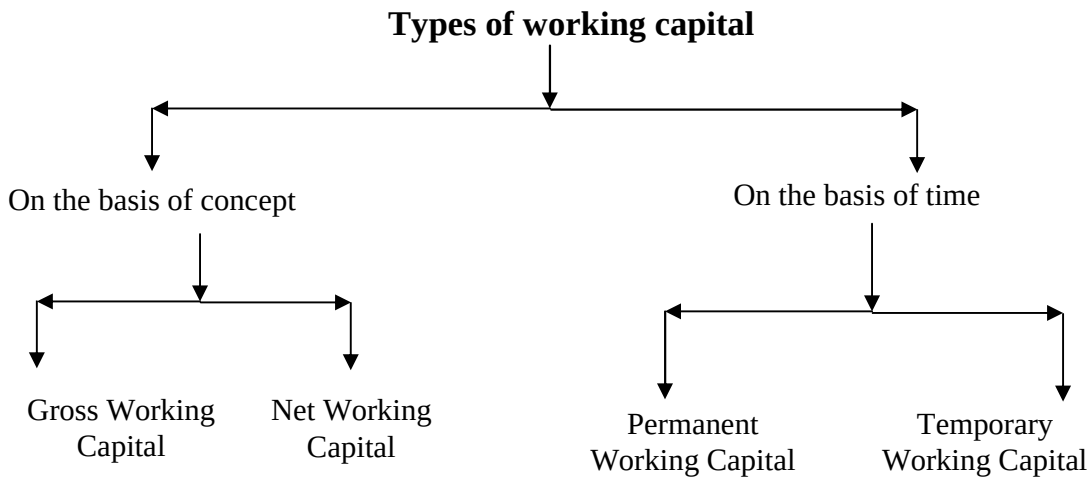
(3) Bills discounted and purchased

(4) Investment (Govt. securities, stock exchange securities, etc.)

(5) Loan and Advances to the customer.

2.3 Types of Working Capital

On the basis of the concept and the time, the working capital has been categorized in four main types;



A. Gross Working Capital

This thought says that total investment in current assets is the working capital of the company. This concept does not consider current liabilities at all. Reasons given for the concept are:

- When we consider fixed capital as the amount invested in fixed assets. Then the amount invested in current assets should be considered as working capital.
- Current asset whatever my be the sources of acquisition, are used in activities related to day to day operations and their forms keep on changing. Therefore they should be considered as working capital.

*Gross Working capital = Total Current Assets

B. Net Working Capital

It is narrow concept of working capital and according to this, current assets minus current liabilities forms working capital. The excess of current assets over current liabilities is called as working capital. This concept lays emphasis on qualitative aspect which indicates the liquidity position of the concern/enterprise.

*Net Working Capital = Current assets – Current Liabilities

C. Fixed or Permanent Working Capital

The volume of investment in current assets changes over a period of time. But always there is minimum level of current assets that must be kept in order to carry on the business. This is the irreducible minimum amount needed for maintaining the operating cycle. It is the investment in current assets which is permanently locked up in the business, and therefore known as permanent working capital.

D. Variable or Temporary Working Capital

It is the volume of working capital which is needed over and above the fixed working capital in order to meet the unforced market changes and contingencies. In other words any amount over and about the permanent level of working capital is variable or fluctuating working capital. This type of working capital is generally financed from short term sources of finance such as bank credit because this amount is not permanently required and is usually paid back during off season or after the contingency.

2.4 Determinants of Working Capital

Working capital requirements of a concern depends on a number of factors, each of which should be considered carefully for determining the proper amount of

working capital. It may be however be added that these factors affect differently to the different units and these keeps varying from time to time. In general, the determinants of working capital which are as under:

a. Nature of Business

Need for working capital is highly depends on what type of business, the firm in. there are trading firms, which needs to invest a lot in stocks, ills receivables, liquid cash etc. public utilities like railways, electricity, etc., need much less inventories and cash. Manufacturing concerns stands in between these two extends. Working capital requirement for manufacturing concerns depends on various factors like the products, technologies, marketing policies.

b. Production Policies

Production policies of the organizations effects working capital requirements very highly. Seasonal industries, which produces only in specific season requires more working capital. Some industries which produces round the year but sale mainly done in some special seasons are also need to keep more working capital.

c. Size of Business

Size of business is another factor to determines the need for working capital

d. Length of Operating Cycle

Operating cycle of the firm also influence the working capital. Longer the orating cycle, the higher will be the working capital requirement of the organization.

e. Credit Policy

Companies follow liberal credit policy needs to keep more working capital with them. Efficiency of debt collecting machinery is also relevant in this matter. Credit availability form suppliers also effects the company’s working capital

requirements. A company doesn't enjoy a liberal credit from its suppliers will have to keep more working capital.

f. Business Fluctuation

Cyclical changes in the economy also influence the level of working capital. During boom period, the tendency of management is to pile up inventories of raw materials and finished goods to avail the advantage of rising prove. This creates demand for more capital. Similarly during depression when the prices and demand for manufactured goods. Constantly reduce the industrial and trading activities show a downward termed. Hence the demand for working capital is low.

g. Current Asset Policies

The quantum of working capital of a company is significantly determined by its current assets policies. A company with conservative assets policy may operate with relatively high level of working capital than its sales volume. A company pursuing an aggressive amount assets policy operates with a relatively lower level of working capital

h. Fluctuations of Supply and Seasonal Variations

Some companies need to keep large amount of working capital due to their irregular sales and intermittent supply. Similarly companies using bulky materials also maintain large reserves' of raw material inventories. This increases the need of working capital. Some companies manufacture and sell goods only during certain seasons. Working capital requirements of such industries will be higher during certain season of such industries period.

i. Other Factors

Effective co-ordination between production and distribution can reduce the need for working capital. Transportation and communication means. If developed helps to reduce the working capital requirement.

2.5 Sources of Working Capital

The company should meet its working capital needs through both long term and short term funds. It will be appropriate to meet at least 2/3 of the permanent working capital equipments form long term sources, whereas the variables working capital should be financed from short term sources. The working capital financing mix should be designed in such a way that the overall cost of working capital is the lowest, and the funds are available on time and for the period they are really required. The company can choose to finance its current assets by:

A) Long Term Sources of Permanent Working Capital

It includes equity and preference shares, retained earning, debentures and other long term debts from public deposits and financial institution. The long term working capital needs should meet through long term means of financing. Financing through long term means provides stability, reduces risk or payment and increases liquidity of the business concern. Various types of long term sources of working capital are summarized as follow:

a. Issue of Shares

It is the primary and most important sources of regular or permanent working capital. Issuing equity shares as it does not create and burden on the income of the concern. Nor the concern is obliged to refund capital should preferably raise permanent working capital. Issue of preference shares is also a source of creating working capital.

b. Retained Earnings

Retain earning accumulated profits are a permanent sources of regular working capital. It is regular and cheapest. It creates not charge on future profits of the enterprises.

c. Issue of Debentures

It creates a fixed charge on future earnings of the company. Company is obliged to pay interest. Management should make wise choice in procuring funds by issue of debentures.

d. Long Term Debt

Company can raise fund from accepting public deposits, debts from Financial Institution like banks, corporations etc. the cost is higher than the other financial tools.

B) Short Term Sources of Temporary Working Capital

Temporary working capital is required to meet the day to day business expenditures. The variable working capital would finance from short term sources of funds. And only the period needed. It has the benefits of, low cost and establishes closer relationships with banker. Some sources of temporary working capital are given be

a. Commercial Bank

A commercial bank constitutes a significant source for short term or temporary working capital. This will be in the form of short term loans, cash credit, and overdraft and though discounting the bills of exchanges.

b. Public Deposits

Most of the companies in recent years depend on these sources to meet their short term working capital requirements ranging for six month to three years.

c. Various Credits

Trade credit, business credit papers and customer credit are other sources of short term working capital. Credit from suppliers, advances from customers, bills of exchanges, promissory notes, etc. helps to raise temporary working capital.

d. Reserves and Other Funds

Various funds of the company like depreciation fund. Provision for tax and other provisions kept with the company can be used as temporary working capital.

C) Sources of Additional Working Capital

Sources of additional working capital include the following

- Existing cash reserves
- Profits (when you secure it as cash)
- Payables (credit from suppliers)
- New equity or loans from shareholder
- Bank overdrafts line of credit
- Long term loans

If you have insufficient working capital and try to increase sales, you can easily over stretch the financial resources of the business, this is called overtrading.

2.6 Objective of Working Capital in Banks

For daily operation of offices and to meet the administrative expenses, a bank should have a certain level of working capital. Working capital is required to run

the business smoothly and efficiency in the context of the set objectives. It is no doubt that no company can achieve its goal without proper use of working capital. Therefore, it can be defined as lifeblood to the organization.

The main objectives of working capital management are:

(a) To pay depositors,

(b) To maintain cash reserve ratio(CRR)

(c) To maintain statutory liquidity ratio (SLR)

(d) To increase the attraction of business.

(e) To achieve goal and smoothly run business.

2.7 Need of Working Capital

The need of working capital to run the day to day business activities cannot be underestimated. We will hardly find a business firm which does not require any amount of working capital. Indeed, firms differ in their requirements of the working capital. We know that firms aim at maximizing the wealth of shareholders. In its endeavor to do so, a firm should earn sufficient return from its operation. The extent to which profit can be earned naturally depends upon the magnitude of sales among the other things. For constant operation of business, every firm needs to hold the working capital components, cash, receivable, inventory etc. Therefore, every firm needs working capital to meet the following motivates:

I. **Transaction motive:**

Transaction motive requires a firm to hold cash and inventories to facilitate smooth production and sales operations in regular. Thus, the firm need working capital to meet the transaction motive.

II. **Precautionary motive:**

Precautionary motive is the need to hold cash and inventories to guard against the risk of the unpredictable change in demand and supply forces and

other factors such as strike, failure of important customers, unexpected slow down in collection of account receivable, cancellation of some other order for goods and some other unexpected emergency. Thus, the firm needs the working capital to meet contingencies in future.

III. Speculative motive:

It refers to the desire of a firm to take advantage of the opportunities like opportunities of profit making investment, an opportunity of purchasing raw material at a reduced price on payment of immediate cash, to speculate on interest rate, and to make purchases at favorable price etc. Thus the firm needs the working capital to meet the speculative motive.

2.8 Significance of Working Capital Management

The management of working capital is important for several reasons. For small companies, current liabilities are the principal source of external financing. These firms do not have access to the longer term capital markets, other than to acquire a mortgage on a building. The fast growing but larger company also market use of current liability financing. For these reasons, the financial manager and staff devote a considerable portion of their time to working capital matters. The management of cash, marketable securities, account receivable, account payable, accruals, and other means of short term financing is the direct responsibility of the financial manager; only the management of inventories is not. Moreover, these management responsibilities require continuous, day to day supervision. Unlike dividend and capital structure decisions, we cannot study the issue, reach a decision, and set the matter aside for many months to come, thus working capital management is important, if for no other reason than the proportion of the financial manager's time that must be devoted to it. More fundamental, however, is the effect that working capital decisions have on the company's risk, return, and share price (Van Horne & Wachowicz, 1999, p.204)

2.9 Review of Articles/ Journals

The well known professors Weston and Brigham (Weston, J. Fred & Brigham, Eugene, F., “managerial finance”, 1984, p.332) have given some theoretical insights into working capital management after their various research studies on it. The conceptual finding of their study provides their sound knowledge and guidance for the further studies on the field of management working capital in any enterprise and naturally to this study as well. They explain in the beginning, the importance of working capital, concept of working capital, financing of working capital, the use of short term versus long term debt and relationship of current assets to fixed assets. In the next chapter they have dealt with the various components of working capital and their efficient management techniques. The components of working capital they have dealt with are cash, marketable, securities, receivable and inventories. 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.

Another well known expert, professor and writer, James C. Van Horne (Van Horne, James C., “Financial Management and Policy”, 2000, p.183, New Delhi) has given the concept of structure management in his book 'Financial Management and Policy.' It is usually described as involving the administration of these assets namely cash, marketable securities, receivables, inventories and the administrative of current liabilities. It means the working capital management is concerned with the problem that arises in attempting to manage the current assets, the current liabilities and the inter relationship that exist between them. He has also described the different methods for efficient management of cash and marketable securities and various models for balancing cash and marketable securities. For the management of receivable, different credit and collection policies have been described and various principles of inventory have been examined for inventory management and control.

Dr Radhe Shyam Pradhan has published a book on management of working capital in Nepalese PEs. This book is based on the study of nine manufacturing public enterprises of Nepal for the duration of ten years from 1973 to 1982 AD. In his study, he aimed at examing the various aspects of management of working capital in selected manufacturing public enterprises of Nepal. The specify objectives undertaken in his study were:

1. To conduct risk return analysis of liquidity of working capital position.
2. To assess the short term financial liquidity position of the enterprises.
3. To assess the structure and utilization of working capital.
4. To estimate the transaction demand functions of working capital its various components.

Some major findings he found in his study, most of the selected enterprises have been activating a tradeoff between risk and return thereby following neither an aggressive nor a conservative approach. Most of the enterprises have poor liquidation position, the poor liquidity position has been noticed as the enterprises have either negative cash flows or negative earnings before tax or they have excessive net current debts which can be paid in a year.

The Nepalese manufacturing PEs have on an average half of their total assets in the form of current assets. Different components of the current assets, on an average, the share of the inventories in total assets is the largest followed by receivables and cash in most of the selected enterprises. The economies scales of scale have been highest for inventories followed by cash and gross working capital, receivable and net working capital. The regression results also show that the level of working capital and its components and enterprise desires to hold depend not only on sales but on holding cost also.

Suniti Shrestha's (Shrestha, Suniti, "Portfolio Behaviour of Commercial Banks in Nepal", 1995, Kathmandu) study of two local commercial banks, three joint venture banks and one development bank concluded the following findings:

1. Total deposits have been the major sources of fund for all banks.
2. Capital and reserve funds do not seem to have changed much over the year.
3. The used fund analysis shows that the resources of commercial banks are allocated in the liquid funds, investment on securities, loans and advances, bills purchases and discount.
4. Among the portfolio, for Nepalese banks' loan and advances share highest volume of the resources and the bills purchased and discount over the year.
5. The excess reserves of the commercial banks show unused resource. The cash reserve exceeds much more than the required cash reserve.

According to professor I.M. Pandey has described some conceptual ingredients, which are based on his various research studies. He has described various aspects of working capital management in to five chapters.

The first chapter deals with the concept of working, need for working capital, determinents of working,dimension of working capital management, optimum level of current assets, and working capital trends.

In the second chapter, he has described the management of cash and marketable securities, where he has dealt with facts of cash management, motives for holding cash, cash planning, managing the cash flows, determining the optimum cash balance, investment in marketable securities.

In the third chapter, he has described the management of receivable, in which he has dealt with goals with credit management, optimum credit polices, aspect of credit polices, credit producers for individual accounts.

In fourth chapter on inventory management, he has described the need to hold inventories, objectives of inventory management, inventory management technique, selective inventory control technique and financial manager's role in inventory management.

In fifth chapter, he has described conclusion and recommendation.

Prof. Manohar K. Shrestha, in his study "An Analysis of capital structure in selected public enterprises: A study on financial results and constraints" has found that the selected public enterprises under study have a very confusing capital structure since the corporations are not guided by objectives based financial plans and policies. In many instances atomism has become the basis of capital structure and most of them want eliminate debt if possible to relieve financial obligations. He has further pointed out that there were neither public enterprise nor government developed criteria in determining capital structure and this is the reason as to way debt equity ratio because of ticklish problem. He has also suggested that the debt equity ratio should neither be highly levered to create too much financial obligation beyond capacity to meet nor should it be much lower levered to infuse operational strategy to by pass responsibility without performance (Shrestha, 1985).

Dr.R.S. Pradhan and K.D. Koirala have studied on the topic "Aspects of working capital management in Nepalese corporations". Among the eleven public corporations, five manufacturing and six non-manufacturing corporations. The problem dealt in this study were size of investment in current assets management and it also dealt with the motive for holding cash and inventory and major factors affecting the size of investment. In this study report, they concluded that investment of current assets had declined over the period of time in both types of corporations. However, the Nepalese PEs had consistently more investment in

cash and receivable as compared to non-manufacturing corporations due to more liberal and less consistent policies. Inventory management is of great significance to manufacturing corporations and management of cash and receivables is of great significance to non manufacturing corporation. The major motive of holding cash in Nepalese corporation was to provide a reserve for routine net out flows of cash and for holding inventory was to facilitate smooth operation of production and sales. They have found that working capital was more difficult to manage than fixed capital. Further more, the inventory in Manufacturing Corporation and cash and receivable in non-manufacturing ones were more problematic to manage.

With reference to the above problems and findings they recommended that need to control investment in Working capital as a whole manufacturing corporation as the average proportion of working capital to sales increased over time. Since manufacturing and non Manufacturing Corporation had been trying to control investment in receivables. The focus of the attention should be derived to control of investment in cash and inventory. But Manufacturing Corporation should pay attention to control the investment in inventory (Pradhan & Koirala, during 031/32 to 035/36).

Dr. k. Acharaya in his study on "Problem and Implementation of Management of Working Capital in Nepalese enterprises" has defined the two major problem i.e. operational problems and organizational problems, regarding the working capital management in Nepalese public enterprises. The operational problems, he found were increase of current liabilities than current assets, not allowing the current ratio 2:1 and slow turnover of inventories. Similarly, change in working capital in relation to fixed capital had very low impacts over the profitability, then transmutation of working capital employed to sales, absence of apathetic management information system. Break- even analysis, funds flow analysis and ratio analysis were either undone or ineffective for performance evaluation. Finally, monitoring of the proper functioning of working capital management has

never been considered as managerial job. In the second part, he has listed the organizational problems in the public enterprises. There is lack of regular and internal external audit system as well as evaluation of financial results. Similarly, very few public enterprises have been able to present their capital requirement functioning of finance department is not satisfactory and some public enterprises are even facing the under utilization of capacity (Acharaya, 1985).

L.D. Mahat has published article relating to spontaneous resources working capital management. He has defined the three major sources of working capital management i.e. equity financing, debt financing and spontaneous sources of financing, regarding the working capital management. Debt financing include short- term bank financing such as bank overdraft, cash credit, bills purchase and discounting, letter of credit etc. whereas spontaneous sources of working capital include trade credit, provisions and accrued expenses.Mr. Mahat has defined that working capital management is one of the important pillars of corporate finance. However, Nepalese industries are facing difficulty in their survival by the cause of recession, which can bring best and worst corporate finance such an environment should be efficient enough to cope with the possible worst happenings in future for working capital management. He had said that managing the working capital resources for a profit making industries are routine affairs of just making payment and arranging collection of debtors. In contrast, the company in debt trouble, it is rather difficult to meet its working capital gap by way of debt financing, the company should have to bear interest, which may cause to increase in percentage of operating expenses to the turnover and depletion in the profits. Therefore, spontaneous sources of working capital in order to improve its performance (Mahat, 2004)

2.10 Review of Previous Thesis

Prem Kumar Shrestha has carried out a study on working capital management of Bhrikuti Paper Mills Limited. He has analyzed the financial statement of the mill for five year (044/45 to 048/49). The objectives of the study were to analyze the current assets and current liabilities and impact of current assets and one current liability. He has used ratio analysis as major tools of his study. In his study he found that cash and bank balance, inventories and receivable where the major component of current assets. Cash and bank balance have held the largest part of current assets. He found the increasing trend in liquidity decreasing in current assets turn over. Finally he has concluded the discouraging profitability caused by the low return on total investment of the mills (shrestha, 1994).

Bashudev Giri has carried out of the study on working capital management in Birgung sugar factory Ltd. He has analyzed the financial statement of the factory for nine years (041/42 to 050/051). The objectives of the study were to analyze the networking capital and relationship between current assets and current liabilities, effect on working capital on profit ability and other operation. He has used financial ratio as the major tools of his study. He found that inventories, receivable, cash and bank balance were major share of current assets. Inventory had held the major portion of current assets. He found the fluctuating trend in current assets, and their improper use. Moreover he found the unsatisfactory profit ability position of the factory (Giri, 1996)

Anirl Raj Bhandari's study on "Working capital management - A case study of Nepal bank Ltd" extracted the following findings:

1. The bank has heavy liquid assets that reflect the improper utilization of the bank's fund due to the heavy growth in deposit and other borrowed capital, the volume of share capital become insufficient.

2. Rate of return on share holders' investment each considered insufficient, the bank could not fully utilize its fund and not paid attention to the portfolio management in investment (Bhandari, 1986).

Narendra Bahadur Amatya's study on "An appraisal of financial position of Nepal Bank Limited" extracted the following findings:

1. The bank is successful in deposit collection but it has always adopted conservative and traditional credit policy.
2. The trade commerce advances are playing major role in credit composition of the bank. Although the reserve of the bank is increasing gradually, the reserve plays of nominal role in the credit expansion control.
3. The major portion of investment of bank is in Nepal government's securities. And the volume of transaction is high in all respects but the bank does not show higher ratio of profit or it shows a decreasing trend of profit (Amatya, 1993).

Ramji Poudel has done a research on "A comparative analysis of financial performance between BNL and NGBL". Although the liquidity position of NBL is better than NGBL but on the whole of the current assets of these banks are adequate to meet the current liabilities. NGBL has better credit position than NBL, in term of short term investment. It also found that NBL has better turnover and highly levered than NGBL. Joint venture banks such as NGBL is fast growing and the overall profitability are higher but government owned commercial banks such as NBL has higher expenditure and profit making capacity is lower and gradually decreasing (Poudel, 1993).

In "Comparative study of Working Capital Management of NBL and NABIL Ltd", Niraj K.C. states the following objectives:

- To study the current assets and current liabilities and their impact and relationship to each other of NBL and NABIL.

- To analyze the comparative study of working capital management of NBL and NABIL.
- To recommended and suggest for improvement of working capital management NBL & NABIL.

His study suggests to NBL & NABIL as follows:-

1. The average bank and cash balance and loan and advance are higher in NABIL than NBL.
2. Management of loan and advances is more problematic in NBL than NABIL.
3. Interest income of NBL is better than NABIL.
4. Liquidity management of these two banks are significantly different.
5. NABIL has been better in the utilization of deposits in income generating activity than NBL. It also shows that NABIL has better investment efficiency in loan and advances.
6. Due to more conservative working capital policy risk of insolvency is lesser but cost of fund is higher on NBL than NABIL.
7. Profitability position of NABIL is far better although NBL earned higher interest than NABIL (K.C., 2000).

Mr.Arjun Lal Joshi has conducted another study relation to Working Capital Management. He has analyzed the financial statement of Biratnagar Jute Mill for five years (2036/037 to 2040/41). This study has focused on problem of working capital management, and the current assets and current liabilities. He has used financial ratios as the major tools of his study. He found that inventories held the major share of current assets followed by the debtors and very negligible cash balance. Mill's had poor liquidity position and financed by short-term sources. He found mills had not earned sufficient profit even to pay the interest on short-term loans. Moreover, he found the operation deficiencies caused by managerial imprudence and gross negligence in working capital management (Joshi, 1986).

Mr.H.P. Lamsal has done a research on "A comparative study of working capital management of NABIL and SCBNL". The main objective of his study was to study the current assets and current liabilities and their impacts on liquidity and profitability as well as to analyze the liquidity, assets utilization, long term solvency and profitability position of selected banks. He used five years financial data from 2054/55 to 2058/59. His findings are as follows:

1. NABIL and SCBNL maintain current ratio of 1.55 and 1.31 in average respectively. Trend values of current ratio were negative. The average quick ratio of NABIL and SCBNL were 0.64 and 0.75 respectively. Liquidity of SCBNL was always better than NABIL during the period.

SCBNL had more short-term and less costly resources of fund then NABIL. NABIL had better investment efficiency on loans and advance. Both banks follow conservative working capital policy though NABIL has more. SCBNL has better profitability than NABIL (Lamsal, 2004).

Mrs. Resha Shresta had undertaken a study entitled "A Study on Working Capital Management of NABIL. " The main objective of her study was as follows:-

1. To analyzed the liquidity, composition of working capital, assets utilization and profitability utilization of Nabil.
2. To know whether the Nabil banks has maintain optimum or working capital or not.
3. To analyzed the current assets policy of Nabil bank.
4. To analyzed the current liabilities policy of Nabil bank.
5. To analyzed the financing pattern of working capital of Nabil bank.
6. To identify the liquidity position of Nabil bank.
7. To examine the relationship between liquidity and profitability of Nabil bank.
8. To profit out the valuable recommendations and suggestions based on analysis.

