

CHAPTER I

INTRODUCTION

1.1 General Background

Nepal as a landlocked country, its economy is agro based. More than 80% of the economically active population depends upon agriculture for livelihood. The GDP contribution of agriculture sector is about 40%. About 38% of the population is below poverty line. To reduce poverty is the main challenge of the mainstay of Nepalese economy. It is necessary to mechanize traditional agriculture in order to enhance the pace of development of the country.

In order to drive the country to industrialization capital is needed. To avail capital, money market and capital market are quite essential. To develop money market and capital market, development of Banking sector financial institutions are necessary. Therefore the economic health of the country, development of banks and financial institutions are necessary and again for the development of banking sector, Investment opportunity should be broadened.

Financial Institution can be considered as the catalyst to the economic growth of a country. The development process of a country involves mobilization and deployment of resources. Development of trade, commerce and industry are the prime requisite for the attainment of the economic, political and social goals. To fulfill the purpose of planning, financial functions more often dominates the other functions. There is always lack of finance in underdeveloped economy because natural resources are either underutilized or unutilized in productive sector or even other purpose i.e. social welfare and so on. Likewise, underdeveloped countries are not deficient in land, water, mineral, forest or power resources, though they may be untapped, constituting only potential resources. So these countries for the rapid development should mobilize resources. Due to various difficulties or even ignorance of the people, such resources have not been properly utilized. Hoarding could be one of the reasons of this. So, banks and other financial institutions play a vital role to encourage thrift & discourage hoarding by mobilizing the resources and removing the habit of hoarding. They pursue rapid economic growth, developing the banking habit among the people, collecting the small scattered resources in one bulk and utilizing them in further productive purpose and rendering other valuable services to the country. Thus this gives the individuals an opportunity to borrow funds against future income, which may improve the economic well being of borrower.

Earlier banks were different from modern commercial banks in many respects. The banks operated in the past combined central banking functions such as issue of currency with commercial banking functions like accepting deposits and financial business. In course of time this practice was abandoned and specialized institutions for the central banking functions were created. Now central banks can be easily distinguished from a commercial bank due to their objective and unique functions.

Modern commercial banks can be identified by different names such as business banks, retail banks, clearing banks, joint venture banks and merchant banks, etc. No matter what names we give to banks, they all perform the same basic functions i.e., they

provide a link between the lender and borrower. Basically by charging a rate of interest to the borrower slightly higher than they pay to the lender, the bank makes their profits. This is known as financial intermediaries. Commercial banks are the suppliers of finance for trade and industry and play a vital role in the economic and financial life of the country. By investing the saving in the productive areas they help in the formation of capital. The qualitative credit ensures certain portion of the credit of banks invested in the productive and priority areas so that there may not be shortage of resources in such areas. In addition flexible monetary and credit policy improve the prevailing slow down in the economic activities to alleviate sluggish credit expansion to the private sector from the banking sector rural people of underdeveloped countries like Nepal need various banking facilities. In most of the countries, the banks are generally concentrated in the urban and semi urban sector and the rural sector is neglected due to risk and low return. But the main sources of national income of developing countries come from the very rural sector. In fact the rural development is the key to the economic development without which other sector of the economy cannot be flourished.

1.2 Evolution of Banking Sector in Nepal:

Banking services is the oldest service industry in Nepal. It has gone through the various stages of evolution and development since the Vedic times (2000 to 1400 B.C.) Though the modern institution has a very recent origin in Nepal, some bank operational were in practice even in the ancient time. In the Katmandu Chronicle, it was recorded that the new era known as Nepal Sambat was introduced by Shankhadhar, a Sudra merchant of Kantipur in 879 or 880 A.D.; after having paid all the outstanding debts in the country. This shows the basis of money lending practice in ancient Nepal. Towards the end of 8th century, GunkamDev has borrowed money to rebuild the Katmandu valley. In 11th century. during Malla regime there was an evidence of professional moneylenders and bankers. It is further believed that money lending business, particularly for financing the foreign trade with Tibet, became quite popular during regime of Mallas. However, In the absence of any regulatory measures, the unscrupulous moneylenders were known to have charged exorbitant rates of interest and other extra dues on loans advanced.

