

CHAPTER – I

INTRODUCTION

1.1 Introduction and Background of the Study

Bank is a financial intermediary accepting deposits and granting loans: offers the widest menu of services of any financial institution. A bank is financial institution, in which people who have spare cash, deposit it and who need funds borrow it. In other words, they mobilize saving and make fund available for investment in trade, industry, agriculture and so on.

According to Kent, "bank is an organization whose principal operations are concerned with accumulation of the temporarily idle money of the general public for the purpose of advancing to other for expenditure."

Oxford Dictionary of Business describes bank as a commercial institution licensed as a taker of deposits. Bank are concerned mainly with making and receiving payment on behalf of their customer; accepting deposits and making short-term loans to private individual, companies and other organizations. A bank performs a highly appreciable function in the economy by offering relatively safe, convenient, liquid, and accessible securities and at the same time accepting relatively risky, liquid, inconvenient, long term and large denomination securities offered by the borrower.

So, the bank is financial establishment for monetary transaction. A bank simply carries out the work of exchanging money, providing loan, accepting deposits and transferring the money. Generally an institution established by law and involved in monetary transaction is called bank.

History of Bank

In facts, the modern bank started to take rapid speed in farming and functioning from 17th century. During this period, banking is said to originate in medieval Italy. "The bank of Venice" which was established in 1157 A.D. in Venice, Italy is the first bank to finance the Monarch in the wars, later "The bank of Barcelona" and "The bank of Geneva." were established in 1402 and 1407 respectively. Only during middle of

sixteenth century in England Banks were introduced. According to Geoffrey Crowther the in development of banking, "The present day banker has three ancestor of particular note. One of them is the Merchant and the other are goldsmith and the money lender. Lending and borrowing are almost old as money itself." Only in the nineteenth century, the modern joint stock commercial banks or banking system developed and spread. (Bandari, 2003).

In the context of Nepal, the financial system has no far away history in Nepal. It was started during the period of Rana Regime of Rana Prime Minister Ranodip Singh. "Tejarath Adda" was established in 1933 B.S. It also known as father of today's modern banking institution in Nepal was established in his period. Tejarath did not collect deposit, but gave loans to employees and public against bullion. It rendered good services to the government servant and general public by providing loan at cheaper rate and mobilizing scattered resources from people. There were no any official units for such types of services before the establishment of "Tejarath Adda." People had to depend on the local goldsmith and money lenders who used to charge high interest rate against the collateral of gold, silver, land, house etc.

Nepal Bank Limited was established in 1994 B.S. is considered as modern bank in Nepal who had a major responsibility to attract people and expand banking system. Nepal Rastra Bank was established in 2013 B.S. by government to manage financial system in proper way all over the country. Since, then Nepal Rastra Bank being central bank under Act, 2012 B.S. has been functioning as government's bank and has been contributing to the growth of financial sector. Government setup Rastriya Banijya Bank in 2022 B.S. as a fully government owned commercial bank (Dahal and Dahal 2002-9-10).

The history of banking in Nepal may be described as a component of gradual and orderly evolution in the financial and economic sphere of the Nepalese life. Bank plays a vital role in the economic development of country especially with under developing financial system. Even now the financial system is still in the evolutionary phase.

The growth of banking in Nepal is not so long in comparison with other developed or developing countries. Nepal had to wait for a long time to come to the present banking system. The development of any country can not be imagined without economic activities. The development of banking system is one of the grounds for economic development. So we should take a bank as strong means for the economic development. The development of a bank is interwoven with the development of a person, a society and a nation.

Banks are the financial services firm performing many other role in the economy. Their success or failure hinges on their ability to identify the financial services on the public demand produce those services efficiently and sell them at competitive price. A single bank can not fulfill the customer demand. So there are different types of bank such as commercial bank. Central Bank, Development Bank, Export and Import Bank (EXIM, Bank, Saving Bank, Building societies, cooperative banks, Merchant bank etc. Here, this study is basically focused on Nabil Bank Limited, which is one of the commercial bank in Nepal.

Concept of Commercial Bank

Commercial Bank, 'Rastriya Banijya Bank' was established in 1966 A.D. It is a profit earning organization/institution whose major function are acceptance of deposits, forwarding of loans, money exchange and transfer. Then, commercial banks are the supplier of finance for trade, and industry. It plays a vital role in the economic and financial life of the country.

After the restoration of democracy in Nepal, the government adopted the liberalized and market oriented economic policies, which created conducive environment for the development of banking sector. Commercial bank investing the saving in the productive areas. They helps in the formation of capital and also perform an extremely important function of credit creation which helps them in earning profits. They provide short-term loans, medium-term loans and long-term loans to trade and industry.

"Commercial bank refers to such type of bank which deals in money exchange, accepting deposits, advancing loans and other commercial transaction except some special function done by other specified banks such as cooperative bank, agriculture bank and industrial bank. (Nepal Commercial Bank Act 2031 B.S.)

Commercial Bank provide short-term and long-term debts, whenever necessary for trade and commerce. They accept deposits for public and grant loans in different forms. They purchase as well as discount the bill for exchange, promissory notes and exchange foreign currency.

Commercial banks plays significant role to change and develop the economy. Their operation stabilizes the economic pulse of the economy.

In the developing countries like Nepal the propensity to save is quite low. This hinders the capital formation and which is a major cause of poor economic condition of the developing countries. That's why the basic problem of the developing countries is raising the level of saving. Nowadays in Nepal, several banks such as Development Bank, Joint Venture Bank, Commercial Bank, Agriculture Bank, Co-operative Bank and So on are coming into existence in quite a few number with the purpose to collect the scattered saving and put them into productive channels. So that the saving will be safely and properly utilized for the all round development of the country. So lastly, commercial banks are banking institution that are geared more toward the lending of money to customer, rather than focusing on generating or raising money. A commercial bank accepts deposits to personal and corporate account, and than uses the combined strength of the deposit to finance loans for individuals and business. This is in contrast to an investment bank, which focuses on generated revenue through investments.

Presently there are 27 commercial banks in Nepal

List of Licensed Commercial Banks

S.N.	Commercial Banks	Established	Head Office
1	Nepal Bank Limited	1937 A.D.	
2	Rastriya Banijya Bank	1966 A.D.	
3	Nepal Investment Bank Ltd.	1986 A.D.	
4	Nabil Bank Limited	1984 A.D.	
5	Standard Chartered Bank Nepal	1987 A.D.	
6	Himalayan Bank Ltd	1993 A.D.	
7	Nepal SBI Bank Ltd	1993 A.D.	
8	Nepal Bangladesh Bank Ltd	1993 A.D.	
9	Bank of Kathmandu Ltd	1995 A.D.	
10	Everest Bank Ltd	1994 A.D.	
11	Nepal Credit and Commerce Bank Ltd.	1996 A.D.	
12	Lumbini Bank Ltd	1997 A.D.	
13	Nepal Industrial & Commercial Bank Ltd.	1998 A.D.	
14	Macchapuchhre Bank Ltd	2057 B.S.	
15	Kumari Bank Ltd	2057 B.S.	
16	Laxmi Bank Ltd	2002 B.S.	
17	Agriculture Bank Ltd	2024 B.S.	
18	Global Bank Ltd	2063 B.S.	
19	Citizens Bank International Ltd	2007 A.D.	
20	Prime Commercial Bank Ltd	2007 A.D.	
21	Bank of Asia Nepal Ltd	2007 A.D.	
22	Sunrise Bank Ltd	2007 A.D.	
23	Development Credit Bank Ltd	2008 A.D.	
24	NMB Bank Ltd	2008 A.D.	
25	Kist Bank Ltd	2009 A.D.	
26	Siddhartha Bank Limited	2002 A.D.	
27	Janata Bank Ltd.	2010 A.D.	

Source: www.nrb.org.np

Profile of NABIL Bank Limited:

Nabil Bank Limited was established in 1984 as a first foreign joint venture bank with Dubai Bank Ltd of Dubai. It has head office in Kathmandu to started operation in July

1984. Nabil Bank is the first joint venture bank to commerce operation in the kingdom of Nepal. This bank is the leader in brining the very best international standard of banking practices, product and services. It was incorporated with the objectives of extended, internationally modern banking services to various sectors of the society. Pursuing its objectives, Nabil provides a full range of commercial banking services through its 35 points of representation across the kingdom and over 170 reputed correspondent banks across the globe. Bank is highly successful to creat banking habits among the Nepalese people. This bank has become the "bank of the year 2004".

The banks business philosophy is "your bank at your service." and "Bank of 1st choice".

Nabil as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business.

Operation of the bank including day to day and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes, ATMs, credit cards, state of art, world-renowned software (finacle) from infosys technologies system, Banglore, India. Internet banking system and tele-banking system. Nabil bank's product and services: loan, trade finance, deposit, remittances, cards and ATMs E-banking, clean bills, others.

Nabil Bank Limited

Type	Public (NEPSE, NABIL)
Founded	Kathmandu, Nepal, 1984
Headquarter	Kamaladi, Kathmandu, Nepal
Key people	Satyendra Pyara Shrestha (Chairman) Amrit Charan Shresth (CEO)
Industry	Financial Services
Products	Banks
Website	www.nabilbank.com

Present Capital Structure of Nabil Bank:

Total Qualifying Capital:

Authorized capital	
Care capital (Tier 1)	3044340637
Supplementary capital (Tier 2)	682742150
Total Capital fund	3727082787

The banks paid up capital has increased by 276.53 million during the year after the distribution of 40% bonus share.

Paid up capital at 16.07 (2008)	689216000
Bonus Share	2761531000
Paid up capital at 15.07 (2009)	965747000

Notes:

No one of the promoters have borrowed money buy pledging banks shares. One of the promoters NIDC holding 10% share of the bank from the beginning. Disposed 3.85 % share in financial year 2007/08 to the general public through auction. These share can be freely traded in NEPSE. 174 such shareholder holding 244852 share have pledged, 238804 share with banks/financial institution/ corporative societies for borrowing money. (Annual Report 2008/09) (Source: www.nabilbank.com)

When the Nabil bank established in 1984 under the company ct 1964 its equity configuration, showed that Dudai Bank Ltd. (DBL) owned 50% equity partner which was transferred to Emirates Bank International Ltd. Later on, emirates Bank International Ltd. Dubai Sold its entire 50% holding to National Bank Ltd, Bangladesh. So the current configuration is given as follows:

Nabil bank Ltd. Bangladesh	50%
Nepal Industrial Development Corporation (NIDC)	10%
Rastriya Beema Sansthan	9.66%
Nepal Stock Exchange (Nepse)	0.34%
Nepalese Public	30%

Mission of Nabil Bank

- To be the bank of 1st Choice to all the stock holders:.
- To be the first choice in meeting all the financial requirement for the customers.
- To be the investment of choice for the shareholder.
- Practice total quality management and embrace good governance and be the example of model bank for the regulators.

Vision:

- A full service bank providing on entire range of products/starting with deposit, Visa and Master cards.
- Customer satisfaction is the 1st priority of bank
- Employees are treated with respect, good faith and provided equal opportunity.
- The bank is transparent in their dealing and conduct.

Value

- Customer oriented.
- Result oriented
- Innovative
- Synergistic
- Professional

Focus of the Study

Working capital management is a crucial aspect of financial management of an organization. It plays a vital role in every business organization, whether they are trading or manufacturing concerns. It is the life blood and controlling nerve center for any type of business because without the proper control upon it no business organization can run smoothly. The management of current assets and current liability of the business organization is necessary for day to day operations. Thus it play the

key role in the success and failure of an organization. So proper working capital management or financial decision making is more important in banking transaction for its efficiency and profitability.

Generally, we divide financial management decisions into the management of assets (Investment) and liabilities (sources of financing) in the long term and in the short term. Short term financial management is known as working capital management. It deals with management of current assets and current liabilities of a firm. As we know that a firm's value cannot be maximized in the long run unless it survives in the short run. Firms fail most often because they are unable to meet their working capital needs. Consequently, sound working capital management is a requisite for firm's survival working capital deals with the matrix of current assets and current liabilities. The conversion process of current assets that include cash, inventory and account receivable and so on must be quick as possible to get readily available cash within one year to meet current obligation. In a like manner, the current liabilities comprising sundry creditor, account, payable, short-term bank loan. Outstanding expenses etc. Must be paid within one year as they become due.

The working capital management of a bank is different from other type of business enterprise. A bank plays a significant role to fulfill the requirement of working capital of any other type of business enterprises. It requires efficient management, investment in working capital of other business enterprises is a part of current assets of a bank's working capital and we can consider deposit and short term borrowing as a part of current liabilities. So this study is a reference regarding the working capital management or position of bank.

The management of working capital plays a vital role for existing of any banks successfully while studies it is the centers the routine day to day administration of current assets and current liabilities. Therefore working capital management is very important of banks or other public enterprises. Such as:

- i. Public Enterprises must need to determined the adequacy of investment in current assets and other wise it could seriously erode their liquidity base.

- ii. They are required to ascertain the turnover of current assets, which determine profitability of the concerns.
- iii. They must select the type of current assets, suitable for investment so as to raise their operational efficiency.
- iv. They must find out the appropriate source of funds of finance (Current assets)

So, working capital management is to support the long term operation and financial goals of the bank. It effects the organization relationship between risk and return. Working capital is one of the most important factor which needed to smoothly move to bank or other organization. It can be evaluated by how to manage the assets and capital funds which is the best sectors to invest and how to run the banking sector. The present study will try to analyze and examine the liquidity, profitability, debt management with financial performance in these banks. Without proper working capital management of any business cannot run in right way and they can not achieve objectives and goals.

1.2. Statement of the Problems

Working capital which is compared as lifeblood of the human beings for any organization. Most of the Nepalese organizations are still facing the problem of working capital management due to the unprofessional human resources. It has various factors affecting the decision managers still focus their attention on the procurement aspect of working capital but not on the efficient utilization of funds defined in terms of working capital. The management of working capital is synonymously to the management of short term liquidity. It has been regarded as one of the conditioning factor in the decision-making issues. It is no doubt, very difficult to point out as to how much working capital is needed by a particular business organization. An organization, which is not willing to take financial risks can go for more short term liquidity. The more of short term liquidity means more of current assets and less of current liabilities. So it is very essential to analyze and find out problem and its solution to make efficient use of funds for minimizing the risk of loss to attention profit objectives.

The working capital management not only attacks profitability position in the short run but it also effect the survival in the long run of the organization. So every firm must maintain the sound working capital component for the effective and efficient for utilization of funds in business organization.

Nepalese banks or enterprises are not so satisfactory their financial composition or performance is very poor. Most of organization were operating in losses and such condition discourage the new investment due to established enterprises financial position. The poor performance of banks atmosphere affects various reasons in the internal, external and financial environment. Such problems should be investigated and removed from the organization is the most important to corrective measurement for the improvement of their performance without effective and efficient financial management the firm is not reach of this target point.

In the light of very facts commercials banks are backbone of the country.

Nabil bank is one of the leading joint venture banks in Nepalese economy providing, wide variety of services. But in today's Nepalese context, banking system is in the excessive liquidity. Banks are flooded with money and there is no place for investment. So being the leading banks of Nepalese economy lot of question occurs that are related with working capital position of this bank.

Nepalese Banks or Other Organization

Face the various problem to manage the working capital due to the non-incoming sectors or non productive sectors.

- a. How are the sources of funds created and mobilized?
- b. What is the comparative (year-wise) working capital position of Nabil bank?
- c. Is the composition of the working capital of Nabil bank limited appropriate?
- d. What is the lending pattern of loan and advances another investment will be profitable?
- e. How to build the image of bank through working capital management.

Then, opportunities and threats are closely related matter. So banking sectors, also face these types of matters in present situation. Unstable political environment, lack of reliable and stable policy and depreciation of risk bear capacity of people are the main problem of banking sectors at the present situation. By entering the high numbers of banks for limited economic sector is also the barrier of banking sector. Besides them the lack of expensive technology, proper manpower, and sufficient capital are current problems of banking sectors.

So, this study "working capital management of Nabil Bank Limited is essential to analyze the working capital position of the bank to outlet new ideas, provide source of livelihood to professionals of all sectors from management team, investors, customer or policy maker.

1.3 Objectives of the study

The basic objectives of the present study are to highlight the working capital management and its effectiveness in Nepalese banks especially the main objective is to examine the management or position of working capital of Nabil Bank.

- a. To examine the impact of working capital on liquidity and profitability.
- b. To analyze the liquidity, assets utilization, long term solvency and profitability position of the bank.
- c. To examine the financial position of Nabil Bank.
- d. To analyze the creation and mobilization of fund in Nabil bank.

1.4 Need of the Study

Certainly there is an important of any research work to various field. This study is a conclusion-oriented study. The study of working capital management helps not only to the professional in the industry to have better understanding on the impact of working capital in these firm but also the academicians and the researchers who study in these areas. More over, it will be more beneficial to further researcher, university's students, financial manager lenders and borrowers, management, policy makers,

general interested public and also to Nepal government for making different plans and policies.

The study will be helpful to go deep into the matters of working capital management of this bank.

It has multidimensional significance, which can be divided in to four boarder headings:

a. Its significance to the shareholders

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

b. Its Significance to the Management

The study will be helpful to go deep into the matters as to why the working capital management to their bank is better (or worse) then their competitors.

c. Its significance to the outsiders

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

d. Its Significance to the Policy Makers

Policy Maker here refers to the government and Nepal Rastra Bank. The study will be helpful to them while formulating the policy regarding the financial institution like bank.

Therefore, considering all these facts of the study of Nabil bank limited.

1.5 Limitation of the Study

Limitation exist every where and this study is not also an expectation of it. Every study has its own limitations, or the study simply represent the partial fulfillments of the MBS programme. The study will be conducted within certain limitation and constraints.

1. It is a study conducted within the time constraints (only 5 years).
2. Money and resources constraints which is weakness to the study .
3. This study has been limited to the working capital management of bank.
4. The study is based on annual report, articles, websites, authorized by banks which are secondary data in nature.
5. The available financial statement might not be correct in reality.

1.6 Organization of the Study

This study has been divided into five chapters. They are as follows:

Chapter I: Introduction

Chapter II: Review of Literature

Chapter III: Research Methodology

Chapter IV: Data Presentation and Analysis

Chapter V: Summary, Conclusion and Recommendation

Chapter one is the introduction chapter, which deals with background of the study, profile of Nabil bank, statement of problems, objectives of the study, need of the study and limitation of the study

The second chapter deals with the review of literatures relating to the concept of working capital management, type of working capital, working capital policy,

determinants of working capital, need of working capital, financing of working capital, review of books, review of journals articles and review of dissertation.

The third chapter is the research methodology which deals with research design nature and sources of data, population and sample, period covered, data gathering, procedure and tools of data analysis, various financial and statistical tools have been used which are discussed in details in this third chapter.

The fourth chapter deal with the presentation and analysis of relevant data and information though a define course of research design. This chapter is also present he result relating to working capital management.

The last chapter is concerned with the summary of the study, various conclusions are drawn from the study and recommendations are provide for improving the future performance.

CHAPTER - II

REVIEW OF LITERATURE

Review of literature is the study of the past research studies and relevant materials. It is advancement of existing knowledge and in depth study of subject matter. In literature review, researcher takes hints from past dissertation but he or she should take need of republication. This chapter also gives the conceptual framework on working capital position and this chapter is basically concerned with review of literature relevant to the topic "working Capital Position/Management with Special Reference to Commercial Bank" The previous study cannot be ignored because they provide the foundation to the present study. There must be continuity in research. This continuity in research is ensured by linking the present study with past research studies. This chapter highlight the literature that is available in concerned subject as to my knowledge, research work, and relevant study on this topic, review of journals and articles review of thesis work performed previously and its provides insight into the finding of earlier studies through the review of books, publications and previous studies related to the working capital management.

2.1 Conceptual Review

2.1.1 Concept of Working Capital

Working capital is refers to the firm, short term current assets and current liabilities. Working capital is defined as all short term asset used in daily operation. They consist primarily of cash, marketable securities, account receivable and inventories. Working capital is characterized by asset with a life span that is less than one year. Cash, marketable securities, account receivable and inventory have a life span of less than one year. It is also characterized by its nearness to cash or liquidity of the finished good, inventory, when sold is converted into account receivable. Receivable on collection are transferred into cash the level of investment in working capital is affected by sales volume, production policies and collection policies.

Working capital is a controlling nerve of center of every business organization because no business can run smoothly without the proper control upon it. Thus, it plays the role in the success and failure of the organization. As the management of current assets and current liabilities of the business organization is necessary for day to day operations; it plays the key role in the success and failure of the organization not only in the short run, in the long run also. In the concern of the management of working capital there have been made number of studies from different management experts and students in various enterprises.

One of the important areas of day to day management of a firms operation is the management of working capital. This is defined as the management of all the short term assets used in daily operations. The proper management of a firms working capital is very much crucial to the financial manager in this competitive scenario. The effective management of working capital is the primary means of achieving the firm's goal of adequate liquidity.