9. To suggest the appropriate management system of working capital of the Nabil.

The major findings of her study are summarizing below:-

1. The major components of current assets in Nabil bank are cash and bank balance, loan and advances, and government securities. Other current assets are also the component of current assets. The average percentages covered by these components during the study are cash and bank balance is 20.18%, loan and advances is 54.40%, loan and advances 19.52% , and other current assets are 5.85%. It shows that the average percentage of loan and advances is higher and then in the second place comes cash and bank balance after that comes government securities. Other current assets hold very little percentage of total current assets. The trend value of loan and advance are government securities proportion are positive and trend value of cash and bank balance is negative, which implies that Nabil bank is investing its current assets in income generating sectors. The trend value shows that the management of loan and advances is more problematic in the bank's current assets management.
2. Among the major three current assets components, government securities holds the smallest portion and it is fluctuating every year with in the study period. The ratio range from 30.97% to 8.34%. The total average percentage of loan & advances and government securities are 54.4% and 19.52% respectively. It show that interest income is satisfactory.
3. The liquidation position of bank is analyzed with the current ratio, quick ratio, cash and bank balance to current, margin and other deposit ratio. The current ratio is ranging from 1.7 to 1.34. Nabil has maintained its current ratio of 1.49 in average over the study period. The current assets ratio trend is negative. The average quick ratio is 0.6, so it is found that the current ratio and quick ratio of the bank can be considered good but still it is not meeting the standard ratio i.e. 2:1 and 1:1 respectively. The trend of quick

ratio and current ratio are decreasing which shows that the bank is trying to reduce its idle cash & bank balance. Although higher liquidity consider as low risk, lower profit but in commercial bank higher liquidity is not always the cause of lower profitability.

4. Correlation between investment on government securities and total deposit are not significant. It shows that there is no closely relationship between investment on government securities and total deposit. The significant correlation of between government securities and total deposit shows that only idle cash balance are invested on government securities if there is no more opportunities to invest on loan and advances. Loan and advances are total deposit are significantly correlated with coefficient value=0.91. It shows that the bank utilizes its total deposit on loan and advances effectively.
5. Coefficient of correlation between cash and bank balance and current liabilities is 0.58. It shows that the holding of cash and bank balance is not related with current liabilities.
6. Coefficient of correlation between loan and advances and net profit is 0.38, which is less t hat 6 per. It shows that the net profit is significantly related with loan & advances. It shows that the change on loan & advances do not change the amount of profit significantly (Shrestha, 2004).

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, efforts have been made to present and explain specific research design for the sake of attaining the research objective. It describes the methods and process applied in the entire subject of the study. it covers quantitative methodology using financial and statistical tools. The study is mainly based on secondary data gathered from respective annual reports of concerned banks especially from profit and loss account, balance sheet and other publication made by the banks. It consists of research design, population and sample study, sources of data, data processing procedure and tools and technique of analysis of data.

3.2 Research Design

The study aims at portraying accurately on the working capital (or current assets and current liabilities) and its impact on overall financial position of these three banks. It is based on recent 5 years data from fiscal year 2061/062 to 2065/66. The study has been conducted to assess the existing situation of working capital management of selected Joint Venture Banks of Nepal and describe the situation and events occurring at present. The research design followed for this study is basically a historical, empirical and descriptive cum analytical.

3.3 Population and Sample

At present out of 27 commercial banks there are 20 Joint Venture Banks in Nepal. Among them NABIL, NIBL and SCBNL, the first three joint venture banks have been taken as a sample for the study. Financial statements of last five fiscal years

from F.Y. 2061/062 to 2065/066 have been taken as sample data for comparative study of working capital management. These Joint Venture Banks are chosen as they account for considerable market share of the banking sectors.

Table No-3.2.1

Lists of Licensed Commercial Banks

S.N.	Commercial Banks	Established Date(B.S)	Operation Date (B.S.)	Head Office
1	Nepal Bank Ltd	1994/07/30	1994/07/30	Kathmandu
2	Rastriya Banijya Bank	2022/10/10	2022/10/10	Kathmandu
3	Nabil Bank Ltd	2041/03/29	2041/03/29	Kathmandu
4	Nepal Investment Bank Ltd	2042/1116	2042/11/16	Kathmandu
5	Standard Charter Bank Ltd	2043/10/16	2043/10/16	Kathmandu
6	Himalayan Bank Ltd	2049/10/05	2049/10/05	Kathmandu
7	Nepal SBI Bank Ltd	2050/03/23	2050/0323	Kathmandu
8	Nepal Bangladesh Bank Ltd	2050/02/23	2050/02/23	Kathmandu
9	Everest Bank Ltd	2051/07/01	2051/07/01	Kathmandu
10	Bank of Kathmandu Ltd	2051/11/28	2051/11/28	Kathmandu
11	NCC Bank Ltd	2053/06/28	2053/06/28	Siddhharthan agar
12	Lumbini Bank Ltd	2055/04/01	2055/04/01	Narayangadh
13	NIC Bank Ltd	2055/04/05	2055/04/05	Biratnagar
14	Machhapuchhre Bank Ltd	2057/06/	2057/06/	Pokhara
15	Kumari Bank Ltd	2056/08/24	205712/21	Kathmandu

16	Laxmi Bank Ltd	2058/06/11	2058/12/21	Birgung
17	Siddhartha Bank Ltd	2058/06/12	2059/09/09	Kathmandu
18	Citizens Bank International Ltd	2007/04/20	2007/04/20AD	Kathmandu
19	Global Bank Ltd	2006AD	2007/01/02	Kathmandu
20	Agriculture Development Bank	2064/10/07	2007/10/07	Kathmandu
21	Prime Bank Ltd	2064/06/07	2064/06/07	Kathmandu
22	Sunrise Bank Ltd	2064/06/25	2064/06/25	Kathmandu
23	Bank of Asia Nepal Ltd	2064/06/25	2064/06/25	Kathmandu
24	Development Credit Bank Ltd	2064	2064	Kathmandu
25	NMB Bank Ltd	2065	2065	Kathmandu
26	Kist Merchant Bank Ltd	2065	2065	Kathmandu
27	Janata Bank Nepal Ltd	2066/12/23	2066/12/23	Kathmandu

3.4 Nature and Sources of Data

This study is basically based on secondary data only. The necessary data and information have been collected from various sources covering a period of five years i.e., from F.Y. 2061/062 to 2065/066.The data relating to the financial performance are directly obtained from concerned bank. And other information are obtained from unpublished official records of concerned bank, booklets, journals, banks' official website, related publications of performance and other organization like Nepal Rastra Bank.

3.5 Data Processing Procedure

Data are analyzed by using simple methods so that everyone would easily understand it. The obtained data are presented in various tables, diagrams and chart, which definitely help to reach towards meaningful interpretation of the presented data. For the sake of convenience, the calculations that cannot be shown in the body part of the report are presented in the appendices section.

3.6 Tools and Techniques of Analysis

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

3.6.1 Financial Tools

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

3.6.2 Ratio Analysis

The main focus will be on ratio analysis. Ratio analysis is the most important tools of the financial analysis, which helps to ascertain the financial conditions of the organizations. “Ratio analysis is such a powerful tool of financial analysis that through the help of it economic and financial position of business unit can be fully x-rayed” (Kothari, 1994, p.187). Ratios are calculated to obtain the better insight into real situation of working capital management of sample banks. Various ratios are employed for the analysis of composition of working capital, liquidity position, activity or turnover position, profitability position and capital structure or leverage position.

(A) Composition of Working Capital:

Working capital refers to the resources of the firm that are used to conduct day to day operation that makes business successful. Simply, working capital refers to the current assets of the firms that can be converted into cash within one year. The main composition of working capital is as follows:-

a) Cash and Bank Balance
b) Loan and Advance
c) Government Securities
d) Money at Call or Short notice

Composition of working capital is analyzed by calculating the following ratio:-

I.

$$Cash\ and\ Bank\ balance\ to\ Total\ Current\ Asset\ Ratio = \frac{Cash\ and\ Bank\ balance}{Tota\ lCurrent\ Assets} \times 100\%$$

II

$$Money\ at\ Call\ to\ Total\ Current\ Ratiol = \frac{Money\ at\ Call}{Toal\ Current\ Assets} \times 100\%$$

III

$$Loan\ and\ Advance\ to\ Total\ Current\ Asset\ Ratio = \frac{Loan\ and\ Advance}{Total\ Current\ Asstes} \times 100\%$$

IV

$$Government\ Secutities\ to\ Total\ Current\ Asset\ Ratio = \frac{Government\ Securities}{Total\ Current\ A\ sstets} \times 100\%$$

(B) Liquidity Ratio:

Liquidity Ratio measures the firm's ability to meet current obligation. It reflects the short-term financial strength of business. One of the main objectives of working capital management is keeping sound liquidity position. Cash is the main liquid assets and other assets which can be easily converted into cash are also called near cash or liquid assets. So managing or maintaining liquid assets is termed as liquidity. In banking sector liquidity is very essential for smooth operation of daily banking business. There are two ratios under liquidity ratio which are as follows:

(a)Current Ratio:

A ratio between current assets and current liabilities is known as current ratio. Current assets are those assets which can be converted into cash within short period of time, normally not exceeding one year. Cash in hand, cash at bank, bills receivable, marketable securities, short-term investment, inventory, debtors, prepaid or paid in advance, accrued or outstanding income, loan and advances, account receivable, government securities, etc are current assets.

Current liabilities are those obligation which are payable within short period, normally not exceeding one year. Creditors, bank overdraft, short term loan, bills payable, provision for tax, provision for dividend received in advance, outstanding expenses, accounts payable, etc are current liabilities.

The calculation is made by dividing total of current assets by total of current liabilities.

Thus,

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

Higher the current ratio better is the liquidity position. In banking sector business 2:1 is considered to be an adequate ratio. If the current ratio of a bank is less than 2:1 the solvency position of the firm is not good. The cash may not be available to pay current liabilities. If the current ratio is more than 2:1, the bank may have an excessive investment in current assets that do not produce adequate return.

(b) Quick ratio:

A ratio between quick assets and current liabilities is known as quick ratio. The calculation is made by dividing total quick assets by total current liabilities.

Thus,

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

:. Quick assets =current assets-inventory-prepaid expenses

Higher the quick ratio better is the liquidity position. For banking types of business 1:1 is considered to be an adequate ratio. If the quick ratio of the bank is less than 1:1 the solvency position of the bank is not good. The cash may not be available to pay current liabilities. If the quick ratio is more than 1:1 then the company may have an excessive investment in quick assets that do not produce adequate return.

(c) Cash and Bank balance to Total Deposit Ratio (Excluding fixed Deposit):

This ratio is employed to measure whether bank and cash balance is sufficient to cover its current calls margin including deposits. It is calculated by dividing cash and bank balance to total deposit.

Thus,

$$\text{Cash and Bank Balance to Total Deposit Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}} \times 100\%$$

(d) Savings Deposit to Total Deposit Ratio:

Savings deposit is interest bearing short-term deposit. The rate of interest in this deposit is less than fixed deposit. In this deposit only limited amount of money can be withdrawn each day. The limit of withdrawing from this account differs according to banks' rules and regulation. The ratio is developed in order to find out the proportion of saving deposit, which is interest bearing and short –term in nature. It is found out by dividing the total amount of saving deposits by the total amount of deposit. The ratio is calculated as follows:

$$\text{Saving Deposit to Total Deposit Ratio } X\frac{\text{Total Saving Deposit}}{\text{Total Deposit}} \mid 100\%$$

(C)Activity or Turnover Ratios:

Activity ratios are employed to evaluate the efficiency with which the bank manages and utilizes its assets. This ratio indicates how quickly certain assets are converted into cash. These ratios are intended to measure the effectiveness of employment of the resources in a business concern. Through these ratios, it is known whether the funds employed have been used effectively in the business activities or not.

(a) Loan and advances to total deposit ratio:

This ratio assesses to what extent the bank is able to utilize the depositors' funds to earn profit by providing loans and advances. It is computed dividing the total

amount of loans and advances by total deposited funds. The ratio is calculated as follows:

$$Loan\ and\ Advance\ to\ Total\ Deposit\ Ratio = \frac{Loan\ and\ Advance}{Total\ Deposit} \times 100\%$$

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

(b) Loan and Advances to Savings Deposit Ratio:

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

$$Loan\ and\ Advance\ to\ Saving\ Deposit\ Ratio = \frac{Loan\ and\ Advance}{Saving\ seposit} \times 100\%$$

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

(c) Loan and Advances to Fixed Deposit Ratio:

This ratio assesses, how many times the fund is used to loans and advances against fixed deposits. Fixed deposits are interests bearing long term obligation and major sources of investment in loan and advances for income generating purpose by commercial banks. This ratio indicates how many times the long term interest bearing deposits are utilized for generating income. It is calculated by dividing the amount of loan and advances by total deposit in fixed account. The ratio is calculated as follows:

$$\text{Loan and Advance to Fixed Deposit Ratio} = \frac{\text{Loan and Advance}}{\text{Total Fixed Ratio}} \times 100\%$$

3.6.3 Statistical tools

In this research study some statistical tools are used for the analysis of the data more accurately, which are given below.

(A) Mean or Average:

The arithmetic mean is the sum of total values to the number of values in the sample. The formula is given below:

$$\bar{\varepsilon} = \frac{\varepsilon}{\rho}$$

Where,

$\bar{\varepsilon}$ = Arithmetic mean

ε = Sum of values of all terms, and

N= Number of terms

(B) Standard Deviation (S.D.):

Standard deviation is an absolute measure of dispersion. The standard deviation is the square root of mean squared deviation from the arithmetic mean. Standard deviation is represented as:

$$\pm = \sqrt{\frac{d^2}{N\ Z1}}$$

Where,

± = Standard deviation,

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

n = Number of items

(C)Trend Analysis:

The tools that are used to show gradually increase or decrease of variables over a period of time is known as trend analysis. With the help of trend analysis the tendency of variables over the period can be seen clearly. The trend line is represented by following equation.

$Y_C = a+bx$, where

Yc = 1 Estimated value of Y for given value of x in coordinate axes,

a = Y intercept of mean of Y value,

b = slope of the line or rate of change

x = variable in time axis

(D) Correlation Analysis:

Correlation is the statistical tools that we can use to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between two sets of figures. If two quantities vary in related manner so that a movement- an increase or decrease in one trend to accompany by a movement in the same or opposite direction in other, they are called correlated. If the relationship is direct they are called positively correlated and if the relation is inverse they are called negatively correlated. If any change in one does not affect the other variable they are called uncorrelated. The correlation may be perfect, imperfect or zero. Among the various methods of finding out

coefficient of correlation, Karl Pearson's method is applied in the study. The result of coefficient of correlation is always between +1 and -1, r is +1, it means there is perfect relationship between two variables and vice versa. When r is 0, it means there is no relationship between two variables. The formula for the calculation of coefficient of correlation between X and Y is given below:

$$r = \frac{\phi \varepsilon \psi}{\sqrt{\phi X^2 \phi Y^2}}$$

(E) Hypothesis Test:

Hypothesis test is one of the important applications of statistical interference in decision making. In hypothesis test, an assumption is made about the population parameter. To test whether the assumption or hypothesis is right or not, a sample is selected from the population and sample statistic is obtained. The main goal of hypothesis test is to test the characteristics of hypothesized population parameter based on sample information whether the difference between population parameter and sample statistic is significant or not. Smaller the difference, the sample mean is close to hypothesized value and large the difference the hypothesized value has low chance to be correct.

Generally, two complementary are set up at one time i.e. a) Null hypothesis (H_0) and (b) Alternative hypothesis (H_1). A statistical hypothesis or assumption made about the population parameter to testing its validity for the purpose of possible acceptance is called null hypothesis and complementary hypothesis to null hypothesis is called alternative hypothesis. Between these two hypothesis if one is accepted, then the other hypothesis is rejected and vice versa.

CHAPTER-4
DATA PRESENTATION AND ANALYSIS

4.1 Introduction

The main purpose of this study is to know thoroughly about the working capital management of sample banks i.e. NABIL, NIBL and SCBNL. The major variables of this study are cash and bank balance, money at call or short notice, loan and advance, government securities. The relevant data and information of working capital as well as financial performance of sample banks are presented, tabulated and analyzed accordingly. To reach toward accurate interpretation, this study analyzes composition of Current assets and Current liabilities, Turnover position and Liquidity position. It analyzes the ratio as well as the trend with the use of Least Square Method. It also uses Correlation Analysis and Hypothesis Test.

4.2 Composition of Working Capital

The composition of current assets of NABIL, NIBL and SCBNL are cash and bank balance, money at call or short notice, loan and advance and government securities. Miscellaneous current assets are also a component of current assets. Prepaid expense, outstanding income, interest receivable and other current assets are included in miscellaneous current assets.

The following table shows the amount of cash and bank balance, money at call or short notice, loan and advances, government securities and miscellaneous current assets of the sample banks i.e. NABIL, NIBL and SCBNL.

Table no. 4.1
Current Assets Components

(Rs .in million)

S.N.	Banks	Fiscal year	Cash & Bank Balance	Money at Call or Short notice	Loan & advance	Government security	Misc. current assets	Total
1	NABIL	061/62	559.38	868.43	10586.17	2413.94	543.88	14971.8
		062/63	630.24	1734.9	12922.54	2301.46	544.67	18133.81
		063/64	1399.83	563.53	15545.78	4808.34	512.05	22829.53
		064/65	2671.14	1952.36	21365.05	4646.88	606.39	31241.82
		065/66	3372.5	552.88	27589.93	3706.10	864.70	36086.11
2	NIBL	061/62	1340.49	140.00	10126.06	1948.50	412.73	13967.78
		062/63	2336.52	70.00	12776.21	2522.30	201.09	17906.12
		063/64	2441.51	362.97	17286.43	3256.40	233.67	23580.98
		064/65	3754.94	-	26996.65	3155.00	170.17	34076.76
		065/66	7918.00	-	36241.21	2531.30	390.65	47081.16
3	SCBNL	061/62	1111.12	2259.69	8143.20	7203.07	3091.74	21808.82
		062/63	1270.24	1977.27	8935.42	8644.86	4828.90	25656.69
		063/64	2021.02	1761.15	10502.64	7104.94	7036.41	28426.16
		064/65	2050.24	2197.54	13718.60	8137.61	1349.32	27453.31
		065/66	3137.16	2055.55	13679.76	9998.76	1341.58	30212.81

Sources: Appendix 1, 2&3.

From the above table, the amounts of the current assets are shown. NIBL has highest current assets all over the selected sample years. NABIL has lowest current assets all over the sample years and SCBNL has medium. The lowest current assets is Rs.13967.78 million of NIBL in FY 061/62 and the highest is Rs.47081.16 of NIBL in FY 065/66

According to the above table, we came to know that each item of current assets contain different amount of rupees. To be clear about the proportion of each item i.e. cash and bank balance, money at call or short notice, loan and advance, investment in government securities and miscellaneous current assets, the

percentage of each item of current assets to total current assets has been taken and shown in the following tables:

Table no. 4.2
Current Assets Components

(in percentage)

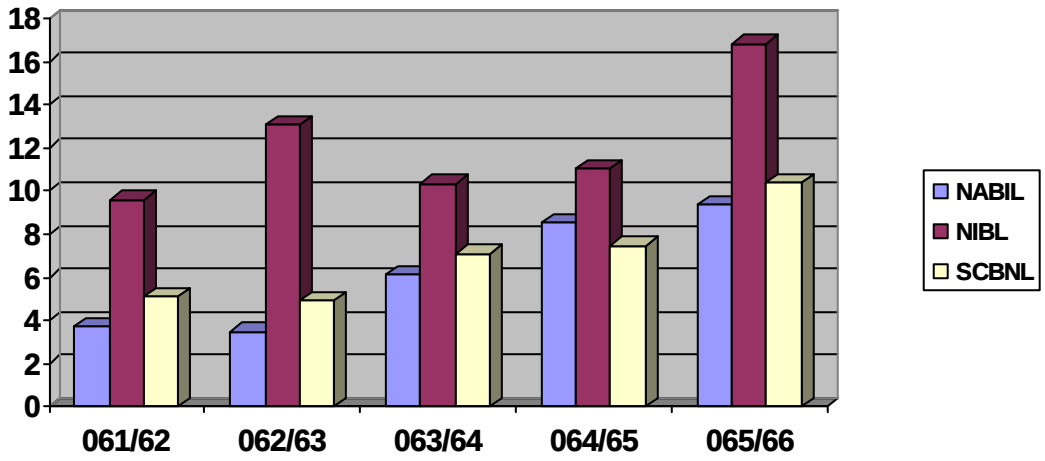
S. N.	Banks	Fiscal Year	cash & bank balance	Money at Call or Shortnotice	Loan & advance	Governmet security	Misc. current assets	total
1	NABIL	061/62	3.74	5.80	70.70	16.13	3.63	100
		062/63	3.48	9.57	71.25	12.70	3.00	100
		063/64	6.13	2.47	68.10	21.06	2.24	100
		064/65	8.54	6.25	68.39	14.87	1.94	100
		065/66	9.35	1.53	76.46	10.30	2.40	100
		Average	6.25	5.12	70.98	15.01	2.64	
2	NIBL	061/62	9.60	1.00	72.50	13.95	2.95	100
		062/63	13.05	0.39	71.35	14.09	1.12	100
		063/64	10.35	1.54	73.31	13.81	0.99	100
		064/65	11.02	-	79.22	9.26	0.50	100
		065/66	16.82	-	76.98	5.38	0.83	100
		Average	12.17	0.59	74.67	11.30	1.28	
3	SCBNL	061/62	5.09	10.36	37.35	33.02	14.18	100
		062/63	4.95	7.71	34.82	33.70	18.82	100
		063/64	7.11	6.20	36.94	24.99	24.76	100
		064/65	7.47	8.00	49.97	29.64	4.91	100
		065/66	10.38	6.80	45.28	33.09	4.44	100
		Average	7.00	7.81	40.87	30.88	13.42	

Sources: Appendix 1, 2&3

4.2.1 Cash and Bank Balance

According to the above table no. 4.2, sample banks' cash and bank balance percentage are fluctuating over the study period. Following bar diagram shows this clearly.

Bar diagram no 4.1
Cash and bank balance (%)



Fiscal year

According to above bar diagram, the sample banks allocate their cash and bank balance as their needs.

NABIL

In the first year, the bank has invested 3.74% of its current assets in cash and bank balance. In the second year, the cash and bank balance is decreased to 3.48% and then third year it is highly increased to 6.13% and then fourth and final year; it is increased to 8.54% and 9.35% respectively.

NIBL

The bank has increasing and decreasing trend. In the first year, the bank has invested 9.60% of its current assets in cash and bank balance. In the second year, it is increased to 13.05% and then third year it is decreased to 10.35% and fourth year; it is increased to 11.02%. Final year it is highly increased to 16.82%.

SCBNL

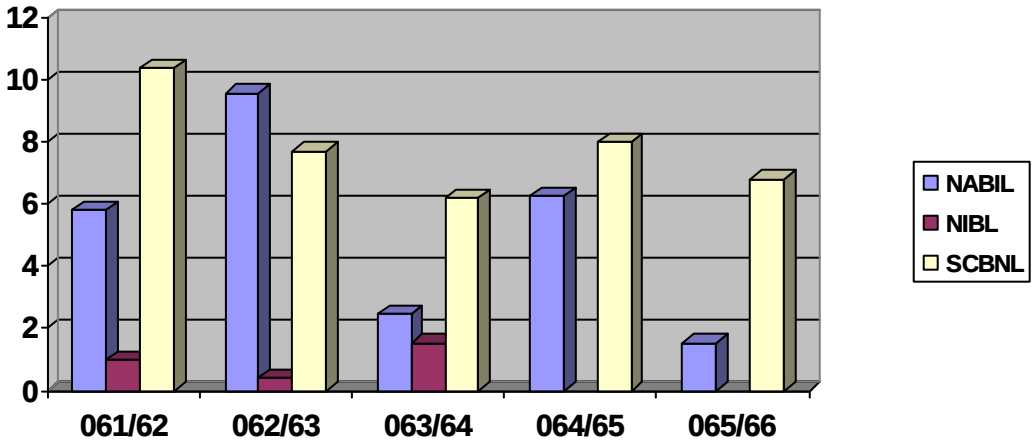
In the first year, the bank has invested 5.09% of its current assets in cash and bank balance. In the second year, the percentage of cash and bank balance is decreased to 4.95% and then in the third year it is increased to 7.11%. In the fourth year, it is slightly increased to 7.47% and in the final year, it is highly increased to 10.38%.

The average cash and bank balance percentage of NABIL, NIBL and SCBNL are 6.25%, 12.17% and 7.00% respectively.

4.2.2 Money at Call or Short- Notice

According to table no 4.2 it is clear that money at call or short notice percentages of sample banks are fluctuating all over the study period. Following bar diagram shows it clearly.