These inconsistencies led the Prime Minister Ranodeep (1877-1885) to establish Tejarath Addaha in Kathmandu, which was a government financial institution supplying credit to the people at 5% rate of interest against security of Gold, Silver and Ornaments. The Government servants were also entitled to take loans from Tejarath, repayable from their salary at the source. During the time of Chandra Shamsher (1901-1929), credit facilities of Tejarath were extended to some other parts of the country by opening its branches. It is believed that the so-called well-to-do persons used take loans from private money lenders even at a higher rate of interest than those from the government Institution, for they were not prepared to disclose in public anything that was likely to affect their prestige. When they were approached by this type of client, the professional money lenders used to raise loans in their own names from Tejarath at 5% rate of interest against gold and ornaments, which were not their own but brought to them by their clients as security for the loans to be financed from the funds raised from Tejarath itself. Thus without any resources of their own and without any risks on their own part, the money lenders could manage very well to exploit their special type of clients just playing the role of middleman between their clients and the government institution. To control spurious rates of interest and also to curb practice on the part of the unscrupulous moneylenders, legislative measures were also taken.

Later, with growing necessity of the commercial banks in the world, Nepal Bank Limited,

the first bank of Nepal, came into being in 1937 A.D. replacing the older system of banking. In the present scenario different types of banks are being practiced in Nepal, but among them commercial banks plays vital role in the economic development of the country.

As Mentioned above, with the motive to develop the trade and Industry in the country commercial banks called Nepal Bank Limited was established in 1937 A.D. It was established under the Nepal Bank Act of 1936 A.D. and this bank was inaugurated by the late king Tribhuvan Bir Bikram Shah Dev. At That time the authorized capital of Nepal Bank Limited (NBL) was Rs 1 crore, divided into 1, 00,000.00 shares of Rs 100.00 each. Nepal Bank Limited had a responsibility of attracting people towards banking sector from predominant sahu-maharjan's transaction and of introducing other banking services as well-being a commercial bank; it was natural that Nepal Bank Limited paid more attention to profit generating business. But it is duty of the government to look into the neglected sectors. Therefore Nepal Bank Limited was established with 51% ownership of his majesty government (HMG) and 49% of the equity participation from private sector. With the development of banking sector and to help the government, formulate monetary policies, Nepal Rastra Bank was set up in 1956 A.D. (14th Baishak 2013 B.S.), the central bank of the country, since then it has contributed to the growth of financial sector.

The growth and development of the country is possible only when competitive banking services reach in each and every corner of the country. However, as the central bank, Nepal Rastra Bank had its own limitations and as a commercial bank it was not logical for Nepal Bank Limited to go to unprofitable sectors. So, to catch up with this problems, the government established Rastriya Banijaya Bank in 2022 B.S.(1965 A.D.), under Banijaya Bank Act 1965 A.D. as a fully state owned commercial bank. Then the establishment of Nepal industrial Development Corporation, Employee Provident Fund, Agriculture Development Bank etc, followed the formulation of financial institutions.

With the aim to provide quality-banking service to enhance the efficiency and health competition, foreign investment and new technology in banking sector was introduced. Nepal Arab Bank, the first joint venture bank of Nepal was established in 1984 A.D. (2041 B.S). The bank was the outcome of joint venture with the Dubai Bank Limited of United Arab Emirates. The footstep of this bank was followed by Nepal Indosuez Bank a joint venture bank with a Bank of Paris in 1986 A.D. (2041 B.S) and later Nepal Grindlays Bank Ltd, now renamed as Standard Chartered Bank, a joint venture bank with a bank of united kingdom was established in 1987 A.D. I here by want to present a brief description of both the banks (NBL & SCBNL) in Nepal which are joint venture banks.