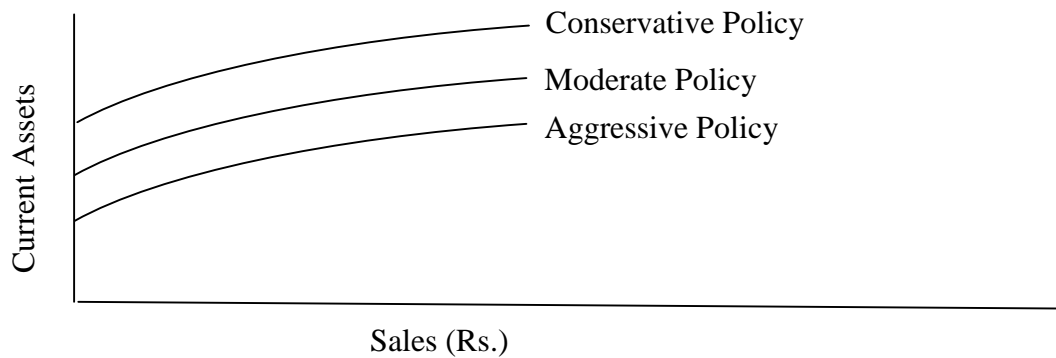
Key Chapters Concepts

-) Working capital management is concerned with the management of CA, CL and the interrelationship that exists between them.
-) Current assets refer to those assets that can be converted into cash within one year. For example, cash inventories, account receivable, marketable securities etc.
-) Current liabilities are those liabilities that are paid within a year. For example, account payable, bills payable, bank overdraft, outstanding expenses etc.
-) The basic goal of working capital management is to manage the firm's current assets and liabilities in such a way that a satisfactory level of working capital is maintained.
-) Working capital policy involves decisions about the company's current assets and current liabilities. What they consist of how they are used and how their mix affects the risk versus return characteristics of the company.

-) The interaction between current assets and current liabilities is therefore, the main theme of the theory of working capital management.
-) There are two concepts of working capital : Gross and Net
 - The term 'gross working capital' also referred to as 'working capital', means the total current assets.
 - The term 'net working capital' can be defined in two ways: (a) The most common definition of net working capital is the difference between current assets and current liabilities, and (b) on alternative definition of net working capital is that portion of current assets which is financed with long-term funds.
-) Working capital policy decisions include:
 - Investment - Level of working capital.
 - Financing - Proportions of short-term and long term debt.
-) Determination of the optimal level of working capital investment involves profitability versus risk trade- off analysis.
 - Higher levels of working capital generally reduce profitability.
 - Higher levels of working capital reduce the risk of financial difficulties.
-) Determination of the optimal proportions of short and long term debt involves profitability versus risk trade- off analysis.
 - Higher proportions of short-term debt increase profitability because of generally lower interest costs and vice versa.
 - Higher proportions of short-term debt increase the risk of financial difficulties and vice versa.

- Overall, working capital policy involves analyzing the joint impact of the working capital investment decision and the working capital financing decision on the firm's risk and profitability.

) Alternative working capital investment policies include: aggressive, conservative and moderate policy (Approaches).



Alternative working capital investment policies

(Source: Financial Management" 2007 Silu Manandhar and Rabindra Bhattarai)

So, every commercial bank needs various types of assets in order to carry out its function without any interruption. They are fixed and current assets. Some fixed assets have physical existences and are required to producing good and services over long period. This types of fixed assets is called tangible fixed assts. It included land, building, plant, machinery, furniture and so on. But some other fixed assets do not generate goods and services directly. However, it reflects the right of the firm. It is called intangible fixed assets. It represents patents, copyrights, trademarks and goodwill. Both fixed assets are written off over a period off time. Current assets are those resources of the firm, which are either held in the form of case or expect to be converted into cash with in an operating cycle of the business. It includes, cash, marketable securities, account receivable, stock of raw materials, work-in-progress, and finished goods. Among these, some assets are required to meet the need of regular production and some for day to day expenses and short term obligations. Current liabilities are those claims of outsiders, which are expecting to be matured with in an accounting year. it includes: creditors, bill payable and outstanding expenses.

Working capital refers to the resources of the firm that are used to conduct operations of day to day activities that make the business smoothly and successful. Without cash

bills cannot be paid, without receivable and payable the firm cannot allow the timing difference between delivery of goods and services and collecting the money to pay for them, without inventories the firm cannot engage in production and nor can it stock goods to provide immediate deliveries. As a result of the critical nature of current assets the management of working capital is one of the important areas in determining whether a firm will be successful. The term working capital refers to the current assets of the firm's those items that can be converted into cash within one year. Net working capital defined as the different between current assets and current liabilities (Hampton & Wagner, 1989: 3-4).

Types of Working Capital

There are two types of working capital, permanent and variables working capital. These working capital are necessary for any organization for continuous production and sales without any interruption.

Permanent working capital: Permanent working capital refers to that level of current assets, which is required on continuous basis over the entire year. A manufacturing concern cannot operate regular production and sales function in the absence of this portion of working capital. That is why a firm holds certain amount of working capital in order to ensure uninterrupted production and sales functions. It is directly related to the firms expansion of operation capacity.

Variables Working Capital

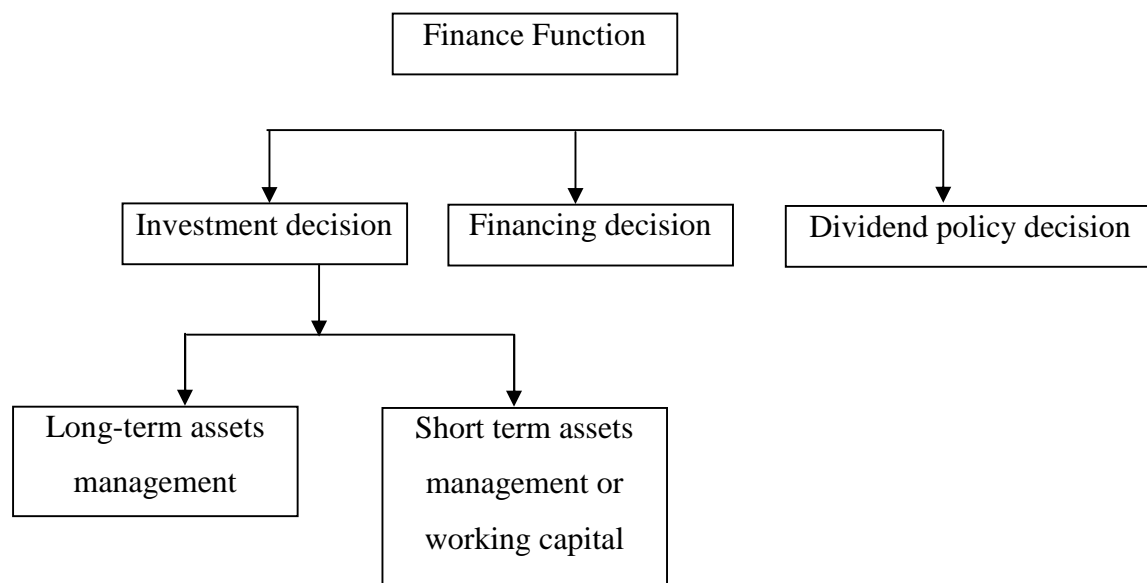
Variable working capital represent that portion of working capital which is required over permanent working capital. If the nature of production and sales of a firm is directly related to seasonal variation, it should stock extra raw materials, work in progress and the inventory of finished goods. Hence, this portion of working capital depends on the nature of firms production relation between labour and management. If a firm has sound management on this portion of working capital, it can easily win over other competitors. (Pandey, 1992: 808)

2.1.2 Working Capital Management

The management of the funds of business can be described as financial management. Financial management is mainly concerned with two aspects. Firstly, fixed assets and fixed liabilities. In other words, long term investment and sources of funds, secondly, current uses and sources of funds. Both of these types of funds play a vital role in business finance. Normally, the finance function can be divided into policy decision, but the most important decision for business in investment decision it includes the long-term asset management and short term assets management. i.e. working capital

Figure – I

Working Capital Management as a Finance Function



In the words of K.V. Smith, the term working management is closely related with short term financing and it is concerned with collection and allocation of resources. Working capital management is related problem that arise in attempting to manage the current assets, current liabilities and the interrelationships that exist between them (Smith, 1974:5)

The goal of the working capital management is to support the long run operation and financial goals of the business. In effect, this involves recognizing the relationship

between risk and return. Three elements must have included in analyzing the trade off between risk and return when managing working capital.

- i. **Insolvency:** This condition occurs when a firm can no longer pay its bills and must default on obligations and possibility declares bankruptcy. A firm without adequate level of working capital may have face this risk.
- ii. **Profitability of assets:** Different level of current assets will have varied effects on profits. A high level of inventory will require high carrying cost. At the same time, the firm will have a wide range of goods to sell and may be able to generate higher sales and profit. Each decision on the level of cash, receivable and inventory should consider the effects to different level.
- iii. **Cost of financing:** When interest rate are high, its costs more to carry inventory then when rate are low, large cash balance may not earn the return that is possible if the cash is converted into operating assets. The cost of debt and opportunity cost of alternative investments are items to consider when evaluating working capital level (Hampton Wagner, 1989: 10).

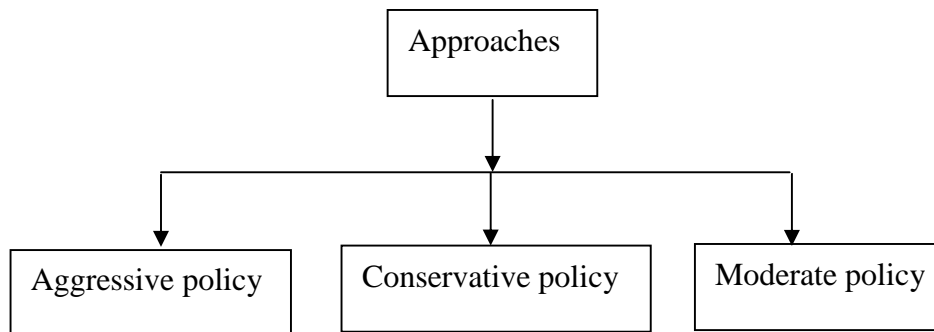
According to I.M. Pandey, there are two concepts of working capital gross and net concept. The gross working capital, simply called as working capital refers to the firms' investment in current assets. Current assets are the assets which can be converted into cash within accounting year (or operating cycle) and include cash, short-term securities, debtors, bill receivable and stocks.

The term net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year and include creditor, bills payable and outstanding expenses. Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities and a negative net working capital occurs when current liabilities are in excess of current assets. He also added that net working capital concept also covers the question of Judicious mix of long-term and short term funds for financing current assets. (Pandey, 1991: 796-797).

Net Working Capital = Current Assets – Current liabilities.

By analyzing the above concept about working capital we concluded that, all the corporations, whether public or private, manufacturing or non-manufacturing have just adequate working capital to serve in competitive market. It is because excessive or inadequate working capital is dangerous from the firms point of view. Excessive investment on working capital affects a firm's profitability just as idle investment, yields nothing. In the same way, in adequate investment on working capital affects the liquidity position of the company and leads to financial embarrassment and failure of the company.

2.1.3 Working Capital Investment and Financing Policies



Aggressive Policy

- Under this policy a company holds a lower level of current assets, thus it has relatively less net working capital.
- Under this policy a company may be aggressive in financing its assets using more short term financing than average.
- This policy yields a higher than expected profitability (return) and a higher risk that the company will encounter financial difficulties.

Conservative Policy

- Under this policy, the company holds a relatively large proportion of its total assets in the form of current assets.
- Meaning that, the company maintains a higher level of current assets than average.

- Under this policy, the company uses more long-term funds than average, to finance current assets.
- This policy results in a lower than expected profitability and a lower risk that the firm will encounter financial difficulties.

Moderate (Average, between) policy

- Under this policy, the company holds a moderate level of current assets.
- Under this policy, assets are financed by short term fund and long term fund equally.
- This policy results a moderate level of expected return and risk that the firm will encounter financial difficulties. (Weston and Brigham, 1996: 348).

2.1.4 Determinants of Working Capital

All the firm, whether public or private manufacturing or non manufacturing must have adequate working capital to survive in competitive market. It should have neither too excess nor too inadequate working capital. But there are no sets of rules or formula to determine the working capital requirement of a firm. It is because a large number of factors that influence the working capital requirement of a firm. A number of factors affects different firm in different ways. Internal policies and changes in environment also affect the working capital requirement. Generally the following factors affect the working capital requirement of the firm (Pandey: 1999: 816).

- a. Nature and size of the organization.
- b. Growth and Expansion
- c. Credit policy
- d. Production policy
- e. Service policy
- f. Availability of credit.
- g. Profit margin
- h. Price level change
- i. Operating efficiency (Pandey, 1999: 817-819)

2.1.5 Superiority

No single working capital investment and financing policy is necessarily optimal for all firms/organization. To select the working capital policy that maximizes shareholder wealth, a financial manager should consider additional factors, including the inherent variability in sales and cash flows and the degree of operating and financial leverage employed.

2.1.6 Importance/Need for Working Capital

Importance of working capital has increased. A firm must have working capital to operate and survive.

In many industries, working capital (current assets) constitutes a relatively large percentage of total assets. (Financial Management' 2007, Shilu and Rabindra Bhattarai)

Working capital is the lifeblood and controlling nerve center of every business organization as without the proper control upon working capital no business organization can operate smoothly. Therefore, it plays a crucial role in the success and failure of the organization. The need for working capital to run the day to day business activities can not be overemphasized. We can hardly find a business firm which does not require any amount of working capital. Indeed firms differ in their requirement of the working capital. As we know that business firms aim at maximizing the wealth of shareholder. In its endeavor to do, so a firm should earn sufficient return from its operation and activities. The extent to which profit can be earned naturally depends upon the magnitude of sales among other thing. For the constant operation of business, every firm needs to hold the working capital component such as cash, receivables, inventory etc. Hence every firm needs working capital to meet the following motives. (Pandey, 1999: 809).

Transaction Motive: Transaction motive require a firm to hold cash and inventories to facilitate smooth production and sales operation regularly. The case of bank to hold cash to easily provide the services to the customers. Thus, the firm needs working capital to meet the transaction motive.

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

Speculative Motive:

It refers to the desire of a firm to exploit opportunities as an opportunity of purchasing raw materials at reduced price on immediate payment making investment on lucrative fields to speculate on interest rates, to make purchase at favorable price and the like. Hence, the firm and the working capital to meet the speculative motive (Van Horne & Wachowicz, 1999: 220).

2.1.7 Criticism

Working capital is generally defined in financial reports as current assets minus current liabilities. Some refers to this measure as net working capital but if working capital is what remains after deducting current liabilities, it is redundant to add the word "net" (Copeland).

2.2 Review of Journal/Articles:

This section is also important of literature, review of working capital. From the study of this section much latest information can be derived about related field. This part is mainly focused on the review of journals and articles published by various management expert in working capital management.

Monohar Krishna Shrestha (1982), in his study, "Working Capital Management in Public Enterprises" stated that manager often lacked basic knowledge of working capital and its overall impact on the operative efficiency and financial availability of public enterprises. The study was based on sample of ten public enterprises namely Birgunj Sugar Factory, Janakpur Cigarette Factory, Raghupati Jute Mills, Dairy Development Corporation, National Trading Ltd. National Construction Company of Nepal, Royal Drugs Limited, Harishiddhi Brick and Tile Factory, Nepal Cheurl Ghee

Industry Ltd and Chandeshowri Textile Factory Ltd. The study had pointed at certain policy flows such as deficient financial planning neglect of working capital management. Deviation between liquidity and turnover etc. He had suggested some measures for their effective operation and efficient result. The problem could be sorted out through identification of needed funds, developed of proper management information system, determination of sound combination of short term and long term source to finance working capital requirements.

The study was based on ratio analysis. He had selected different types and nature of PEs. That is why with lower turnover, had higher liquidity position. The author should have selected similar nature of PEs or analysis should have been made seperately. He had taken only single year data for the study. But to find the real situation of PEs, it should be more than five years.

K. Acharya (1988), in his article, "The Management of Working Capital in the PEs of Nepal" had described the two major problems, operational and organizational problem regarding the working capital management in Nepalese PEs. The operational problem he found, listed in the first part were increase of current liabilities than current assets, not maintain current ratio 2:1 and slow turnover of inventory. Similarly, the change in working capital in relation to fixed capital had vary low impact over the profitability, thin transmutation of capital employed to sales, absence of apathetic management information system, break even analysis, fund flow analysis and ratio analysis were either undone or ineffective for performance evaluation finally, monitoring of the proper functioning of working capital management had never been considered a managerial job.

In the second part he had listed the organizational problem in the PEs. In most of the PEs there was lack of regular internal and external audit system as well as evaluations of financial results. Similarly, very few PEs had been able to present their capital requirement, in addition functioning of finance department was not satisfactory and some PEs were even facing the problem of capacity underutilization. To make an efficient use of funds for minimizing the risk of loss to attain profit objectives, he had made some suggestions. The PEs should avoid the system of crisis decision which prevailed frequently in their operation, avoid fictitious holding of assets, the finance staff should be acquainted with the modern scientific tools used for the presentation

and analysis of data and lastly, he had suggested optimizing the level of investment at point of time. Neither over nor under investment in working capital be desired by the management of an enterprise because both of these situations will erode the efficiency of the concern.

According to NK Agrawal (1998), proper management of working capital must ensure, adequate amount of working capital as per need of business firms. It should be in good health and efficiency circulated. To have adequate health and efficient circulation of working capital it is necessary that working capital be properly determined and allocated to its various segments, effectively controlled and regularly reviewed and "working capital consist broadly at the portion of the assets of the business used in or related to, current operational and represented at any one time of the operating cycle by such items as an account receivables, inventories of raw materials, stores, work-in progress and finished goods, bill receivable and cash. Assets of this type are relatively temporary nature, since the invested names are normally capable of being recovered or of being change in form with in a short period of time, and the time, and the time element of ultimate recovery depends on the manufacturing cycle as well as sales and collection cycle".

Weston and Brigham (1997), have given some theoretical insights into working capital management after their various research studies on it. The bond conceptual findings of their study provide sound knowledge and guidance for the further study on the field of management working capital in any enterprises and naturally to this study as well. They explain in the beginning, the important of working capital, the use of short term versus long term debt, relationship between current assets to fixed assets. The components of working capital they have deal with current assets, which are cash marketable, securities, receivable and inventory. For the efficient management of cash, they have explained the different cash management model. They have also explain the major sources and form of short term financing. Such as trade credit, loan from commercial banks and commercial paper.

L.D. Mahat (2004), has published an article relating to spontaneous resources working capital management. He has defined the three major source of working capital i.e. equity, financing, debt financing and spontaneous sources of financing regarding the working capital management. Debt financing include short tern bank financing such

as bank overdraft, cash credit, bills purchase and discounting letter of credit etc. Where as spontaneous source of working capital include trade credit, provision and occurred expenses.

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 in corporate finance such as environment should be efficient enough to cope with the possible worst happenings in future for working capital management. He said that managing the working capital resource 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 the percentage of operating expenses to the turnover and depletion in the profit. Therefore, spontaneous sources of working capital will better to working capital in order to improve its performance.

Consequently, in a changed economic scenario, every company should realize that inability to manage working capital might land them in a vicious circle that can be hard to get out from. It is indeed essential for industries to tighten their belts and checks their financial stability to face and stand in forthcoming competitive day (Mahat, 2004)

2.3 Review of Research Paper and Previous Thesis

Niraj K.C. (K.C., 2000) in his thesis entitled. "Comparative Study of Working Capital Management of NBL and NABIL Ltd". He has examined the management of working capital in NBL and NABIL. The specific objectives undertaken in his study are:

- 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.

- Recommendation and suggestion for the improvement of working capital management of NBL and NABIL in the future.

Study has mentioned the following findings.

- The average cash and bank balance and loans and advances are higher on NABIL than NBL. Management of loans and advances is more problematic in NBL than NABIL.
- Interest income of NBL is better than NABIL.
- Liquidity management policies of these two banks are significantly different.
- NABIL has the better utilization of deposit in income generating activity than NBL. It also shows that NABIL has better investment efficiency in loan and advances.
- Due to more conservative working capital policy risk of insolvency is lesser but cost of fund is higher on NBL than NABIL.
- Profitability position of NABIL is far better although NBL earned higher interest than NABIL.

Sthapit Sushma (2005) has conducted the study on "Financial Performance of Nepalese Commercial Banks in Nepal".

The research finding of the study are as follows:

- The liquidity position of SCBL has better than other five banks NABIL, BOK, Nepal SBI Bank, NIBL, and HBL in respect of current ratio standard should be 2:1. Although, this standard can not be maintained by all commercial banks. HBL has lower current ratio than other five banks.
- Nepal SBI bank has better position than other five banks in the case of cash and bank balance with respect to total deposit. In contrast, a high ratio of cash and bank balance may indicates the banks inability. Thus, in case of NABIL, HBL, NSBI, NIBL and BOK, have invested their deposits fund in more

productive sector like short term investment, marketable securities etc. for improving their profitability.