Bar diagram no-4.2
Money at call or short notice (%)



Fiscal year

According to above bar diagram, the sample banks allocate their money at call or short notice as their needs.

NABIL

In the first year, money at call or short notice is 5.80% and it is highly increased to 9.57% in the second year. In the third year, it is highly decreased to 2.47%. In the fourth year, it is highly increased to 6.25%. In the final year, the percentage of money at call or short notice is highly decreased to 1.53%.

NIBL

The bank has decreasing and increasing trend. In the first year, it has invested 1.00% of its current assets in money at call or short notice. Then, it is decreased to 0.39% in the second year and increased to 1.54% in the third year. In the fourth and final year, the bank has not invested of their current assets in money at call or short notice.

SCBNL

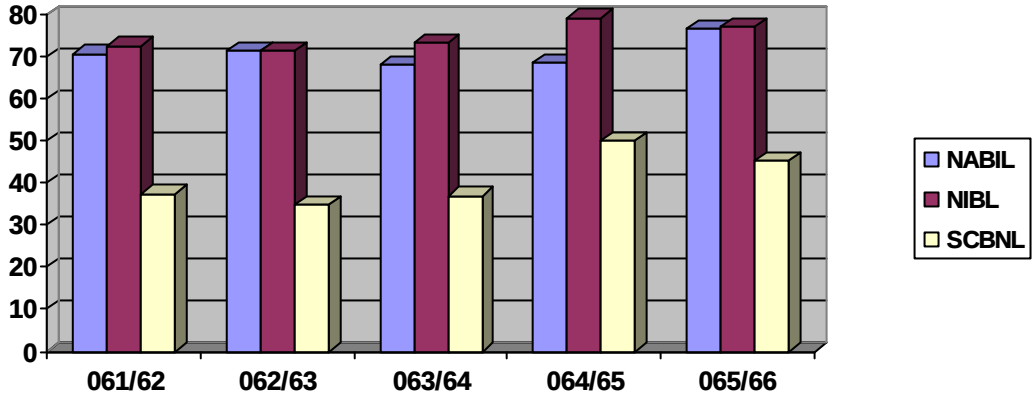
In the first year, the bank has invested 10.36% of its current assets in money at call or short notice. Then, it is decreased to 7.71% in second year. In the third year, the percentage is decreased to 6.20%. In the fourth year, the percentage is increased to 8.00%. In the final year, the percentage of money at call or short notice is slightly decreased to 6.80%.

The average money at call or short notice percentage of NABIL, NIBL and SCBNL are 5.12%, 0.59% and 7.81% respectively. NIBL has invested small portion of current assets in money at call or short notice.

4.2.3 Loan and Advance

According to the table no 4.2 it is clear that loan and advance percentages of sample banks are fluctuating all over the study period. Following bar diagram shows it clearly.

Bar diagram no.4.3
Loan and advance (%)



Fiscal year

According to above bar diagram, the sample banks allocate their loan and advance as their needs.

NABIL

In the first year, loan and advance is 70.70% and it is slightly increased to 71.25% in the second year. In the third year, it is decreased to 68.10%. In the fourth year, it is slightly increased to 68.39%. In the final year, the percentage of loan and advance is highly increased to 76.46%.

NIBL

The bank has decreasing and increasing trend. In the first year, it has invested 72.50% of its current assets in loan and advance. Then, it is slightly decreased to 71.35% in the second year and increased to 73.31% in the third year. In the fourth year, it is highly increased to 79.22%. In the final year, loan and advance is decreased to 76.98%.

SCBNL

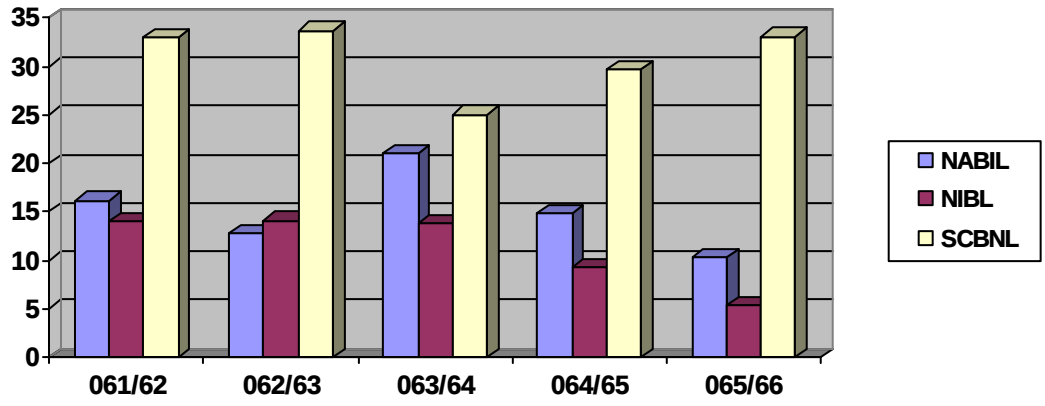
In the first year, the bank has invested 37.35% of its current assets in loan and advance. Then, it is decreased to 34.82% in the second year. In the third year, the percentage increased to 36.94%. In the fourth year, the percentage is highly increased to 49.97%. In the final year, the percentage of loan and advance is decreased to 45.28%.

The average loan and advance percentage of NABIL, NIBL and SCBNL are 70.98%, 74.67% and 40.87% respectively during the study period. SCBNL has invested small portion of current assets in loan and advance than others.

4.2.4 Government Securities

According to table no 4.2 it is clear that government securities percentages of sample banks are fluctuating all over the study period. Following bar diagram shows it clearly.

Bar diagram 4.4
Government security (%)



Fiscal year

According to above bar diagram, the sample banks allocate their loan and advance as their needs.

NABIL

In the first year, the bank has invested 16.13% of its current assets in government securities. And it is highly decreased to12.70% in the second year. In the third year, it is highly increased to 21.06%. In the fourth year, it is highly decreased to 14.87%. In the final year, it is decreased to 10.30%.

NIBL

The bank has decreasing and increasing trend. In the first year, it has invested 13.95% of their current assets in government securities. Then, it is slightly increased to 14.09% in the second year and slightly decreased to 13.81% in the third year. In the fourth year, it is highly decreased to 9.26%. In the final year, it is highly decreased to 5.38%.

SCBNL

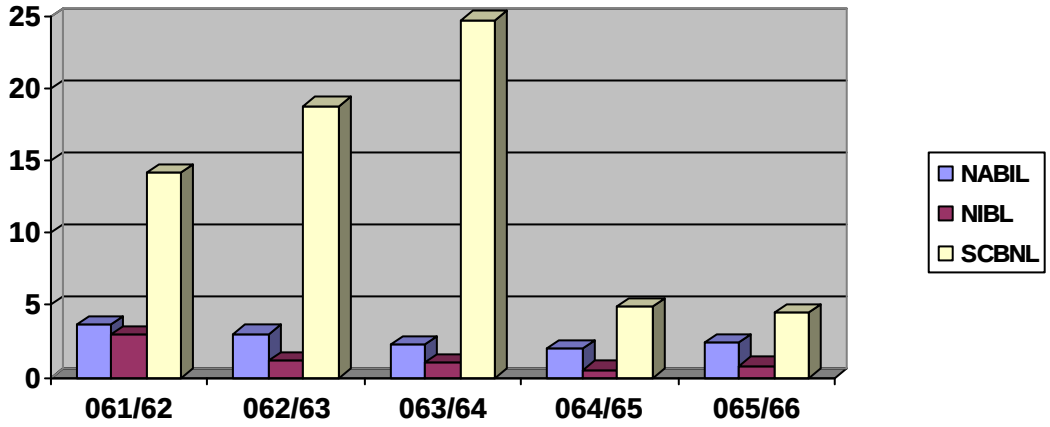
In the first year, the bank has invested 33.02% of its current assets in government securities. Then, it is slightly increased to 33.70% in the second year. In the third year, the percentage is decreased to 24.99%. In the fourth and final year, the percentage is increased to 29.64% and 33.09% respectively.

The average government securities percentage of NABIL, NIBL and SCBNL are 15.01%, 11.30% and 30.88% respectively. NIBL has invested small portion of current assets in government securities.

4.2.5 Miscellaneous Current Assets

According to table no 4.2 it is clear that miscellaneous current assets percentages of sample banks are fluctuating all over the study period. Following bar diagram shows it clearly.

Bar diagram no 4.5
Miscellaneous current assets (%)



Fiscal year

According to above bar diagram, the sample banks allocate their loan and advance as their needs.

NABIL

In the first year, percentage of miscellaneous current asset is 3.63% and it is slightly decreased to 3.00% in the second year. In the third and fourth year, it is even decreased to 2.24% and 1.94% respectively. In the final year, the percentage of miscellaneous current asset is increased to 2.40%.

NIBL

The bank has increasing and decreasing trend. In the first year, the bank has invested 2.95% of its current assets in miscellaneous current assets. Then, it is decreased to 1.12%, 0.99% and 0.50% in the second, third and fourth year respectively. In the final year, it is increased to 0.83%.

SCBNL

In the first year, the bank has invested 14.18% of its current assets in miscellaneous current assets. Then, it is highly increased to 18.82% in the second year. In the third year, the percentage is increased to 24.76%. In the fourth year, it is highly decreased to 4.91%. In the final year, it is slightly decreased to 4.44%.

The average miscellaneous current assets percentage of NABIL, NIBL and SCBNL are 2.64%, 1.28% and 13.42% respectively. NIBL has invested small portion of current assets in his miscellaneous current assets, whereas SCBNL has invested higher portion than others.

From the overall analysis of the composition of working capital, NIBL and NABIL have better utilized their funds on loan and advance to earn interest. SCBNL has invested very low percentage of total current assets on loan and advance but has invested high percentage in money at call or short notice and government securities. So compositions of working capital of sample banks are different.

4.3 Liquidity Position

Liquidity of an organization is directly related with the working capital or current assets and current liabilities of that organization. Liquidity is one of the main objectives of working capital management. These ratios provide insight into the present cash solvency in the event of adverse financial condition. In case of banks working capital management is mainly concerned with the liquidity management. And a bank cannot operate its function without sound liquidity. To measure the banks' liquidity position, various liquidity ratios are calculated.

4.3.1 Current Ratio

The current ratio measures the short-term solvency position of a bank, i.e. ability to meet its current obligations. Higher current ratio indicates better liquidity position. A ratio between current assets and current liabilities is known as current ratio.

The calculation is made by dividing total of current assets by total of current liabilities.

Thus,

$$Current\ ratio = \frac{Current\ assets}{Current\ liabilities}$$

The following table shows the current ratio of NABIL, NIBL and SCBNL.

Table no- 4.3
Current ratio (times) Rs.million

Fiscal Year	NABIL			NIBL			SCBNL		
	CA	CL	Ratio	CA	CL	Ratio	CA	CL	Ratio
061/62	14971.80	15420.81	0.97	13967.78	15078.84	0.93	21808.82	20250.49	1.08
062/63	18133.81	20351.95	0.89	17906.12	19350.83	0.93	25656.69	23961.79	1.07
063/64	22829.53	25095.29	0.91	23580.98	24899.12	0.95	28426.16	26420.09	1.08
064/65	31241.82	34328.76	0.91	34183.44	35123.72	0.97	27453.31	30781.40	0.89
065/66	36086.12	31629.86	1.14	47234.76	48040.61	0.98	30212.81	37473.40	0.81
Average			0.96			0.95			0.99
Total average of the sample banks = 0.97									

Sources: Appendix 1, 2&3

According to table no 4.3 the sample banks' current ratio is different all over the study period. They allocate their current assets according to their needs.

NABIL

In the first year, current ratio is 0.97 and it is highly decreased to 0.89 in the second year. In the third year, it is increased to 0.91. In the fourth year, it is neither increase nor decrease i.e. 0.91. In the final year, the ratio of current ratio is highly increased to 1.14. It is far higher than other previous years.

NIBL

The bank has increasing and decreasing trend. In the first year, its current ratio is 0.93. Then, it is neither increase nor decrease i.e. 0.93 in the second year. In the third, fourth and final year, it is increased to 0.95, 0.97 and 0.98 respectively.

SCBNL

In the first year, current ratio is 1.08. In the second year, it is decrease to 1.07. In the third year, current ratio is increased to 1.08. In the fourth and final year, the current ratio is decreased to 0.89 and 0.81 respectively.

The average current ratio of NABIL, NIBL and SCBNL are 0.96, 0.95 and 0.99 respectively. The total average of current assets of sample banks is 0.97. NIBL has invested small portion in current assets.

From the above analysis, it can be concluded that although the banks are not meeting the standard ratio i.e. 2:1, its current ratio can be considered good, as its current assets excess current liabilities. There is increasing and decreasing trend of current ratio of sample banks. SCBNL has the highest current ratio among the sample banks but does not meet the standard.

4.3.2 Quick Ratio

Quick Ratio establishes a relationship between quick ratio or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or

reasonably soon without loss of original value. Cash is most liquid assets. Under this study cash and bank balance, money at call or short notice and government securities are included in quick assets. A ratio between quick assets and current liabilities is known as quick ratio. The calculation is made by dividing total quick assets by total current liabilities.

Thus,

$$\text{Quick ratio} = \frac{Quick\ assets}{Current\ liabilities}$$

The following table shows the quick ratio of NABIL, NIBL and SCBNL.

Table no-4.4
Quick Ratio (times)
Rs.million

Fiscal Year	NABIL			NIBL			SCBNL		
	QA	CL	Ratio	QA	CL	Ratio	QA	CL	Ratio
061/62	3841.75	15420.81	0.25	3428.99	15078.84	0.23	10573.88	20250.49	0.52
062/63	4666.60	20351.95	0.23	4928.82	19350.83	0.25	11892.37	23961.79	0.50
063/64	6771.70	25095.29	0.27	6060.88	24899.12	0.24	10887.11	26420.09	0.41
064/65	9270.38	34328.76	0.27	6909.94	35123.72	0.20	12385.39	30781.40	0.40
065/66	7631.49	31629.86	0.24	10449.30	48040.61	0.22	15191.47	37473.40	0.41
Average			0.25			0.23			0.45
Total average of the sample banks = 0.31									

Sources: Appendix 1, 2 &3

According to table no-4.4 the sample banks' quick ratio is different all over the study period. They allocate their quick assets according to their needs.

NABIL

In the first year, quick ratio is 0.25 and it is slightly decreased to 0.23 in the second year. In the third year, it is increased to 0.27. In the fourth year, it is neither increased nor decreased i.e. 0.27. In the final year, the ratio of quick ratio is decreased to 0.24.

NIBL

The bank has increasing and decreasing trend. In the first year, its quick ratio is 0.23. Then, it is increased to 0.25 in second year and decreased to 0.24 in third year. In the fourth year, it is highly decreased to 0.20. In the final year, quick ratio is increased to 0.22.

SCBNL

In the first year, the bank's quick ratio is 0.52. It is decreased to 0.50 in the second year. In the third year, it is highly decreased to 0.41. In the fourth year, it is decreased to 0.40. In the final year, quick ratio is slightly increased to 0.41.

The average quick ratio of NABIL, NIBL and SCBNL are 0.25, 0.23 and 0.45 respectively. The total average of quick ratio of sample banks is 0.31. SCBNL has invested far higher portion in quick assets than other sample banks.

From the above analysis, it can be concluded that although the banks are not meeting the standard ratio i.e. 1:1, its quick ratio can be considered good, as its quick assets equal to current liabilities. There is increasing and decreasing trend of quick ratio of sample banks. SCBNL has the highest quick ratio among sample banks but does not meet standard. NIBL and NABIL have far lower quick ratio than SCBNL. So these banks have no sound management of working capital.

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

The Ratio shows the ability of banks immediate funds to cover their deposit. It can be calculated by dividing cash and bank balance by total deposits (excluding fixed deposit).

Thus,

$$\textit{Cash and bank balance to total deposit ratio} = \frac{\textit{Cash and bank balance}}{\textit{Total Deposit}} \times 100 \textit{ (\%)}$$

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

Table no 4.5
Cash and bank balance to total deposit ratio (%) (in million)

Fiscal Year	NABIL			NIBL			SCBNL		
	CBB	TD	Ratio	CBB	TD	Ratio	CBB	TD	Ratio
061/62	559.38	12508.07	4.47	1340.49	11042.30	12.14	1111.12	17918.71	6.20
062/63	630.24	15898.31	3.96	2336.52	13514.34	17.29	1270.24	20924.82	6.07
063/64	1399.83	17907.10	7.82	2441.51	16972.17	14.39	2021.02	24647.02	8.20
064/65	2671.14	23450.97	11.39	3754.94	26507.50	14.17	2050.24	26442.98	7.75
065/66	3372.50	33522.15	10.06	7918.00	35064.72	22.58	3137.16	28770.03	10.90
Average			7.54			16.11			7.82
Total average of the sample banks = 10.49									

Sources: Appendix 1, 2 &3.

According to table no 4.5 the sample bank's cash and bank balance to total deposit ratio is different all over the study period. They allocate their cash and bank balance according to their needs.

NABIL

In the first year, cash and bank balance to total deposit ratio is 4.47% and it is slightly decreased to 3.96% in the second year. In the third year, it is highly increased to 7.82%. In the fourth year, it is even increased to 11.39%. In the final year, the ratio is decreased to 10.06%.

NIBL

The bank has increasing and decreasing trend. In the first year, its cash and bank balance to total deposit ratio is 12.14%. Then, it is increased to 17.29% in the

second year and decreased to 14.39% in the third year. In the fourth year, it is slightly decreased to 14.17%. In the final year, it is highly increased to 22.58%.

SCBNL

In the first year, the cash and bank balance to total deposit ratio is 6.20%. In the second year it is slightly decreased to 6.07%. In the third year, cash and bank balance to total deposit ratio is increased to 8.20%. In the fourth year, it is highly decreased to 3.44%. In the final year, it is highly increased to 10.90%.

The average cash and bank balance to total deposit ratio of NABIL, NIBL and SCBNL are 7.54%, 16.11% and 7.82% respectively. The total average of cash and bank balance to total deposit ratio of sample banks is 10.49%. NIBL has invested far higher portion than other sample banks in cash and bank balance.

From the above analysis, NABIL and SCBNL have lower and almost similar cash and bank balance to total deposit ratio. So they have invested their fund to earn more interest. However, NIBL has the greatest cash and bank balance to total deposit ratio among them. So it has more idle fund and less risk. So NABIL and SCBNL have sound management of working capital but with a high risk.

4.3.4 Saving Deposit to Total Deposit Ratio

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

$$\textit{Saving deposit to total deposit ratio} = \frac{\textit{Total saving deposit}}{\textit{Total deposit}} \quad | 100\%$$

The following table shows the savings deposit to total deposit ratio of NABIL, NIBL and SCBNL.

Table no- 4.6

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

Fiscal Year	NABIL			NIBL			SCBNL		
	SD	TD	Ratio	SD	TD	Ratio	SD	TD	Ratio
061/62	7026.34	14586.61	48.17	6702.55	14254.57	47.02	13030.93	19335.09	67.40
062/63	8770.76	19345.40	45.33	8081.98	18927.31	42.70	14597.67	23061.13	63.30
063/64	10187.35	23342.29	43.64	10742.33	24488.86	43.87	15244.38	24647.02	61.85
064/65	12159.90	31915.05	38.10	13688.77	34451.73	39.73	17856.13	29743.99	60.10
065/66	14620	41832.86	34.95	17066.25	46698.10	36.55	19187.64	35871.73	53.49
Average			42.04			41.97			61.21
Total average of the sample banks = 48.41									

Sources: Appendix 1, 2 & 3

According to table no 4.6 the sample banks' savings to total deposit ratio is different all over the study period.

NABIL

The bank has decreasing trend. In the first year, savings to total deposit ratio is 48.17% and it is decreased to 45.33% in the second year. In the third year, it is slightly decreased to 43.64%. In the fourth and final year, it is even decreased to 38.10%, 34.95% respectively.

NIBL

The Bank has increasing and decreasing trend. In the first year, its savings to total deposit ratio is 47.02%. Then, it is decreased to 42.70% in the second year and slightly increased to 43.87% in the third year. In the fourth and final year, it is decreased to 39.73% and 36.55% respectively.

SCBNL

The Bank has decreasing trend. In the first year, the bank’s savings to total deposit ratio is 67.40%. In the second, third, fourth and final year, the saving to total deposit ratio is decreased to 63.30%, 61.85%, 60% and 53.49% respectively.

The average savings to total deposit ratio of NABIL, NIBL and SCBNL are 42.04%, 41.97% and 61.21% respectively. The total average of saving to total deposit ratio of sample banks is 48.41%. SCBNL has highest portion of savings deposit, whereas NABIL and NIBL have lower and almost similar.

From the above analysis, it can be concluded that the banks have decreasing trend except the ratio of NIBL in the year 063/064. Higher savings deposit shows higher risk and higher gain. So the large amount of savings deposit in total deposit shows the high liquidity of the bank. NABIL and NIBL have lower savings to total deposit ratio. So they have lower burden and low risk. However, SCBNL has greatest savings to total deposit ratio. It has more risk and high burden. So NABIL and NIBL have sound management of working capital with a low risk.

4.4 Activity Turnover Ratio

Activity Turnover Ratios are used to evaluate the efficiency with which the firm manages and utilizes its assets. These ratios are also employed to evaluate the speed with which assets are being converted and turnover. These ratios moreover, help in measuring the banks' ability to utilize their available resources. It has direct impact on the efficiency of the company. There is no standard of ideal management though a greater turnover is regarded as efficient utilization of the assets.

4.4.1 Loan and Advance to Total Deposit Ratio

This Ratio measures the extent to which banks are successful in utilizing the profit generating purpose. In other words how quickly collected deposits are converted into loan and advances to the clients to earn income. It is calculated by dividing loan and advance by the amount of total deposit.

Thus,

Loan and advance to total deposit ratio = $\frac{Loan\ and\ advance}{Total\ deposit} | 100\%$

The following table shows the loan and advance to total deposit ratio of NABIL, NIBL and SCBNL.

Table no – 4.7

Loan and advance to total deposit ratio (%) Rs. in million

Fiscal Year	NABIL			NIBL			SCBNL		
	L&A	TD	Ratio	L&A	TD	Ratio	L&A	TD	Ratio
061/62	10586.17	14586.61	72.57	10126.06	14254.57	71.04	8143.20	19335.09	42.12
062/63	12922.54	19347.40	66.79	12776.21	18927.31	67.50	8935.42	23061.13	38.75
063/64	15545.78	23342.29	66.60	17286.43	24488.86	70.59	10502.64	24647.02	42.61
064/65	21365.05	31915.05	66.94	26996.65	34451.73	78.36	13718.60	29743.99	46.12
065/66	27589.93	41832.86	66.95	36241.21	46698.10	77.61	13679.76	35871.73	38.14
Average			67.97			73.02			41.55
Total average of the sample banks = 60.85									

Sources: Appendix 1, 2 &3

According to table no. 4.7 the sample banks' loan and advance to total deposit ratio is different all over the study period.

NABIL

In the first year, loan and advance to total deposit ratio is 72.57% and it is highly decreased to 66.79% in the second year. In the third year, it is slightly decreased to 66.60%. In the fourth and final year, it is slightly increased to 66.94% and66.95% respectively.

NIBL

The bank has increasing and decreasing trend. In the first year, its loan and advance to total deposit ratio is 71.04%. Then, it is decreased to 67.50% in the second year and increased to 70.59% in the third year. In the fourth year, it is highly increased to 78.36%. In the final year, it is slightly decreased to 77.61%.

SCBNL

In the first year, the bank's loan and advance to total deposit ratio is 42.12%. In the second year it is decreased to 38.75%. In the third and fourth year, it is increased to 42.61% and 46.12 respectively. In the final year, it is highly decreased to 38.14%.

The average loan and advance to total deposit ratio of NABIL, NIBL and SCBNL are 67.97%, 73.02% and 41.55% respectively. The total average of loan and advance to total deposit ratio of sample banks is 60.85%. NIBL has highest portion of loan and advance to total deposit ratio.

From the above analysis, it can be concluded that the banks have increasing and decreasing trend. Higher loan and advance to total deposit ratio shows higher risk and higher turnover. So, NABIL and NIBL have invested their deposit more in loan and advance to earn higher profit. However, SCBNL has far lower loan and advance to total deposit ratio. It has less risk and it has low profit. So NABIL and NIBL have sound management of working capital.