1. **Description of Standard Chartered Bank Nepal Ltd**

Under the company act of 1984, Nepal Grindlays Bank Limited was established in 1985 as a third joint venture in Nepal. The Bank originally started its operation in 1986; ANZ Grindlays Bank Limited is the foreign joint venture partner with 50% equity investment. ANZ Grindlays Bank PLC is managing the bank under joint and technical services signed between Grindlays Bank PLC and Nepali promoters. Later on, the ownership of 50% share of ANZ has been transferred from august 2000, to Standard Chartered Bank; Remaining 35% share capital belongs to Nepal Bank Limited and Public holds 15% share capital. The name of Nepal Grindlays Bank Limited has been changed to Standard Chartered Bank Nepal Limited, effective from 16th July 2001.

2. **Description of Nabil Bank Ltd**

Nepal Arab Bank Limited, the first commercial joint venture bank of Nepal, was

incorporated in 1984 A.D. the authorized capital of this bank was Rs 100 million and paid up capital was Rs 28 million 400 thousand .The 50% share of Nabil owned by Dubai Bank Limited was transferred to Emirates Bank international Ltd. Dubai by virtue of its annexation with the later. Nepal Industrial Development Corporation, Rastriya Bima Sansthan and Security purchase and Sales Corporation share 10%, 5% and 5% respectively and rest 30% share of this bank has been issued for the general public of Nepal later on Emirates Bank Limited, sold its entire 50% equity holding to National Bank Ltd, Bangladesh. Now National Bank Limited is managing the bank in accordance with the Technical Services Agreement signed between it and the bank on June 1995.

1.3 Joint Venture Banks

A joint venture is an association of two or more persons or parties, having mutual advantages in specific operations and is undertaken to make the operation highly remunerative with their collective efforts.

Joint venture banks are financial intermediaries, financing deficit units with money deposited with them by surplus units. The financial system or the banking industry in precise is a complex network embracing payment mechanism and the borrowing and lending of funds. Though they have other important functions, the key role played by these banks in the system is to act as financial intermediaries channeling funds from those with excess income to those wishing to borrow.

Some examples of Joint Ventures banks and financial institutions

1. Nepal SBI Bank Ltd.
2. Everest Bank Ltd.
3. NABIL Bank Ltd.
4. Standard Chartered Bank Nepal Ltd
5. Nepal Bangladesh Bank Ltd.
6. Himalayan Bank Ltd.
7. NMB Bank Ltd.
8. International Leasing & Finance Co. Ltd.
9. Life Insurance Corporation (Nepal) Ltd.
10. National Life & General Insurance Co. Ltd.
11. Sagarmatha Insurance Co. Ltd.
12. American Life Insurance Company (ALICO)
13. National Insurance Co. Ltd
14. The Oriental Insurance Company Limited

1.4 Objectives of Joint Venture Banks:

Joint Venture Banks were established to invite foreign investment and modern technology to provide financial services to the target market in the kingdom of Nepal. Government policy of economic liberalization has opened its door to private foreign investment in conjunction with Nepalese investors. This has intensified the competition, which has ultimately affected the profitability of the banks. Hence to become successful in this competitive environment, all banks are moving ahead with some specific objectives, which can be summarized as below:

-) To become the most preferred supplier of financial services to the target market and to become noted for their professionalism of its staff and management.
-) To gain their position as the leading bank in the provision of their financial performance.
-) To be identified as a good corporate citizen.
-) To be recognized for the quality and stability of their earning.
-) To be able to provide stable and consistent return to their shareholders.

In order to achieve the above mentioned objectives, the JVBs should concentrate in their trust areas. Via; corporate banking, retail and private banking, Investment credit cards and technology and at the same time they must maintain their asset quality by keeping intact their lending standards.