- Cash and bank balance position with respect to deposits (excluding fixed deposit) in the case of NSBI has better performance against the readiness to serve its customer deposits than other five banks.
- NSBI has a high ratio of cash and bank balance percentage in respect of current assets. But other remaining five banks have low ratio than NSBI's yearly average (19.44%) is higher than composite average (11.11%), although, yearly average of BOK and NIBL have also covered more than composite average. In contrast, it is clearly seen that cash and bank balance percentage is lowest in case of SCBNL in comparison with other banks.
- Investment in government securities percentage in respect to current assets, in the case of SCBNL has certainly registered better than other five banks. In the case of NBIL, it has very low ratio with respect of current assets among the six banks.
- Net profit to total assets ratio in the case of SCBNL has registered better performance by utilizing its overall resources than other five banks. NSBI has low percentage ratio than the other five banks.
- In the case of SCBNL, it has registered more percentage in respect of net profit to total deposits ratio than other bank i.e. NABIL, BOK, NIBL, NSBI, and HBL. Comparatively, SCBNL could earn more profit over the deposit amount than other five banks.
- SCBNL has appeared better achievement by mobilizing an resources of shareholder's equity than other five banks. This ratio reflects the profitability of the owner's investment of commercial banks. NSBI is not able to mobilizing shareholder equity than other five banks.
- Return on loan and advance in the case of SCBNL have appeared better achievement by mobilizing their loan and advances.

- Market price per share of SCBNL has occupied better performance in the competitive open market of investor expectation than other five banks i.e. NABIL, HBL, NSBI, NIBL and BOK.
- Market rate of return of BOK is better than other five banks i.e. NABIL, SCBNL, HBL, NSBI and NIBL.
- Market price to book value ratio of commercial banks are fluctuating trend over the last five different fiscal years. In the case of SCBNL has recorded highest position by securing high yearly average in the comparison of other five banks.
- The degree of relationship between deposits and loan and advances of the commercial banks are positive. Moreover, the coefficient of determination of BOK has registered higher value than other five banks.
- The degree of relationship between loan and advances and net profit of all commercial banks are positive. Moreover, by considering the coefficient of determination of SCBNL has registered higher value than other five banks.

Anir Raj Bhandari (Bhandari 1990) in his thesis entitled "Working capital Management" (A Case Study of Nepal Bank Ltd) has done research work for the ten years period 2034 to 2034 to 2043 B.S. He has drawn some major findings from his study were as follows:

- The bank has heavy liquidity assets that reflect the improper utilization of the bank's fund due to heavy growth in deposit and other borrowed capital. The volume of share capital become in sufficient. Rate of return on shareholder investment is considered insufficient the bank could not fully utilize its funds and not paid attention to the portfolio management in investment.

Om Bikram Gurung (2002), in the concern of working capital management of Nepal lever limited has carried out another study related to working capital management. He has used financial and statistical tools to analyze the financial statement of the company for five years from 053/058. The objectives of his study is to analyze the

liquidity position, composition of working capital, assets utilization and profitability position of NLL. The major findings of his study are as follows:

- Inventory holds the major portion of current assets followed by miscellaneous current assets, sundry debtors, cash and bank balance. All the components of current assets are fluctuating during observed period.
- The liquidity position of NLL is not satisfactory since current and quick ratios are below satisfactory level but increasing trend implies that liquidity position can be expected to be good in future.
- There is not trade off between liquidity and profitability; however profitability of NLL is satisfactory.
- Company has not taken serious decision on financing policy.
- The company has preferred short-term fund rather long-term fund, which has been indicated by increasing trend of current liabilities to long term to liability ratio. It applied firm's moderate financing policy.
- Inventory and receivable turnover are fluctuating during study period. This indicate that the company has high risk.

He has suggested the company should determine appropriate financing sources. Company should reduce inventory and receivable level for adjusting with sales and receivable level for adjusting sales and production level. To balance them company should improve marketing and credit policy.

His study has not covered all the EPs in manufacturing sector. Each selected enterprises for the study is differing in its working and nature. This study has only used secondary data for the analysis of working capital management of NLL. He has only mentioned simple regression, standard deviation and correlation coefficient among the statistical tools.

Hari Prasad Lamsal (2002) has carried out a research work on the topic, "A comparative study of working capital management of NABIL and Standard Chartered Bank Ltd."

The prime objective of his study was to comparatively assess the management of working capital of the concerned banks. He found that average cash and bank balance and government securities percentage was higher in Standard Chartered than Nabil but loans and advances percentage was higher in Nabil bank. Standard Chartered has less costly source of funds. So Nabil had higher interest income. Liquidity position of Standard Chartered (except in current ratio) was better than Nabil Bank. Due to conservative working policy risk of insolvency was lesser but the cost of fund was higher in Nabil than in Standard Chartered. Profitability position of Standard Chartered was better although Nabil earned higher interest than Standard Chartered.

Rojina Shrestha (2003) has carried out her study on working capital management with respect to National Trading Limited and Salt Trading Limited. She has used financial as well as statistical tools to analyse the final statement of ten years from 04/55. Major findings of her study are as follows:

- Both trading companies have followed aggressive financing policy.
- Investment in current assets is high in both with respect to its total assets and net fixed assets.
- The net working capital turnover is also fluctuating year after year and even it reaches to negative figure in the last year of the study period.
- Liquidity position of National Trading Limited is unsatisfactory and Salt Trading Limited is satisfactory and favourable.
- Overall return position of Salt Trading Limited is not favourable.
- The relationship between current assets and sales of National Trading Limited has insignificant and Salt Trading Limited has significant relationship.
- Correlation between net profit and net working capital is negative in both cases with insignificant relationship because the correlation coefficient of both companies is less than 6 P.E. Net profit and net working capital is not correlated.

Naresh Kunwar (2000) has carried out a research on "Working Capital Management of Pharmaceutical Industry of Nepal with Reference to Royal Drug Limited". He has used statistical as well as financial tools to analyze the financial statement of 2049/2050 to 2045/055. The main objectives of his study is to analyze empirical testing affecting working capital of Royal Drugs Limited as well as know whether adequacy of working capital depends upon the nature of financing current assets or not. The major finding of this study are:

- It has used more long-term sources of financing than short-term sources.
- It has followed conservative working capital policy.
- The major components of current assets in Royal Drug Limited are cash and bank balance, receivable inventory. Among these current assets inventory holds largest portion of current assets.
- The overall portion of current assets to total assets, current assets to net fixed assets are found increasing trend in the study period.
- Company cannot efficiently utilize current assets.
- There is also inefficient management of receivable policy.
- Liquidity position is satisfactory whereas return position is not satisfactory due to negative return.

2.4 Review of Books

Some of the books on financial management regarding working capital management have been reviewed here under:

Weston and Brigham (1984) have given some theoretical insights into working capital management after their various research studies on it. The bond conceptual findings of their study provide sound knowledge and guidance for the further study on the field of management of working capital in any enterprise and naturally to this study as well. They explain, in the beginning, concept of working capital, working capital policy, requirement for external working capital financing. In the next chapter, they have dealt with the various components of working capitals and their effective

management techniques. The components of working capital they have dealt with are cash, marketable securities, receivable and inventory, for the effective management of cash, they have explain the different cash management models. They have also explained the major sources and forms of short term financing, such as trade credit, loan from commercial banks and commercial paper. (Weston and Brigham, 1984: 331)

Van Horne (1994) has categorized the various components of working capital i.e. liquidity, receivable and inventory and current liabilities and grouping them according to the way they affect valuation. He has also described the different methods for efficient management of cash and marketable securities and various models for balancing cash and marketable securities. For the management of receivable, different credit and collection policies have been described and various principle of inventory have been examined for inventories management and control. He has written different types of books, articles and other facts relating to financial terminology. He is dealing about working capital management in broad version. He has explained all short term assets namely cash, marketable securities, receivables, inventories and the administration of current liabilities. (Van Horne, 1994: 421)

Prasanna Chandra (2001), an Indian writer Prasanna Chandra wrote a book for fiancé subject called financial management, theory and practice. He has included a topic of working capital management in overall considerations. Net working capital is the difference between current assets and current liabilities. Management of working capital refers to the management of current assets as well as current liabilities. The major thrust is understandable because current liabilities arise in the context of current assets. It may be mentioned here that it is an accounting concept with little economic meaning. It makes little sense to say that a firm manages its net working capital what a firm really does is to take decisions with respect to various current assets and current liabilities. (Chandra 2001: 259)

2.5 Research Gap

All the above studies are concerned with the research titled or the review of related studies, of "Working Capital Management/Position" of bank. There is very limited study on banking sectors with reference to working capital management. The review

of that studies it can be concluded that financial ratio and accounting ratio analysis is very important tools, perhaps the most important one is examining the financial ratio of any enterprises. The most of studies have been concerned with manufacturing enterprises and most have been used financial tools and secondary data. They have only included summary, finding and conclusion in their study but not recommend concrete suggestions to solve the finding problems. So, the case with banks, income generating assets possessed by a bank, the components of the current assets, the deposit collected by it and the soundness with which it extends its credits and investments are the most important aspects of the banks. Liquidity maintained by the banks to meet its daily operation is another important aspect.

The quest to extend knowledge of banking operations led to the undertaking of the current research work. The current research work will definitely extend the hitherto available knowledge on the implications of working capital management of commercial banks in Nepal with measuring the financial constitution of banks.

There is very limited study of working capital management of banking organizations. Thus, to fill up the gap, research has conducted this research topic to light on working capital position and to suggest the possible measures for the betterment and welfare of the trading sectors. Researcher has used financial as well as statistical tools like ratio analysis, mean, standard deviation, coefficient of correlation, regression analysis and primary tools. Almost all the ratios have been applied to cover the analytical part and fulfill the objectives of this study. It involves more recent data of bank for five years.

CHAPTER - III

RESEARCH METHODOLOGY

Research methodology is a way to systematically solve the research problem. It may be understood as a science of study how research is done scientifically; in it, we study the various steps that are generally adopted by research in studying his research problem along with the logic behind them (Kothari, 1990: 10) it tries to make clear view of method and process adopted in the entire aspect of study. It is known a path from which can systematically solve the research problem.

Research is the process of systematic and in depth study or research for any particular topic, subject, or area, of investigation, balked by collection, compellation presentation and interrelation of relevant details of data. It is a careful search or inquiry into any subject or subject matter, which is an endeavor to discover find out valuable fact, which would be useful for future application or utilization (Michel 2002). The main purpose of this chapter is focus on the different research methods and conditions, which are used while conducting this study. Every study needs systematic methodology to achieve the pre-mentioned objectives of research. In this study, a working capital management of bank also needs a appropriate research method. For the better result, it includes research design, population and sample, nature and sources of data collection of data and tools used for analysis of data. It is really a method of critical thinking by defined and collecting and organizing and evaluating data, making deduction and making conclusion.

3.1 Research Design

Research design is the plan, structure and strategy of investigation conceived to obtain answers to research questions and to variances. The plan is the overall scheme or program of the research.

A well settled research design is necessary to fulfill the objective of the study. Generally research design means definite procedures and techniques that guide to sufficient way for analyzing and evaluating the study. The main objectives of this study is to evaluate the working capital management of Nabil Bank Limited, so this

study attempts to make comparison and to establish relationship between two or more variables. Thus, it is based on descriptive and analytical method. Financial tools as well as statistical tools are employed to provide analytical insights and to achieve prescribed results. In other hand, in order to achieve the predetermined objectives of research, secondary data have been used. Thus, it is not possible for research to conduct a research work without a search design.

In other words, a research design is the arrangement of conditions for collection and analysis of data that aim to combine relevance to the research purpose with economy in procedure. It is the process which gives us an appropriate way to reach research goal.

3.2 Population and Sample

The population to the industries of the same nature and its services and product in general. Thus, total of 27 commercial banks operating in Nepal constitute the population of the data and the bank under study constitutes the sample for the study which are actively conducting their services in market. All the banks are not included in this study. so, Nabil Bank Limited has been taken as a sample from the population for this research. Data are collected for five years (2005 to 2009) to analyze the effectiveness of working capital management of banking sectors in Nepal.

3.3 Nature and Sources of Data

The data used in this study are secondary in nature. The secondary data have been extracted from financial statement, annual reports and publication of security board and concerned bank.

3.4 Collection of Data

Financial data are required to achieve predetermined objectives of this study, which have been directly extracted from the balance sheet and income statement and profit and loss account of the bank.

3.5 Tools of Data Analysis

For the analysis of data, different financial ratio analysis, analysis of different working capital and working capital required and statistical tools (mean, standard deviation, correlation coefficient and regression equation) have been used.

3.5.1 Financial Tools

Financials tools are very essential tools to identify the financial strength and weakness of any organization. In order to obtain the relationship between various variables, the ratio analysis is used. It shows the quantitative or numerical relationship between two variables or more of financial statement. Financial ratio analysis is widely used to know the financial condition of the firm. Bank may able to judge their financial stability by using various ratios. It is the relationship between financial contained in the financial statement (i.e. B/S and P/L) It helps to spot out the financial strength and weakness of the firm. It is the process of summarizing the large quantity of financial data and making quantitative judgement about the firm's financial performance. Those various ratios are employed and grouped for the analysis of composition of working capital, liquidity position, turnover position, profitability position, types of working capital and working capital required. The financial tools used in this study are as follow: Liquidity ratio, activity or turnover ratio and profitability ratio. Similarly, net working capital in term of cash and bank balance percentage, loan and advances percentage, money at call & short notice percentage, government security percentage and miscellaneous current assets percentage are also calculated.

1. Liquidity Ratio

This ratio measures the liquidity position and short term solvency of the firm indicating the company's ability to meet short term obligation. The current ratio and quick ratio measures the liquidity position of the company (Pradhan, 2000: 53). These ratios are calculated to judge the long term as well as short term financial position of concerned firm. Liquidity of any business organization is directly related to working capital or current assets and current liabilities of that organization. One of the main

objectives of working capital management is keeping good liquidity position. Every bank needs liquidity to meet loan demand and deposit withdrawals. Without good liquidity, bank is not able to operate its function. To measure the bank solvency position or ability to meet its short term obligation, various liquidity ratios are calculated. The liquidity ratios calculated in this study are as follows:

a. Current Ratio

Current ratio reflects the strength of current assets available with the company over its current liabilities into cash in one accounting year. This ratio indicates the current short term solvency position of the bank. The current ratios are the ratios of total current assets to current liabilities. Higher current ratio indicates better liquidity position. In other words, current ratio represents a margin of safety. The higher current ratio, the greater margin of safety, and the larger amount of current assets relation to current liabilities. The more bank's ability to meet its obligation. By definition,

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

b. Quick Ratio

Quick ratio is used to measure the ability of concerned firms to pay current obligation. (Short term) without depending on other liquid assets of current ratio. It provides relationship between quick assets with current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Cash is the most liquid asset other assets which are considered being relatively liquid and included in quick assets are book debt and marketable securities. The quick ratio can be found out by dividing the total quick asset by total liabilities.

$$\text{Quick Ratio} = \frac{\text{Quick or liquid assets}}{\text{Current liabilities}}$$

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

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

$$\text{Balance Deposit Ratio} \times \frac{\text{Cash and bank balance}}{\text{Total deposit (excluding fixed deposit)}}$$

ii. Saving Deposit to Total Deposit Ratio

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

$$\text{Saviung Deposit to total Deposit Ratio} \times \frac{\text{Saving deposit}}{\text{Total deposit}}$$

2. Activity or Turnover Ratio

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

a. Loans and Advances to Total Deposit Ratio

The ratio assesses to what extent the bankers are able to utilize the depositor's fund to earn profit by providing loan and advances. In other words, how quickly total collected deposits are converted into loans and advances given to the client to earn income. It is computed by dividing the total amount of loan and advances to total

deposit fund. Higher ratio indicates higher/proper utilization of funds and low ratio is the signal of inefficiency or remaining idle.

$$\text{Loan and advance to total deposit ratio} \times \frac{\text{Loan and advance}}{\text{Total deposit}}$$

b. Loan and Advances to Fixed Deposit Ratio

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

$$\text{Loan and advance to fixed deposit ratio} \times \frac{\text{Loan and advance}}{\text{Fixed deposit}}$$

c. Loan and Advances to Saving Deposit Ratio

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

$$\text{Loan and advance to saving deposit ratio} \times \frac{\text{Loan and advance}}{\text{Saving deposit}}$$

3. Profitability Ratio

The profitability ratio, as the name suggests, measures the operating profitability in terms of profit margin return on equity and return on total investment, and reflects the overall efficiency and effectiveness of management (Pradhan 2000, 53). Share holders, bankers, government, tax collectors, employees are concerned with the

profitability of the company. The shareholders are interested with their rate of return, employee in the future, prospect of the company, government in companies, tax payment capacity and bankers in the perspective of the company. A required level of profit is necessary for survival and growth of a firm in a competitive environment.

Profitability can be measured in term of a relationship between net profit and assets. This ratio is also known as profit-to-asset ratio. It measures the profitability of investment. Various ratios can be developed based upon the profit under different circumstances. These different ratios are called profitability ratios, which are required to support the purpose of the study. The profitability ratios calculated in this study are:

a. Interest Earned to total Assets Ratio

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

$$\text{Interest earned to total assets ratio} \times \frac{\text{Interest earned}}{\text{Total assets}}$$

b. Net Profit to Total Assets Ratio

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

Hence,

$$\text{Net profit to total assets ratio} \times \frac{\text{Net profit}}{\text{Total assets}}$$

c. Net Profit to Total Deposit Ratio

This ratio measures the percentage of profit earned from the utilization of the total deposits. Deposits are mobilized for investment, loan and advances to the public in

generating revenue. Higher ratio indicates the return from investment on loan and lower ratio indicates that the funds are not properly mobilized.

$$\text{Net profit to total deposit ratio} \times \frac{\text{Net profit}}{\text{Total deposit}}$$

4. Composition of Working Capital

To operate a business, different kinds of assets are needed. For the day to day business operation, different types of current assets are utilized. In case of Nabil Bank Limited, the main components of current assets are cash and bank balance, loan and advances, government securities, money at call & short notice and Miscellaneous current assets, are also a component of current assets, (prepaid expenses outstanding income like, interest receivable and other current assets are included in miscellaneous current assets).

In this study, composition percentages of following components:

- Cash and bank balance percentage.
- Loan and advances percentage.
- Government securities percentage.
- Money at call & short notice percentage.
- Miscellaneous current assets percentage.

5. Net Working Capital

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

3.5.2 Statistical Tools

Various financial tools mentioned above were used to analyze the working capital management of Nabil Bank Limited. Likewise, the relationship between different variables related to the study topics were also drawn out using statistical tools.

a. Mean or Average

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

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

Where,

\bar{X} = Arithmetic average

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

N = number of terms

b. Standard Deviation

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

Standard deviation is represented as:

$$\sigma = \sqrt{\frac{\sum d^2}{n}}$$

Where,

σ = Standard deviation

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

n = Number of items

c. Coefficient of Variation

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

Mathematically,

$$C.V. = \frac{\exists}{\bar{X}}$$

Where,

CV=Coefficient of variation

\exists = Standard deviation, and

\bar{X} = Arithmetic average

d. Coefficient of Correlation

Correlation is a statistical tool which is used to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between to sets of figures. Among the various methods of findings out coefficient of correlation, Karl Person's Method is applied in the study. The result of coefficient of correlation is always between +1 and -1. When r, the coefficient 0 correlation is +1, there is perfect relationship between two variables and vice versa. When r is 0, there is no relationship between two variables. In correlation analysis, only one variable is treated as dependent and one or more variables are treated as independent.

The formula for the calculation of coefficient of correlation between x and y is given below.

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

Where,

r = coefficient of correlation

x, y = Variables of correlation coefficient

e. Trend Analysis

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

$$Y_c = a + bx,$$

Where,

Y_c = 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 = variables in time axis.

To find the value of a and b , we have to solve the following equations;

$$Y = Na + b \sum X^2 \dots\dots\dots(i)$$

$$\sum XY = a \sum X + b \sum X^2 \dots\dots\dots(ii)$$

Where,

N = Number of years.

f. Probable Error (P.E)

Probable error is measured for testing the reliability of an observed value of correlation coefficient. It is computed to find the extent to which is dependable. If correlation coefficient is greater than 6 times P.E. the observed value of r is said to be significant, otherwise nothing can be concluded with certainty. But if the calculated (r) is less than the P.E. correlation is not at all significant. It is calculated by using following formula.

$$P.E.= \frac{0.6745(1 - Zr^2)}{\sqrt{n}}$$

Where,

P.E.= probable error of correlation coefficient.

r= Correlation coefficient.

n= Number of observations.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

Introduction

This chapter attempts to serve the purpose by analyzing collected data and is the heart of the entire report. After the collection of data, an analysis of the data and the interpretation of the results are necessary. Analysis of data comes prior to the interpretations and analysis of empirical data focused on how far the Nabil bank limited is in position to manage its working capital. The facts and figures collected are to be processed with a view of reducing them to manageable proportions. Only by such a careful and systematic processing, the data collected will lend itself for statistical treatment and meaningful interpretations. To reach toward accurate interpretation.

The major variables for this study are current assets, current liabilities. Inventory, receivable, net working capital, net profit etc. Simply presenting the variables is not sufficient, so various financial and statistical tools have been employed for the analysis. This chapter begins with the composition of working capital followed by banks, then analysis of various financial ratios and the financial variables are also compared with the help of available statistical tool i.e. mean, standard deviation, correlation coefficient etc.

The major variables of the study are cash and bank balance, loan and advances and investment of government securities. Relevant data and information of working capital as well as financial performance of Nabil bank limited are presented. Compared, tabulated and analyzed accordingly. Analysis is performed using various financial and statistical tools. In financial tools, it uses ratio analysis in which various related ratios have been compared and analyzed such as liquidity ratios, turnover ratios, profitability ratios and composition of working capital. In statistical tools, it uses trend analysis, correlation analysis.

4.1 Analysis of Composition of Working Capital

Business needs different types of assets to operate its activities. Some assets are needed for the long-term fulfillment of the business activities while others are needed to carry out the day-to-day operation of the business. The assets that are used to carryout day-to-day operation of the business are known as current assets (Working capital).