4.4.2 Loan and Advance to Fixed Deposit Ratio

This Ratio examines that how many times the fund is used in loan and advances against fixed deposit. Fixed deposits are interest bearing long term obligation whereas loan and advances are the major sources of investment in generating income for commercial banks. This ratio indicates how many times the long term interest bearing deposits are utilized for generating income. It is calculated by dividing the amount of loan and advances by total deposit in fixed account. The ratio is calculated as follows:

Loan and advance to fixed deposit ratio = $\frac{Loan\ and\ advance}{Fixed\ deposit} \times 100\%$

Table no-4.8
Loan & advance to fixed deposit ratio (%) Rs in million

Fiscal Year	NABIL			NIBL			SCBNL		
	L&A	FD	Ratio	L&A	FD	Ratio	L&A	FD	Ratio
061/62	10586.17	2078.54	509.31	10126.06	3212.27	315.23	8143.20	1416.38	574.93
062/63	12922.54	3449.09	374.67	12776.21	5412.97	236.03	8935.42	2136.31	418.26
063/64	15545.78	5435.19	286.02	17286.43	7516.69	229.97	10502.64	3196.49	328.57
064/65	21365.05	8464.08	252.42	26996.65	7944.23	339.83	13718.60	3301.01	415.59
065/66	27589.93	8310.71	331.98	36241.21	11633.38	311.53	13679.76	7101.70	192.63
Average			350.89			286.52			386.00
Total average of the sample banks = 341.14									

Sources: Appendix 1, 2 &3

According to table no. 4.8 the sample banks' loan and advance to fixed deposit ratio is different all over the study period.

NABIL

In the first year, loan and advance to fixed deposit ratio is 509.31% and it is highly decreased to 374.67% in the second year. In the third year, it is decreased to 286.02%. In the fourth year, it is even decreased to 252.42%. In the final year, it is increased to 331.98%.

NIBL

The bank has increasing and decreasing trend. In the first year, its loan and advance to total fixed deposit ratio is 315.23%. Then, it is decreased to 236.03% in the second year and even decreased to 229.97% in the third year. In the fourth year, it is increased to 339.83%. In the final year, loan and advance to total fixed deposit ratio is decreased to 311.53%.

SCBNL

In the first year, the bank's loan and advance to total fixed deposit ratio is 574.93%. In second and third year, it is decreased to 418.26%, 328.57% respectively. Then, in the fourth year, it is increased to 415.59%. In the final year, it is highly decreased to 192.63%.

The average loan and advance to total fixed deposit ratio of NABIL, NIBL and SCBNL are 350.89%, 286.52%and 386% respectively. The total average of loan and advance to total fixed deposit ratio of sample banks is 341.14. SCBNL has highest portion of loan and advance to total fixed deposit ratio, whereas NIBL has the lowest portion among them.

From the above analysis, it can be concluded that the banks have increasing and decreasing trend. Higher loan and advance to total fixed deposit ratio shows lower risk and higher turnover. So SCBNL has invested more in loan and advance to earn higher profit than other sample banks. Similarly, NABIL has invested slightly lower than SCBNL. However, NIBL has the lowest investment in loan and advance. So it has higher risk and lower portion of earning. So SCBNL and NABIL have sound management of working capital.

4.4.3 Loan and Advance to Savings Deposit Ratio

This Ratio examines that how many times the funds are used in loan and advance against saving deposit. For commercial banks, saving deposits are short-term interest bearing obligations, whereas investment in loan and advances are the main sources of earning. This ratio is computed dividing loans and advances by saving deposits. A low ratio indicates idle cash balance. It means total funds are not properly utilized. The ratio is calculated as follows:-

Loan and advance to saving deposit ratio = $\frac{Loan\ and\ advance}{Saving\ deposit} \times 100\%$

The following table shows the loan and advance to saving deposit ratio of NABIL, NIBL and SCBNL.

Table no- 4.9

Loan and advance to saving deposit ratio (%) Rs. in million

Fiscal Year	NABIL			NIBL			SCBNL		
	L&A	SD	Ratio	L&A	SD	Ratio	L&A	SD	Ratio
061/62	10586.17	7026.34	150.66	10126.06	6702.55	151.08	8143.20	13030.93	62.49
062/63	12922.54	8770.76	147.34	12776.21	8081.98	158.08	8935.42	14597.67	61.21
063/64	15545.78	10187.35	152.60	17286.43	10742.33	160.92	10502.64	15244.38	68.90
064/65	21365.05	12159.97	175.70	26996.65	13688.77	197.22	13718.60	17856.13	76.83
065/66	27589.93	14620.00	188.71	36241.21	17066.25	212.36	13679.76	19187.64	71.29
Average			163.00			175.93			68.14
Total average of the sample banks = 135.69									

Sources: Appendix 1, 2&3

According to table no. 4.9 the sample banks' loan and advance to saving deposit ratio is different all over the study period.

NABIL

In the first year, loan and advance to saving deposit ratio is 150.66% and it is slightly decreased to 147.34% in the second year. In the third year, it is increased to 152.60%. In the fourth year, it is highly increased to 175.70%. In the final year, it is again increased to 188.715.

NIBL

The bank has increasing trend. In the first year, its loan advance to saving deposit ratio is 151.08%. Then, it is increased to 158.08% and 160.92% in the second and third year. In the fourth year, it is highly increased to 197.22%. In the final year, it is even increased to 212.36%.

SCBNL

In the first year, the bank's loan and advance to saving deposit ratio is 62.49%. It is slightly decreased to 61.21% in the second year. In the third and fourth year, it is increased to 68.90% and 76.83% respectively. In the final year, it is decreased to 71.29%.

The average loan and advance to savings deposit ratio of NABIL, NIBL and SCBNL are 163.00%, 175.93% and 68.14% respectively. The total average of loan and advance to saving deposit ratio of sample banks is 135.69%. NIBL has the highest portion of loan and advance to savings deposit ratio, whereas SCBNL has far lower portion than others.

From the above analysis, it can be concluded that NIBL has only increasing trend whereas other sample banks have increasing and decreasing trend. Higher loan and advance to savings deposit ratio shows lower risk and higher turnover. So, NIBL has more investment in loan and advance to earn higher profit than all other sample banks. Similarly, NABIL has almost similar investment and profit to NIBL. But SCBNL has far lower investment in loan and advance, so it has higher risk and lower portion of profit. So, NABIL and NIBL have sound management of working capital.

4.5 Trend Analysis

The tools that are used to show gradually increase or decrease of variables over the selected period of time is known as trend analysis. With the help of trend analysis the tendency of variables over the period can be seen clearly. It is a part of time series analysis. For a long period, it is desire to indicate whether the present data is increasing or decreasing. It is also attempted to find out growth factor. The trend analysis projects the rate of change so that budgeting and planning can be made easier. Therefore, trend analysis is taken as a tool to find out

future behavior of data. Least square method of trend analysis is used for the study.

4.5.1 Cash and Bank Balance Percentage

According to the table no 4.5.1, sample banks' cash and bank balance percentage and trend values are fluctuating over the study period. The value of constant a and b of sample banks are as follows.

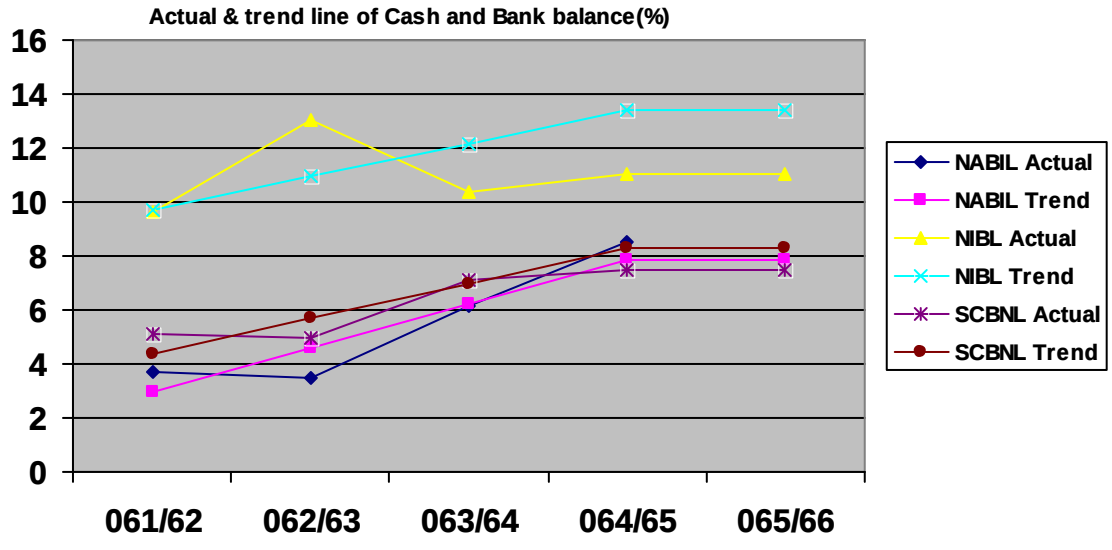
Table no 4.5.1

Bank	a	b
NABIL	6.25	1.63
NIBL	12.17	1.24
SCBNL	7.00	1.31

Sources: Appendix 7

According to the above table no 4.5.1; the rate of change on cash and bank balance percentage b is positive. NABIL has the highest positive value i.e. 1.63 which indicates the better utilization of cash on income generating sources.

Figure - 4.5.1



Sources: Appendix 7&13

According to above figure no 4.5.1, the sample banks allocate their cash and bank balance as their needs.

NABIL

In the first year the bank has cash and bank balance trend value is 2.99% of their current assets. In the second, third, fourth and final year, it is increased to 4.62%, 6.25%, 7.88% and 9.51% respectively.

NIBL

The bank has increasing trend. In the first year, cash and bank balance trend value is 9.69% of its current assets. Then, it is increased to 10.93%, 12.17% and 13.41% in the second, third and fourth year respectively. In the final year, it is highly increased to 26.82%.

SCBNL

The bank has increasing trend. In the first year, the bank's cash and bank balance trend is 4.38% of its current assets. Then, it is increased to 5.69%, 7.00%, 8.31% and 9.62% in the second, third, fourth and final year respectively.

It is concluded that the trend line of NIBL is always higher of the study period due to high cash and bank balance percentage. In this way, we can say that average cash and bank balance percentage of NIBL is higher than NABIL and SCBNL. Trend value of cash and bank balance of NIBL shows that the bank has maintained constant balance.

4.5.2 Money at Call or Short Notice

According to the table no 4.5.2, sample banks' money at call or short notice percentage and trend values are fluctuating over the study period. The value of constant a and b of sample banks are as follows.

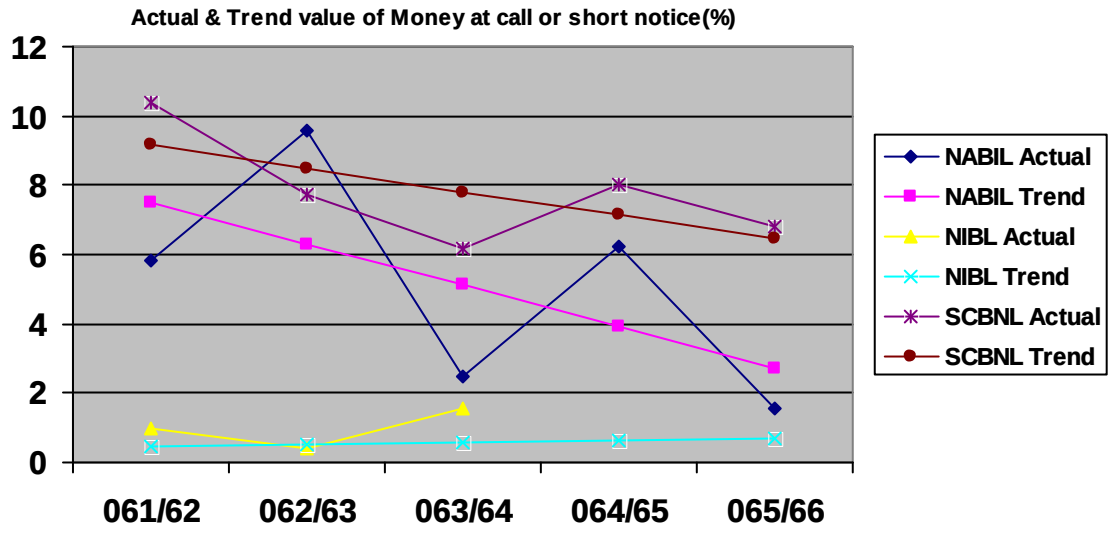
Table no- 4.5.2

Bank	a	b
NABIL	5.12	-1.19
NIBL	0.59	0.06
SCBNL	7.81	-0.68

Sources: Appendix 8

According to the above table no 4.5.2 the rate of change on cash and bank balance of NABIL & SCBNL percentage b is negative. NABIL has highest negative value i.e. -1.19 which indicates the better utilization of money at call or short notice on income generating sources.

Figure-4.5.2



Sources: Appendix 8&13

According to above figure no 4.5.2, the sample banks allocate their money at call or short notice as their needs.

NABIL

The Bank has decreasing trend. In the first year, the bank has money at call or short notice percentage trend value is 7.5% of its current assets. In the second year, third year, fourth year and final year, it is decreased to 6.31%, 5.12%, 3.93%, and 2.74 respectively.

NIBL

The Bank has increasing trend. In the first year, money at call or short notice percentage trend value is 0.47% of their current assets. Then, it is increased to 0.53% 0.59%, 0.65% and 0.71% in the second, third, fourth and final year respectively.

SCBNL

The bank has decreasing trend. In the first year, the bank's money at call or short notice trend value is 9.17% of their current assets. Then, it is decreased to 8.49%, 7.81%, 7.13% and 6.45% in the second, third, fourth and final year respectively.

It is concluded that the trend line of SCBNL is always higher of the study period due to high money at call or short notice percentage. In this way, we can say that average money at call or short notice percentage of SCBNL is higher than NABIL and NIBL. Trend value of money at call or short notice of SCBNL shows that the bank has maintained constant balance.

4.5.3 Loan and Advance Percentage

According to the table no. 4.5.3, sample banks' loan and advance percentage and trend values are fluctuating over the study period. The value of constant a and b of sample banks are as follows:

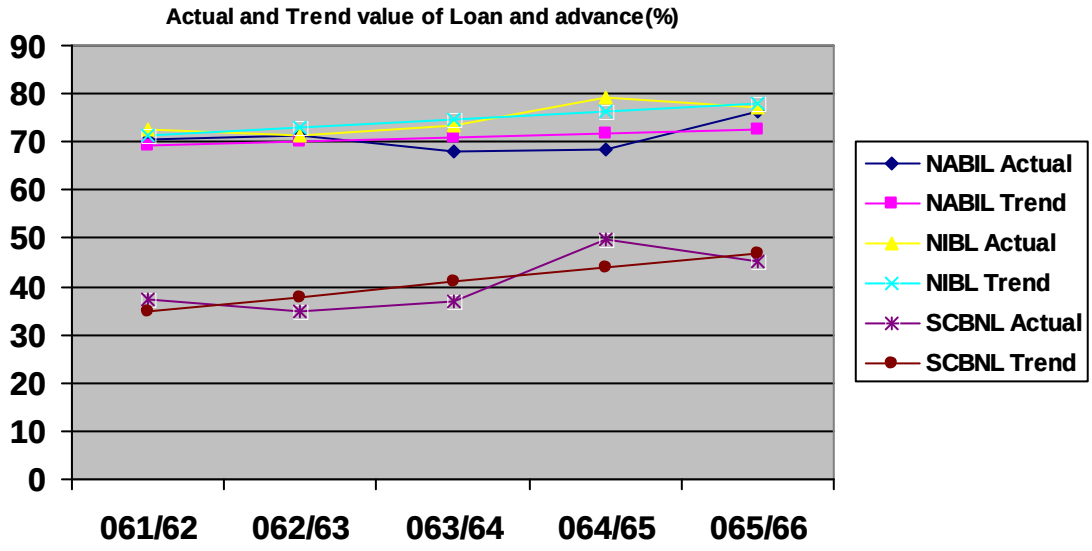
Table no - 4.5.3

Bank	a	b
NABIL	70.98	0.87
NIBL	74.67	1.68
SCBNL	40.87	3.10

Sources: Appendix 9

According to the above table no 4.5.3, the rate of change on loan and advance percentage b is positive. It shows that increasing loan and advance percentage to total current assets in all sample banks. SCBNL has highest positive value i.e. 3.10 which indicates the better utilization of fund on income generating sources.

Figure no - 4.5.3



Sources: Appendix 9&13

According to above figure no. 4.5.3, the sample banks allocate their fund in loan and advance as their needs.

NABIL

In the first year the bank's loan and advance percentage trend value is 69.24% of their current assets. In the second year, it is increased to 70.11% and then in the third, fourth and final year it is increased to 70.98%, 71.85% and 72.72 respectively.

NIBL

The bank has increasing trend. In the first year, loan and advance percentage trend value is 71.31% of its current assets. Then, it is increased to 72.99% in the second year. And in the third, fourth and final year it is even increased 74.67%, 76.35% and 78.03% respectively.

SCBNL

The bank has increasing trend. In the first year, the bank's loan and advance trend value is 34.67% of its current assets. Then, it is increased to 37.77% in the second year. Then, it is increased to 40.87%, 43.97% and 47.07% in the third, fourth and final year respectively.

It is conclude that the trend line of NIBL is always higher of the study period due to high loan and advance percentage. In this way, we can say that average loan and advance percentage of NIBL is higher than NABIL and SCBNL. Trend value of loan and advance of NIBL shows that the bank has maintained constant balance.

4.5.4 Government Securities Percentage

According to the table no. 4.5.4, the samples banks' government securities percentage and trend values are fluctuating over the study period. The value of constant a and b of the sample banks are as follows:

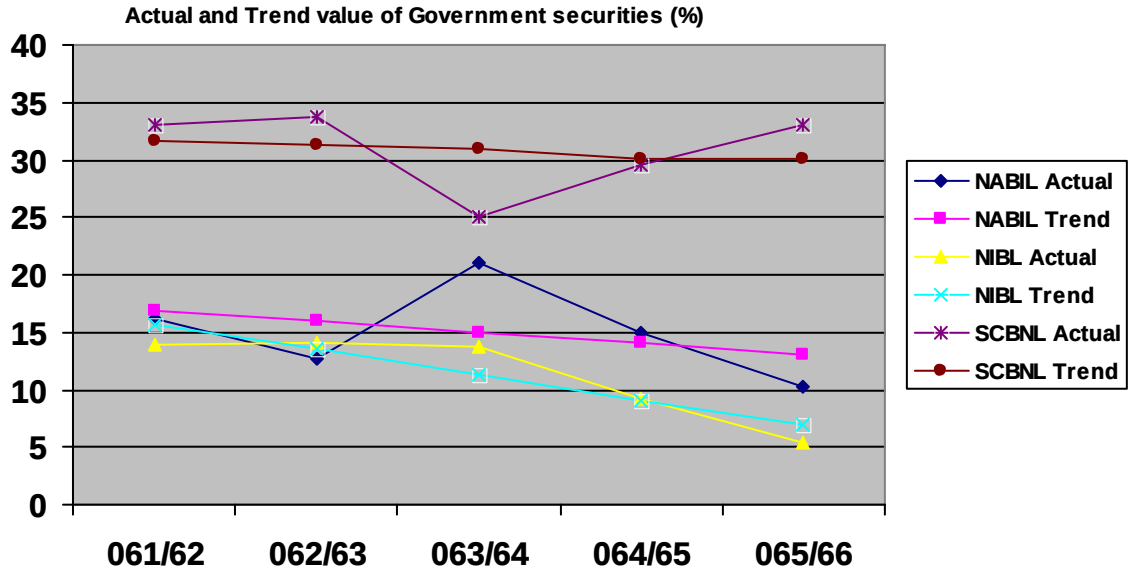
Table no- 4.5.4

Bank	a	b
NABIL	15.01	-0.95
NIBL	11.30	-2.20
SCBNL	30.89	-0.39

Sources: Appendix 10

According to the above table no. 4.5.4, the rate of change on government securities percentage b is negative. It shows that decreasing in investment in government securities which indicates the better utilization of fund on income generating sources. NIBL utilizes their fund more efficiently.

Figure - 4.5.4



Sources: Appendix 10& 13

According to above figure no. 4.5.4, the sample banks allocate their fund in government securities as their needs.

NABIL

In the first year the bank's government securities percentage trend value is 16.91% of its current assets. In the second, third, fourth and final year, it is decreased to 15.96%, 15.01%, 14.06% and 13.11% respectively.

NIBL

The bank has decreasing trend. In the first year, government securities percentage trend is 15.7% of its current assets. Then, it is decreased to 13.5% in the second year. And then, it is decreased to 11.30%, 9.10% and 6.90% in the third, fourth and final year respectively.

SCBNL

In the first year, the bank's government securities percentage trend value is 31.67% of its current assets. Then, it is slightly decreased to 31.28%, 30.89%, 30.05% and 30.11% in the second, third, fourth and final year respectively.

It is concluded that the trend line of SCBNL is always higher of the study period due to high government securities percentage. In this way, we can say that average government securities percentage of SCBNL is higher than NABIL and NIBL. Trend value of government securities of SCBNL shows that the bank has maintained constant balance.

4.5.5 Current Assets Ratio

According to the table no. 4.5.5 sample banks' current ratio percentage and trend values are fluctuating over the study period. The value of constant a and b of sample banks are as follows:

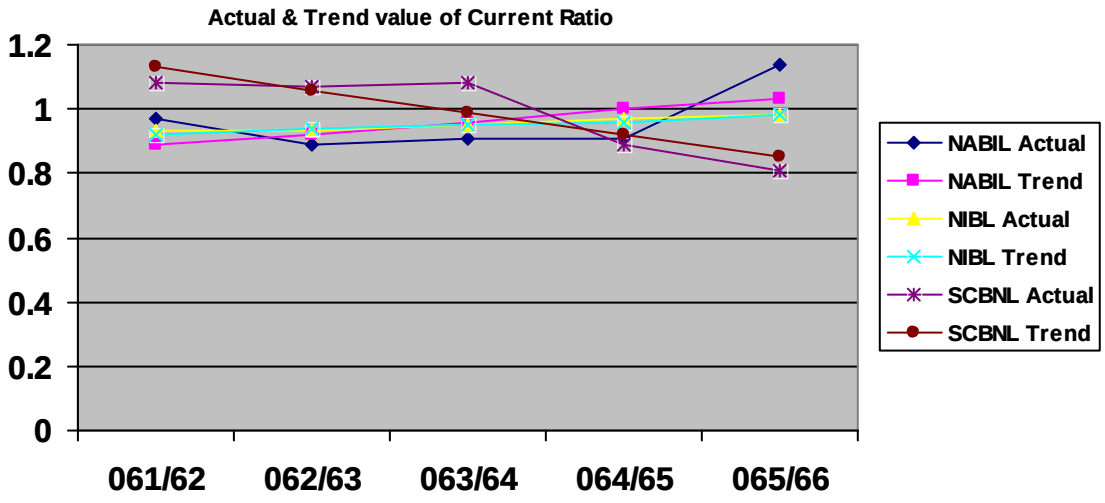
Table no. - 4.5.5

Bank	a	b
NABIL	0.96	0.036
NIBL	0.95	0.014
SCBNL	0.99	-0.072

Sources: Appendix 11

According to the above table no. 4.5.5 the rate of change on current ratio percentage b is negative of SCBNL. It shows that current assets is in decreasing trend and unable to meet the standard. NABIL & NIBL have positive b constant it shows better utilization of fund on standard maintaining.

Figure no. - 4.5.5



Sources: Appendix 11&13

According to above figure no. 4.5.5, the sample banks allocate their fund in current assets as their needs.

NABIL

The bank has increasing trend. In the first year, the bank's current assets trend value is 0.89. In the second, third, fourth and final year, it is increased to 0.9, 0.96, 1.00 and 1.03 respectively.

NIBL

The bank has increasing trend. In the first year, current assets trend is 0.92. Then, it is increased to 0.94, 0.95, 0.96 and 0.98 in the second, third, fourth and final year respectively.

SCBNL

The bank has decreasing trend. In the first year, the bank's current assets ratio trend is 1.13. Then, it is decreased to 1.06, 0.99, 0.92 and 0.85 in the second, third fourth and final year respectively.

It is concluded that the current assets trend line of SCBNL is always higher of the study period due to high current assets. In this way, we can say that average current assets ratio of SCBNL is higher than NABIL and NIBL.Trend value of current assets ratio of SCBNL shows that the bank has maintained for standard increasing total current assets. Trend value of current assets ratio of SCBNL shows that it is always better than NABIL and NIBL so the SCBNL has better liquidity position in comparison to other sample banks.