1.5 Focus of the Study

The concept of financial institution in Nepal was introduced when the first commercial bank, the Nepal Bank Limited (NBL), was established in 30th Kartik, 1994 B.S. as a semi-government organization. In the fiscal year 2039/040, new banking policy was introduced for the establishment of new banks by the joint investment of foreign nations. Establishment of new banks by joint venture banks gave a new horizon to the financial sector of the country. Commercial Banks are the heart of the financial system. They hold the deposits of many persons, government establishment and business units; they make funds available through their lending and investing activities to borrower, individuals, business firms and government establishments. In doing so, they assist both the flow of goods and services from the producers to consumers and the financial activities of the government. They provide a large portion of medium of exchange and they are the media through which monetary policy is affected. These facts show that the commercial banking system of the nation is important to the functioning of the country.

Bank is a business organization where monetary transaction occurs. It creates funds from its clients' saving and lends the same to needy person or business companies in term of loans, advances and investment. So proper financial decision –making is more important in the banking transaction for its efficiency and profitability. Most of the financial decision of the banks is concerned with the current assets and current liabilities. The working capital management of a bank is different from other type of business enterprises. A bank plays a significant role to fulfill the requirement of working capital of any other type of business enterprises. It also needs efficient management Investment in working capital of other business enterprises is a part of current assets of bank's working capital and we can consider deposits and short term borrowings as a part of current liabilities. So this study is a reference regarding the working capital management. And Nabil and Standard Banks provide more reliable report then other and more profit earning banks then others banks and Financial Institutions which can analysis from below table

Table 1: **Operational Results of the listed companies for the fiscal year 2006/2007**
(Rs. In million)

NameOf Banks and Financial Institutions	Paid Capital Up	Net Per (Rs)	Worth Share	Net Profit	Total Assets	Market Price of the Share
Standard chartered Bank Ltd	413.25	512.12		691.67	25896.69	5800.00
Nepal Industrial & Commercial Bank	660.00	139.09		158.48	11678.83	950.00
Laxmi Bank Ltd	729.70	118.46		65.58	8582.69	664.00
Nepal SBI Bank Ltd	641.80	179.58		254.91	13901.20	1176.00
Nepal Investment Bank Ltd	801.35	234.37		795.71	27590.84	1729.00
Bank Of Kathmandu	603.14	162.81		262.39	14570.10	1375.00
Lumbini Bank Ltd	600.00	(71.61)		192.40	5705.03	505.00
Himalayan Bank Ltd	810.81	264.74		491.82	33519.40	1760.00
Kumari Bank Ltd	750.00	136.75		170.26	11918.31	830.00
Macchapucchre Bank Ltd	821.65	121.74		74.09	10807.62	620.00
Nabil Bank Ltd	461.65	418.39		673.96	27253.39	5050.00
Everest Bank Ltd	518.00	231.95		296.41	21432.57	2430.00
Neapl Bangladesh Bank Ltd	719.85	(364.54)		(877.38)	7254.55	550.00
NMB Bank Ltd	199.54	142.56		75.14	4420.94	840.00
Nirthan Utthan Bank Ltd	32.93	332.31		13.78	858.99	110.00
Bageshwori Bikash Bank Ltd	30.00	116.30		2.81	315.86	294.00
International Leasing & Finance Co. Ltd	120.00	146.69		32.33	1910.51	380.00
Life Insurance Corporation Nepal) Ltd	250.00	120.38		830.21	2301.70	880.00

In the above table we can analyze market price of commercial bank, development bank, and other financial institution and found that Nabil and Standard Chartered Bank are the most two top banks which have the highest Market price of the share and highest profit earning banks. So these two banks of Nepal are selected for study.

1.6 Statement of the Problem:

Working capital management of the bank is difficult that of manufacturing and non-manufacturing business organization. Commercial banks are great monetary institutions which are playing important role to general welfare of the economy. The responsibility of commercial banks is more than any other financial institutions. They must be ready to pay on demand without warning or notice, a good share of their liabilities. Banks collect

funds from different types of deposits for providing loan and advances to different sector. To get higher return, bank must try to increase fund from deposits as well as their investments. The motive of banking business is to borrow public saving and lend to needy people, But commercial bank always face the problem of utilizing more deposit as investment fully and productively. The gap between collection of deposit and disbursement of loan increase the cash balance on bank, which require paying its large amount of liability on its depositors demand without notice. But the large amount of idle cash balance also decrease profitability of bank.