The composition of current assets i.e. working capital of Nabil bank limited are analyzed below:

Investment of Current Assets (Working Capital)

Appropriate level of current assets (gross working capital) should be maintained to run day-to-day business activity more efficiently. There should be proper management of current assets because in absence of it, the main objective of any business organization cannot be obtained.

A high ratio of current assets in total assets structure does not always convey a high liquidity position because current assets consist of cash, receivables and stocks for the qualitative consideration of the current assets its composition should be seriously examined. In common sense, a high ratio of cash to currents indicates liquidity current's as it has zero conversion rate and hundred percent liquidity conversely, it is also an indication of poor cash management as ideas of cash reserved involved an opportunity cost, so the quality of current assets can be judged with the individual holding of cash, receivables and stocks to its current assets holding.

The main components of current assets at Nabil bank are cash and bank balance, loan and advance, investment in government securities and miscellaneous current assets are also the component of it. (i.e. prepaid expenses, outstanding incomes, for example, interest receivable, and other current assets are miscellaneous C.A.) The following table shows the composition of current assets of Nabil Bank Limited from 2005 to 2009 A.D.

Table 4.1**Current Assets Component of Nabil Bank**

Rs. in Million

Fiscal Year	Cash balance	Bank balance	Money at calls short notice	Investment govt. securities	Loan & advance	Misc. Current asset	Total current asset
2004/05	1463.52	4130.28	8684.28	42672.33	10586.17	5438.83	72975.41
2005/06	2378.18	3924.19	17349.01	61785.33	12922.54	5446.68	103805.93
2006/07	2704.06	11294.18	5635.32	89453.10	15545.77	5120.50	129752.93
2007/08	5114.26	21597.13	19523.60	99397.71	21365.05	6063.93	173061.68
2008/09	6743.95	26981.16	5528.88	10826.37	27589.93	8646.95	86317.24

Source: www.nabilbank.com.

The above table shows the fluctuation in the components of current assets of Nabil bank during the study period. The bank has the highest level of total current assets of Rs. 17306.61 million in the year 2008 and the lowest level of current assets of Rs. 72975.41 million in the year 2005.

The component of current of the bank are cash balance, Bank balance, money at call and short notice, Govt. securities, loan and advance and misc. current assets. The amount of these items are Rs. 1463.52 million, Rs. 4130.28 million, 8684.28 million, 42672.33 million, 10586.17 million and 5438.83 million respectively in the fiscal year 04/05 where as these amount are Rs. 6743.95 million, 26981.16 million, 5528.88 million, 10826.37 million, 27589.93 million and 8646.95 million respectively in the year 2008/09.

Table 4.2**Percentage Component of Current Assets of Nabil Bank**

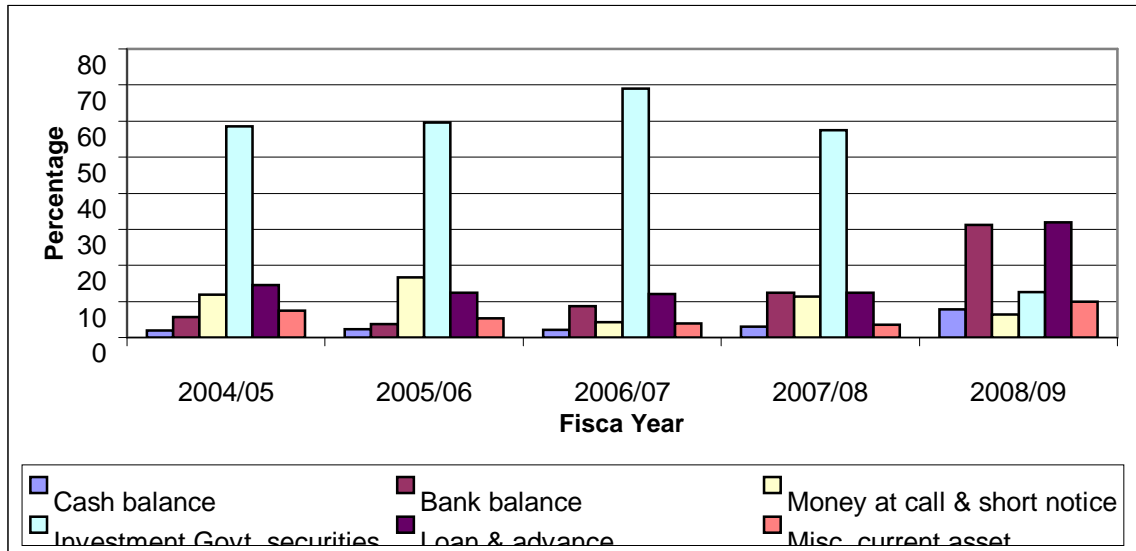
Fiscal year	Cash balance	Bank balance	Money at call & short notice	Investment Govt. securities	Loan & advance	Misc. current asset	Total current assets
04/005	2.00549	5.6598	11.90028	58.4749	14.5064	7.4529	100
05/006	2.29098	3.7803	16.7129	59.52003	12.448	5.2469	100
06/007	2.08401	8.7043	4.34311	68.9411	11.9810	3.9463	100
07/008	2.95516	12.4794	11.2812	57.4348	12.3453	3.54039	100
08/009	7.81298	31.2581	6.4053	12.5425	31.9634	10.0176	100
Average	3.429	12.376	10.128	51.382	16.649	6.033	100
S.d.	2.4786	11.0568	4.8773	22.1927	8.6179	2.7046	
C.v.	0.7226	0.8933	0.4815	0.4319	0.5176	0.4482	

Source: www.nabilbank.com.

From the above table current assets percentages of the Nabil bank is fluctuated and the components are interrelated between them and the Nabil bank's current assets average on cash balance is 3.429 percent and the bank has hold the highest level of cash balance in current asset is 7.8129 percentage in the fiscal year 08/09 and lowest is 2.0054 in year 04/005 and than the S.d. is 2.4786 than C.v. is 0.7226. It shows that the risk is lower and the return is high and the same as bank balance, money at calls & short notice, Investment Govt. securities, loan and advances and misc. current asset's average is 12.376, 10.128, 51.382, 16.649, 6.003 respectively. Then, the S.D. of this component of 11.056, 4.877, 22.1927, 8.6179, 2.7046 and coefficient of variation is 0.893, 0.4815, 0.4319, 0.5176, 0.4482 respectively. That is different types of risk and return of the Nabil bank. The total current assets percentage are call 100 percent.

Diagram 4.1

Percentage Component of Current Assets of Nabil Bank



4.2 Trend of Component of Current Assets

a) Trend of Cash Balance: Cash balance is one of the major component of current assets of the bank. Cash balance of Nabil bank is fluctuated over the Study period. The level of it is highest with 7.8129 percentage in the current assets of the bank in the 2008/2009 fiscal year where as its weight is lowest with 2.00549 percentage in the 2004/2005 fiscal year. The average level of cash balance of the bank is 3.429 percentage.

Similarly, standard deviation is 2.4786% in Nabil bank. Hence, it shows Nabil has lower risk factor. Like wise, coefficient of variation is 0.7226 for this bank it means the rate of return of Nabil is not satisfactory level.

From the calculation of cash balance percentage trend, the value of the constants 'a' and 'b' are as follows:

$$a = 3.4297\% \text{ or } 0.034297$$

$$b = 1.2279$$

The rate of change of the bank is positively increase in every year.

Trend Value

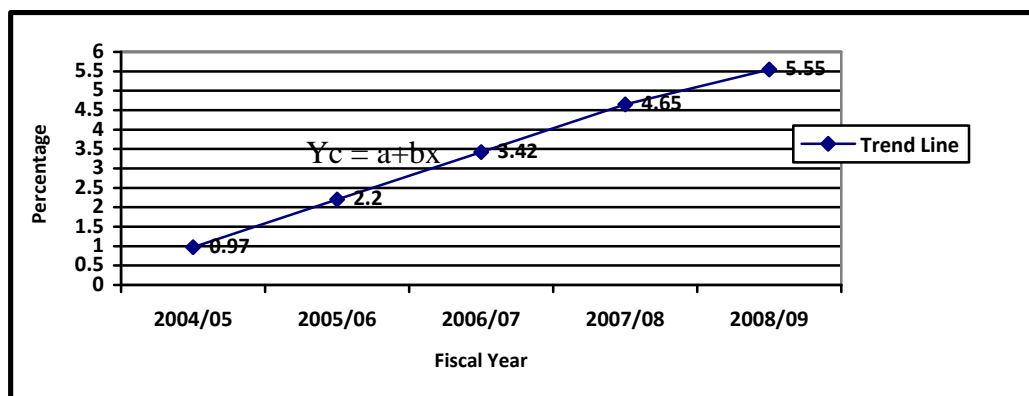
The trend values of cash balance percentage

Fiscal Year	Cash Balance (YC)
2004/05	0.9739
2005/06	2.2018
2006/07	3.4297
2007/08	4.6575
2008/09	5.8855

Source: Appendix 3

Graph 4.2

Trent Line of Cash Balance Percentage



Above Graph of Trend line of cash balance shows that the Trend line is increasing in the 2nd year than the 1st year. It shows that the current assets of this bank increases in compare of 1st year. Then 3rd years Trend line also in increasing order. In 4th year, trend line of cash balance is also increasing order and shows that the current assets of bank is improved. So, that the bank's capacity of investment is strong in the 4th year. Above analysis represents that the trend line of cash balance is in increasing rate in the study period and highest in the 5th year. the trend line shows that Nabil bank effectively utilized its cash balance to invest in income generating sectors.

b) Trend of Bank Balance: bank balance is also one of the important components of current assets of the bank. Bank balance of Nabil bank is fluctuated over the study period. The level of it is highest with 31.7803 percentages in the 08/009 fiscal years.

Its weight is lowest with 3.780 percentage in fiscal year 05/06. The average level of bank balance of the bank is 12.376 percentages.

Similarly, standard deviation is 11.0568 in the Nabil bank. Hence, it shows Nabil has lower risk factor and the coefficient of variation is 89.33% for this bank. It means the rate of return of Nabil bank is not satisfactory level.

From the calculation of Bank balance percentage trend, the value of the constant's 'a' and 'b' are as follows:

Constants value of Nabil bank in Bank balance.

$$a = 12.3763$$

$$b = 5.9895$$

The rate of change of the bank is positively increase in every year.

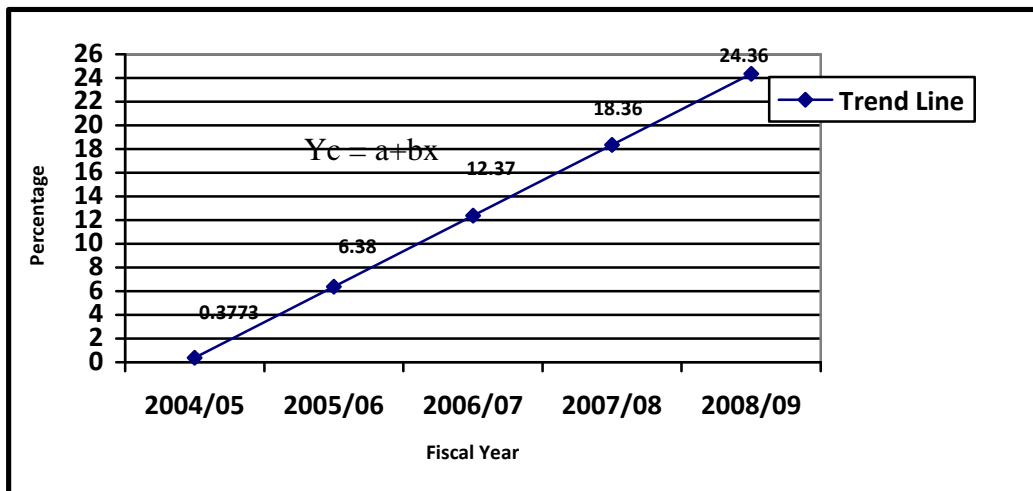
The trend values of bank balance percentage

Fiscal Year	Bank Balance (YC)
2004/05	0.3973
2005/06	6.3868
2006/07	12.3763
2007/08	18.3658
2008/09	24.3553

Source: Appendix 4

Graph 4.3

Trend Line of Bank Balance Percentage



Above Graph of Trend line of bank balance shows that the Trend line is increasing in the 2nd year, than the 1st year. It shows that the current assets of this bank increase in compare of 1st year. Then 3rd year's Trend line also in creasing order. It means current assets of bank are also increase. In 4th year Trend line of bank balance is also increasing order. And shows that the bank's capacity is strong. At last, the ending year of study period, the Trend line of bank balance shows the increasing order. Above analyzing represent that the Trend line shows that Nabil bank effectively utilized its balances to incoming operation.

c) Trend of Money at Call and Short Notices: Money at call and short notice of Nabil bank is fluctuated over the study period. The level of it is highest point with 16.7129 percentage in the current assets of the bank in the fiscal year 05/006. Where as its weight is lowest level with 4.3431 percentage in year 06/007. The average level of money at call and short notice is 10.128 percentage. And the standard deviation is 4.8773 percentage it shows that the Nabil bank has lower risk than other current assets and the coefficient of variation is 0.4815 it means that the level of return of Nabil bank on money at call and short notice has not satisfactory.

From above calculation of money at call and short notice percentage trend values of constants 'a' and 'b' are as follows:

Constants value of Nabil bank in money at call and short notice

$$a = 10.285$$

$$b = -1.6421$$

The trend rate or the rate of change of money at call and short notice percentage 'b' of Nabil bank is Negative. It implies that the money at call and short notice position is not satisfactory.

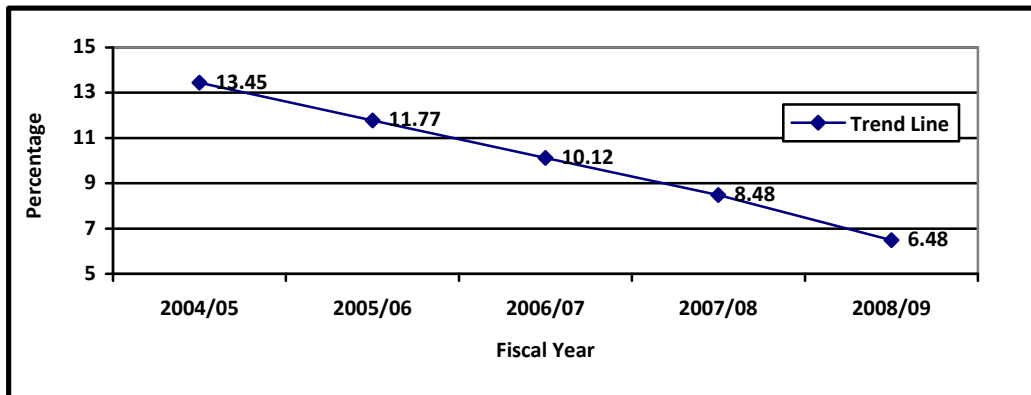
The trend values of money at call and short notice percentage

Fiscal Year	Money at Call and Short Notice (YC)
2004/05	13.4127
2005/06	11.7706
2006/07	10.1285
2007/08	8.4864
2008 /09	6.8443

Source: Appendix 5

Graph 4.4

Trend Line of Money at Call and Short Notice Percentage



Above Graph of trend line of money at call and short notice shows that the trend line is in decreasing order. It means this assets of bank are also decreasing in the whole of study period. It means current assets of bank are also decreasing conditions. So, the bank's capacity for the money at call and short notice is not good. The trend line shows that Nabil bank is not effective utilized its current assets of money at call and short notice.

d) Trend of Investment Govt. Securities: The investment Govt. Securities is also another major components of current assets of the bank. Govt. Securities are fluctuated over the study period. The level of it is highest with 68.9411 percentage in the current assets of the bank in the 3rd (06/007) year, where as its weight is lowest with 12.5425 percentage in fiscal year 08/009. The average level of Govt. Securities of the bank is 51.382 percentages. Similarly the level of standard deviation is 22.1927 and the coefficient of variation is 0.4319. More variation of Govt. Securities is maintained in Nabil bank.

From the calculation of Govt. Securities percentage trend value of constants 'a' and 'b' are as follows:

Constants value of Nabil bank is Govt. Securities:

$$a = 51.3826$$

$$b = -9.395$$

The trend rate or rate of change of investment Govt. Securities percentage 'b' of Nabil bank is Negative. Which implies that the Govt. Securities are decreasing in total assets in this bank.

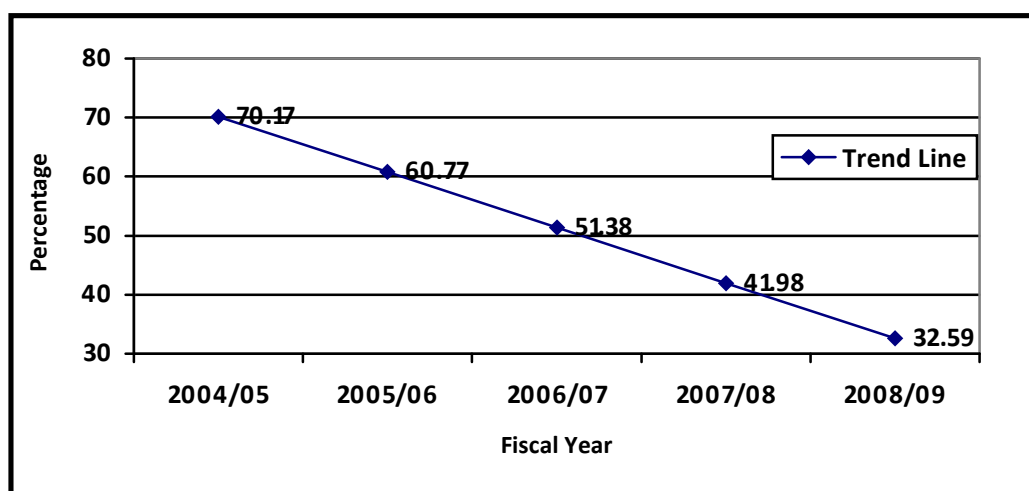
The trend values of investment government securities percentage

Fiscal Year	Investment government Security (YC)
2004/05	70.1726
2005/06	60.777
2006/07	51.3826
2007/08	41.9876
2008/09	32.5926

Source: Appendix 6.

Graph 4.5

Trend Line of Investment Govt. Securities



The above analysis helps to conclude that the Trend line of Govt. Securities in Graph is totally decreasing in the whole study period. the Trend line of investment Govt. Securities is decreasing order and shows that the current assets of bank is not sufficient. So, that the bank's capacity of investment in Govt. Securities sector is not strong in study period. So, this is not good satisfactory level of Govt. securities of Nabil bank to represents the share of Govt. securities are decreases. Then the current assets of Nabil banks is lowest standard. Above analysis represent that the Trend line of Govt. securities is in decreasing rate in the study period. the trend line shows that

Nabil bank is not good utilized its Govt. securities to invest in income generating sector.

e) Trend of Loan and Advance: Loan and Advance is also one of the component of current assets of the bank loan and advance percentage of Nabil bank is found to be fluctuating in the study period. The level of it is highest point is 31.9634 percentage in the current assets of bank in fiscal year 08/009. And the lowest level of bank current assets percentage with 11.9810 in year 06/007. The average level of loan and advance of the bank is 16.649 and standard deviation is 8.6179 than coefficient of variation is 0.5176. Its shows the bank has 8.6179% of risk factor and the return of bank has so good or satisfactory level.

From above calculation of loan and advances percentage trend value of constants 'a' and 'b' are as follows:

Constant's value of bank in loan and advances:

$$a = 16.6489$$

$$b = 3.4810$$

The trend rates or the rate of change of loan and advance percentage 'b' of Nabil bank is positive. It implies that the loan and advance of bank are increasing.

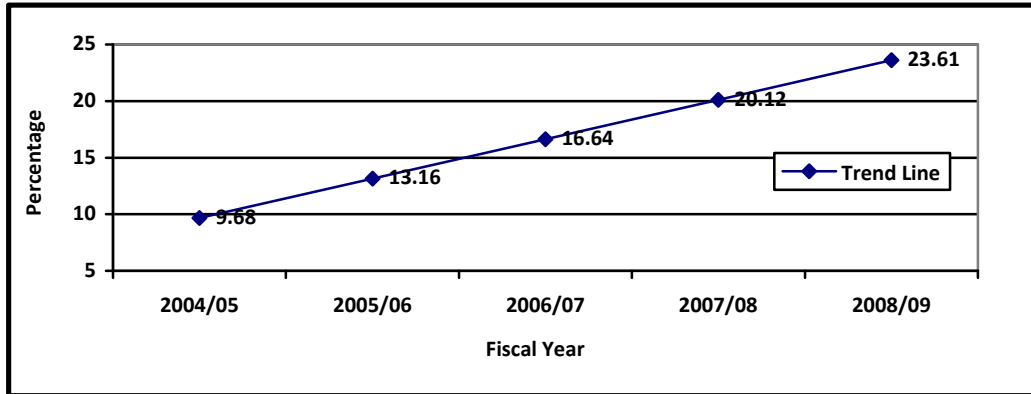
The trend values of loan and advances percentage

Fiscal Year	Loan and Advances (YC)
2004/05	9.6869
2005/06	13.1679
2006/07	16.6489
2007/08	20.1299
2008/09	23.6109

Source: Appendix 7.