4.5.6 Quick Assets Ratio

According to the table no. 4.5.6, sample banks' quick assets ratio and trend value are fluctuating over the study period. The value of constant a and b of sample banks are as follows:

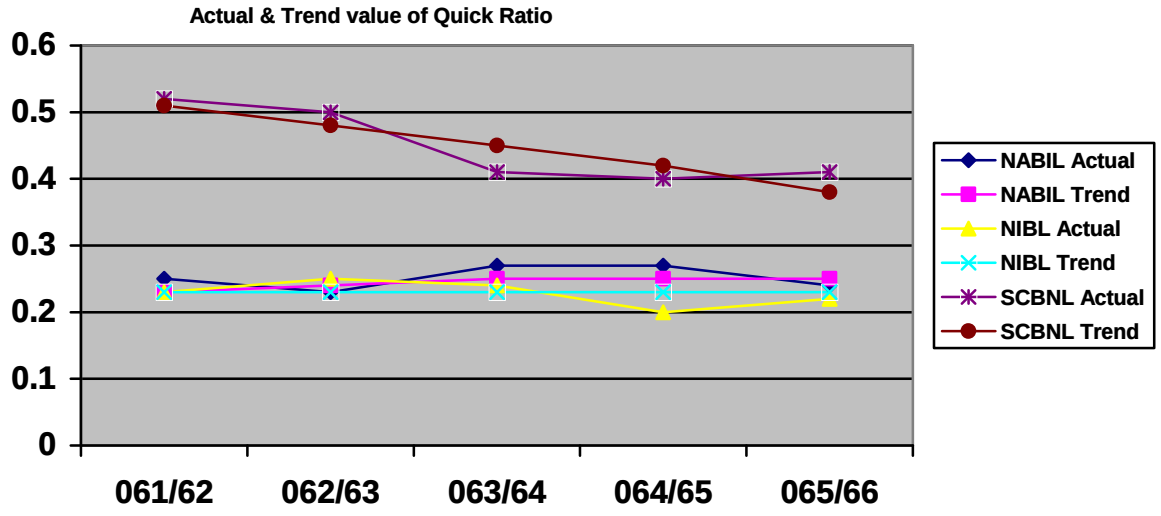
Table no. - 4.5.6

Bank	a	b
NABIL	0.25	0.002
NIBL	1.14	0.002
SCBNL	0.45	-0.032

Sources: Appendix 12

According to the table no. 4.5.6, the rate of change on quick ratio b is negative of SCBNL. It shows that decreasing in investment in quick assets which indicates the investment in quick assets is in decreasing trend and unable to meet the standard. NABIL and NIBL have positive b constant that shows better utilization of fund on standard maintaining i.e. 1:1.

Figure no. - 4.5.6



Sources: Appendix 12&13

According to above figure no 4.5.6, the sample banks allocate their fund in quick assets as their needs.

NABIL

In the first year, the bank's quick assets ratio trend value is 0.24. In the second year, quick assets ratio is increased to 0.25. And then in the third, fourth and final year its trend value is same i.e.0.25.

NIBL

In the first year, quick assets ratio trend value is 0.23 and thereafter in the second, third and fourth year its trend value is same i.e.0.23.

SCBNL

In the first year, the bank's quick assets ratio trend value is 0.51. Then, in the second, third, fourth and final year; it is decreased to 0.48, 0.45, 0.42 and 0.38 respectively.

It is concluded that the current assets trend line of SCBNL is always higher of the study period due to high quick assets. In this way, we can say that average quick assets ratio of SCBNL is higher than NABIL and NIBL. Trend value of quick assets ratio of SCBNL shows that it is always better than NABIL and NIBL. So the SCBNL has better liquidity position in comparison to other sample banks.

4.6 Correlation Analysis

Correlation is the statically tool, which measure the relationship between two or more variables of a population or a sample. In other words, it describes the degree to which one variable is linearly related to another. The coefficient of correlation measure the degree of relationship between two sets of figures. Among the various methods of finding out coefficient of correlation, Karl Pearson's method is applied in the study. The result of coefficient of correlation is always between +1 and -1 when r is +1, it means there is perfect relationship between two variables and vice versa. When r is 0 it means there is no relationship between two of them.

4.6.1 Co-efficient of Correlation between Investment on Government Securities and Total Deposit

The coefficient of correlation between investment on government securities and total deposit is to measure the degree of relationship between government securities and total deposit. The purpose of computing correlation coefficient is to justify whether the excess deposits are significantly used in government securities or not or whether there is any relationship between these two variables. The following table shows the coefficient of correlation between deposits and government securities.

Table no. - 4.6.1

Banks	Correlation	PEr	6PEr
NABIL	0.43	0.11	0.66
NIBL	0.61	0.19	1.14
SCBNL	0.60	0.19	1.16

Sources: Appendix 14 a, b & c

The above table no 4.6.1 shows the correlation, PEr &6PEr of the sample banks.

NABIL

The bank's correlation between government securities and total deposit is 0.43 which shows positive correlation. Probability error (PEr) is 0.11 and 6PEr is 0.66. Correlation's value is less than 6PEr which indicates that there is no significant relationship between government securities and total deposit.

NIBL

The bank's correlation between government securities and total deposit is 0.61 which shows positive correlation. Probability error (PEr) is 0.19 and 6PEr is 1.14. Correlation's value is less than 6PEr which indicates that there is no significant relationship between government securities and total deposit.

SCBNL

The bank's correlation between government securities and total deposit is 0.60 which shows positive correlation. Probability error (PEr) is 0.19 and 6PEr is 1.16. Correlation's value is less than 6PEr which indicates that there is no significant relationship between government securities and total deposit.

It is concluded that there is no significant relationship of the sample banks. Although NABIL, NIBL and SCBNL have positive correlation but not significant relationship between government securities and total deposit.

4.6.2 Co-efficient of Correlation between Investment on Loan and Advance and Total Deposit

The coefficient of correlation between investment on loan and advance and total deposit is to measure the degree of relationship between loan and advance and total deposit. The purpose of computing correlation coefficient is to justify whether the excess deposits are significantly used in loan and advance or not or whether there is any relationship between these two variables.

In correlation analysis, total deposit is independent variable and loan advance is dependent variable. The following table shows the coefficient of correlation between loan and advance and total deposit.

Table no. - 4.6.2

Banks	Correlation	PEr	6PEr
NABIL	0.99	0.006	0.036
NIBL	0.999	0.0006	0.0036
SCBNL	0.95	0.029	0.18

Sources: Appendix 15 a, b & c

The above table no. 4.6.2 shows the correlation, PEr & 6PEr of the sample banks.

NABIL

The bank's correlation between loan and advance and total deposit is 0.99 which shows positive correlation. Probability error (PEr) is 0.006 and 6PEr is 0.036. Correlation's value is greater than 6PEr which indicates that there is highly significant relationship between loan and advance and total deposit.

NIBL

The bank's correlation between loan and advance and total deposit is 0.999 which show positive correlation. Probability error (PEr) is 0.0006 and 6PEr is 0.0036. Correlation's value is greater than 6PEr which indicates that there is highly significant between loan and advance and total deposit.

SCBNL

The bank's correlation between loan and advance and total deposit is 0.95 which show positive correlation. Probability error (PEr) is 0.029 and 6PEr is 0.18. Correlation's value is greater than 6PEr which indicates that there is highly significant relationship between loan and advance and total deposit.

It is concluded that NIBL has the highest significant relationship. Although NABIL and SCBNL have positive correlation and highly significant relationship between loan and advance and total deposit.

4.6.3 Co-efficient of Correlation between Cash and Bank Balance and Current Liabilities

The coefficient of correlation between cash and bank balance and current liabilities is to measure the degree of relationship between cash and bank balance and current liabilities. Commercial banks use large amount of cash and bank balance to meet their current obligation. The purpose of computing correlation

coefficient is to justify whether the excess cash and bank balance are significantly used to meet current obligation or not or whether there is any relationship between these two variables. In correlation analysis, total cash and bank balance is independent variable and current liabilities are dependent variable. The following table shows the coefficient of correlation between cash and bank balance and current liabilities.

Table no. - 4.6.3

Bank	Correlation	PEr	6PEr
NABIL	0.92	0.046	0.28
NIBL	0.96	0.024	0.14
SCBNL	0.97	0.018	0.11

Sources: Appendix 16 a, b & c

The above table no. 4.6.4 shows the correlation, PEr &6PEr of the sample banks.

NABIL

The bank's correlation between cash and bank balance and current liabilities is 0.92 which shows positive correlation. Probability error (PEr) is 0.046 and 6PEr is 0.28. Correlation’s value is greater than 6PEr which indicates that there is highly significant relationship between cash and bank balance and current liabilities.

NIBL

The bank's correlation between cash and bank balance and current liabilities is 0.96 which shows positive correlation. Probability error (PEr) is 0.024 and 6PEr is 0.14. Correlation’s value is greater than 6PEr which indicates that there is highly significant relationship between cash and bank balance and current liabilities.

SCBNL

The bank's correlation between cash and bank balance and current liabilities is 0.97 which shows positive correlation. Probability error (PEr) is 0.018 and 6PEr is 0.11. Correlation value is greater than 6PEr which indicates that there is highly significant relationship between cash and bank balance and current liabilities.

It is concluded that SCBNL has highly significant relationship. NABIL and NIBL have positive correlation and also have significant relationship between cash and bank balance and current liabilities.

4.7 Test of Hypothesis

Hypothesis test is one of the important applications of statistical interference in decision making. In hypothesis test, an assumption is made about the population parameter. To test whether the assumption or hypothesis is right or not, a sample is selected from the population and sample statistic is obtained. The main goal of hypothesis test is to test the characteristics of hypothesized population parameter based on sample information and whether the difference between population parameter and sample static is significant or not. Smaller the difference, the sample mean is close to hypothesized value and large the difference the hypothesized value has low chance to be correct.

In this study three hypothesis sets are set to identify whether there is significant different or not in (a) composition of working capital management and (b) liquidity position. Here, two complementary are set up at one time i.e. (1) Null hypothesis (H_0) and (2) Alternative hypothesis (H_1). Among these two hypotheses if one is accepted, then the other is rejected and vice versa.

Hypothesis 1

$H_{0:}$ There is no significant difference in composition of working capital among NABIL, NIBL and SCBNL.

$H_{1:}$ There is significant difference in composition of working capital among NABIL, NIBL and SCBNL.

Hypothesis 2

$H_{0:}$ There is no significant difference in liquidity position among NABIL, NIBL and SCBNL.

$H_{1:}$ There is significant difference in liquidity position among NABIL, NIBL and SCBNL.

Since three banks are taken into consideration as samples in this study, F- test is applied to test the validity of our assumptions. For applying F- test in the contest of small sample, the f value is calculated first and compared with the table value of F at a 5% level of significance for given degree of freedom. If calculated value is greater than tabulated value, the null hypothesis is rejected i.e. the difference is significant at 5% level of significance. But if F is less than the conserving table value of F the null hypothesis is accepted i.e. the difference is not significant. For the computation of value F, analysis of variance (ANOVA), a statistical tool is used. It is powerful statistical technique for the tests of significance to evaluate difference between two variables. For the test of hypothesis one-factor analysis of variance is used.

4.7.1 Composition of Working Capital

The composition of working capital of sample banks i.e. NABIL, NIBL and SCBNL are tested as follows by formulating null and alternative hypothesis.

Null Hypothesis

$H_{0:}$ There is no significant difference in composition of working capital among NABIL, NIBL and SCBNL.

Alternative Hypothesis

$H_{1:}$ There is significant difference in composition of working capital among NABIL, NIBL and SCBNL.

The following table shows the mean value, calculated F value and tabulated F value to measure the composition or structure of working capital management of sample banks.

Table no. - 4.7.1

Working capital	NABIL (Mean)	NIBL (Mean)	SCBNL (Mean)	Calculated F- value	Tabulated F-Value	Decision
Cash & bank balance	6.25	12.17	7.00	7.60	3.89	H_0 reject
Money at call or short notice	5.12	0.57	7.81	15.05	3.89	H_0 reject
Loan and advance	70.98	74.67	40.87	80.74	3.89	H_0 reject
Government securities	15.01	11.30	30.89	36.21	3.89	H_0 reject
Misc. current assets	2.64	1.28	13.42	8.38	3.89	H_0 reject

Sources: Appendix 17, 18, 19, 20 & 21

The above table no. 4.7.1 shows the mean, F value decision of sample banks.

A. Cash and Bank Balance

The sample banks' (NABIL, NIBL and SCBNL) cash and bank balance mean values are 6.25, 12.17 and 7.00. Their calculated F (2, 12) value is 7.60 and tabulated F – value at 5% level of significant for (2, 12) is 3.89 i.e. $F_{0.05}$ (2, 12)

equal to 3.89. Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 is rejected.

B. Money at Call or Short- notice

The sample banks' (NABIL, NIBL and SCBNL) money at call or short notice mean values are 5.12, 0.57 and 7.81. Their calculated F (2, 12) value is 15.05 and tabulated F- value at 5% level of significant for (2, 12) is 3.89 i.e. $F_{0.05}$ (2, 12) equal to 3.89. Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 is rejected.

C. Loan and Advances

The sample banks' (NABIL, NIBL and SCBNL) loan and advances mean values are 70.98, 74.67 and 40.87. Their calculated F (2, 12) value is 80.74 and tabulated F- value at 5% level of significant for (2, 12) is 3.89 i.e. $F_{0.05}$ (2, 12) equal to 3.89. Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 is rejected.

D. Government Securities

The sample banks' (NABIL, NIBL and SCBNL) government securities mean values are 15.01, 11.30 and 30.89. Their calculated F (2, 12) value is 36.21 and tabulated F- value at 5% level of significant for (2, 12) is 3.89 i.e. $F_{0.05}$ (2, 12) equal to 3.89. Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 rejected.

E. Miscellaneous Current Assets

The sample banks' (NABIL, NIBL and SCBNL) miscellaneous current assets mean values are 2.64, 1.28 and 13.42. Their calculated F (2, 12) value is 8.38 and tabulated F- values at 5% significance level for (2, 12) is 3.89 i.e. $F_{0.05}$ (2, 12) equal to 3.89. Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 rejected.

It is concluded that the sample banks' cash and bank balance, money at call or short notice, loan and advance, government securities and miscellaneous

current assets are significantly different. There is significant difference in composition of working capital among NABIL, NIBL and SCBNL.

4.7.2 Liquidity Position

The liquidity position of sample banks i.e. NABIL, NIBL and SCBNL are tested as follows by formulating null and alternative hypothesis.

Null Hypothesis

H_0: There is no significant difference in liquidity position among NABIL, NIBL and SCBNL.

Alternative Hypothesis

H_1: there is significant difference in liquidity position among NABIL, NIBL and SCBNL.

The following table shows the mean value, calculated F value and tabulated F value to measure the liquidity position of working capital management of sample banks.

Table no. - 4.7.2

Ratios	NABIL (Mean)	NIBL (Mean)	SCBNL (Mean)	Calculated F- value	Tabulated F- Value	Decision
current ratio	0.96	0.95	0.99	0.26	3.89	H_0 accept
Quick ratio	0.25	0.23	0.45	5.47	3.89	H_0 reject
Cash and bank balance to Total deposit	7.54	10.49	7.82	0.51	3.89	H_0 accept
Saving deposit to total deposit	42.04	41.97	61.21	25.88	3.89	H_0 reject

Sources: Appendix 22, 23, 24 &25

The above table no. 4.7.2 shows the mean, F value decision of the sample banks.

A. Current Ratio

The sample banks' (NABIL, NIBL and SCBNL) current ratio mean values are 0.96, 0.95 and 0.99. Their calculated F (2, 12) value is 0.26 and tabulated F-value at 5% level of significant for (2, 12) is i.e. $F_{0.05}$ (2, 12) equal to 3.89. Since, the calculated value of F is less than tabulated value of F, there is no significant difference and H_0 is accepted.

B. Quick Ratio

The sample banks' (NABIL, NIBL and SCBNL) quick ratio mean values are 0.25, 0.23 and 0.45. Their calculated F (2, 12) value is 5.47 and tabulated F-value at 5% level of significant for (2, 12) is 3.89 i.e. $F_{0.05}$ (2, 12) equal to 3.89. Since, the calculated value F is greater than tabulated value of F, there is significant difference and H_0 is rejected.

C. Cash and Bank Balance to Total Deposit

The sample banks' (NABIL, NIBL and SCBNL) cash and bank balance to total deposit mean values are 7.54, 10.49 and 7.82. Their calculated F (2, 12) value is 0.51 and tabulated F- value at 5% level of significant for (2, 12) is 3.89 i.e.$F_{0.05}$ (2, 12) equal to 3.89. Since, the calculated value of F is less than tabulated value of F, there is no significant difference and H_0 is accepted.

D. Saving Deposit to Total Deposit

The sample banks' (NABIL, NIBL and SCBNL) saving deposit to total deposit mean values are 42.04, 41.97 and 61.21. Their calculated F (2, 12) value is 25.88 and tabulated F - value at 5% level of significant for (2, 12) is 3.89 i.e. $F_{0.05}$ (2, 12) equal to 3.89. Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 rejected.

It is concluded that the sample banks' current ratio and cash and bank balance to total deposit are not significantly different. But quick ratio and saving deposit to total deposit are significantly different. Although, it is concluded that there is significant difference in liquidity position of NABIL, NIBL and SCBNL.

4.8 Major Findings of the Study

The major findings of this study during the period of five fiscal years i.e. 061/62 to 065/66 are summarized as follow.

1. The average major components of the current assets i.e. cash and bank balance, money at call or short notice, loan and advance, government securities and miscellaneous assets are 6.25%,5.12%,70.98%,15.01% and 2.64% on NABIL; 12.17%,0.59%, 74.67%, 11.30%and 11.28% on NIBL and 7.00%,7.81%, 40.87%, 30.88% and 13.42% on SCBNL respectively. It shows that the average cash and bank balance and loan and advance percentages are higher in NIBL. Money at call or short notice, government securities and miscellaneous assets are higher in SCBNL.
2. The liquidity positions of the sample banks are analyzed with the current ratio, quick ratio and cash and bank balance to total deposit ratio. The average current ratio of NABIL, NIBL and SCBNL are 0.96, 0.95 and 0.99 respectively. Similarly, average quick ratio of NABIL, NIBL and SCBNL are 0.25, 0.23 and 0.45 and average cash and bank balance to total deposit ratios are 7.54%, 16.11% and 7.82% respectively. SCBNL has highest current and quick ratio and NIBL has highest cash and bank balance ratio.
3. The average saving deposit to total deposit ratio of NABIL, NIBL and SCBNL are 42.04%, 41.97% and 61.21%. it shows that SCBNL has highest saving deposit to total deposit ratio. SCBNL has more short term and less costly sources of fund than other sample banks.
4. The activity turnover ratio of banks are analyzed with the loan and advance to total deposit ratio, loan and advance to fixed deposit ratio and loan and advance to saving deposit ratio. The average value of loan and advance to total deposit ratio, loan and advance to fixed deposit ratio and loan and advance to saving deposit ratio are 67.97%, 350.89% and 163.00% on NABIL; 73.02%, 286.52% and 175.93% on NIBL and 41.55%, 386.00%

and 68.14% on SCBNL respectively. From the analysis, it is found that NIBL is employing its fund more effectively than other sample banks.

5. Trend analysis:
    - Trend value of NIBL is always higher than NABIL and SCBNL of the study period due to high cash and bank balance percentage. Therefore, trend value of cash and bank balance of NIBL shows that the bank has maintained constant balance.
    - Trend value of SCBNL is always higher than NABIL and NIBL of the study period due to high money at call or short-notice. Therefore, trend value of money at call or short-notice of SCBNL shows that the bank has maintained constant balance.
    - Trend value of NIBL is always higher than NABIL and SCBNL of the study period due to high loan and advance percentage. Therefore, trend value of loan and advance of NIBL shows that the bank has maintained constant balance.
    - Trend value of SCBNL is always higher than NABIL and NIBL of the study period due to high government securities percentage. Therefore, trend value of government securities of SCBNL shows that the bank has maintained constant balance.
    - The trend value of SCBNL is always higher than NABIL and NIBL of the study period due to high current assets. Therefore, trend value of current ratio of SCBNL shows that it is always better than NABIL and NIBL so the SCBNL has better liquidity position in comparison to other sample banks.
    - The trend value of SCBNL is always higher of the study period due to high quick assets. Therefore, trend value of quick assets ratio of SCBNL shows that it is always better than NABIL and NIBL so the

SCBNL has better liquidity position in comparison to other sample banks.

6. Correlation between government securities and total deposit of sample banks is not significant; it shows that there is not close relationship between two variables. But there is highly significant correlation between loan and advance and total deposit of NABIL, NIBL and SCBNL. The banks have better utilization of their loan and advance and total deposit. There is positive correlation between cash and bank and current liabilities and highly significant in NABIL, NIBL and SCBNL. Therefore, the banks have been better utilization of their cash and bank balance and current liabilities.
7. From the above calculation of hypothesis, the composition of working capital are cash and bank balance, money at call or short notice, loan and advance, government securities and miscellaneous current assets are significantly different. There is significant difference in composition of working capital among NABIL, NIBL and SCBNL. Since, the mean value of loan and advance on total current assets of sample banks are significantly high and invest their fund in income generating sectors.
8. From the calculation of hypothesis, liquidity position of the sample banks' current ratio and cash and bank balance to total deposit ratio are not significantly different. But quick ratio and saving to total deposit ratio are significantly different in liquidity position of NABIL, NIBL and SCBNL. The mean value of current ratio, quick ratio and saving to total deposit ratio of SCBNL is higher than NABIL and NIBL but cash and bank balance to total deposit ratio of SCBNL is lower. However, liquidity position of SCBNL is better.

Chapter -5
SUMMARY, CONCLUSION AND ROCOMMENDATIONS

This chapter explains the summary of whole study, major findings, conclusion of the study and forwards the applicable recommendations for better and efficient management of working capital management of sample banks. The main purpose of this study is to make familiar about the working capital management as well as financial performance of NABIL, NIBL & SCBNL to the reader and interested person.

5.1 Summary

Nepal is a landlocked and least developed country. The reason behind Nepal's underdeveloped economy is not due to lack of resource but due to not proper utilization of the available resources, even though the process of economic development depends upon various factors. So, for the rapid economic development in the underdeveloped countries like Nepal there should be proper utilization of resources. Financial system plays an important role in allocating resources in productive sectors and helps increase income and employment in an economy. Bank is the main financial institution which plays an important role in the economic development of the nation. A bank collects deposit from different individuals and institutions and collected deposits are mobilized by giving loans to different industries, commercial enterprises, individuals, etc. In this process, joint venture banks are putting their best effort. Such banks help to transfer foreign investment and advanced technology from one country to another country. Nepal has adopted liberal and free economic policy to encourage such foreign investment in banking sectors.

The main objective of the study was to study and analyze of the working capital management as well as financial performance of the selected joint venture banks i.e. NABIL, NIBL & SCBNL. Most of the financial decisions of the banks are concerned with the current assets and current liabilities. Working capital management is concerned with current assets and current liabilities. Generally, working capital refers to the difference between current assets and current liabilities. So, working capital management is one of the important factors of decision making, related to short-term financing.

To make this thesis more understandable to the interested party, available data and information are presented in different tables and diagram with appropriate analysis and interpretations. This thesis work has been divided into five chapters. They are introduction, review of literature, research methodology, presentation and data analysis and finally summary, conclusion and recommendation.

To carry out thesis work secondary data have been used. The necessary data are derived from the balance sheet and profit and loss account of NABIL, NIBL and SCBNL. Only five fiscal years data i.e. 2061/62 to 2065/66 is taken as sample.

To fulfill the objective of this study and specific objective which is described in chapter one, an appropriate research methodology has been developed which includes the ratio analysis as financial tools and trend analysis, correlation coefficient and test of hypothesis as statistical tools. The major ratio analysis consists of the composition of working capital position, liquidity position and turnover position. To test the relationship between various components of working capital, Karl Pearson’s correlation coefficient r is calculated and analyzed. Some null hypothesis is set, calculated and tested the validity by using f- test.

5.2 Conclusion

Working capital components of the sample banks are fluctuating all over the study period. Cash and bank balance, money at call or short notice and miscellaneous current assets cover the small portion of the total current assets. Loan and advance and government securities cover huge portion of total current assets. NIBL invests more in loan and advance to earn more income then other. SCBNL invests more in government securities to earn more as secured income. It is found that SCBNL segregates its fund in working capital more efficiently.

SCBNL has highest current and quick ratio than NABIL and NIBL. SCBNL is unable to meet the standard although it is better than other banks. However, the sample banks are efficient in the management of the funds but failed to maintain minimum required level of the liquidity. So, the liquidity position of the SCBNL is better than NABIL and NIBL. Over all study of the working capital management of the sample banks are sound and manageable. SCBNL is in the first rank, and NABIL and NIBL are in the second and third respectively.

5.3 Recommendations

On the basis of analysis and major findings of the study following recommendations are made:

1. SCBNL segregates very low portion in the loan and advance, so it is unable to maximize the shareholders' value. SCBNL should increase loan and advance portion from 40.87% to 75%. The bank should improve its current investment policy about loan and advance.
2. All the sample banks' liquidity position is not good. Their current and quick ratio are very low than normal standard. So they have faced liquidity problem for last one year. It is better, as soon as the SCBNL, NABIL and NIBL try to maintain the standard by increasing current and quick assets.

3. Savings deposit is the less cost bearing fund, so it is beneficial to have higher savings deposit for increasing the profit and decreasing the cost of funds. NABIL and NIBL have 50% under savings to total deposit ratio. So the banks must increase the savings deposit. NABIL and SCBNL have lower cash and bank balance to total deposit ratio. It is therefore, suggested that the bank must increase the cash and bank balance to maintain the liquidity position.
4. Activity turn over ratio is fluctuating all over the study period. SCBNL has used very low percentage of total deposit in loan and advance. Due to the poor turnover position, the chances of bad debts and non earning idle fund are high. So the bank should give proper attention. The selected banks have to improve and change their investment policy to utilize funds in more productivity sectors.

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Appendix 1
NABIL Bank Limited (NABIL)
Kantipath, Kathmandu

Comparative Balance Sheet for five fiscal years

S.N.	Fiscal year / Particulars	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07	2064/65 2007/8	2065/66 2008/09
	Total assets(A+B+C)	17186.33	22329.97	27253.39	37132.76	43867.40
A.	Current assets(1+2+3+4+5+6)	14971.80	18133.81	22829.53	31241.82	36086.12
1	Cash and bank balance	559.38	630.24	1399.83	2671.14	3372.51
2	Money at call or short notice	868.43	1734.90	563.53	1952.36	552.88
3	Loan and advance	10586.17	12922.54	15545.78	21365.05	27589.93
4	Investment (a+b)	2413.94	2301.46	4808.34	4646.88	3701.10
	a. Government securities	2413.94	2301.46	4808.34	4646.88	3701.10
	b. Others	0.00	0.00	0.00	0.00	0.00
5	Interest receivable	168.86	188.63	0.00	0.00	0.00
6	Misc. current assets	375.02	356.04	512.05	606.39	864.70
B.	Fixed assets (Net)	361.24	319.09	286.90	598.04	660.99
C.	Investment in shares, debentures &others	1853.29	3877.07	4136.96	5292.89	7120.28
	Total liabilities(A+B+C+D)	15528.69	20454.38	25196.34	37132.76	43867.40
A	Current liabilities(1+2+3+4+5+6+7)	15420.81	20351.95	25095.29	34328.76	40303.26
1.	Deposit and other a/c(a+b+c+d+e)	14586.61	19347.40	23342.29	31915.05	37348.26
	a. saving	7026.34	8770.76	10187.35	12159.97	14620.00
	b. fixed	2078.54	3449.09	5435.19	8464.08	8310.71
	c. current	2799.18	2910.59	3395.24	5284.32	5480.53
	d. calls &short	2341.33	3851.16	3961.63	5563.44	8438.27
	e. others	341.22	365.80	362.88	443.18	498.33
2.	Short term loan	17.06	173.20	882.57	1360.00	1681.31
3.	Bills payable	119.75	92.54	83.51	238.42	463.14
4.	Tax provision	15.35	34.60	0.00	38.77	80.23
5.	Staff bonus	84.20	89.80	99.50	108.89	147.87
6.	Dividend payables	17.06	435.08	509.42	437.37	361.32
7.	Misc.current liabilities	580.78	179.33	178.00	230.26	221.13
B	Deferred liabilities	107.88	102.43	101.05	366.78	432.90
	Net worth(C+D)	1657.64	1874.99	2057.05	2437.20	3130.24
C.	Share capital	491.65	491.65	491.65	689.22	965.75
D.	Share holder's reserves	1165.99	1383.34	1565.40	1747.98	2164.49
	BALANCE SHEET TOTAL	17186.33	22329.37	27253.39	37132.76	43867.40

Appendix -2
Nepal Investment Bank Limited (NIBL)
Durbarmarg, Kathmandu

Comparative Balance Sheet for five fiscal years (Rs.in million)

S.N.	Fiscal year / Particulars	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07	2064/65 2007/8	2065/66 2008/09
	Total assets(A+B+C)	16274.06	21330.14	27590.84	38873.31	53010.80
A.	Current assets(1+2+3+4+5+6)	13967.78	17906.12	23580.98	34183.44	47234.76
1	Cash and bank balance	1340.49	2336.52	2441.51	3754.94	7918.00
2	Money at call or short notice	140.00	70.00	362.97	-	-
3	Loan and advance	10126.06	12776.21	17286.43	26996.65	36241.21
4	Investment (a+b)	1948.50	2522.30	3256.40	3155.00	2531.30
	a. Government securities	1948.50	2522.30	3256.40	3155.00	2531.30
	b. Others	0.00	0.00	0.00	0.00	0.00
5	Interest receivable	81.56	77.94	90.44	106.68	153.60
6	Misc. current assets	331.17	123.15	143.23	170.17	390.65
B.	Fixed assets(Net)	320.59	343.45	759.46	970.09	1060.75
C.	Investment in shares, debentures &others	1985.69	3080.57	3249.28	3719.02	4868.51
	Total liabilities(A+B+C+D)	15093.89	19914.70	25712.72	38873.31	53010.80
A	Current liabilities(1+2+3+4+5+6+7)	15078.84	19350.83	24899.12	35123.72	48040.61
1.	Deposit and other a/c(a+b+c+d+e)	14254.57	18927.31	24488.86	34451.73	46698.10
	a. saving	6702.55	8081.98	10742.33	13688.77	17066.25
	b. fixed	3212.27	5412.97	7516.69	7944.23	11633.38
	c. current	1583.03	1705.67	2175.03	3138.67	3756.57
	d. calls &short	2469.74	3448.21	3683.15	9072.99	13513.91
	e. others	286.98	278.48	371.66	607.06	727.99
2.	Short term loan	350.00	0.00	0.00	0.00	38.80
3.	Bills payable	15.01	18.82	32.40	78.84	82.34
4.	Tax provision	0.00	9.32	0.30	24.08	38.30
5.	Staff bonus	37.08	50.49	72.33	102.00	129.86
6.	Dividend payables	5.89	121.63	43.65	93.47	485.45
7.	Misc.current liabilities	416.29	223.26	261.58	373.60	567.76
B	Deferred liabilities	15.05	563.87	813.60	1062.81	1062.35
	Net worth(C+D)	1180.17	1415.44	1878.12	2686.78	3907.84
C.	Share capital	587.74	590.59	801.35	1203.91	2407.07
D.	Share holder's reserves	592.43	824.85	1076.77	1482.87	1500.77
	BALANCE SHEET TOTAL	16274.06	21330.14	27590.84	38873.31	53010.80

Appendix -3
Standard Chartered Bank Nepal Limited (SCBNL)
Naya Baneshwor, Kathmandu

Comparative Balance Sheet for five fiscal years

S.N.	Fiscal year / Particulars	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07	2064/65 2007/8	2065/66 2008/09
	Total assets(A+B+C)	21889.58	25776.33	28596.69	33335.79	40587.47
A.	Current assets(1+2+3+4+5+6)	21808.82	25656.69	28426.16	27453.31	30212.76
1	Cash and bank balance	1111.12	1270.24	2021.02	2050.24	3137.16
2	Money at call or short notice	2259.69	1977.27	1761.15	2197.54	2055.50
3	Loan and advance	8143.20	8935.42	10502.64	13718.60	13679.76
4	Investment (a+b)	9689.21	12835.20	13508.29	8137.61	9998.76
	a. Government securities	7203.07	8644.86	7104.94	8137.61	9998.76
	b. Others	2486.14	4190.34	6403.35	0.00	0.00
5	Interest receivable	133.46	188.56	202.29	0.00	0.00
6	Misc. current assets	472.14	450.00	633.05	1349.32	1341.58
B.	Fixed assets(Net)	67.41	101.30	125.59	117.27	137.29
C.	Investment in shares, debentures &others	13.35	18.34	44.94	5765.21	10237.42
	Total liabilities(A+B+C+D)	20311.16	24022.29	26480.34	33335.79	40587.47
A	Current liabilities(1+2+3+4+5+6+7)	20250.49	23961.79	26420.09	30781.40	37473.39
1.	Deposit and other a/c(a+b+c+d+e)	19335.09	23061.13	24647.02	29743.99	35871.73
	a. saving	13030.93	14597.67	15244.38	17856.13	19187.64
	b. fixed	1416.38	2136.31	3196.49	3301.01	7101.70
	c. current	4356.34	4681.94	4794.53	6174.56	6202.86
	d. calls &short	294.87	1135.69	925.52	1938.25	3001.57
	e. others	236.57	509.52	486.10	474.04	377.96
2.	Short term loan	55.93	0.00	400.00	0.00	0.00
3.	Bills payable	56.30	55.75	36.17	87.40	72.94
4.	Tax provision	0.00	0.00	5.60	2.05	4.26
5.	Staff bonus	88.68	93.94	101.61	119.34	146.72
6.	Dividend payables	11.77	499.98	341.74	506.37	476.30
7.	Misc.current liabilities	702.72	250.99	887.95	322.25	601.45
B	Deferred liabilities	60.67	60.50	60.25	61.84	61.61
	Net worth(C+D)	1582.42	1754.04	2116.35	2492.54	3052.47
C.	Share capital	374.64	374.64	413.25	620.78	931.97
D.	Share holder's reserves	1207.78	1379.40	1703.10	1871.76	2120.50
	BALANCE SHEET TOTAL	21893.58	25776.33	28596.69	33335.79	40587.47

Appendix- 4

NABIL Bank Limited (NABIL)

Kantipath, Kathmandu

Comparative Profit & Loss A/C for Five Fiscal Years

S. N.	Fiscal Years / Particulars	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07	2064/65 2007/08	2065/66 2008/09
	Operating Income (1+2+3+4+5)	**1438.44**	**1741.12**	**2011.42**	**2431.94**	**3374.26**
A						
	1. Interest Earned	1068.75	1310.00	1587.76	1978.69	2798.49
	2. Commission & Discount	128.88	138.29	150.61	159.32	179.69
	3. Exchange Income	184.88	209.93	185.48	196.49	251.92
	4. Dividend	0.00	0.00	0.00	0.00	0.00
	5. Other	55.93	82.90	87.57	97.44	144.16
B	**Cost of Services (1+2)**	**443.06**	**576.94**	**795.87**	**1020.91**	**1493.18**
	1. Interest Paid (a+b+c)	243.54	357.16	555.71	758.44	1153.28
	a. On Borrowings	15.64	11.19	25.58	70.28	91.61
	b. On Deposit	227.90	345.97	530.13	688.82	1061.67
	c. Others	0.00	0.00	0.00	0.00	0.00
	2. Salaries, Allowances & P.F.	199.52	219.78	240.16	262.91	339.90
C	**Income After Services Cost (A-B)**	**995.38**	**1164.18**	**1218.55**	**1411.03**	**1881.08**
D	**Other Provision & Expenses(1+2)**	**251.13**	**209.20**	**172.96**	**288.71**	**335.22**
	1. Provision for Bonus	84.20	89.80	99.50	108.90	147.87
	2. Other General expenses	166.93	119.40	73.46	179.81	187.35
	Gross Profit (C-D)	**744.25**	**954.98**	**1042.59**	**1122.32**	**1545.86**
	Less:- Depreciation	58.71	57.72	52.82	57.41	60.39
	Operating Profit	**685.54**	**897.26**	**989.77**	**1064.91**	**1485.47**
	Add:- Income from other Sources	72.24	0.74	5.28	24.08	2.19
	Earning Before Tax	**757.78**	**898.00**	**995.05**	**1088.99**	**1487.66**
	less:- Provision for Tax	239.15	262.74	321.09	342.52	447.61
	Net Profit/ Loss	**518.63**	**635.26**	**673.96**	**746.47**	**1031.05**

Appendix- 5

Nepal Investment Bank Limited (NIBL)

Durbar Marg, Kathmandu

Comparative Profit & Loss A/C for Five Fiscal Years

S. N.	Fiscal Years / Particulars	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07	2064/65 2007/08	2065/66 2008/09
	Operating Income (1+2+3+4+5)	**1139.44**	**1450.33**	**1931.57**	**2641.79**	**3803.63**
A						
	1.Interest Earned	886.80	1172.74	1584.99	2194.28	3267.94
	2.Commission & Discount	93.55	115.94	163.90	215.29	262.79
	3.Exchange Income	102.52	125.75	135.36	165.84	185.33
	4.Dividend	0.00	0.00	0.00	0.00	0.00
	5.Other	56.57	35.90	47.32	66.38	87.57
B	**Cost of Services (1+2)**	**451.55**	**611.61**	**830.90**	**1179.31**	**1912.69**
	1. Interest Paid (a+b+c)	354.55	490.95	685.53	992.16	1686.97
	a. On Borrowings	3.73	28.27	40.50	75.79	90.30
	b. On Deposit	328.32	462.66	645.03	916.37	1596.67
	c. Others	22.50	0.02	0.00	0.00	0.00
	2. Salaries, Allowances & P.F.	97.00	120.66	145.37	187.15	225.72
C	**Income After Services Cost (A-B)**	**687.89**	**838.72**	**1100.67**	**1462.48**	**1890.94**
D	**Other Provision & Expenses(1+2)**	**327.62**	**305.32**	**392.84**	**379.27**	**507.11**
	1.Provision for Bonus	37.08	50.49	72.34	102.00	129.86
	2.Other General expenses	290.54	254.83	320.50	277.27	377.25
	Gross Profit (C-D)	**360.27**	**533.40**	**707.83**	**1083.21**	**1383.83**
	Less:- Depreciation	32.79	39.59	52.65	70.30	96.58
	Operating Profit	**327.48**	**493.81**	**655.18**	**1012.91**	**1287.25**
	Add:- Income from other Sources	6.19	11.09	1.43	7.05	2.95
	Earning Before Tax	**333.67**	**504.90**	**723.38**	**1019.96**	**1290.20**
	less:- Provision for Tax	101.53	154.38	221.97	323.23	389.58
	Net Profit/ Loss	**232.14**	**350.52**	**501.40**	**696.73**	**900.62**

Appendix- 6

Standard Chartered Bank Nepal Limited (SCBNL)

Naya Baneshwor, Kathmandu

Comparative Profit & Loss A/C for Five Fiscal Years

S. N.	Fiscal Years / Particulars	2061/62 2004/05	2062/63 2005/06	2063/64 2006/07	2064/65 2007/08	2065/66 2008/09
	Operating Income (1+2+3+4+5)	**1573.31**	**1721.44**	**1971.06**	**2245.87**	**2635.91**
A						
	1. Interest Earned	1058.68	1189.60	1411.98	2245.87	2635.91
	2. Commission & Discount	184.83	222.93	221.21	1591.20	1887.22
	3. Exchange Income	266.86	283.47	309.09	276.43	235.47
	4. Dividend	0.00	0.00	0.00	0.00	480.03
	5. Other	62.94	25.44	28.78	32.59	33.19
B	**Cost of Services (1+2)**	**402.72**	**471.43**	**612.84**	**696.99**	**796.85**
	1. Interest Paid (a+b+c)	254.13	303.20	413.06	471.73	543.79
	a. On Borrowings	7.55	2.11	5.34	18.84	18.53
	b. On Deposit	246.53	299.92	406.20	449.09	520.76
	c. Others	0.05	1.17	1.52	3.80	4.49
	2. Salaries, Allowances & P.F.	148.59	168.23	199.78	225.26	253.06
C	**Income After Services Cost (A-B)**	**1170.59**	**1250.01**	**1358.22**	**1548.88**	**1839.06**
D	**Other Provision & Expenses(1+2)**	**309.46**	**293.11**	**333.44**	**334.17**	**369.64**
	1. Provision for Bonus	88.68	93.94	101.61	119.34	146.72
	2. Other General expenses	220.78	199.17	231.83	214.83	222.92
	Gross Profit (C-D)	**861.13**	**956.90**	**1024.78**	**1214**	**1469.42**
	Less:- Depreciation	65.95	18.92	18.18	23.02	24.32
	Operating Profit	**795.18**	**937.98**	**1006.60**	**1191.69**	**1445.10**
	Add:- Income from other Sources	2.96	1.40	9.49	1.68	22.10
	Earning Before Tax	**798.14**	**939.38**	**1016.09**	**1193.37**	**1467.20**
	less:- Provision for Tax	258.94	280.62	324.43	374.45	442.09
	Net Profit/ Loss	**539.20**	**658.76**	**691.66**	**818.92**	**1025.11**

Appendix 7

Calculation of Trend Value of Cash and Bank balance to Current assets ratio

F.Y. (X)	X^2	NABIL			NIBL			SCBNL		
		Y_1	XY_1	Yc_1 =a+bx	Y_2	XY_2	Yc_2 = a+bx	Y_3	XY_3	Yc_3 = a+bx
-2	4	3.74	-7.48	2.99	9.60	-19.2	9.69	5.09	-10.18	4.38
-1	1	3.48	-3.48	4.62	13.05	-13.05	10.93	4.95	-4.95	5.69
0	0	6.13	0	6.25	10.35	0	12.17	7.11	0	7.00
1	1	8.54	8.54	7.88	11.02	11.02	13.41	7.47	7.47	8.31
2	4	9.35	18.7	9.51	16.82	33.64	26.82	10.38	20.76	9.62
	ϕX^2 =10	ϕY_1 =31.24	ϕXY_1 =16.28	ϕYc_1 =31.25	ϕY_2 =60.84	ϕXY_2 =12.41	ϕYc_2 =73.02	ϕY_3 =35	ϕXY_3 =13.10	ϕYc_3 =35.00

NABIL NIBL SCBNL

$a = \frac{Y_1}{N} = \frac{31.24}{5} = 6.25$ $a = \frac{Y_2}{N} = \frac{60.84}{5} = 12.17$ $a = \frac{Y_3}{N} = \frac{35}{5} = 7.00$

$b = \frac{XY_1}{X^2} = \frac{16.28}{10} = 1.63$ $b = \frac{XY_2}{X^2} = \frac{12.41}{10} = 1.24$ $b = \frac{XY_3}{X^2} = \frac{13.10}{10} = 1.30$

Appendix -8

Calculation of Trend value of Money at Call or Short- notice to Current assets ratio

F.Y. (X)	X^2	NABIL			NIBL			SCBNL		
		Y_1	XY_1	Yc_1 =a+bx	Y_2	XY_2	Yc_2 = a+bx	Y_3	XY_3	Yc_3 = a+bx
-2	4	5.80	-11.6	7.5	1.00	-2	0.47	10.36	-20.72	9.17
-1	1	9.57	-9.57	6.31	0.39	-0.39	0.53	7.716	-7.71	8.49
0	0	2.47	0	5.12	1.54	0	0.59	6.20	0	7.81
1	1	6.25	6.25	3.93	-	1	0.65	8.00	8.00	7.13
2	4	1.53	3.06	2.74	-	2	0.71	6.80	13.60	6.45
	ϕX^2 =10	ϕY_1 =25.62	ϕXY_1 =-11.86	ϕYc_1 =25.6	ϕY_2 =2.93	ϕXY_2 =0.61	ϕYc_2 =2.95	ϕY_3 =39.07	ϕX_3 =-6.83	ϕYc_3 =39.05

NABIL

$a = \frac{Y_1}{N} = \frac{25.62}{5} = 5.12$

$b = \frac{XY_1}{X^2} = \frac{Z11.86}{10} = -1.19$

NIBL

$a = \frac{Y_2}{N} = \frac{2.93}{5} = 0.59$

$b = \frac{XY_2}{X^2} = \frac{0.61}{10} = 0.06$

SCBNL

$a = \frac{Y_3}{N} = \frac{39.07}{5} = 7.81$

$b = \frac{XY_3}{X^2} = \frac{Z6.83}{10} = -0.68$

Appendix -9

Calculation of Trend Value of Loan and Advance to Current assets ratio

F.Y. (X)	X^2	NABIL			NIBL			SCBNL		
		Y_1	XY_1	Yc_1 =a+bx	Y_2	XY_2	Yc_2 = a+bx	Y_3	XY_3	Yc_3 = a+bx
-2	4	70.70	-141.4	69.24	72.50	-145	71.31	37.35	-74.7	34.67
-1	1	71.25	-71.25	70.11	71.35	-71.35	72.99	34.82	-34.82	37.77
0	0	68.10	0	70.98	73.31	0	74.67	36.94	0	40.87
1	1	68.39	68.39	71.85	79.22	79.22	76.35	49.97	49.97	43.97
2	4	76.46	152.92	72.72	76.90	153.96	78.03	45.28	90.56	47.07
	ϕX^2 =10	ϕY_1 =354.9	ϕXY_1 =8.66	ϕYc_1 =354.90	ϕY_2 =373.35	ϕXY_2 =16.83	ϕYc_2 =373.35	ϕY_3 =204.36	ϕXY_3 =31.01	ϕYc_3 =204.35

NABIL

$a = \frac{Y_1}{N} = \frac{354.9}{5} = 70.98$

$b = \frac{XY_1}{X^2} = \frac{8.66}{10} = 0.87$

NIBL

$a = \frac{Y_2}{N} = \frac{373.35}{5} = 74.67$

$b = \frac{XY_2}{X^2} = \frac{16.83}{10} = 1.68$

SCBNL

$a = \frac{Y_3}{N} = \frac{204.36}{5} = 40.87$

$b = \frac{XY_3}{X^2} = \frac{31.01}{10} = 3.10$

Appendix 10
Calculation of Trend value of Government Securities to Current assets ratio

F.Y. (X)	X^2	NABIL			NIBL			SCBNL		
		Y_1	XY_1	$Yc_{1=a+bx}$	Y_2	XY_2	$Yc_{2=a+bx}$	Y_3	XY_3	$Yc_{3=a+bx}$
-2	4	16.13	-32.26	16.91	13.95	-27.9	15.70	33.02	-66.04	31.67
-1	1	12.70	-12.70	15.96	14.09	-14.09	13.50	33.70	-33.70	31.28
0	0	21.06	0	15.01	13.81	0	11.30	24.99	0	30.89
1	1	14.87	14.87	14.06	9.26	9.26	9.10	29.64	29.64	30.05
2	4	10.3	20.60	13.11	5.38	10.76	6.90	33.09	66.18	30.11
	ϕX^2 =10	ϕY_1 =75.05	ϕXY_1 =-9.49	ϕYc_1 =75.05	ϕY_2 =56.50	ϕXY_2 =21.97	ϕYc_2 =56.50	ϕY_3 =154.44	ϕXY_3 =-2.63	ϕYc_3 =154

NABIL

$a = \frac{Y_1}{N} = \frac{75.05}{5} = 15.01$

$b = \frac{XY_1}{X^2} = \frac{Z9.49}{10} = -0.95$

NIBL

$a = \frac{Y_2}{N} = \frac{56.5}{5} = 11.30$

$b = \frac{XY_2}{X^2} = \frac{Z21.97}{10} = -2.20$

SCBNL

$a = \frac{Y_3}{N} = \frac{154.44}{5} = 30.89$

$b = \frac{XY_3}{X^2} = \frac{Z3.90}{10} = -0.39$

Appendix 11
Calculation of Trend value of Current assets ratio

F.Y. (X)	X^2	NABIL			NIBL			SCBNL		
		Y_1	XY_1	$Yc_{1=a+bx}$	Y_2	XY_2	$Yc_{2=a+bx}$	Y_3	XY_3	$Yc_{3=a+bx}$
-2	4	0.97	-1.94	0.89	0.93	-1.86	0.92	1.08	-2.16	1.13
-1	1	0.89	-0.89	0.92	0.93	-0.93	0.94	1.07	-1.07	1.06
0	0	0.91	0	0.96	0.95	0	0.95	1.08	0	0.99
1	1	0.91	0.91	1.00	0.97	0.97	0.96	0.89	0.89	0.92
2	4	1.14	2.28	1.03	0.98	1.96	0.98	0.81	1.62	0.85
	ϕX^2 =10	ϕY_1 =4.82	ϕXY_1 =0.36	ϕYc_1 =4.80	ϕY_2 =4.76	ϕXY_2 =0.14	ϕYc_2 =4.75	ϕY_3 =4.93	ϕXY_3 =-0.72	ϕYc_3 =4.95

NABIL NIBL SCBNL

$a = \frac{Y_1}{N} = \frac{4.82}{5} = 0.96$ $a = \frac{Y_2}{N} = \frac{4.76}{5} = 0.95$ $a = \frac{Y_3}{N} = \frac{4.93}{5} = 0.99$