Graph 4.6

Trend Lines of Loan and Advances Percentage



The above Graph related to line of loan and advances shows that the trend line is in increasing order and shows that the current assets of bank is increasing, so that the bank's capacity of lending is strong. The trend line of loan and advances is increasing order in the whole study period. It means the bank is able to give the loan and advances to its customers or investors. Above analysis represent that the Trend of loan and advances is in increasing rate in the study period. The trend line shows that Nabil has effectively utilized its loan and advances in lending sectors.

f) Trend of Misc. Current Assets: Misc. current assets is also important of current assets of the bank. It is more fluctuating in the study period. It is in increase in 1st year and than decreasing order in three year and last year it's increase. It is highest in 10.0176 in year 08/009 and lowest point in fiscal year 06/007 and 07/008. The average level of miscellaneous current assets percentage for Nabil bank is 6.033.

Similarly the standard deviation of misc. current assets is 2.7046 percentage, it shows that the Nabil bank has lower risk than other current assets. and the coefficient of variation is 0.4482 or 44.82% . It means the level of return of bank on misc. current assets has not good satisfied.

From the calculation of misc. current assets percentage trend value of constant 'a' and 'b' are as follows:

Constants value of Nabil bank in misc. current assets.

a = 6.0335

b = 0.3386

The Trend rate of change of miscellaneous current assets percentage 'b' of Nabil bank is positive. It implies that the current assets of Nabil bank are little increases in total assets.

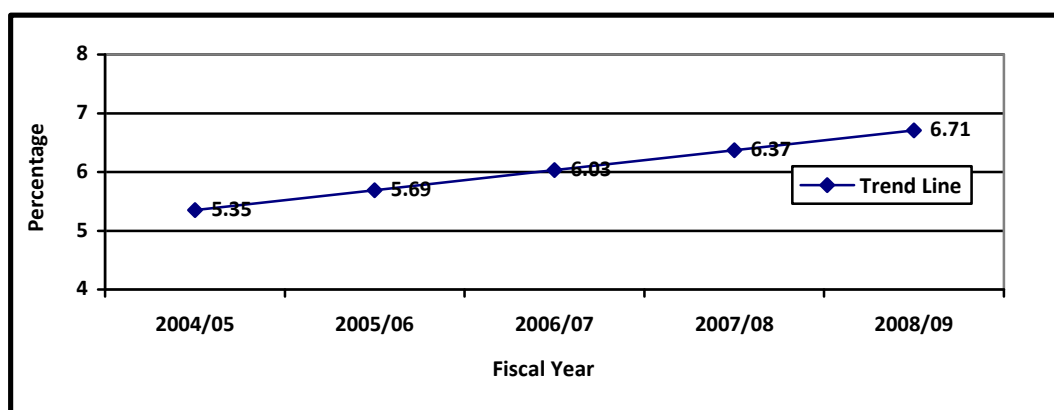
The trend values of Misc-current assets percentage

Fiscal Year	Misc-current assets (YC)
2004/05	5.3563
2005/06	5.6949
2006/07	6.0335
2007/08	6.3721
2008/09	6.7107

Source: Appendix 8.

Graph 4.7

Trend Line of Miscellaneous Current Assets Percentage



In the above graph the trend line of misc. current assets of Babil bank for five year been shown. The trend line shows slowly increasing level of current assets in the study period. The line shows the bank is in good position. So, that the bank's capacity of investment in misc. current assets is effective utilized. The trend line show the bank's current assets increasing 1st year than 2nd year and the 3rd, 4th, 5th year current assets slowly changes or increases. It means that the misc. current asset of banks is not able to invest that current asset for its customer's and investor.

4.3 Net Working Capital

Net working capital refers to the different between current assets and current liabilities. The need for this concept arises the gross concept fails to considers current liabilities. The current liabilities are those liabilities which can be claimed by outsiders/supplier with in a year. it includes account payable, bills payable and outstanding expenses. The concept of net working capital helps the management to look for permanent sources for its financing since working capital under this approach. Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities. A negative working capital occurs when current liabilities are in excess of current assets. All the organization should have just adequate working capital to serve in competitive market. Excessive or inadequate working capital is dangerous from the firm's point of view. Exclusive investment working capital affects a firm's profitability just as idle investment yields nothing. In the same way inadequate or negative new working capital may be harmful to the organization. So, net working capital can be more useful for the analysis of trade off between profitability and risk. It enables a firm to determine how much amount is left for operational requirement.

Table 4.3
Net Working Capital of Nabil Bank

Rs. in Million				
Fiscal year	Current Assets	Current Liabilities	Networking Capital	% Change in NWC.
04/005	72975.41	10505.404	-34529.99	-
05/006	103805.93	126157.234	-22351.3	1.647
06/007	129752.93	53854.606	75898.324	-4.395
07/008	173061.68	76808.7649	96252.92	0.268
08/009	86317.24	83501.7012	2815.54	-0.970
Average			23617.098	-0.69
S.D.			59025.780	
C.V.			2.49928%	

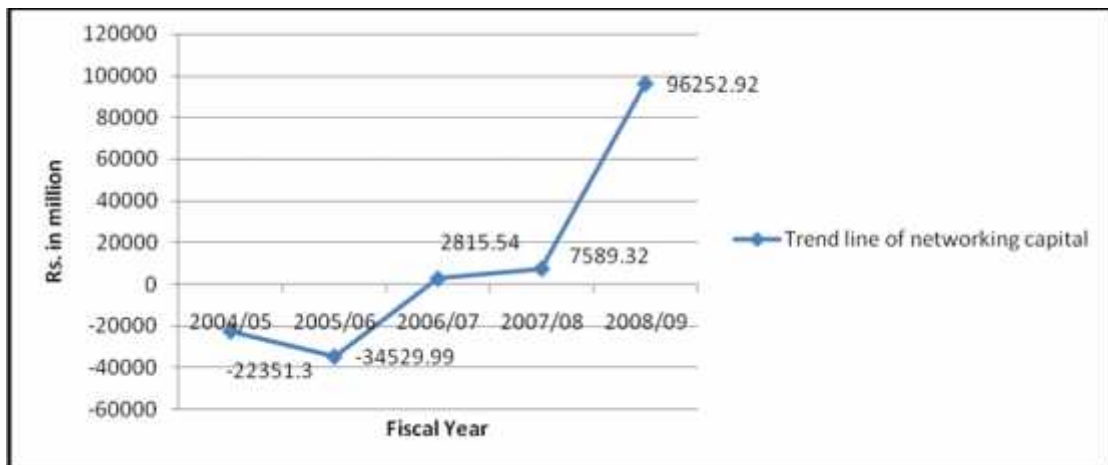
Source: Appendix 15.

Table 3. Shows that the working capital of Nabil bank is firstly decreasing order than after increasing and lastly decrease. The average level of net working capital of this bank is 23617.098 million.

In case of net working capital of Nabil bank table shows that net working capital is decreasing in fiscal year 2005 and 2006 and net working capital increased the 3rd and 4th year and last the working capital again decrease. Its means that this bank has must negative working capital and decreasing order of the study period. Which implies that there is not sufficient amount required for operational requirement.

Graph 4.8

Networking Capital of Nabil Bank



4.4 Ratio Analysis

Ratio is the numerical or arithmetical relationship between two variables. It is expressed when one variable is divided by another. Ratio analysis is the process of determining and interpreting numerical relationship between variables of financial statement. Ratio is used an index or yard stick for evaluating the financial position and performance. It helps analysis to make quantitative judgment about financial position and performance of the bank.

Ratio analysis is developed to show the numerical relationship between the data presented in the financial statement. It helps to measures profitability, solvency and performance of any business firm. It facilitates the decision maker to take the appropriate decision basing on the different ratios.

4.4.1 Liquidity Ratios

It is very important for firm to be meeting its obligations as they become due. Liquidity ratios measures the ability of the firm to meet its current obligations. A firm should ensure that it doesn't suffer from the liquidity crunch, and also that it is not too much highly liquid. the failure of a company to meet its obligations due to lack of very high degree of liquidity is also bad, idle or non-performing assets earn nothing. The firms fund will be unnecessary tied up in the current assets. Therefore, it is necessary to strike a proper balance between liquidity and lack of liquidity.

A commercial bank must maintain satisfactory liquidity position to satisfy the credit needs of the community, Meet demand for deposits, withdrawal, pay maturity obligation in time and convert to cash assets into cash to satisfy immediate needs without loss to the bank and without consequent impact on long run profitability of the bank.

To measure the liquidity position of the bank, the following measures of liquidity ratios has been calculated and brief analysis of the same has been done as below:

a) Current Ratio: This ratios indicates the current short-term solvency position of the bank. Higher current ratio indicates better liquidity position. In other words, current ratios represents a margin of safty, i.e. a 'cushion' of protection for creditors and the highest the current ratio, greater the margin of softy, the large amount of current assets in relation to current liabilities, more the bank ability to meet its current obligations. The current ratio can be calculated as shown bellows.

$$\text{Current ratio} \times \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The following table shows the current ratio to compare the working capital management of Nabil bank limited.

Table 4.4

Current Ratio

Rs. in Million

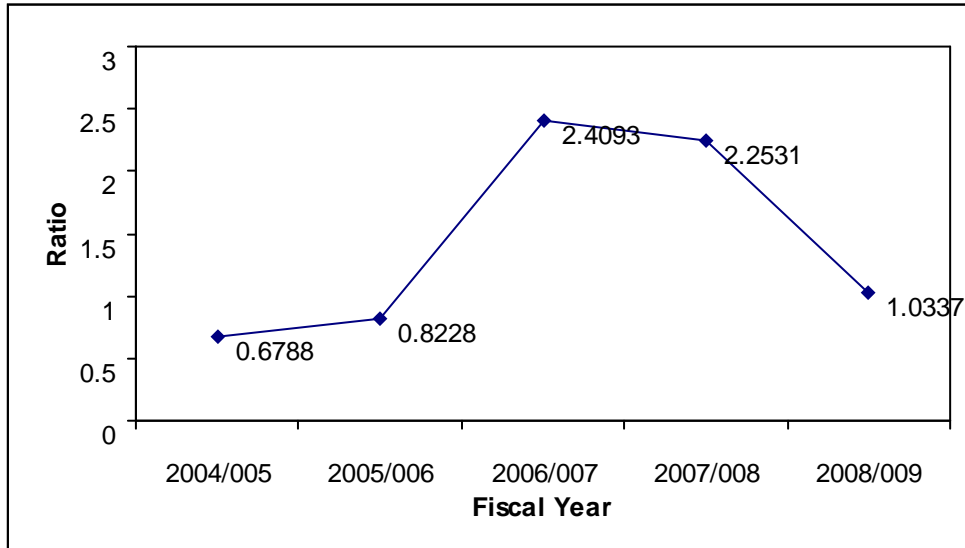
Fiscal year	Current Assets	Current Liabilities	Current Ratio
04/005	72975.41	107505.404	0.6788
05/006	103805.93	126157.23	0.8228
06/007	129752.93	53854.606	2.4093
07/008	173061.68	76808.764	2.2531
08/009	86317.24	83501.7012	1.0337
Average	113182.638	89565.538	1.4395
S.D.			0.8255
C.V.			0.5734

Source: Appendix 16

From above table 4 it depicts that current assets are increasing and decreasing order than the liabilities also fluctuated in study period. The current ration of Nabil bank is fluctuated in the period. It is highly increased in fiscal year 06/007. Than the 07/008-year the ratio is little decrease and the last year the current ratio again decrease. the highest point is 2.4093 and lowest ratio is 0.6788. The average current assets of Nabil bank 1.4395. Standard deviation is 0.8255 in the study period similarly coefficient of variation is 57.34%. Hence, more than 50% of coefficient of variation is current ratio maintained by the Nabil bank limited.

Graph 4.9

Current Ratio



Graph 9 shows that the current Ratio of Nabil bank has fluctuated in the study period. It is clear from the graph that current ratio are lower and higher in compare of starting year of study period. The above analysis help to conclude that the bank is able to maintain the standard current ratio 2.1 for the year 07/008. There fore the bank has good liquidity position according to norms however they have sufficient current liabilities.

b) Quick Ratio: Quick ratio established a relationship between quick or liquid assets and current liabilities. An assets is said to be quick if it can be converted into cash immediately or reasonably soon and without a loss of original value. For this study, cash and bank balance, money at call and short notice and Govt. securities are considered as quick assets because of their tendency of conversion into cash shortly without the loss of value. Quick ratio reflects the instant debt paying capacity of the firm. It is also called acid test ratio.

The formulas is given below:

$$\text{Quick Ratio} \times \frac{\text{Quick / Acid Test Asset}}{\text{Current Liabilities}}$$

Quick Assets = Cash and Bank Balance + Investment Govt.

Securities + Money at Call and Short Notice

Table 4.5

Quick Ratio

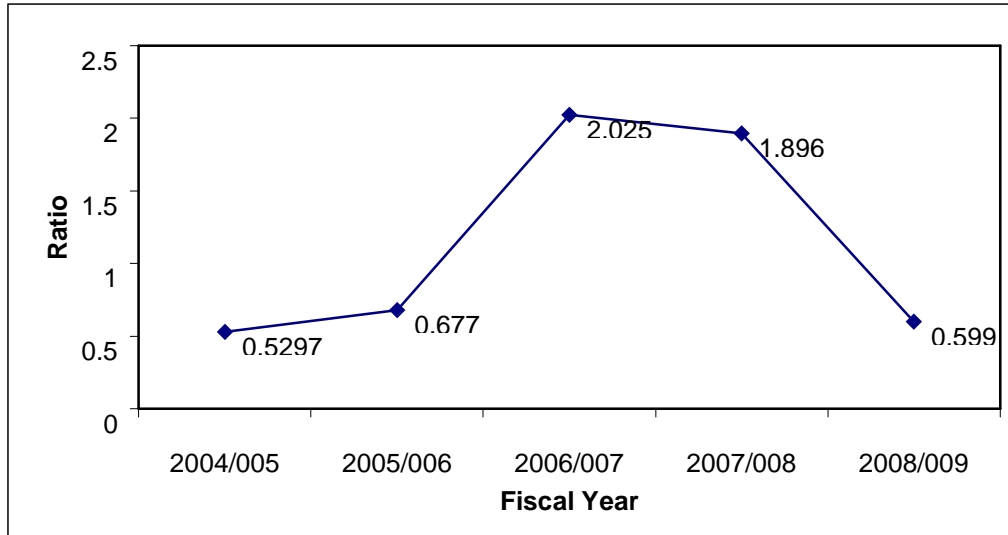
			Rs. in Million
Fiscal year	Quick Asset	Current Liabilities	Quick Ratio
04/005	56950.41	107505.404	0.5297
05/006	85436.71	126157.234	0.677
06/007	109086.669	53854.606	2.025
07/008	145632.7	76808.7649	1.8960
08/009	50080.36	83501.7012	0.599
Average	89437.369	89565.538	1.1453
S.D.			0.7473
C.V.			0.6525

Source: Appendix 17

Table 5. Shows that the quick ratio of Nabil bank is fluctuating over the study period. The ratio is highest point is 2.025 in the year 06/007 and lowest in 0.529 in year 04/005. There is different between highest and lowest ratio. The average ratio is 1.1453. Similarly the standard deviation of ratio is 0.7473 and the coefficient of variation is 65.25%.

Graph 4.10

Quick Ratio



Above Graph 10 Shows that the quick ratio of Nabil bank limited has fluctuated or high and low order in the study period. The ratio starting year increased and the middle time its highly increase than the last year the ratio is decreasing order. That means the Nabil bank's liquidity is not satisfactory.

i) Cash and Bank Balance to Deposit Ratio (Excluding Fixed Deposit): The cash and bank balance to deposit ratio clears its definition. This ratio is calculated as below:

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

The following tables shows the cash and bank balance to deposits ratio (excluding fixed deposit) of Nabil bank limited.

Table 4.6**Cash and Bank Balance to Total Deposit Ratio (Excluding Fixed Deposits)**

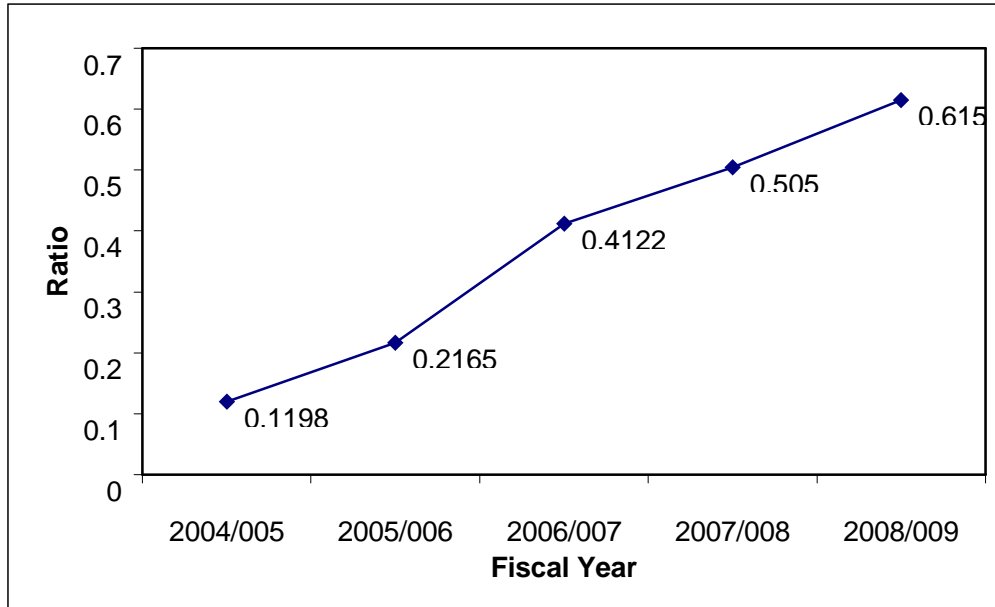
Fiscal year	Cash and Bank Balance	Deposit (Current)	Rs. in Million
			Ratio
04/005	5593.8	27991.849	0.1998
05/006	6302.37	29105.897	0.2165
06/007	13998.249	33952.3977	0.4122
07/008	26711.39	52843.68	0.505
08/009	33725.11	54805.334	0.615
Average			0.3897
S.D.			0.1805
C.V.			0.463

Sources: Appendix-18.

Table 6 demonstrates that the ratio of Nabil bank are increasing order over the study period. The ratios are slightly increasing the period. The ratio is highest point is 0.615 in the fiscal year 08/009 and the lowest is 0.1998 in year 04/005. The average ratio is 0.3897. The standard deviation is 0.1805 and the coefficient of variation is 46.3%.

Graph 4.11

Balance to Deposit Ratio



Graph 11 depict that the cash and Bank balance to Deposit Ratio (Excluding fixed deposit) of Nabil bank. It is clear from graph that the ratio is higher in compare of starting year of the study period.

ii) Saving Deposit to Total Deposit Ratio: This ratio is calculated as below:

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

$$\text{Total Deposit} = \text{Current} + \text{Fixed Deposit}$$

Table 4.7

Saving Deposit to Total Deposit Ratio

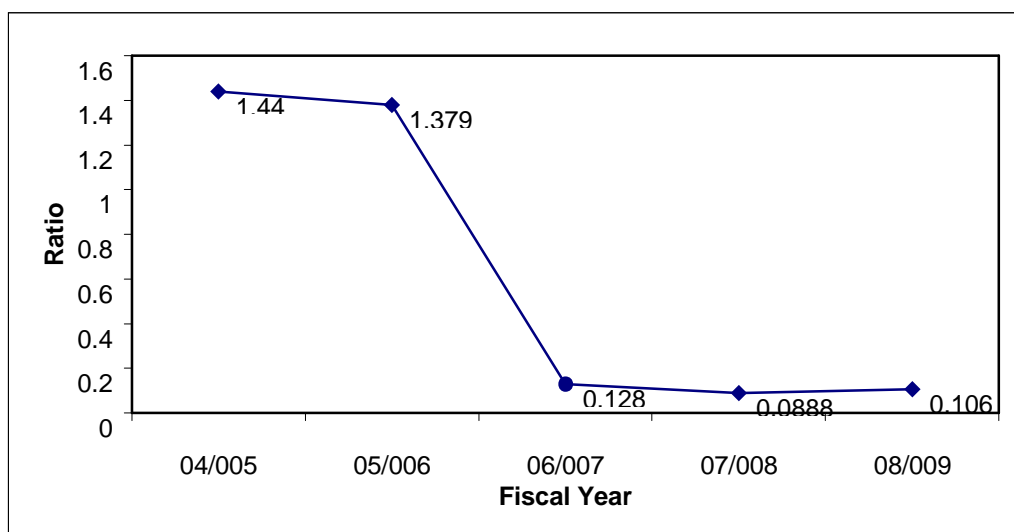
Year	Saving	Total Deposit	Ratio
04/005	70263.3440	48777.199	1.440
05/006	87707.5942	63596.83	1.379
06/007	10187.3544	88304.28	0.1415
07/008	12159.966	137484.54	0.0888
08/009	14620.407	137912.41	0.1060
Average			0.625
S.D.			0.71592
C.V.			1.145

Source: Appendix-19

Above table show that the saving deposit is fluctuating in the study period. The ratios 1st and 2nd in slightly change and the 3rd, 4th, 5th year ratio is slowly increase and decrease. The ratio's highest point is 1.440 in year 04/005 and the lowest point is 0.088 in 07/008 year. The average point is 0.625 and the standard deviation is 0.7159 and coefficient of variation is 114.5 %.