$b = \frac{XY_1}{X^2} = \frac{0.36}{10} = 0.036$ $b = \frac{XY_2}{X^2} = \frac{0.14}{10} = 0.014$ $b = \frac{XY_3}{X^2} = \frac{Z0.72}{10} = -0.072$

Appendix 12
Calculation of Trend value of Quick ratio

F.Y. (X)	X^2	NABIL			NIBL			SCBNL		
		Y_1	XY_1	$Yc_{1=a+bx}$	Y_2	XY_2	$Yc_{2=a+bx}$	Y_3	XY_3	$Yc_{3=a+bx}$
-2	4	0.25	-0.50	0.24	0.23	-0.46	0.23	0.52	-1.04	0.51
-1	1	0.23	-0.23	0.25	0.25	0.25	0.23	0.50	-0.50	0.48
0	0	0.27	0	0.25	0.24	0	0.23	0.41	0	0.45
1	1	0.27	0.27	0.25	0.20	0.25	0.23	0.40	0.40	0.42
2	4	0.24	0.48	0.25	0.22	0.48	0.23	0.41	0.82	0.38
	$\phi X^2=10$	ϕY_1 =1.26	ϕXY_1 =0.02	ϕYc_1 =1.24	ϕY_2 =1.14	ϕXY_2 =0.02	ϕYc_2 =1.17	ϕY_3 =2.24	ϕXY_3 =-0.32	ϕYc_3 =2.25

NABIL NIBL SCBNL

$a = \frac{Y_1}{N} = \frac{1.26}{5} = 0.25$ $a = \frac{Y_2}{N} = \frac{1.14}{5} = 0.23$ $a = \frac{Y_3}{N} = \frac{2.24}{5} = 0.45$

$b = \frac{XY_1}{X^2} = \frac{0.02}{10} = 0.002$ $b = \frac{XY_2}{X^2} = \frac{0.02}{10} = 0.002$ $b = \frac{XY_3}{X^2} = \frac{Z0.32}{10} = -0.032$

Appendix-13

Table no 4.2(A)
Actual and Trend value of Cash and Bank balance

Banks		061/62	06263	063/34	064/65	065/66
NABIL	Actual	3.74	3.48	6.13	8.54	9.35
	Trend	2.99	4.62	6.25	7.88	9.51
NIBL	Actual	9.60	13.05	10.35	11.02	16.82
	Trend	9.69	10.93	12.17	13.41	26.82
SCBNL	Actual	5.09	4.95	7.11	7.47	10.38
	Trend	4.38	5.69	7.00	8.31	9.62

Table no 4.2(B)
Actual and Trend value of Money at Call or Short -notice

Banks		061/62	062/63	063/64	064/65	065/66
NABIL	Actual	5.80	9.57	2.47	6.25	1.53
	Trend	7.50	6.31	5.12	3.93	2.74
NIBL	Actual	1.00	0.39	1.54	-	-
	Trend	0.47	0.53	0.59	0.65	0.71
SCBNL	Actual	10.36	7.71	6.20	8.00	6.80
	Trend	9.17	8.49	7.81	7.13	6.45

Table no 4.2 (C)
Actual and Trend value of Loan and Advance

Banks		061/62	062/63	063/64	064/65	065/66
NABIL	Actual	70.70	71.25	68.10	68.39	76.46
	Trend	69.24	70.11	70.98	71.85	72.72
NIBL	Actual	72.50	71.35	73.31	79.22	76.98
	Trend	71.31	72.99	74.67	76.35	78.03
SCBNL	Actual	37.35	34.82	36.94	49.97	45.28
	Trend	34.67	37.77	40.87	43.97	47.07

Table no 4.2(D)
Actual and Trend value of Government Securities

Banks		061/62	062/63	063/64	064/65	065/66
NABIL	Actual	16.13	12.70	21.06	14.87	10.30
	Trend	16.91	15.96	15.01	14.06	13.11
NIBL	Actual	13.95	14.09	13.81	9.26	5.38
	Trend	15.7	13.5	11.30	9.1	6.90
SCBNL	Actual	33.02	33.70	24.99	29.64	33.09
	Trend	31.67	31.28	30.89	30.05	30.11

Table no 4.2 (E)
Actual and Trend value of Current ratio

Banks		061/62	062/63	063/64	064/65	065/66
NABIL	Actual	0.97	0.89	0.91	0.91	1.14
	Trend	0.89	0.92	0.96	1.00	1.03
NIBL	Actual	0.93	0.93	0.95	0.97	0.98
	Trend	0.92	0.94	0.95	0.96	0.98
SCBNL	Actual	1.08	1.07	1.08	0.89	0.81
	Trend	1.13	1.06	0.99	0.92	0.85

Table no 4.2 (F)
Actual and Trend value of Quick ratio

Banks		061/62	062/63	063/64	064/65	065/66
NABIL	Actual	0.25	0.23	0.27	0.27	0.24
	Trend	0.23	0.24	0.25	0.25	0.25
NIBL	Actual	0.23	0.25	0.24	0.20	0.22
	Trend	0.23	0.23	0.23	0.23	0.23
SCBNL	Actual	0.52	0.50	0.41	0.40	0.41
	Trend	0.51	0.48	0.45	0.42	0.38

Appendix 14(A)

Calculation of Correlation Coefficient between Government Securities & Total Deposit of NABIL

GS(X)	TD(Y)	$X=(X-\bar{\varepsilon})$	X^2	$Y=(Y-\bar{\psi})$	Y^2	XY
2413.93	12508.07	-1161.41	1348873.19	-8149.25	66410275.56	9464620.44
2301.46	15898.31	-1273.88	1622770.25	-4759.01	22648175.18	6062407.66
4808.34	17907.10	1233	1520289.00	-2750.22	7563710.05	-3391021.26
4646.88	23450.97	1071.54	1148197.97	2793.65	7804480.32	2993507.72
3706.10	33522.15	130.76	17098.18	12864.83	165503850.90	1682205.17
$\phi\varepsilon$ =17876.71	$\phi\psi$ =103286.6		ϕX^2 =5657228.59		ϕY^2 =269930493	ϕ XY =16811719.73

$$\bar{\varepsilon} = \frac{\phi\varepsilon}{N} = \frac{17876.71}{5} = 3575.34$$

$$\bar{\psi} = \frac{\phi\psi}{N} = \frac{103286.6}{5} = 20657.32$$

$$\text{Correlation, } r = \frac{\phi\varepsilon\,\psi}{\sqrt{\phi\varepsilon^{\,2}\phi\psi^{2}}} = \frac{386096638.60}{\sqrt{5657228.59 \mid 269930493}} = 0.43$$

$$\text{PEr} = 0.6745\frac{1-r^2}{\sqrt{\rho}} = 0.6745 \mid \frac{1-(0.43)^2}{\sqrt{5}} = 0.11$$

6Per =0.66

Appendix 14(B)

Calculation of correlation coefficient between government securities & total deposit of NIBL

GS(X)	TD(Y)	$X=(X-\bar{\varepsilon})$	X^2	$Y=(Y-\bar{\psi})$	Y^2	XY
1948.50	11042.30	-734.20	539049.64	-9577.91	91736359.97	7032101.52
2522.30	13514.34	-160.40	25728.16	-7105.87	50493388.46	1139781.55
3256.40	16972.17	573.70	329131.69	-3648.04	13308195.84	-2092880.55
3155.00	26507.50	472.30	223067.29	5887.27	34659948.05	2780557.62
2531.30	35064.72	-151.40	22921.96	14444.51	208643869.10	-21868898.81
$\phi\varepsilon$ =13413.50	$\phi\psi$ =103101.03		ϕX^2 =1139898.74		ϕY^2 =398841761.50	ϕ XY =13009338.67

$$\bar{\varepsilon}^{z} = \frac{\phi\varepsilon}{N} = \frac{13413.5}{5} = 2682.70$$

$$\bar{\psi}^{z} = \frac{\phi\psi}{N} = \frac{103101.03}{5} = 20620.21$$

Correlation, $r = \frac{\phi\varepsilon\,\psi}{\sqrt{\phi\varepsilon^{2}\,\phi\psi^{2}}} = \frac{13009338.67}{\sqrt{1139898.74 \mid 398841761.5}} = 0.61$

$$PEr = 0.6745\frac{1-r^{2}}{\sqrt{\rho}} = 0.6745\ \frac{1-(0.61)^{2}}{\sqrt{5}} = 0.19$$

6PEr = 1.14

Appendix 14(C)

Calculation of Correlation Coefficient between Government Securities & Total Deposit of SCBNL

GS(X)	TD(Y)	$X=(X-\bar{\varepsilon}^{z})$	X^2	$Y=(Y-\bar{\psi}^{z})$	Y^2	XY
7203.07	17918.71	-1014.78	1029778.45	-5822	33895684	5908049.16
8644.86	20924.82	427.01	182337.54	-2815.89	7929236.49	-1202413.19
7104.94	24647.02	-1112.91	1238568.67	906.31	821397.82	-1008641.46
8137.61	26442.98	- 80.24	6438.46	2702.27	7302263.15	-216830.14
9998.76	28770.03	1780.91	3171640.43	5029.32	25294059.66	8956766.28
$\phi\varepsilon$ =41089.24	$\phi\psi$ =118703.56		ϕX^2 =5628763.55		ϕY^2 =75242641.12	ϕXY =12436930.65

$$\bar{\varepsilon}^{z} = \frac{\phi\varepsilon}{N} = \frac{41089.24}{5} = 8217.85$$

$$\bar{\psi}^{z} = \frac{\phi\psi}{N} = \frac{118703.56}{5} = 23740.71$$

Correlation, $r = \frac{\phi\varepsilon\,\psi}{\sqrt{\phi\varepsilon^{2}\,\phi\psi^{2}}} = \frac{12436930.65}{\sqrt{5628763.55 \mid 75242641.12}} = 0.60$

$$PEr = 0.6745\frac{1-r^{2}}{\sqrt{\rho}} = 0.6745 \mid \frac{1-\int 0.60\text{Å}}{\sqrt{5}} = 0.19$$

6PEr =1.16

Appendix 15(A)

Calculation of Correlation Coefficient between Loan & Advance and Total Deposit of NABIL

LA(X)	TD(Y)	$X=(X-\bar{\varepsilon})$	X^2	$Y=(Y-\bar{\psi})$	Y^2	XY
10586.17	12508.07	-7015.72	49220327.12	-8149.25	66410275.56	57172856.21
12922.54	15898.31	-4679.35	21896316.42	-4759.01	22648176.18	22269073.44
15545.78	17907.10	-2056.11	4227588.33	-2750.22	7563710.048	5654754.84
21365.05	23450.97	3763.16	14161373.19	2793.65	7804480.32	10512951.93
27589.93	33522.15	9988.04	99760943.04	12864.83	165503850.90	128494436.60
$\phi\varepsilon$ =88009.47	$\phi\psi$ =103286.60		ϕX^2 =189266548.10		ϕY^2 =269930493	ϕXY =224104073.10

$$\bar{\varepsilon} = \frac{\phi\varepsilon}{N} = \frac{88009.47}{5} = 17601.89$$

$$\bar{\psi} = \frac{\phi\psi}{N} = \frac{103286.60}{5} = 20657.32$$

$$\text{Correlation, } r = \frac{\phi\varepsilon\,\psi}{\sqrt{\phi\varepsilon^{\,2}\,\phi\psi^{2}}} = \frac{224104073.10}{\sqrt{189266548.10 \mid 269930493}} = 0.99$$

$$PEr = 0.6745\frac{1-r^2}{\sqrt{\rho}} = 0.6745\frac{1-0.99}{\sqrt{5}} = 0.006$$

$$6PEr = 0.036$$

Appendix 15(B)

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

LA(X)	TD(Y)	$X=(X-\bar{\varepsilon})$	X^2	$Y=(Y-\bar{\psi})$	Y^2	XY
10126.06	11042.30	-10559.25	111497760.60	-9577.91	91736359.97	101135546.20
12776.21	13514.34	-7909.10	62553862.81	-7105.87	50493388.46	56201036.42
17286.43	16972.17	-3398.88	11552385.25	-3648.04	13308195.84	12399250.20
26996.65	26507.50	6311.34	39833012.60	5887.29	34660183.54	37156688.87
36241.21	35064.72	15555.90	241986024.80	14444.51	208643869.10	224697353.10
$\phi\varepsilon$ =103426.56	$\phi\psi$ =103101.03		ϕX^2 =467423046		ϕY^2 =398841996.90	ϕXY =431589874.80

$$\bar{\varepsilon}^{z} = \frac{\phi\varepsilon}{N} = \frac{103426.56}{5} = 20685.31$$

$$\bar{\psi}^{z} = \frac{\phi\psi}{N} = \frac{103101.03}{5} = 20620.21$$

$$\text{Correlation, } r = \frac{\phi\varepsilon\,\psi}{\sqrt{\phi\varepsilon^{2}\phi\psi^{2}}} = \frac{431589874.8}{\sqrt{467423046 \mid 398841996.90}} = 0.999$$

$$\text{PEr} = 0.6745\frac{1-r^{2}}{\sqrt{\rho}} = 0.6745\frac{1-0.999^{2}}{\sqrt{5}} = 0.0006$$

6PEr=0.0036

Appendix 15(C)

Calculation of Correlation Coefficient between Loan & Advance and Total Deposit of SCBNL

LA(X)	TD(Y)	$X=(X-\bar{\varepsilon}^{z})$	X^2	$Y=(Y-\bar{\psi}^{z})$	Y^2	XY
8143.20	17918.71	-2852.72	8138011.40	-5822	33895684	16608535.84
8935.42	20924.82	-2020.50	4082420.25	-2815.89	7929236.49	5689505.75
10502.64	24647.02	-493.28	243325.16	906.31	821397.82	-447064.60
13718.60	26442.98	2722.68	7412986.38	2702.27	7302263.15	7357416.48
13679.76	28770.03	2683.84	7202997.15	5029.32	25294059.66	13497890.19
$\phi\varepsilon$ =54979.62	$\phi\psi$ =118703.56		ϕX^2 =27079740.34		ϕY^2 =75242641.12	ϕXY =42706282.91

$$\bar{\varepsilon}^{z} = \frac{54979.62}{5} = 10995.92$$

$$\bar{\psi}^{z} = \frac{\phi\psi}{N} = \frac{118703.56}{5} = 23740.71$$

$$\text{Correlation, } r = \frac{\phi\varepsilon\,\psi}{\sqrt{\phi\varepsilon^{2}\phi\psi^{2}}} = \frac{42706282.91}{\sqrt{27079740.34 \mid 75242641.12}} = 0.95$$

$$\text{PEr} = 0.6745\frac{1-r^{2}}{\sqrt{\rho}} = 0.6745\frac{1-0.95^{2}}{\sqrt{5}} = 0.029$$

6PEr= 0.18

Appendix 16(A)

Calculation of Correlation Coefficient between Cash & Bank balance and Current liabilities of NABIL

CBB(X)	CL(Y)	$X=(X-\bar{\varepsilon})$	X^2	$Y=(Y-\bar{\psi})$	Y^2	XY
559.38	15420.81	-1167.24	1362449.22	-9944.52	98893478.03	11607641.52
630.24	20351.95	-1096.38	1202049.10	-5013.38	25133979.02	5496569.56
1399.83	25095.29	-326.79	106791.70	-270.04	72921.60	88246.37
2671.14	34328.76	944.52	892118.03	8963.43	80343077.36	8466138.90
3372.50	31629.86	1645.88	2708920.97	6264.53	39244336.12	10310664.64
$\phi\varepsilon$ =8633.09	$\phi\psi$ =126826.67		ϕX^2 =6272329.02		ϕY^2 =243687792.10	ϕXY =35969260.99

$$\bar{\varepsilon} = \frac{\phi\varepsilon}{N} = \frac{8633.09}{5} = 1726.62$$

$$\bar{\psi} = \frac{\phi\psi}{N} = \frac{126826.67}{5} = 25365.33$$

$$\text{Correlation, } r = \frac{\phi\varepsilon\,\psi}{\sqrt{\phi\varepsilon^{\,2}\,\phi\psi^{\,2}}} = \frac{35969260.99}{\sqrt{6272329.02 \mid 243687792.10}} = 0.92$$

$$PEr = 0.6745\frac{1-r^2}{\sqrt{\rho}} = 0.6745\frac{1-0.92^2}{\sqrt{5}} = 0.046$$

Appendix 16(B)

Calculation of Correlation Coefficient between Cash & Bank balance and Current liabilities of NIBL

CBB(X)	CL(Y)	$X=(X-\bar{\varepsilon})$	X^2	$Y=(Y-\bar{\psi})$	Y^2	XY
1340.49	15078.84	-2217.80	4918636.84	-13419.78	180090495.20	29762388.08
2336.52	19350.83	-1221.77	1492721.93	-9147.79	83682061.88	11176495.39
2441.51	24899.12	-1116.78	1247197.57	-3599.50	12956400.25	4019849.61
3754.94	35123.72	196.65	38671.22	6625.10	43891950.01	1302825.92
7918.00	48040.61	4359.71	19007071.28	19541.99	381889373.20	85197409.22
$\phi\varepsilon$ =17791.46	$\phi\psi$ =142493.12		ϕX^2 =26704298.84		ϕY^2 =702510280.50	ϕXY =131458968.20

$$\bar{\varepsilon}^{z} = \frac{\phi\varepsilon}{N} = \frac{17791.46}{5} = 3558.29$$

$$\bar{\psi}^{z} = \frac{\phi\psi}{N} = \frac{142493.12}{5} = 28498.62$$

$$\text{Correlation, } r = \frac{\phi\varepsilon\,\psi}{\sqrt{\phi\varepsilon^{2}\,\phi\psi^{2}}} = \frac{131458968.20}{\sqrt{26704298.84 \times 702510280.50}} = 0.96$$

$$\text{PEr} = 0.6745\frac{1-r^{2}}{\sqrt{\rho}} = 0.6745\frac{1-0.96^{2}}{\sqrt{5}} = 0.024$$

6PEr= 0.14

Appendix 16(C)

Calculation of Correlation Coefficient between Cash & Bank balance and Current liabilities of SCBNL

CBB(X)	CL(Y)	$X=(X-\bar{\varepsilon}^{z})$	X^2	$Y=(Y-\bar{\psi}^{z})$	Y^2	XY
1111.12	20250.49	-806.92	651119.89	-7526.94	56654825.76	6073638.43
1270.24	23961.79	-647.80	419644.84	-3815.64	14559108.61	2471771.59
2021.02	26420.09	102.98	10604.88	-1357.34	1842371.87	-139778.87
2050.24	30781.40	132.20	17476.84	3003.97	9023835.76	397124.83
3137.16	37473.40	1219.12	1486253.57	9695.97	94011834.24	11820550.95
$\phi\varepsilon$ =9590.22	$\phi\psi$ =138887.17		ϕX^2 =2585100.02		ϕY^2 =176091976.20	ϕXY =20623306.93

$$\bar{\varepsilon}^{z} = \frac{\phi\varepsilon}{N} = \frac{9590.22}{5} = 1918.04$$

$$\bar{\psi}^{z} = \frac{\phi\psi}{N} = \frac{138887.17}{5} = 27777.43$$

$$\text{Correlation, } r = \frac{\phi\varepsilon\,\psi}{\sqrt{\phi\varepsilon^{2}\,\phi\psi^{2}}} = \frac{20623306.93}{\sqrt{2585100.02 \times 176091976.20}} = 0.97$$

$$\text{PEr} = 0.6745\frac{1-r^{2}}{\sqrt{\rho}} = 0.6745\frac{1-0.97^{2}}{\sqrt{5}} = 0.018$$

6PEr= 0.11

Appendix- 17

Calculation of F value

Cash and Bank balance percentage on Total Current assets

NABIL(X_1)	NIBL(X_2)	SCBNL(X_3)	$(X_1-\bar{\varepsilon}_1)^2$	$(X_2-\bar{\varepsilon}_2)^2$	$(X_3-\bar{\varepsilon}_3)^2$
3.74	9.60	5.09	6.30	6.60	3.65
3.48	13.05	4.95	7.67	0.77	4.20
6.13	10.35	7.11	0.014	3.31	0.01
8.54	11.02	7.47	5.24	1.32	0.22
9.35	16.82	10.38	9.61	21.62	11.42
$\phi\varepsilon_1$=31.24	$\phi\varepsilon_2$=60.84	$\phi\varepsilon_3$=35	$\phi(X_1-\bar{\varepsilon}_1)^2$ = 28.83	$\phi(X_2-\bar{\varepsilon}_2)^2$ =33.62	$\phi(\varepsilon_3-\bar{\varepsilon}_3)^3$ =19.5

$$\bar{\varepsilon}_1 = \frac{\phi\varepsilon_1}{n_1} = \frac{31.24}{5} = 6.25 \qquad \bar{\varepsilon}_2 = \frac{\phi\varepsilon_2}{n_2} = \frac{60.84}{5} = 12.17 \qquad \bar{\varepsilon}_3 = \frac{\phi\varepsilon_3}{n_3} = \frac{35}{5} = 7.00$$

Grand mean, $\bar{\bar{\varepsilon}} = \frac{\bar{\varepsilon}_1 \Gamma \bar{\varepsilon}_2 \Gamma \bar{\varepsilon}_3}{3} = \frac{6.25 \Gamma 12.17 \Gamma 7.00}{3} = 8.47$

$$SSC = \phi n_j(\bar{\varepsilon}_j Z \bar{\bar{\varepsilon}})^2 = n_1(\bar{\varepsilon}_1 Z \bar{\bar{\varepsilon}}) \Gamma n_2(\bar{\varepsilon}_2 Z \bar{\bar{\varepsilon}}) \Gamma n_3(\bar{\varepsilon}_3 Z \bar{\bar{\varepsilon}})$$

= 24.64 + 68.45 + 10.80 =103.89

$$SSE = \phi(\varepsilon_j Z \bar{\varepsilon}_j) X (\varepsilon_1 Z \bar{\varepsilon}_1)^2 \Gamma (\varepsilon_2 Z \bar{\varepsilon}_2)^2 \Gamma (\varepsilon_3 Z \bar{\varepsilon}_3)^2$$

= 28.83 +33.62 +19.5 = 81.95

SST =SSC+SSE = 103.89 +81.95 =185.84

One-way ANOVA Table

Sources of variance	Sum of Squares(S.S.)	Degree of Freedom d. f.	Mean Sum of Squares(M.S.S.)	F- ratio
Between Samples	SSC =103.89	K-1=3-1 =2	$MSE = \frac{SSC}{K Z 1} = \frac{103.89}{2} X 51.95$	$F = \frac{MSC}{MSE}$
With in Samples (Errors)	SSE = 81.95	n-k =15-3 =12	$MSE = \frac{SSE}{n Z k} = \frac{81.95}{12} X 6.83$	$= \frac{51.95}{6.83} = 7.60$
Total	SST = 185.84	n-1=15-1=14		

From the ANOVA table, we get

Calculated =F (2, 12) = 7.60

The tabulated value of F at 5% level of significance for (2, 12) is 3.89

i.e. $F_{0.05}$ (2, 12) = 3.89

Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 is rejected.

Appendix -18

Calculation of F value

Money at Call or Short- notice percentage on Total Current assets

$NABIL(X_1)$	$NIBL(X_2)$	$SCBNL(X_3)$	$(X_1-\bar{\varepsilon}_1)^2$	$(X_2-\bar{\varepsilon}_2)^2$	$(X_3-\bar{\varepsilon}_3)^2$
5.80	1.00	10.36	0.46	0.18	6.50
9.57	0.39	7.71	19.80	0.03	0.01
2.47	1.54	6.20	7.02	0.94	2.59
6.25	-	8.00	1.28	0.32	0.036
1.53	-	6.80	12.89	0.32	1.02
$\phi\varepsilon_1$ =25.62	$\phi\varepsilon_2$ =2.93	$\phi\varepsilon_3$ =39.07	$\phi(X_1-\bar{\varepsilon}_1)^2$ = 41.45	$\phi(X_2-\bar{\varepsilon}_2)^2$ =1.80	$\phi(\varepsilon_3-\bar{\varepsilon}_3)^3$ =10.16

$$\bar{\varepsilon}_1 = \frac{\phi\varepsilon_1}{n_1} = \frac{25.62}{5} = 5.12 \qquad \bar{\varepsilon}_2 = \frac{\phi\varepsilon_2}{n_2} = \frac{2.93}{5} = 0.57 \qquad \bar{\varepsilon}_3 = \frac{\phi\varepsilon_3}{n_3} = \frac{39.07}{5} = 7.81$$

$$\text{Grand mean} = \frac{\bar{\varepsilon}_1 \Gamma \bar{\varepsilon}_2 \Gamma \bar{\varepsilon}_3}{3} = \frac{5.12 \Gamma 0.57 \Gamma 7.81}{3} = 4.50$$

$$SSC = \phi n_j(\bar{\varepsilon}_j Z \bar{\varepsilon}) = n_1(\bar{\varepsilon}_1 Z \bar{\varepsilon}) \Gamma n_2(\bar{\varepsilon}_2 Z \bar{\varepsilon}) \Gamma n_3(\bar{\varepsilon}_3 Z \bar{\varepsilon})$$

$$= 1.92 + 77.22 + 54.78 = 133.92$$

$$SSE = \phi(\varepsilon_j Z \bar{\varepsilon}_j) X (\varepsilon_1 Z \bar{\varepsilon}_1)^2 \Gamma (\varepsilon_2 Z \bar{\varepsilon}_2)^2 \Gamma (\varepsilon_3 Z \bar{\varepsilon}_3)^2$$

$$= 41.45 + 1.80 + 10.16 = 53.41$$

$$SST = SSC + SSE = 133.92 + 53.41 = 187.33$$

One-way ANOVA Table

Sources of variance	Sum of Squares(S.S.)	Degree of Freedom d. f.	Mean Sum of Squares(M.S.S.)	F- ratio
Between Samples	SSC= 133.92	K-1=3-1 =2	$MSE = \frac{SSC}{K Z 1} = \frac{133.92}{2} =$ 66.96	$F = \frac{MSC}{MSE} = \frac{66.96}{4.45} =15.05$
With in Samples (Errors)	SSE = 53.41	n-k =15-3 =12	$MSE = \frac{SSE}{n Z k} = \frac{53.41}{12} = 4.45$	
Total	SST = 187.33	n-1=15-1= 14		

From the ANOVA table, we get

Calculated =F (2, 12) =15.05

The tabulated value of F at 5% level of significance for (2, 12) is 3.89

i.e. $F_{0.05}$ (2, 12) = 3.89

Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 is rejected.

Appendix -19

Calculation of F value

Loan and Advance percentage on Total Current assets

NABIL(X_1)	NIBL(X_2)	SCBNL(X_3)	$(X_1-\bar{X}_1)^2$	$(X_2-\bar{X}_2)^2$	$(X_3-\bar{X}_3)^2$
70.70	72.50	37.35	0.078	4.71	12.39
71.25	71.35	34.82	0.073	11.02	36.60
68.10	73.31	36.94	8.29	1.85	15.44
68.39	79.22	49.97	6.71	20.70	82.81
76.46	76.98	45.28	30.03	5.34	19.45
$\phi\varepsilon_1$ =354.90	$\phi\varepsilon_2$ =373.36	$\phi\varepsilon_3$ =204.36	$\phi(X_1-\bar{X}_1)^2$ = 45.18	$\phi(X_2-\bar{X}_2)^2$ =43.62	$\phi(\varepsilon_3-\bar{X}_3)^3$ =166.69

$\bar{X}_1 = \frac{\phi\varepsilon_1}{n_1} = \frac{354.90}{5} = 70.98$ $\bar{X}_2 = \frac{\phi\varepsilon_2}{n_2} = \frac{373.36}{5} = 74.67$ $\bar{X}_3 = \frac{\phi\varepsilon_3}{n_3} = \frac{204.36}{5} = 40.8$

Grand mean = $\frac{\bar{X}_1 \Gamma \bar{X}_2 \Gamma \bar{X}_3}{3} = \frac{70.98 \Gamma 74.67 \Gamma 40.87}{3} = 62.17$

SSC = $\phi n_j(\bar{X}_j Z \bar{\bar{X}})^2 = n_1(\bar{X}_1 Z \bar{\bar{X}}) \Gamma n_2(\bar{X}_2 Z \bar{\bar{X}}) \Gamma n_3(\bar{X}_3 Z \bar{\bar{X}})$

=388.08 +781.25+ 2268.45 =3437.78

SSE = $\phi(\varepsilon_j Z \bar{X}_j) X (\varepsilon_1 Z \bar{X}_1)^2 \Gamma (\varepsilon_2 Z \bar{X}_2)^2 \Gamma (\varepsilon_3 Z \bar{X}_3)^2$

=45.18 +43.62 +166.69 =255.49

SST =SSC+SSE =3437.78 +255.49 =3693.27

One-way ANOVA Table

Sources of variance	Sum of Squares(S.S.)	Degree of Freedom d. f.	Mean Sum of Squares(M.S.S.)	F- ratio
Between Samples	SSC= 3437.78	K-1=3-1 =2	MSE = $\frac{SSC}{K Z 1} = \frac{3437.78}{2}$ =1718.89	F = $\frac{MSC}{MSE}$
With in Samples (Errors)	SSE = 255.49	n-k =15-3 =12	MSE = $\frac{SSE}{n Z k} = \frac{255.49}{12}$ =21.29	= $\frac{1718.89}{21.29}$ =80.74
Total	SST = 3693.27	n-1=15-1=14		

From the ANOVA table, we get

Calculated =F (2, 12) =80.74

The tabulated value of F at 5% level of significance for (2, 12) is 3.89

i.e. $F_{0.05}$ (2, 12) = 3.89

Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 is rejected.

Appendix -20

Calculation of F value

Government Securities percentage on Total Current assets

NABIL(X_1)	NIBL(X_2)	SCBNL(X_3)	$(X_1-\bar{\varepsilon}_1)^2$	$(X_2-\bar{\varepsilon}_2)^2$	$(X_3-\bar{\varepsilon}_3)^2$
16.13	13.95	33.02	1.25	7.02	12.39
12.70	14.09	33.70	5.34	7.78	36.60
21.06	13.81	24.99	36.60	6.30	15.44
14.87	9.26	29.64	0.020	4.16	82.81
10.30	5.38	33.09	22.18	35.05	19.45
$\phi\varepsilon_1$=75.06	$\phi\varepsilon_2$=56.49	$\phi\varepsilon_3$ =154.44	$\phi(X_1-\bar{\varepsilon}_1)^2$ = 65.39	$\phi(X_2-\bar{\varepsilon}_2)^2$ =60.31	$\phi(\varepsilon_3-\bar{\varepsilon}_3)^3$ =53.65

$$\bar{\varepsilon}_1 = \frac{\phi\varepsilon_1}{n_1} = \frac{75.06}{5} = 15.01 \qquad \bar{\varepsilon}_2 = \frac{\phi\varepsilon_2}{n_2} = \frac{56.49}{5} = 11.30 \qquad \bar{\varepsilon}_3 = \frac{\phi\varepsilon_3}{n_3} = \frac{154.44}{5} = 30.89$$

$$\text{Grand mean} = \frac{\bar{\varepsilon}_1 \Gamma \bar{\varepsilon}_2 \Gamma \bar{\varepsilon}_3}{3} = \frac{15.01 \Gamma 11.30 \Gamma 30.89}{3} = 19.07$$

$$SSC = \phi n_j (\bar{\varepsilon}_j Z \bar{\varepsilon}\,)^2 = n_1(\bar{\varepsilon}_1 Z \bar{\varepsilon}\,) \Gamma n_2(\bar{\varepsilon}_2 Z \bar{\varepsilon}\,) \Gamma n_3(\bar{\varepsilon}_3 Z \bar{\varepsilon}\,)$$

$$= 82.42 + 301.86 + 698.56 = 1082.84$$

$$SSE = \phi(\varepsilon_j Z \bar{\varepsilon}_j) X (\varepsilon_1 Z \bar{\varepsilon}_1)^2 \Gamma (\varepsilon_2 Z \bar{\varepsilon}_2)^2 \Gamma (\varepsilon_3 Z \bar{\varepsilon}_3)^2$$

$$= 65.39 + 60.31 + 53.65 = 179.35$$

$$SST = SSC + SSE = 1082.84 + 179.35 = 1262.19$$

One-way ANOVA Table

Sources of variance	Sum of Squares(S.S.)	Degree of Freedom d. f.	Mean Sum of Squares(M.S.S.)	F- ratio
Between Samples	SSC=1082.84	K-1=3-1 =2	$MSE = \frac{SSC}{K Z 1} = \frac{1082.84}{2} = 541.42$	$F = \frac{MSC}{MSE} = \frac{541.42}{14.95} = 36.21$
With in Samples (Errors)	SSE=179.35	n-k =15-3 =12		
Total	SST = 1262.19	n-1=15-1=14	$MSE = \frac{SSE}{n Z k} = \frac{179.35}{12} = 14.95$	

From the ANOVA table, we get

Calculated =F (2, 12) = 36.21

The tabulated value of F at 5% level of significance for (2, 12) is 3.89

i.e. $F_{0.05}$ (2, 12) = 3.89

Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 is rejected.

Appendix -21

Calculation of F value

Miscellaneous Current assets percentage on Total Current assets

NABIL(X_1)	NIBL(X_2)	SCBNL(X_3)	$(X_1-\bar{X}_1)^2$	$(X_2-\bar{X}_2)^2$	$(X_3-\bar{X}_3)^2$
3.63	2.95	14.18	0.98	2.79	0.58
3.00	1.12	18.82	0.13	0.026	29.16
2.24	0.99	24.76	0.16	0.084	128.60
1.94	0.50	4.91	0.49	0.61	72.42
2.40	0.83	4.44	0.06	0.20	80.64
$\phi\varepsilon_1$=13.20	$\phi\varepsilon_2$=6.40	$\phi\varepsilon_3$ =67.10	$\phi(X_1-\bar{X}_1)^2$ = 1.82	$\phi(X_2-\bar{X}_2)^2$ =3.71	$\phi(\varepsilon_3-\bar{X}_3)^3$ =311.40

$$\bar{X}_1 = \frac{\phi\varepsilon_1}{n_1} = \frac{13.20}{5} = 2.64 \qquad \bar{X}_2 = \frac{\phi\varepsilon_2}{n_2} = \frac{6.40}{5} = 1.28 \qquad \bar{X}_3 = \frac{\phi\varepsilon_3}{n_3} = \frac{67.10}{5} = 13.42$$

$$\text{Grand mean} = \frac{\bar{X}_1 + \bar{X}_2 + \bar{X}_3}{3} = \frac{2.64 + 1.28 + 13.42}{3} = 5.78$$

$$SSC = \phi n_j(\bar{X}_j - \bar{\bar{X}})^2 = n_1(\bar{X}_1 - \bar{\bar{X}}) + n_2(\bar{X}_2 - \bar{\bar{X}}) + n_3(\bar{X}_3 - \bar{\bar{X}})$$

$$= 49.30 + 101.25 + 291.85 = 442.40$$

$$SSE = \phi(\varepsilon_j - \bar{X}_j) = (\varepsilon_1 - \bar{X}_1)^2 + (\varepsilon_2 - \bar{X}_2)^2 + (\varepsilon_3 - \bar{X}_3)^2$$

$$= 1.82 + 3.71 + 311.40 = 316.93$$

$$SST = SSC + SSE = 442.40 + 316.93 = 759.33$$

One-way ANOVA Table

Sources of variance	Sum of Squares(S.S.)	Degree of Freedom d. f.	Mean Sum of Squares(M.S.S.)	F- ratio
Between Samples	SSC=442.40	K-1=3-1 =2	$MSC = \frac{SSC}{K-1} = \frac{442.40}{2} = 221.20$	$F = \frac{MSC}{MSE}$
With in Samples (Errors)	SSE =316.93	n-k =15-3 =12		$= \frac{221.20}{26.41}$
Total	SST =759.33	n-1=15-1=14	$MSE = \frac{SSE}{n-k} = \frac{316.93}{12} = 26.41$	= 8.38

From the ANOVA table, we get

Calculated =F (2, 12) = 8.38

The tabulated value of F at 5% level of significance for (2, 12) is 3.89

i.e. $F_{0.05}$ (2, 12) = 3.89

Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 is rejected.

Appendix -22

Calculation of F Value

Current Ratio

NABIL(X_1)	NIBL(X_2)	SCBNL(X_3)	$(X_1-\bar{\varepsilon}_1)^2$	$(X_2-\bar{\varepsilon}_2)^2$	$(X_3-\bar{\varepsilon}_3)^2$
0.97	0.93	1.08	0.0001	0.0004	0.0081
0.89	0.93	1.07	0.0049	0.0004	0.0064
0.91	0.95	1.08	0.0025	0.0000	0.0081
0.91	0.97	0.89	0.0025	0.0004	0.0100
1.14	0.98	0.81	0.0320	0.0009	0.0320
$\phi\varepsilon_1$=4.82	$\phi\varepsilon_2$=4.75	$\phi\varepsilon_3$=4.95	$\phi(X_1-\bar{\varepsilon}_1)^2$ = 0.042	$\phi(X_2-\bar{\varepsilon}_2)^2$ =0.0021	$\phi(\varepsilon_3-\bar{\varepsilon}_3)^3$ =0.064

$$\bar{\varepsilon}_1 = \frac{\phi\varepsilon_1}{n_1} = \frac{4.82}{5} = 0.96 \qquad \bar{\varepsilon}_2 = \frac{\phi\varepsilon_2}{n_2} = \frac{4.75}{5} = 0.95 \qquad \bar{\varepsilon}_3 = \frac{\phi\varepsilon_3}{n_3} = \frac{4.95}{5} = 0.99$$

$$\text{Grand mean} = \frac{\bar{\varepsilon}_1 \Gamma \bar{\varepsilon}_2 \Gamma \bar{\varepsilon}_3}{3} = \frac{2.90}{3} = 0.97$$

$$SSC = \phi n_j(\bar{\varepsilon}_j Z \bar{\bar{\varepsilon}})^2 = n_1(\bar{\varepsilon}_1 Z \bar{\bar{\varepsilon}}) \Gamma n_2(\bar{\varepsilon}_2 Z \bar{\bar{\varepsilon}}) \Gamma n_3(\bar{\varepsilon}_3 Z \bar{\bar{\varepsilon}})$$

$$=0.0005 + 0.002 + 0.002 = 0.0045$$

$$SSE = \phi(\varepsilon_j Z \bar{\varepsilon}_j) X (\varepsilon_1 Z \bar{\varepsilon}_1)^2 \Gamma (\varepsilon_2 Z \bar{\varepsilon}_2)^2 \Gamma (\varepsilon_3 Z \bar{\varepsilon}_3)^2$$

$$=0.042 +0.0021 + 0.064 =0.108$$

$$SST = SSC+SSE = 0.0045+ 0.108 =0.113$$

One-way ANOVA Table

Sources of variance	Sum of Squares(S.S.)	Degree of Freedom d. f.	Mean Sum of Squares(M.S.S.)	F- ratio
Between Samples With in Samples (Errors)	SSC=0.0045 SSE=0.108	K-1=3-1 =2 n-k =15-3 =12	$MSE = \frac{SSC}{K Z 1} = \frac{0.0045}{2} = 0.0023$ $MSE = \frac{SSE}{n Z k} = \frac{0.108}{12} = 0.009$	$F = \frac{MSC}{MSE} = \frac{0.0023}{0.009}$ =0.26
Total	SST = 0.113	n-1=15-1=14		

From the ANOVA table, we get

Calculated =F (2, 12) = 0.26

The tabulated value of F at 5% level of significance for (2, 12) is 3.89

i.e. $F_{0.05}$ (2, 12) = 3.89

Since, the calculated value of F is less than tabulated value of F, there is no significant difference and H_0 is accepted.

Appendix -23

Calculation of F value

Quick Ratio

NABIL(X_1)	NIBL(X_2)	SCBNL(X_3)	$(X_1-\bar{X}_1)^2$	$(X_2-\bar{X}_2)^2$	$(X_3-\bar{X}_3)^2$
0.25	0.23	0.52	0.000	0.000	0.0049
0.23	0.25	0.50	0.0004	0.0004	0.0025
0.27	0.24	0.41	0.0004	0.0001	0.0016
0.27	0.20	0.40	0.0004	0.0009	0.0025
0.24	0.22	0.41	0.0001	0.0001	0.0016
$\phi\bar{X}_1=1.25$	$\phi\bar{X}_2=1.15$	$\phi\bar{X}_3=2.25$	$\phi (X_1-\bar{X}_1)^2 = 0.0013$	$\phi (X_2-\bar{X}_2)^2 =0.0015$	$\phi(\bar{X}_3-\bar{X}_3)^3 =0.013$

$$\bar{\bar{X}}_1 = \frac{\phi\bar{X}_1}{n_1} = \frac{1.25}{5} = 0.25 \qquad \bar{\bar{X}}_2 = \frac{\phi\bar{X}_2}{n_2} = \frac{1.15}{5} = 0.23 \qquad \bar{\bar{X}}_3 = \frac{\phi\bar{X}_3}{n_3} = \frac{2.25}{5} = 0.45$$

$$\text{Grand mean} = \frac{\bar{\bar{X}}_1 + \bar{\bar{X}}_2 + \bar{\bar{X}}_3}{3} = \frac{0.25 + 0.23 + 0.45}{3}$$

$$SSC = \phi n_j(\bar{\bar{X}}_j - \bar{\bar{X}})^2 = n_1(\bar{\bar{X}}_1 - \bar{\bar{X}}) + n_2(\bar{\bar{X}}_2 - \bar{\bar{X}}) + n_3(\bar{\bar{X}}_3 - \bar{\bar{X}})$$

$$= .018 + 0.032 + 0.098 = 0.148$$

$$SSE = \phi(\bar{X}_j - \bar{\bar{X}}_j) X (\bar{X}_1 - \bar{\bar{X}}_1)^2 + (\bar{X}_2 - \bar{\bar{X}}_2)^2 + (\bar{X}_3 - \bar{\bar{X}}_3)^2$$

$$= 0.0013 + 0.0015 + 0.013 = 0.016$$

$$SST = SSC + SSE = 0.148 + 0.016 = 0.164$$

One-way ANOVA Table

Sources of variance	Sum of Squares(S.S.)	Degree of Freedom d. f.	Mean Sum of Squares(M.S.S.)	F- ratio
Between Samples With in Samples (Errors)	SSC =0.148 SSE = 0.016	K-1=3-1 =2 n-k =15-3 =12	$MSC = \frac{SSC}{K-1} = \frac{0.148}{2} = 0.074$	$F = \frac{MSC}{MSE}$
Total	SST = 0.164	n-1=15-1=14	$MSE = \frac{SSE}{n-k} = \frac{0.016}{12} = 0.0013$	$= \frac{0.074}{0.0013} = 56.92$

From the ANOVA table, we get

Calculated =F (2, 12) = 56.92

The tabulated value of F at 5% level of significance for (2, 12) is 3.89

i.e. $F_{0.05}$ (2, 12) = 3.89

Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 is rejected.

Appendix -24

Calculation of F value

Cash and Bank balance to Total Deposit Ratio

NABIL(X_1)	NIBL(X_2)	SCBNL(X_3)	$\sum (X_1-\bar{X}_1)^2$	$\sum (X_2-\bar{X}_2)^2$	$\sum (X_3-\bar{X}_3)^2$
4.47	12.14	6.20	9.42	2.72	2.62
3.96	17.29	6.07	12.82	46.24	3.06
7.82	14.39	8.20	0.078	15.21	0.14
11.39	14.17	7.75	14.82	13.54	0.005
10.06	22.58	10.90	6.35	146.17	9.45
$\sum X_1$=37.7	$\sum X_2$=52.45	$\sum X_3$=39.10	$\sum (X_1-\bar{X}_1)^2$ = 43.49	$\sum (X_2-\bar{X}_2)^2$ =223.88	$\sum (X_3-\bar{X}_3)^3$ =15.31

$$\bar{X}_1 = \frac{\sum X_1}{n_1} = \frac{37.7}{5} = 7.54 \qquad \bar{X}_2 = \frac{\sum X_2}{n_2} = \frac{52.45}{5} = 10.49 \qquad \bar{X}_3 = \frac{\sum X_3}{n_3} = \frac{39.10}{5} = 7.82$$

$$\text{Grand mean} = \frac{\bar{X}_1 + \bar{X}_2 + \bar{X}_3}{3} = \frac{7.54 + 10.49 + 7.82}{3} = 8.62$$

$$SSC = \sum n_j (\bar{X}_j - \bar{\bar{X}})^2 = n_1(\bar{X}_1 - \bar{\bar{X}}) + n_2(\bar{X}_2 - \bar{\bar{X}}) + n_3(\bar{X}_3 - \bar{\bar{X}})$$

$$= 5.83 + 17.48 + 3.20 = 26.51$$

$$SSE = \sum (X_j - \bar{X}_j) = (X_1 - \bar{X}_1)^2 + (X_2 - \bar{X}_2)^2 + (X_3 - \bar{X}_3)^2$$

$$= 43.49 + 223.88 + 15.31 = 282.68$$

$$SST = SSC + SSE = 26.51 + 282.68 = 309.19$$

One-way ANOVA Table

Sources of variance	Sum of Squares(S.S.)	Degree of Freedom d. f.	Mean Sum of Squares(M.S.S.)	F- ratio
Between Samples	SSC = 26.51	K-1=3-1 =2	$MSC = \frac{SSC}{K-1} = \frac{26.51}{2} = 13.26$	$F = \frac{MSC}{MSE} = \frac{13.26}{25.76} = 0.51$
With in Samples (Errors)	SSE = 309.19	n-k =15-3 =12	$MSE = \frac{SSE}{n-k} = \frac{309.19}{12} = 25.76$	
Total	SST =309.19	n-1=15-1=14		

From the ANOVA table, we get

Calculated =F (2, 12) = 0.51

The tabulated value of F at 5% level of significance for (2, 12) is 3.89

i.e. $F_{0.05}$ (2, 12) = 3.89

Since, the calculated value of F is less than tabulated value of F, there is no significant difference and H_0 is accepted.

Appendix -25

Calculation of F value

Saving Deposit to Total Deposit Ratio

NABIL(X_1)	NIBL(X_2)	SCBNL(X_3)	$\sum (X_1-\bar{X}_1)^2$	$\sum (X_2-\bar{X}_2)^2$	$\sum (X_3-\bar{X}_3)^2$
48.17	47.02	67.40	37.58	25.50	38.32
45.33	42.70	63.30	10.82	0.53	4.37
43.64	43.87	61.85	2.56	3.61	0.41
38.10	39.73	60.00	15.52	5.02	1.46
34.95	36.55	53.49	50.27	29.38	59.60
$\sum X_1=210.20$	$\sum X_2=209.85$	$\sum X_3=306.05$	$\sum (X_1-\bar{X}_1)^2$ = 116.75	$\sum (X_2-\bar{X}_2)^2$ =64.04	$\sum (X_3-\bar{X}_3)^3$ =104.16

$$\bar{X}_1 = \frac{\sum X_1}{n_1} = \frac{210.20}{5} = 42.04 \qquad \bar{X}_2 = \frac{\sum X_2}{n_2} = \frac{209.85}{5} = 41.97 \qquad \bar{X}_3 = \frac{\sum X_3}{n_3} = \frac{306.05}{5} = 61.21$$

$$\text{Grand mean} = \frac{\bar{X}_1 + \bar{X}_2 + \bar{X}_3}{3} = \frac{42.04 + 41.97 + 61.21}{3}$$

$$SSC = \sum n_j (\bar{X}_j - \bar{\bar{X}})^2 = n_1(\bar{X}_1 - \bar{\bar{X}}) + n_2(\bar{X}_2 - \bar{\bar{X}}) + n_3(\bar{X}_3 - \bar{\bar{X}})$$

$$= 197.82 + 202.25 + 829.47 = 1229.54$$

$$SSE = \sum (X_j - \bar{X}_j) X (X_1 - \bar{X}_1)^2 + (X_2 - \bar{X}_2)^2 + (X_3 - \bar{X}_3)^2$$

$$= 116.75 + 64.04 + 104.16 = 284.95$$

SST =SSC+SSE =1229.54+284.95 =1514.49

One-way ANOVA Table

Sources of variance	Sum of Squares(S.S.)	Degree of Freedom d. f.	Mean Sum of Squares(M.S.S.)	F- ratio
Between Samples	SSC = 1229.54	K-1=3-1 =2	MSE = $\frac{SSC}{K-1} = \frac{1229.54}{2}$ =614.77	F = $\frac{MSC}{MSE}$ = $\frac{614.77}{23.75}$ =25.88
With in Samples (Errors)	SSE = 284.95	n-k =15-3 =12	MSE = $\frac{SSE}{n-k} = \frac{284.95}{12}$ = 23.75	
Total 1=14	SST = 1514.49	n-1=15-		

From the ANOVA table, we get

Calculated =F (2, 12) = 25.88

The tabulated value of F at 5% level of significance for (2, 12) is 3.89

i.e. $F_{0.05}$ (2, 12) = 3.89

Since, the calculated value of F is greater than tabulated value of F, there is significant difference and H_0 is rejected.