Graph 4.12

Saving Deposit to total Deposit Ratio



Above graph shows the ratio is decreasing or increase order. The ratio in 3rd year it increase than 4th year it decrease the 5th year it again increase. It means the saving Deposit of the bank is fluctuated in the study period. It is not constant and it is not good and so satisfaction of the bank.

iii) Loan and Advance to total Deposit Ratio: This ratio is calculated as below:

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

Total deposit = Current + Fixed deposit.

Table 4.8

Loan and advance to total deposit ratio

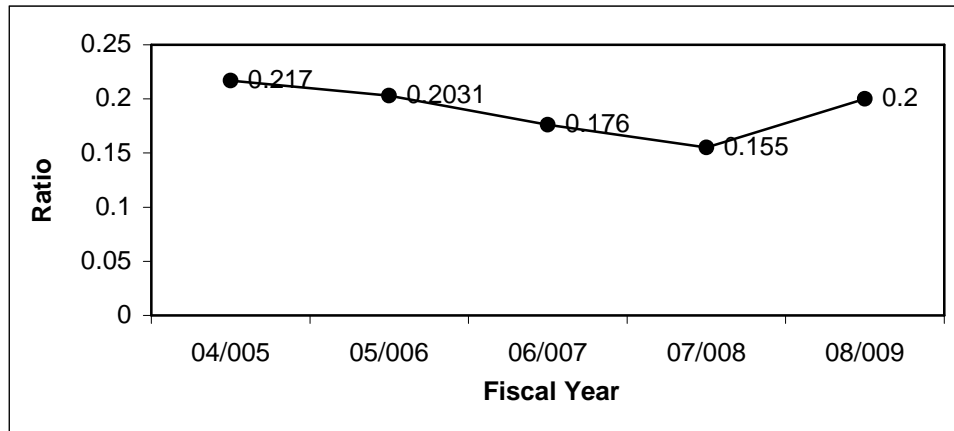
			Rs. in Million
Fiscal year	Loan and Advance	Total Deposit	Ratio
04/005	10586.17	48777.199	0.2170
05/006	12922.54	63596.83	0.2031
06/007	15545.77	88304.28	0.176
07/008	21365.05	137484.54	0.155
08/009	27589.93	137912.41	0.200
Average			0.190
S.D.			0.246
C.V.			0.1294

Source: Appendix-20

Above table shows that the loan and advance to total deposit ratio of Nabil bank are fluctuated during the study period. It is highest is 0.2170 in the year 04/005. And lowest is 0.155 in the 07/008 year. The average ratio is 0.190. The standard deviation is 0.02461 than coefficient of variation is 0.1294.

Graph 4.13

Loan and Advances to total deposit ratio



Above graph shows the ratio is slightly decreases order than the last year the ratio is increase.

iv) Loan and Advance to Fixed Deposit Ratio: This ratio is calculated as below:

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

The following table shows the ratio of Nabil bank.

Table 4.9

Loan and Advance to fixed Deposit Ratio

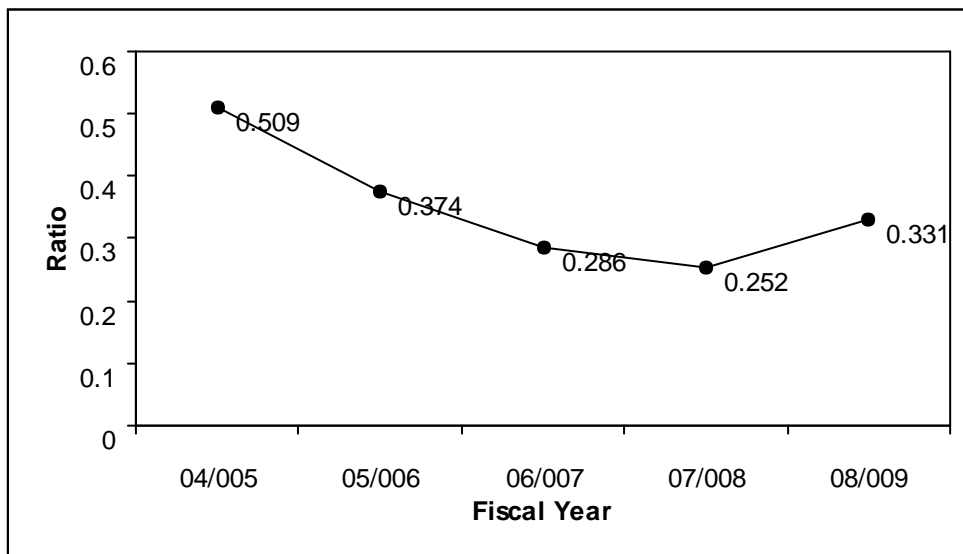
			Rs. in Million
Year	Loan and Advances	Fixed Deposit	Ratio
04/005	10586.17	20785.35	0.509
05/006	12922.54	34490.94	0.374
06/007	15545.77	54351.89	0.286
07/008	21365.05	84640.86	0.252
08/009	27589.93	83107.08	0.331
Average			0.350
S.D.			0.0997
C.V.			0.285

Source: Appendix 21

Above table shows that the ratio is fluctuating in the study period. The ratio smoothly decreasing order than the last year it increase. The highest point is 0.509 in year 2005 and the lowest is 0.252 in 2008 year, than the average ratio is 0.350 and standard deviation is 0.099 than coefficient of variation is 0.285. Here the risk is low and return is high. That is satisfactory level of Nabil bank.

Graph 4.14

Loan and Advance to fixed Deposit Ratio



The above graph shows that the Ratios trend is decreasing order and the last year 2009 the Ratio is increase.

v) Loan and advance to saving Deposit Ratio: This ratio calculated as bellows:

$$\text{Loan ad Advance to Saving Deposit} = \frac{\text{Loan and advances}}{\text{Saving Deposit}}$$

Table 4.10

Loan and Advance to Saving Deposit Ratio

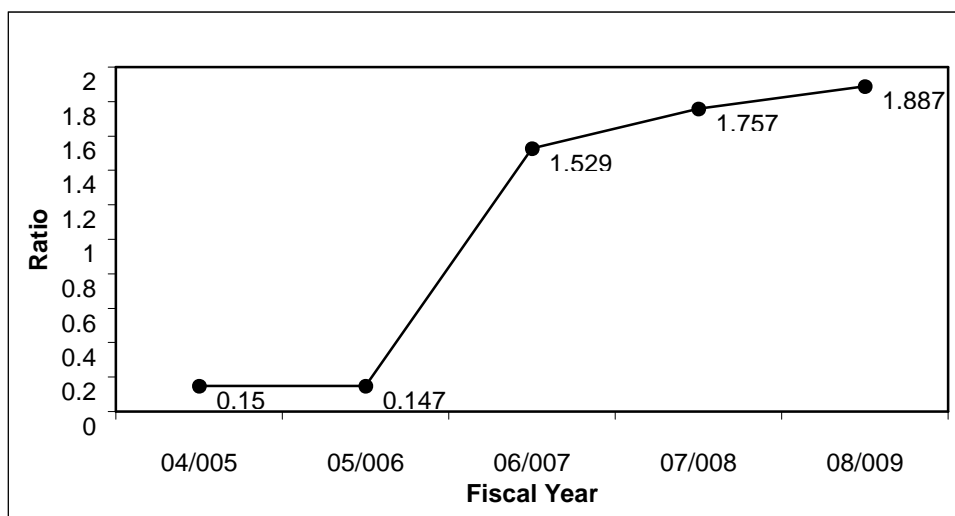
Years	Loan and Advance	Saving Deposit	Ratio
04/005	10586.17	70263.344	0.150
05/006	12922.54	87707.59	0.147
06/007	15545.77	10187.35	1.529
07/008	21365.05	12159.96	1.757
08/009	27589.93	14620.40	1.887
Average			1.095
S.D.			0.871
C.V.			0.7976

Source: Appendix 22

Above table shows that the ratio's increasing order. The 1st and 2nd year ratio is slightly low and the other 3-year the ratio is increases. The highest ratio is 1.88 and the lowest is 0.147 in year 006. The average ratio is 1.093 standard deviation and coefficient of variation and 0.871 and 79.76% respectively.

Graph 4.15

Loan and Advance to Saving Deposit Ratio



Above graph already said that the trend line firstly down and later that is increasing order. It means the ratio is down and up or fluctuated in the study period. The 007 to 009 the ratio increases.

4.4.2 Profitability Ratio:

Profitability is an indicators of efficiency of the business organization. Profitability ratio measures the managements overall efficiency as shown by the return generated from sales and investment. Higher the profitability ratio shows the efficiency of the management.

a) Interest earned to Total Assets ratio: This ratio can be calculated as below:

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

Table 4.11

Interest Earned to Total Assets Ratio

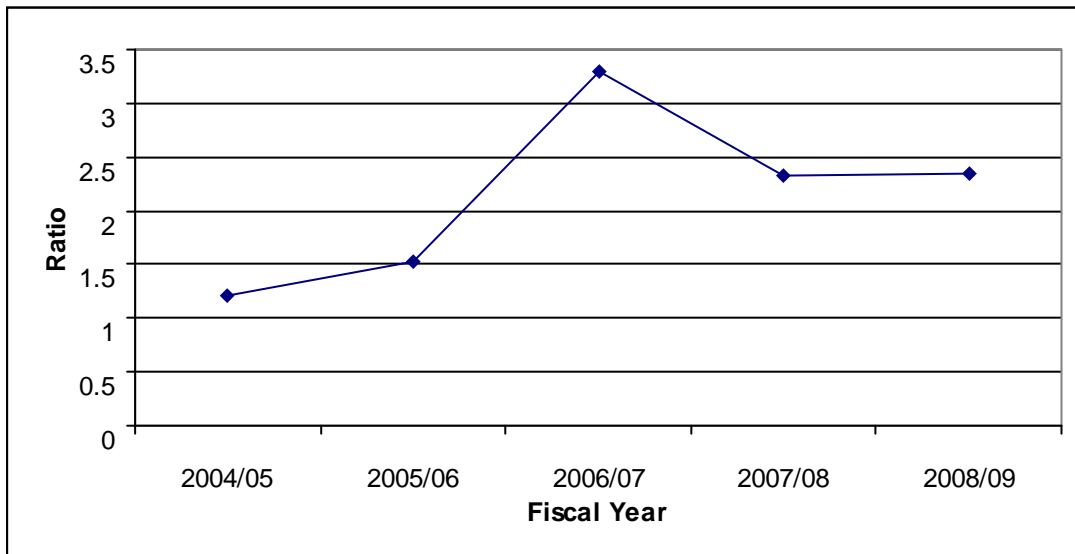
			Rs. in Million
Year	Interest earned	Total Assets	Ratio
04/005	10687.46	8844.065	1.208
05/006	13099.98	8609.18	1.521
06/007	15877.58	4816.23	3.29
07/008	19786.96	8464.92	2.33
08/009	27984.86	11887.73	2.35
Average			2.140
S.D.			0.814
C.V.			0.384

Source: Appendix 23

Above the table shows that the interest earned ratio of bank is fluctuating. The 3rd year the ratio is increase and than other year ratio is slightly decrease. The highest ratio is 3.29 in 06/007 year and lowest is 1.208 in 04/005 years. The average ratio is 2.140 than S.D. and coefficient of variations are 0.814 and 0.380 respectively.

Graph 4.16

Interest Earned to Total Assets Ratio



This graph shows that the trend of earning ratio is up and down. The fiscal year 007. This ratio is highly than other. This year Nabil bank is in satisfactory level. The interest earned to total assets ratio implies that the Nabil bank is sufficient total fund for using to earn interest income and the other year this ratio is slightly changes.

b) Net profit to Total Assets Ratio: This ratio can be calculated as below:

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

The following table shows the ratio of net profit to total assets of Nabil bank.

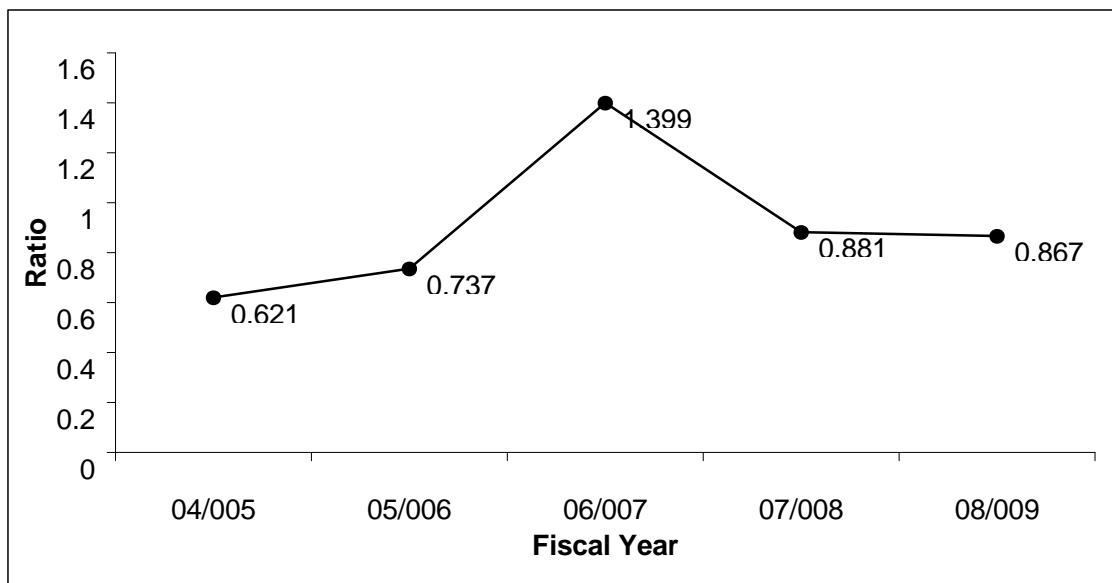
Table 4.12
Net Profit to Total Assets Ratio

			Rs. in Million
Fiscal year	Net profit	Total Assets	Ratio
04/005	5499.08	8844.065	0.621
05/006	6352.62	8609.18	0.737
06/007	6739.59	4816.23	1.399
07/008	7464.68	8464.92	0.881
08/009	10310.53	11887.73	0.867
Average			0.901
S.D.			0.2978
C.V.			0.330

Source: Appendix 24

Table 13 shows that the net profit to total assets ratio of Nabil bank is fluctuating in the study period. It is highest 1.399 in the year 06/007 and lowest in 0.621 in the year 04/005. The average ratio is 0.901 during the studying period and the coefficient of variation is 33%. Similarly, the standard deviation is 0.2978.

Graph 4.17
Net Profit to Total Assets Ratio



This graph shows that the ratio is firstly slowly increase and the 007/3rd year. The ratio is highly increase. Its means 2006/007 year bank has a more profit to total asset and than later this ratio again smoothly decreasing level. So it indicates bank need to improve its profit ratio.

c) Net Profit to Total Deposit Ratio: This ratio can be calculated as below:

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

The following tables shows the ratio of net profit to total deposit of Nabil bank.

Table 4.13

Ratio of Net Profit to Total Deposit of Nabil Bank

Year	Net profit	Total Deposit	Rs. in Million
			Ratio
04/005	5499.04	48777.199	0.11
05/006	6352.62	63596.83	0.099
06/007	6739.59	88304.28	0.076
07/008	7464.68	137484.54	0.054
08/009	10310.53	137912.41	0.074
Average			0.0827
S.D.			0.0170
C.V.			0.206

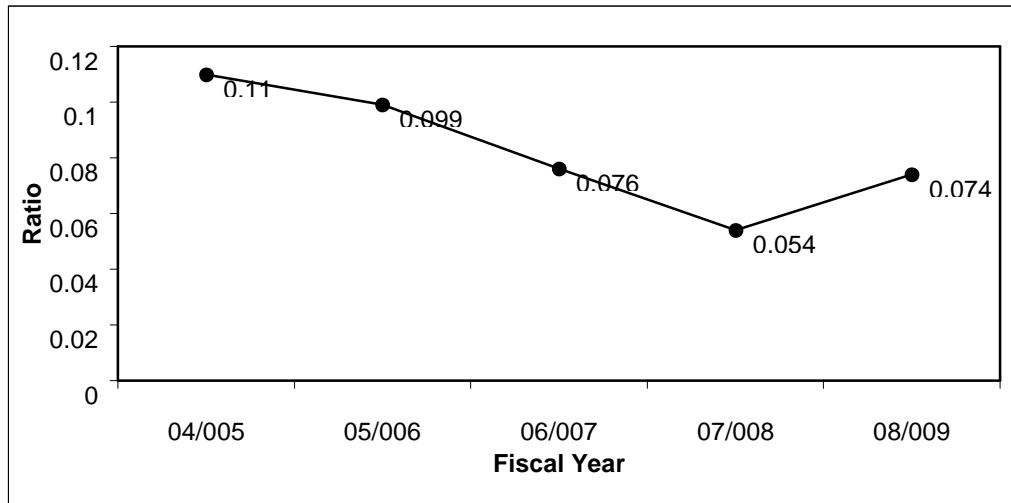
Source: Appendix 25

Table 14 shows that the ratios of Nabil bank are fluctuating in the period. The highest ratio is 0.11 in year 04/005 and lowest is 0.054 in 07/008 years. The average is 0.0827.

The standard deviation of the bank in the study period is 0.0170 the risk factor for the net profit to total deposit during study period is 1.7% likewise, the coefficient of variation 20.6%.

Graph 4.18

Net Profit to Total Deposit Ratio



This graph said to the net profit ratio if firstly is high and the latter the ratio is decreasing order and the last year again little increase. It means this ratio is fluctuated during the study period. That profit ratio maintained the Nabil bank.

4.4.3 Correlation Analysis

Correlation analysis is the statistical tool that we can use to describe the degree to which one variable is linearly related to other variables. Two or more variables are said to be correlated if change in the value of one variable appears to be related or linked with the change in the other variables. The relationship between age, height and weight are studies by correlation. Correlation is an analysis of the covariance between two or more variables and it deals to determine the degree of relationship between two or more variables. It does not tell us anything about cause and effect relationship i.e. if there is a high degree of correlation between two variables we can not say which is the cause and which is the effect. Sometimes, correlation does not necessarily imply causation while causation always implies correlation. In correlation analysis, only one variable is treated as dependent and one or more variables are treated as independent. Among the various methods of finding out the coefficient of correlation, Karl Pearson's method is applied in the study. The result of coefficient of correlation is always lies between +1 and -1 when 'r' the coefficient of correlation is

+1 there is perfect relationship between two variables and vice-versa. When 'r' is 0 there is no relationship between two variables.

Under this topic, this study tries to find out relationship between the following variables.

- a) Coefficient of correlation between current assets and current liabilities.
- b) Coefficient of correlation between total deposit and net profit.
- c) Coefficient of correlation between total deposit and loan and advances.

The Above analysis tools analyze the relationship between these the relevant variables and helps the bank to make sound policies regarding deposit collection, fund utilized (loan and advances and investment) and profit maximization.

The following formula is used to find out the relationships:

$$\text{Coefficient of correlation (r)} = \frac{\sum xy}{\sqrt{\sum X^2} \sqrt{\sum y^2}}$$

Where, x = (X₁ - \bar{X})

y = (y₁ - \bar{y})

Nearer the value of r to +1 closer will be the relationship between two variables and nearer and nearer the value of r to 0 lesser will be the relationship.

$$\text{P.E.} = \frac{0.6745 (1 - r^2)}{\sqrt{n}}$$

Where, P.E. = Probable error of correlation coefficient.

r = Correlation coefficient.

n = Number of observations.

- a) Coefficient of correlation between current assets and current liabilities:

The following table describes the relationship between current assets and current liabilities of Nabil bank with comparatively under five years study period. In the following case, current assets are independent variable (X) and current liabilities are dependent variables (Y).

Table 4.14

Coefficient of Correlation of Current Assets and Current Liabilities

Bank	R	P.E.	6 x P.E.	Result
Nabil	-0.508	0.224	1.34	Nothing can be concluded

Source: Appendix 26

The above table indicates that the coefficient of correlation between current assets and current liabilities of Nabil bank limited is -0.508 which indicates negative relationship of both components. We can say that nothing can be concluded of the value of r . So, there is negative relationship between current assets and current liabilities.

Table 4.15

Coefficient of Correlation of Total Deposit and Net Profit

Bank	R	P.E.	6 x P.E.	Result
Nabil	0.832	0.093	0.558	Significant

Here, $r > 6 \text{ P.E.} \rightarrow$ Significant

Source: Appendix 27

From the above table, it can be inferred that the coefficient of correlation between total deposits and net profit of Nabil bank limited is 0.832 implying positive relationship between two variables. It can be inferred that the value of r is significant. In the analysis it is clear that there is significant relationship between the total deposit and net profit. There is significant correlation in these variables and the positive P.E. (0.093) correlation coefficient of two variables than 6 P.E. is 0.558 . It indicates that

high degree of the positive and significant correlation between total deposit and net profit.

c) Coefficient of Correlation between total Deposit and loan and advances: The basic function of the every bank is to collect deposit and invest their funds on loan and advances to generate higher profit large amount of loan and advance increase higher profit.

Table 4.16

Coefficient of Correlation of Total Deposit and loan and advances:

Bank	r	P.E.	6 x P.E.	Result
Nabil	0.945	0.036	0.216	Highly Significant

Here, $r > 6 \text{ P.E.} \rightarrow$ Significant

Source: Appendix 28

From the above table, it can be inferred that the coefficient of correlation between total deposit to loan and advances in Nabil bank is 0.945. Which is shows positive relationship between two variables. We can say that the value of 'r' is significant relationship. So there is significant relationship between total deposit to loan and advances and the P.E. of correlation coefficient of variables is 0.036 and 6 P.E. is 0.216. It indicates that the high degree of correlation.

Major Findings:

Basically in this research work, all the data has been obtained from secondary sources. Data has been analyzed by using financial as well as statistical tools. This topic focuses on the major finding of the study, which are derived from the analysis of working capital management of the Nabil bank comparatively applying five years data from 2005 to 2009.

The major finding of the study drive from the analysis of financial tools of the banks are given below:

- The major components of current assets of bank are cash and bank balance, money at call and short notice, loan and advances, Govt. securities. In the study period the proportion of cash and bank balance, loan and advances and Govt. securities and money at call and short notice to total current assets on average percentages are 15.808%, 16.649%, 51.382% and 6.033% respectively. It shows that the average percentage of cash and bank balance, loan and advance, Govt. securities were higher than the money at call and short notice. The current assets average trend is increasing and decreasing.
- The average net working capital of this bank is 23617.098. All of the net working capital is not positive in the study period. Negative working capital indicates the insufficient amount of bank and positive net working capital indicates the sufficient amount of this bank. The net working capital ranges from 2815.54 million to 96252.92 million. The standard deviation of net working capital is 59025.780 and C.V. is 2.499. Its means that the risk is higher than return of the bank from working capital.
- The liquidity position of the bank is analyzed with the current ratio quick ratio and cash balance to deposit ratio. The current ratio of Nabil bank over the period were 0.67, 0.82, 2.40, 2.25 and 1.03 times which though fluctuating a bit. IT is increasing and decrease trend and the average current ratio is 1.439 times and standard deviation and coefficient of variation of this ratio is 0.82 , 0.57 respectively. And the quick and cash deposit ratio's average is 1.1453 and 0.389. Then the S.D. and C.V. is also is quick ratio's 0.74, 0.65 and cash deposit ratio's 0.180 and 0.463. This shows the liquidity position or short-term solvency during the study period. Although higher liquidity means lower risk as well as lower profit in general, it does not necessarily mean lower profit in case of every bank.
- Fixed deposit to total deposit ratio are increasing in the study period. The average ratio of fixed deposits to total deposits is 0.560. The ratio ranges from 0.426 to 0.0615 (in Rs. million). Therefore it is concluded that more long term and costly sources of funds and risk depends upon the ratio.

- Saving deposit to total deposit ratios are fluctuating during the study period. It is ranges from 0.088 to 1.440. The average ratio is 0.625 (in Rs. million). High ratio indicates more short term and les costly sources of funds. Similarly the low ratio indicates long term and costly sources of fund.
- The profitability is the measures of efficiency of the firm. the profitability of the Nabil bank is analyzed from various angles. the average value of interest earned to total assets ratio is 2.140. And net profit to total assets ratio are 0.901 respectively. When these ratios are high, then more efficiently using its total assets to earn interest income.
- The trend value of interest earned to total assets ratio are increasing than slightly decrease. Although the net profit to total assets ratio and net profit to total deposit ratios are more fluctuating in the study period. It shows that the bank it not able of efficiently use its working capital funds of assets to earn higher rate of profit during the study period.
- While analyzing the correlation coefficient of current assets and current liabilities of this bank are in significantly correlated. The value of 'r' of Nabil bank is -0.50 in current assets to current liabilities. The negative value of 'r' shows the negative relationship between the current assets and current liabilities. The coefficient of correlation of total deposit and net profit and total deposit and loan advances of the bank are significantly correlated. The value of 'r' is 0.832 and 0.945 respectively. It shows that there are positive relationships between both variable. It means that the bank utilizes its assets on various factors effectively. And lastly the probable error (6 P.E.) of correlation coefficient of C.A. and C.L.. Total deposit and net profit and total deposit on loan and advances are 1.34, 0.558 and 0.216 respectively.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter includes summary, conclusion and recommendation of the study. The final and most important task of the researchers to enlist fact finding of the study and give suggestion for further improvement. The analysis is performed with the help of financial tools and statistical tools. The analysis is associated with comparison and interpretation under financial analysis various financial ratios related to the working capital management is used and under statistical analysis some relevant statistical tools are used. This chapter contains summary, conclusion and recommendation. Summary gives the brief introduction of all chapter , conclusion is based on the consequence of the analysis of relevant data and recommendations are represented on the basis of the findings.

5.1 Summary

The development of any country largely depends upon its economic development. Economic development demands transformation of saving or resources into the actual investment capital formation is the pre requisite in setting the overall pace of the economic development of a country. It is the financial institution that transfers funds from surplus spending units to deficit units.

Banking sector plays a vital role for the country's economic development. Bank is a resource mobilizing institution, which aspect deposits from various sources, and invests such accumulated resources in the fields of agriculture, trade, commerce, industry, tourism etc. Banks helps to mobilize the small saving collectively to huge capital markets. Commercial banks basically help to promote the money market by providing expert managerial skills and by using advanced and offer state of the art technologies to serve the customers in an efficient and effective manner.

In financial sector, there are various commercial banks established as joint venture. After implementation of the open market policy. Joint venture commercial banks are opened as private banks. In competitive financial market performance of joint venture banks are very good. The main objectives of the study was to study the comparative

analysis of the working capital as well as ratio analysis of commercial bank. i.e. Nabil bank limited. To fulfill this objective and other specific objective as described in chapter one, an appropriate research methodology has development, which include the ratio analysis as a financial tools and statistical tools with t-test (hypothesis) tools. The major ratio analysis consist of the composition of working capital position, liquidity ratio, activity ratio, capital structure ratio and profitability ratio. Under these main ratios and their trend position are studied in the chapter four. In order to test the relationship between the various components of working capital. Karl person's correlation coefficient 'r' is calculated and analyzed.

Now-a-days many commercial banks are rapidly opened in Nepal as commercial banks with higher technology and efficient methods in banking sector especially after the political reform of the country. At present 27 commercial banks are operating in Nepal. But in this study, only one commercial bank has been undertaken i.e. Nabil bank limited. This study has been completed on the basic of secondary data.

Periodical review and analysis of financial aspects of the banks are vary necessary to see the clear financial pictures. Working capital's components of Nepalese commercial banks in Nepal. Nabil bank limited has been carried out to fulfill this requirement.

Studies of the bank is introduced problems are stated to set the objective of the study. The objectives are to evaluate the working capital. Management and financial analysis of Nabil bank and to identity their strengths and weakness. Theoretical framework of ratio analysis, correlation between two variables, its importance and limitations, research methodology and limitation of the study are mention.

The finding of liquidity ratio, capital structure, profitability ratios are profitability ratios are presented on a comparative basis. Besides, statistical analysis i.e. Mean, standard deviation, coefficient of variation of all ratios and correlation of coefficient of current assets with current liabilities, total deposits with net profit and loan and advances and test of hypothesis made is also done of the Nabil bank. This analysis gives clear picture of the performance of the bank with regard to its operation. All of the information and data are collected from related banks i.e. websites, annual reports. the operating efficiencies of the bank and their abilities to ensure adequate return to

the shareholders have been measured. And other hand the perspective of the researcher, this bank is chosen for the study mainly because of accessibility and availability of financial data for latest five years period.

5.2 Conclusion

On the basis of entire research study some conclusions have been deduced. It can be said that working capital management is one of the most important part of every financial institution viz. bank working capital is a crucial capital, which is often compared to life blood of a human being.

After analyzing the sample bank is Nabil bank limited by using various financial and statistical tools, various important conclusions have been derived from the study.

- The mean (\bar{X}) of current ratio of Nabil bank is 1.439. This is lesser than the standard current ratio 2:1. The bank is unable to maintain the current ratio in accordance with standard.
- The mean of quick ratio is 1.145. It is not standard ratio. The average cash and bank balance, money at call and short notice investment Govt. securities, and loan and advances percentages are increasing trend. the net working capital of this bank negative in the 1st and 2nd year of the study period and other 3 year is positive net working capital. Nabil bank is 1st and 2nd year not able to maintain adequate liquidity position and than the after 3rd, 4th and 5th year the bank able to maintain adequate liquidity position to meet the short teral or even instant obligation in that period.
- The ratio of this bank is higher than the normal standard ratio it is higher liquidity position other is not higher liquidity of the bank. High liquidity means lower risk as well as lower profit in general it does not necessary mean lower profit in case of every bank.
- Analyzing the turnover position, it is utilizing its funds more efficiently for the profit generating purpose on loan and advances. Nabil bank limited is utilizing saving deposits (Average of Saving Deposit Ratio to total deposit is 0.65) more than the income generating purpose in compare of fixed deposit

(Average of fixed deposit ratio to total deposit is 0.56). In case of profitability position, profitability in terms of interest earned to total assets ratios, increasing trend shows that the bank is efficiently using its total assets to earn interest income.

- The net profit to total assets ratios and net profit to total deposit ratios are more fluctuating. Net profit to total assets ratios are increasing trend and net profit to total deposits ratios are decreasing trend in the study period. It shows that the bank is not more able to efficiently using its working funds of assets to earn higher rate of profit during the study period. It shows that the bank has not satisfactory level of generating profit. To acquire higher profits it should take strong steps for the better management strong marketing and strategies develop met etc.
- The correlation coefficient of the variable selected for the statistical analysis shows that Nabil bank has insignificant relationship between current assets and current liabilities while analysis the correlation coefficient total deposit to net profit of this bank are significantly correlated. Correlation between total deposit to loan and advance of Nabil bank limited is significant. It may be due to the higher amount of costly funds and other higher costs.

5.3 Recommendation

On the basis of the above analysis major finding and conclusion of the study, some important recommendations have been forwarded. Although the Nepalese no. 1 bank is Nabil bank limited has more experiences an more standard bank in the Nepalese commercial banking sector with a competent managerial team some weaknesses have come into light through the study. The sample bank may use it as a remedial measure. The recommendations have been the following.

- The banks especially the Nabil bank limited has to maintained adequate cash and bank balance to total deposit ratio, as prescribed by NRB, which is 5% of total deposit.
- The bank is suggested to improve its profitability position than liquidity position and to improve its overall efficiency and returns to its share holders.
- The bank is suggested to improve its deposits and credits to increase its volume of banking operation.

- Although the loan and advances to total deposit ratio of the bank is fluctuating and not high ratio over the study period. The bank performance has good don't losses in this level.
- Positive working capital represents the sound management of the bank. Similarly, the negative working capital represent the poor financial management of the bank. In case of Nabil bank has 1st and 2nd year in negative net working capital in study period that is not good and we hope always found positive net working capital in the bank. This bank is always maintaining the optimum size of current assets and current liabilities.
- The liquidity position in terms of current ratio of this bank is less than normal standard ratio. This shows the liquidity position or short-term solvency is not better. Therefore, the bank should increase the current assets.
- The Bank should maintained positive relationship between loan and advances and deposits in coming years also, to maximize benefits.
- The unskilled manpower, overstaffing, unsystematic purchase of raw materials, unnecessary expenses, misuse of facilities, heavy expenses on overhead etc. may be the cause for high operating cost. So Nabil bank is recommended to pay attention to these aspects.
- By implementing the matching working capital management policy instead of adopting conservative working capital policy it can improve in its profitability in both short and long runs.
- Improper working capital leads to decrease the profitability of the company and leads to run the company in the long run. So Nabil bank limited recommended giving emphasis to proper working capital policy to uplift the financial performance of the company in the competitive age of today.
- Since the economy of the country has become weaker since the last decade, the studied banks are advised to concentrate more on risk free securities and low risk loans.
- Last, but not the least the banks should keep in peace with the changing banking technology, improve organizational structure, provide quality services to its customers and activity participate in social welfare programmes organizational culture that acquires, develops utilizes and maintains the employees in a high moral is preferred.

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APPENDIX

Appendix – 1

Nabil Bank Limited

Five Years Balance Sheet

(In Rs. Million)

Particular	2004/05	2005/06	2006/07	2007/08	2008/09
Assets:					
Cash balance	1463.52	2378.18	2704.069	5114.26	6743.95
Bank balance	4130.28	3924.19	11294.18	21597.13	26981.16
Money at calls short notice	8684.28	17349.01	5635.32	19523.60	5528.88
Investment	42672.33	61785.33	89453.10	99397.71	10826.37
Loan & Advances	10586.17	12922.54	15545.77	21365.05	27589.93
Misc./Other assets	5438.83	5446.68	5120.50	6063.93	8646.95
Total Current Assets	72975.41	103805.93	129752.93	173061.68	86317.24
Fixed Assets	3612.35	3190.86	2868.95	5980.38	6609.88
Less : Depreciation	207.1212	28.360	3173.219	3579.39	3369.10
Net fixed assets	3405.23	3162.50	-304.26	2400.99	3240.78
Add: Misc. Assets	5438.83	5446.68	5120.50	6063.93	8646.95
Total assets	8844.0659	8609.18	4816.23	8464.9232	11887.73
Liabilities					
Current liabilities					
Saving deposit	70263.34	87707.59	10187.35	12159.96	14620.407
Current deposit	27991.84	29105.89	33952.39	52843.68	54805.33
Bills payable	1197.53	1126.06	835.148	2384.21	4631.38
Misc. current liabilities	8052.68	8217.68	8879.70	9420.90	9444.57
Total current liabilities	107505.40	126157.23	53854.60	76808.76	83501.70
Fixed deposit	20785.35	34490.94	54351.89	84640.86	83107.08
Long term liabilities	16747.009	20481.96	29396.22	40371.98	51115.45
Total capital and Liabilities	145037.7653	181130.134	137602.725	201821.6049	217724.24

Appendix – 2

Nabil Bank Limited

Profit and Loss Statement

(Rs. In Million)

S.N.	Particular	2004/05	2005/06	2006/07	2007/08	2008/09
1	Interest income	10687.4676	13099.98	15877.58	19786.96	27984
2	Interest expenses	2435.446	3571.61	5557.101	7584.36	11532.80
	Net interest income	8252.0215	9528.37	10320.48	12202.60	16452.06
3	Commission discount	1288.834	1382.93	1506.08	1562.34	1796.93
4	Other operating income	559.338	828.97	875.74	974.45	1441.64
5	Exchange income	1848.78	1854.83	2099.26	1694.87	2519.19
	Total Operating income	11948.98	13595.12	14801.57	16704.27	22209.83
6	Personal expenses	1995.162	2197.80	2401.61	2629.075	3398.97
7	Other operating expenses	1902.99	1826.96	1881.833	2207.50	2651.58
	Operating profit before provision of less	8050.82	9570.35	10518.13	11867.69	16159.27
8	Provision for loss	42.073	37.69	142.06	640.55	457.22
	Operating profit	8008.75	9532.65	10376.06	11227.13	15702.04
9	Non-operating income	722.41	7.353	52.806	240.83	21.901
10	Provision for possible loss write back	311.329	77.29	109.26	111.005	106.178
	Profit from Regular activities	9042.49	9617.305	10538.138	11578.98	15830.12
11	Income from ex-ordinary act	-	260.735	407.366	399.9	435.218
	Profit from all activities	9042.49	9878.04	10945.50	11978.89	16265.344
12	Provision for staff bonus	841.98	898.003	995.045	1088.99	1478.66
13	Provision for income tax	2391.49	2627.41	3210.86	3425.21	4476.14
	This year	5186.35	2625.625	3145.26	3426.68	4707.019
	Previous year	14.78	1.788	65.59	0.528	9.187
	Net profit/loss	5499.08	6352.62	6739.59	7464.68	Differed tax – (240.06)
					Net profit	10310.53

Appendix – 3

Calculation of Trend Value of Cash Balance Percentage

Fiscal year (x)	Cash balance (y)	x=X-06/07	x ²	Xy	Yc=a+bx
2004/05	2.00549	-2	4	-4.01098	0.9739
2005/06	2.29098	-1	1	-2.29098	2.2018
2006/07	2.08401	0	0	0	3.4297
2007/08	2.95516	1	1	2.95516	4.6576
2008/09	7.81298	2	4	15.62596	5.8855
	$\phi y_1=17.14862$		$\phi x^2=10$	$\phi xy=12.2791$	

Here, $y = 17.148$

$$x^2 = 10$$

Here, $xy = 12.27$

Where n = Total number of year

yc = Estimate value of y for give value of x in coordinate axes.

a = y intercept of mean of y value.

b = slope of line or rate of change

x = variable in time axis

So,

$$a = \frac{\phi y}{N} = \frac{17.14862}{5} = 3.4297$$

$$b = \frac{\phi xy}{\phi x^2} = \frac{12.2791}{10} = 1.2279$$

Appendix 4

Calculation of Trend Value of Bank Balance Percentage

Fiscal year (x)	Bank balance (y)	x = X- 06/07	x ²	Xy	Yc=a+bx
2004/05	5.6598	-2	4	-11.3196	0.3973
2005/06	3.7803	-1	1	-3.7803	6.3868
2006/07	8.7043	0	0	0	12.3763
2007/08	12.4794	1	1	12.4794	18.3658
2008/09	31.2581	2	4	62.5162	24.3553
	∑ y ₁ =61.8819		∑x ² =10	∑xy=59.8957	

Here, $y = 61.8819$

$$x^2 = 10$$

Here, $xy = 59.8957$

Where n = Total number of year

yc = Estimate value of y for give value of x in coordinate axes.

a = y intercept of mean of y value.

b = slope of line or rate of change

x = variable in time axis

So,

$$a = \frac{\sum y}{N} = \frac{61.8819}{5} = 12.3763$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{59.8957}{10} = 5.9895$$

Appendix 5

Calculation of Trend Value of money at call & short notice percentage

Fiscal year (x)	Money at call and Short notice (y)	x = X – 06/07	x ²	Xy	Yc=a+bx
2004/05	11.9002	-2	4	-23.8004	13.4127
2005/06	16.7129	-1	1	-16.7129	11.7706
2006/07	4.3431	0	0	0	10.1285
2007/08	11.2812	1	1	11.2812	8.4864
2008/09	6.4053	2	4	12.8106	6.8443
	$\phi y=50.6427$		$\phi x^2=10$	$\phi xy=16.4215$	

Here, $y = 50.6427$

$$x^2 = 10$$

Here, $xy = 16.4215$

Where n = Total number of year

yc = Estimate value of y for give value of x in coordinate axes.

a = y intercept of mean of y value.

b = slope of line or rate of change

x = variable in time axis

So,

$$a = \frac{\phi y}{N} = \frac{50.6427}{5} = 10.1285$$

$$b = \frac{\phi xy}{\phi x^2} = \frac{16.4215}{10} = -1.6421$$

Appendix 6

Calculation of Trend Value of Investment Govt. Securities Percentage

Fiscal year (x)	Investment Govt. Securities (y)	x = X – 06/07	x ²	Xy	Yc=a+bx
2004/05	58.4749	-2	4	-116.9498	70.1726
2005/06	59.5200	-1	1	-59.5200	60.777
2006/07	68.9411	0	0	0	51.3826
2007/08	57.4348	1	1	57.4348	41.9876
2008/09	12.5425	2	4	25.085	32.5926
	∑ y=256.9133		∑ x ² =10	∑ xy=-93.95	

Here, $\sum y = 256.9133$

$$\sum x^2 = 10$$

Here, $\sum xy = -93.95$

Where n = Total number of year

yc = Estimate value of y for give value of x in coordinate axes.

a = y intercept of mean of y value.

b = slope of line or rate of change

x = variable in time axis

So,

$$a = \frac{\sum y}{N} = \frac{256.9133}{5} = 51.3826$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{-93.95}{10} = -9.395$$

Appendix 7

Calculation of Trend Value of Loan and Advance Percentage

Fiscal year (x)	Loan and Advance (y)	$x = X -$ 06/07	x^2	Xy	$Y_c = a + bx$
2004/05	14.5064	-2	4	-29.0128	9.6869
2005/06	12.4487	-1	1	-12.4487	13.1679
2006/07	11.9810	0	0	0	16.6489
2007/08	12.3453	1	1	12.3453	20.1299
2008/09	31.9634	2	4	63.9268	23.6109
	$\phi y = 83.2448$		$\phi x^2 = 10$	$\phi xy = 34.8106$	

Here, $y = 83.2448$

$$x^2 = 10$$

Here, $xy = 34.8106$

Where $n =$ Total number of year

$y_c =$ Estimate value of y for give value of x in coordinate axes.

$a =$ y intercept of mean of y value.

$b =$ slope of line or rate of change

$x =$ variable in time axis

So,

$$a = \frac{\phi y}{N} = \frac{83.2448}{5} = 16.6489$$

$$b = \frac{\phi xy}{\phi x^2} = \frac{34.8106}{10} = 3.4810$$

Appendix 8

Calculation of Trend Value of Misc-current assets percentage

Fiscal year (x)	Misc-current assets (y)	$x = X -$ 06/07	x^2	XY	$Y_c = a + bx$
2004/05	7.4529	-2	4	-14.9058	5.3563
2005/06	5.2469	-1	1	-5.2469	5.6949
2006/07	3.9463	0	0	0	6.0335
2007/08	3.5039	1	1	3.5039	6.3721
2008/09	10.0176	2	4	20.0352	6.7107
	$\phi y = 30.1676$		$\phi x^2 = 10$	$\phi xy = 3.3864$	

Here, $y = 30.1676$

$$x^2 = 10$$

Here, $xy = 3.3864$

Where $n =$ Total number of year

$y_c =$ Estimate value of y for give value of x in coordinate axes.

$a =$ y intercept of mean of y value.

$b =$ slope of line or rate of change

$x =$ variable in time axis

So,

$$a = \frac{\phi y}{N} = \frac{30.1676}{5} = 6.0336$$

$$b = \frac{\phi xy}{\phi x^2} = \frac{3.3864}{10} = 0.3386$$

The following formulas are used to calculate mean, standard deviation and coefficient variation

$$\text{Mean } (\bar{x}) = \frac{\sum x}{N}, \text{ Standard deviation}$$

$$(\sigma) = \sqrt{\frac{\sum d^2}{n}}$$

$$\text{Coefficient of variation (C.V.)} = \frac{\sigma}{\bar{x}}$$

Appendix – 9

Cash balance to current asset percentage

Year	X ₁	d ₁ = (x ₁ - \bar{x})	ϕd^2
2004/05	2.0054	-1.4243	2.02863
2005/06	2.2909	-1.1388	1.2968
2006/07	2.0840	-1.3457	1.8109
2007/08	2.9551	-0.4746	0.2252
2008/09	7.8129	4.3832	19.2124
N = 5	$\phi x_1 = 17.1486$		$\phi d^2 = 24.5739$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N} = \frac{17.1486}{5} = 3.4297$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{N \cdot Z1}} = \sqrt{\frac{24.5739}{5 \cdot Z1}} = 2.4786\%$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger}{x} = \frac{2.4786}{3.4297} = 0.72268$$

Appendix – 10

Bank Balance to Current Asset Percentage

Year	X ₁	d ₁ = (x ₁ - \bar{x})	ϕd^2
2004/05	5.6598	-6.7165	45.11137
2005/06	3.7803	-8.596	73.8912
2006/07	8.7043	-3.672	13.4835
2007/08	12.4794	0.1031	0.01062
2008/09	31.2581	18.8818	356.5223
N = 5	$\phi x_1 = 61.8819$		$\phi d^2 = 489.0190$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N} = \frac{61.8819}{5} = 12.3763$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{n Z1}} = \sqrt{\frac{489.0190}{5 Z1}} = 11.0568\%$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger}{x} = \frac{11.0568}{12.3763} = 0.8933\%$$

Appendix – 11

Money at Call & short Notice to Current Assets Percentage

Year	X_1	$d_1 = (x_1 - \bar{x}_1)$	ϕd^2
2004/05	11.90028	1.77178	3.1392
2005/06	16.7129	6.5844	43.3543
2006/07	4.3431	-5.7854	33.4708
2007/08	11.2812	1.1527	1.3287
2008/09	6.4053	-3.7232	13.8622
N = 5	$\phi x_1 = 50.6427$		$\phi d^2 = 95.1552$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N} = \frac{50.6427}{5} = 10.1285$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{n Z1}} = \sqrt{\frac{95.1552}{5 Z1}} = 4.8773\%$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger}{x} = \frac{4.8773}{10.1285} = 0.4815\%$$

Appendix – 12

Investment Govt. Securities to Current Assets Percentage

Year	X ₁	d ₁ = (x ₁ - \bar{x})	ϕd^2
2004/05	58.4749	7.0923	50.3007
2005/06	59.5200	8.1374	66.2172
2006/07	68.9411	17.5585	308.3009
2007/08	57.4348	6.0522	36.6291
2008/09	12.5425	-38.8411	1508.6310
N = 5	$\phi x_1 = 256.9133$		$\phi d^2 = 1970.0789$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N} = \frac{256.9133}{5} = 51.3826$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{n Z1}} = \sqrt{\frac{1970.0789}{5 Z1}} = 22.1927\%$$

$$\text{Coefficient of variation (C.V.)} = \frac{\Xi}{x} = \frac{22.1927}{51.3826} = 0.4319\%$$

Appendix – 13

Loan and Advance to Current Assets Percentage

Year	X_1	$d_1 = (x_1 - \bar{x}_1)$	ϕd^2
2004/05	14.5064	-2.1425	4.5903
2005/06	12.4487	-4.2002	17.6416
2006/07	11.9810	-4.6679	21.7892
2007/08	12.3453	-4.3036	18.5209
2008/09	31.9634	15.3145	234.5339
N = 5	$\phi x_1 = 83.2448$		$\phi d^2 = 297.0759$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N} = \frac{83.2448}{5} = 16.6489$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{n Z1}} = \sqrt{\frac{297.0759}{5 Z1}} = 8.6179\%$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger}{x} = \frac{8.6179}{16.6489} = 0.5176\%$$

Appendix – 14

Misc. Current Assets to Current Assets Percentage

Year	X ₁	d ₁ = (x ₁ - \bar{x})	ϕd^2
2004/05	7.4529	1.4194	2.0146
2005/06	5.2469	-0.7866	0.6187
2006/07	3.9463	-2.0872	4.3564
2007/08	3.5039	-2.5296	6.3988
2008/09	10.0176	3.9841	15.8730
N = 5	$\phi x_1 = 30.1676$		$\phi d^2 = 29.2615$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N} = \frac{30.1676}{5} = 6.0335$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{n Z1}} = \sqrt{\frac{29.2615}{5 Z1}} = 2.7046\%$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger}{x} = \frac{2.7046}{6.0335} = 0.4482\%$$

Appendix- 15

Net Working Capital

Year	X ₁	d ₁ = (x ₁ - \bar{x})	ϕd^2
2004/05	-34529.99	-58147.088	3381083843
2005/06	-22351.3	-45968.39	2113093615
2006/07	75898.32	52281.22	2733326174
2007/08	96252.92	72635.822	5275962638
2008/09	2815.54	-20801.55	432704815.2
N = 5	$\phi x_1 = 118085.49$		$\phi d^2 = 8.710106928$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N} = \frac{118085.49}{5} = 23617.098$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{n Z1}} = 59025.780\%$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger}{x} = \frac{59025.780}{23617.098} = 2.49928\%$$

Appendix – 16

Current Ratio

Year	X ₁	d ₁ = (x ₁ - \bar{x})	d ₁ ²
2004/05	0.6788	-0.7607	0.5786
2005/06	0.8228	-0.6167	0.3803
2006/07	2.4093	0.9698	0.9405
2007/08	2.2531	0.8136	0.6619
2008/09	1.0337	-0.4058	0.1646
N = 5	$\phi x_1 = 7.1975$		$\phi d_1^2 = 2.7259$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N} = \frac{7.1975}{5} = 1.4395$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{n Z1}} = \sqrt{\frac{2.7295}{5 Z1}} = 0.8255$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger}{x} = \frac{0.8255}{1.4395} = 0.5734$$

Appendix-17

Quick Ratio

Year	X_1	$d_1 = (x_1 - \bar{x}_1)$	d_1^2
2004/05	0.5297	-0.6156	0.3789
2005/06	0.677	-0.4683	0.2193
2006/07	2.025	0.8797	0.7738
2007/08	1.8960	0.7507	0.5635
2008/09	0.599	-0.5463	0.2984
N = 5	$\phi x_1 = 5.7265$		$\phi d_1^2 = 2.2339$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N} = \frac{5.7265}{5} = 1.1453$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{n Z1}} = \sqrt{\frac{2.2339}{5 Z1}} = 0.7473$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger}{x} = \frac{0.7473}{1.1453} = 0.6525$$

Appendix-18

Cash and Bank balance to total Deposit Ratio (Excluding fixed Assets)

Year	X ₁	d ₁ = (x ₁ - \bar{x})	d ₁ ²
2004/05	0.1998	-0.1899	0.0360
2005/06	0.2165	-0.1732	0.0299
2006/07	0.4122	0.0225	0.0005
2007/08	0.505	0.1153	0.01329
2008/09	0.615	0.2253	0.0507
N = 5	$\phi x_1 = 1.9488$		$\phi d_1^2 = 0.13045$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N} = \frac{1.9488}{5} = 0.3897$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{n Z1}} = \sqrt{\frac{0.13045}{5 Z1}} = 0.1805$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger}{x} = \frac{0.1805}{0.3897} = 0.463$$

Appendix-19

Saving Deposit to total Deposit Ratio

Year	X ₁	d ₁ = (x ₁ - \bar{x})	d ₁ ²
2004/05	1.440	0.815	0.6642
2005/06	1.379	0.754	0.5685
2006/07	0.115	-0.51	0.2601
2007/08	0.088	-0.537	0.288
2008/09	0.1060	-0.519	0.269
N = 5	$\phi x_1 = 3.125$		$\phi d_1^2 = 2.050$

$$\text{Average/mean } (\bar{x}) = \frac{\phi x_1}{N}$$

$$= \frac{3.125}{5}$$

$$= 0.625$$

$$\text{Standard deviation } (\Xi) = \sqrt{\frac{\phi d_1^2}{n Z1}}$$

$$= \sqrt{\frac{2.050}{5 Z1}}$$

$$= 0.7159$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger}{x}$$

$$= \frac{0.7159}{0.625}$$

$$= 1.145$$

Appendix-20

Loan and Advance to total Deposit Ratio

Fiscal Year	X_1	$d_1 = (x_1 - \bar{x}_1)$	d_1^2
2004/05	0.2170	0.027	0.000729
2005/06	0.2031	0.0131	0.0001716
2006/07	0.167	-0.014	0.000196
2007/08	0.155	-0.035	0.0001225
2008/09	0.200	0.01	0.0001
N = 5	$\phi x_1 = 0.9511$		$\phi d_1^2 = 0.00242$

$$\begin{aligned}
 \text{Average/mean } (\bar{x}) &= \frac{\phi x_1}{N} \\
 &= \frac{0.5911}{5} \\
 &= 0.190
 \end{aligned}$$

$$\begin{aligned}
 \text{Standard deviation } (\Xi) &= \sqrt{\frac{\phi d_1^2}{n Z1}} \\
 &= \sqrt{\frac{0.00242}{5 Z1}} \\
 &= 0.0246
 \end{aligned}$$

$$\begin{aligned}
 \text{Coefficient of variation (C.V.)} &= \frac{\dagger}{x} \\
 &= \frac{0.0246}{0.190} \\
 &= 1.129
 \end{aligned}$$

Appendix-21

Loan and Advance to Fixed Deposit Ratio

Year	X ₁	d ₁ = (x ₁ - \bar{x})	d ₁ ²
2004/05	0.509	0.159	0.0252
2005/06	0.374	0.024	0.000576
2006/07	0.286	-0.064	0.00409
2007/08	0.252	-0.098	0.0096
2008/09	0.331	-0.019	0.00036
N = 5	$\phi x_1 = 1.752$		$\phi d_1^2 = 2.0398$

$$\begin{aligned} \text{Average/mean } (\bar{x}) &= \frac{\phi x_1}{N} \\ &= \frac{1.752}{5} \\ &= 0.350 \end{aligned}$$

$$\begin{aligned} \text{Standard deviation } (\Xi) &= \sqrt{\frac{\phi d_1^2}{n Z1}} \\ &= \sqrt{\frac{0.0398}{5 Z1}} \\ &= 0.0997 \end{aligned}$$

$$\begin{aligned} \text{Coefficient of variation (C.V.)} &= \frac{\dagger}{x} \\ &= \frac{0.0997}{0.350} \\ &= 0.285 \end{aligned}$$

Appendix-22

Loan and Advance to Saving Deposit Ratio

Year	X ₁	d ₁ = (x ₁ - \bar{x})	d ₁ ²
2004/05	0.150	-0.943	0.889
2005/06	0.147	-0.946	0.894
2006/07	1.525	0.432	0.1866
2007/08	1.757	0.664	0.440
2008/09	1.887	0.794	0.630
N = 5	$\phi x_1 = 5.466$		$\phi d_1^2 = 3.040$

$$\begin{aligned} \text{Average/mean } (\bar{x}) &= \frac{\phi x_1}{N} \\ &= \frac{5.466}{5} \\ &= 1.093 \end{aligned}$$

$$\begin{aligned} \text{Standard deviation } (\Xi) &= \sqrt{\frac{\phi d_1^2}{n Z1}} \\ &= \sqrt{\frac{3.040}{5 Z1}} \\ &= 0.871 \end{aligned}$$

$$\begin{aligned} \text{Coefficient of variation (C.V.)} &= \frac{\dagger}{x} \\ &= \frac{0.871}{1.093} \\ &= 0.7976 \end{aligned}$$

Appendix-23

Interest Earned to total Assets Ratio

Year	X ₁	d ₁ = (x ₁ - \bar{x})	d ₁ ²
2004/05	1.208	-0.932	0.8686
2005/06	1.521	-0.619	0.3831
2006/07	3.290	1.15	1.3225
2007/08	2.33	0.19	0.0361
2008/09	2.35	0.21	0.0441
N = 5	$\phi x_1 = 10.70$		$\phi d_1^2 = 2.6544$

$$\begin{aligned}
 \text{Average/mean } (\bar{x}) &= \frac{\phi x_1}{N} \\
 &= \frac{10.70}{5} \\
 &= 02.140
 \end{aligned}$$

$$\begin{aligned}
 \text{Standard deviation } (\Xi) &= \sqrt{\frac{\phi d_1^2}{n Z1}} \\
 &= \sqrt{\frac{2.6544}{5 Z1}} \\
 &= 0.814
 \end{aligned}$$

$$\begin{aligned}
 \text{Coefficient of variation (C.V.)} &= \frac{\dagger}{x} \\
 &= \frac{0.814}{0.2.140} \\
 &= 0.380
 \end{aligned}$$

Appendix-23

Net Profit to total Assets Ratio

Year	X_1	$d_1 = (x_1 - \bar{x}_1)$	d_1^2
2004/05	0.621	-0.28	0.0784
2005/06	0.737	-0.164	0.0268
2006/07	1.399	0.498	0.2480
2007/08	0.881	-0.02	0.0004
2008/09	0.876	-0.034	0.0045
N = 5	$\phi x_1 = 4.505$		$\phi d_1^2 = 0.3587$

$$\begin{aligned} \text{Average/mean } (\bar{x}) &= \frac{\phi x_1}{N} \\ &= \frac{4.505}{5} \\ &= 0.901 \end{aligned}$$

$$\begin{aligned} \text{Standard deviation } (\Xi) &= \sqrt{\frac{\phi d_1^2}{n Z1}} \\ &= \sqrt{\frac{0.3547}{5 Z1}} \\ &= 0.0.2978 \end{aligned}$$

$$\begin{aligned} \text{Coefficient of variation (C.V.)} &= \frac{\dagger}{x} \\ &= \frac{0.2978}{0.901} \\ &= 0.330 \end{aligned}$$

Appendix-25

Net Profit to total Deposit Ratio

Year	X ₁	d ₁ = (x ₁ - \bar{x})	d ₁ ²
2004/05	0.11	0.028	0.00078
2005/06	0.099	0.017	0.000289
2006/07	0.076	-0.006	0.000036
2007/08	0.054	-0.028	0.00078
2008/09	0.074	-0.008	0.0000169
N = 5	∑ x ₁ = 0.413		∑ d ₁ ² = 0.001169

$$\begin{aligned}
 \text{Average/mean } (\bar{x}) &= \frac{\sum x_1}{N} \\
 &= \frac{0.413}{5} \\
 &= 0.0827
 \end{aligned}$$

$$\begin{aligned}
 \text{Standard deviation } (\sigma) &= \sqrt{\frac{\sum d_1^2}{n}} \\
 &= \sqrt{\frac{0.001169}{5}} \\
 &= 0.0170
 \end{aligned}$$

$$\begin{aligned}
 \text{Coefficient of variation (C.V.)} &= \frac{\sigma}{\bar{x}} \\
 &= \frac{0.0170}{0.0827} \\
 &= 0.206
 \end{aligned}$$

Appendix-26

Calculation of Correlation Coefficient between current Assets and current liabilities of Nabil Bank

Let X and Y denote the current assets and current liabilities respectively

Year	C.A. (x)	C.L. (y)	$x - (\bar{x})$	x^2	$y - (\bar{y})$	y^2	xy
2004/05	72975.41	107505.40	-40207.22	1616620540	17939.87	321838935.6	-721312299.9
2005/06	103805.93	126157.23	-9376.7	87922502.89	36591.7	1338952509	-343109393.4
2006/07	129752.93	53854.60	16570.3	274574842.1	-35710.93	1275270521	-591740823.4
2007/08	173061.68	76808.76	59879.05	3585500629	-12756.77	162735180.8	-763863268.7
2008/09	86317.24	83501.70	-26865.39	721749179.9	-6063.83	36770034.27	162907157.8
N = 5	565913.19	447827.69		6286367694		3135567181	-2257118628

$$\text{Average } (\bar{x}) = \frac{\phi x}{n} = \frac{565913.19}{5} = 113182.63$$

$$\bar{y} = \frac{\phi y}{n} = \frac{447827.69}{5} = 89565.53$$

Here,|

$$\phi x^2 = 6286367694$$

$$|\phi y^2 = 3135567181$$

$$|\phi xy = -2257118628$$

Now,

$$\begin{aligned} \text{Correlation (r)} &= \frac{\phi xy}{\sqrt{\phi x^2} \sqrt{\phi y^2}} = \frac{-2257118628}{\sqrt{6286367694} \sqrt{3135567181}} \\ &= \frac{-2257118628}{4439743321} \quad r = -0.508 \end{aligned}$$

$$\text{P.E.} = \frac{0.674(1 - Zr^2)}{\sqrt{n}} = \frac{0.674 \cdot Z \cdot 0.508}{\sqrt{5}} = \frac{0.500}{2.23} = 0.224$$

Appendix-27

Calculation of Correlation Coefficient between total Deposit and Net Profit

Let x and y denote the total deposit and net profit.

Year	T.D. (x)	Net Profit (y)	$x - \bar{x}$	x^2	$y - \bar{y}$	y^2	xy
2004/05	48777.199	5499.08	-46437.84	2156473077	-1774.22	3147856.60	82390962.23
2005/06	63596.83	6352.62	-31618.21	999711203.6	-920.68	847651.66	29110262.79
2006/07	88304.28	6739.59	-6910.76	47758603.78	-533.71	284846.36	3688347.05
2007/08	137484.54	7464.68	42269.5	1786710630	191.38	36626.30	8089534.99
2008/09	137912.41	10310.53	42697.37	1023065405	3037.23	9224766.0	129681702.7
N = 5	476075.25	36366.5		6813718827		13541746.99	252960809.8

$$\text{Average } (\bar{x}) = \frac{\phi x}{n} = \frac{476075.219}{5} = 95215.04$$

$$\bar{y} = \frac{\phi y}{n} = \frac{36366.5}{5} = 7273.3$$

Here,|

$$\phi x^2 = 6813718827$$

$$|\phi y^2 = 13541746.99$$

$$|\phi xy = 252960809.8$$

Now,

$$\begin{aligned} \text{Correlation (r)} &= \frac{\phi xy}{\sqrt{\phi x^2} \sqrt{\phi y^2}} = \frac{252960809.8}{\sqrt{6813718827} \sqrt{13541746.99}} \\ &= \frac{252960809.8}{303759090.9} = 0.832 \end{aligned}$$

$$\begin{aligned} \text{P.E.} &= \frac{0.674(1Zr^2)}{\sqrt{n}} = \frac{0.674}{\sqrt{5}} x(1Z0.832^2) \\ &= \frac{0.208}{2.23} = 0.093 \end{aligned}$$

Appendix – 28

Calculation of Correlation Coefficient between the Total Deposit and Loan and Advances

Let x and y denote the total deposit loan and advance.

Year	TD (x)	L &A (y)	$x = (x - \bar{x})$	x^2	$y = (y - \bar{y})$	y^2	xy
2004/05	48777.19	10586.17	-46437.8	2156469269	-7015.63	49219064.3	325794953
2005/06	63596.83	12922.54	-31618.21	999711203.6	-4679.35	21896316.42	147952717.8
2006/07	88304.28	15545.77	-6910.76	47758603.78	-2056.12	4227629.45	14209372.41
2007/08	137484.54	21365.05	42269.5	1786710630	3763.18	14161523.7	1590666854
2008/09	137912.41	27589.93	42697.37	1823065405	9988.04	99760943.04	426462939.6
N = 5	476075	88009.46		6813718827		189266589.2	1073486837

$$\text{Average } (\bar{x}) = \frac{\phi x}{n} = \frac{476075.219}{5} = 95215.04$$

$$\bar{y} = \frac{\phi y}{n} = \frac{88009.46}{5} = 17601.89$$

$$|\phi x^2 = 6813718827$$

$$|\phi y^2 = 189266589.2$$

$$|\phi xy = 1073486837$$

Here,

$$\text{Correlation (r)} = \frac{\phi xy}{\sqrt{\phi x^2} \cdot \sqrt{\phi y^2}} = \frac{1073486837}{\sqrt{6813718827} \sqrt{189266589.2}}$$

$$= \frac{1073486837}{82545.25 \mid 13757.41} = 0.945$$

$$\text{P.E.} = \frac{0.674(1 - Zr^2)}{\sqrt{n}} = \frac{0.674(1 - Z0.94^2)}{\sqrt{5}}$$

$$= \frac{0.0808}{2.23} = 0.036$$