Joint venture banks are playing vital role in mobilizing financial resources in Nepal. Attraction of joint ventures banks in banking sectors is quite new sign in economic achievements. So joint venture banks are the matter interested for the students of economic. Mainly the leading two joint venture banks – Nabil Bank Ltd and Standard Chartered Bank Nepal Ltd. are seen well in comparison to others joint venture on the account of their performance and profitability as well. It is the question of the study that whether there is any relationship of working capital management with regard to their performance and profitability between this to banks.

So following major problem that have been identified for the proposed of this study

-) Which of the current assets are more problematic in Nabil and Standard Chartered Bank?
-) What is the lending pattern of loans and advances and other investments?
-) What is the banks' image in relation to working capital?
-) What are the components of working capital, which affect the operating income of Nabil and Standard Chartered Bank?

1.7 Objectives of the Study

The main objective of this study is to examine the management of working capital in Nabil Bank Limited and Standard chartered Bank Nepal Limited. The specific objectives of this study are as follows:-

-) To study the current assets and current liability and their impact on liquidity and profitability.
-) To analyze the liquidity, assets utilization, long term solvency and profitability position of both banks.
-) To analyze the comparative study of working capital management between Nabil Bank Limited and Standard Chartered Bank Nepal Limited.
-) To provide recommendation and suggestions for the improvement of Nabil Bank Limited and Standard Chartered Bank Nepal Limited.

1.8 Research Hypothesis

In order to fulfill the objective of research study following hypothesis is formulated for testing.

Hypothesis 1.

Ho: There is no significant difference in composition of working capital between Nabil Bank and Standard Bank Nepal Limited.

H1: There is significant difference in composition of working capital between Nabil and Standard Chartered Bank Nepal Limited.

Hypothesis 2

H0: There is no significant difference in liquidity position between Nabil and Standard Chartered Bank Nepal Limited.

H1: There is significant difference between in Liquidity position between Nabil and Standard Chartered Bank Nepal Limited.

Hypothesis 3

H0: There is no significant difference in profitability position between Nabil and Standard Chartered Bank Nepal Limited.

1.9 Significance of the Study

Nepalese commercial banks are operating in a competitive environment. Every bank should adopt suitable strategies for their existence. The success or failure of any organization depends on proper management of working capital. Working capital management is the crux of problem to prepare strategy on its favors. So the study might be helpful for the management of concerned banks as well as it might be valuable for the researcher, scholars, students who want to study into the working capital management of joint venture banks.

1.10 Limitation of the Study

Following are the limitations of the study:-

-) Though a commercial bank has several functions the study concentrates only on the working capital management.
-) The period of study covers only 5 years (2002-2007)A.D
-) The data used in the study are both primary and secondary and based on the information provided by the bank. The truth of the research is based on the data available from the bank
-) Though there are 19 commercial banks opening in Nepal this considers only two joint venture commercial bank i.e. NABIL and SCBNL for the study.
-) The Study is focused on balance sheet and income statement maintain by the banks published in annual report where the information given in condensed form

1.11 Organization of the Study

The Study has been organized as follows:-

- 1 Introduction
- 2 Review of Literature
- 3 Research Methodology
- 4 Data Presentation and Analysis
- 5 Summary, Conclusion & Recommendation

The introduction chapter covers, general background, evolution of banking sectors in Nepal, Joint venture banks, objectives of joint venture banks, focus of the study, statement of the problem, objectives of the study, research hypothesis, significance of the study, limitation of the study and organization of the study.

The second chapter focuses on the review of literature. It contains the conceptual framework and past research literature on working capital management of various books and research works.

The third chapter deals with the research methodology to be adopted for the study consisting research design, sources of data, data processing procedure, tools and techniques of analysis and period covered.

The fourth chapter deals with presentation, analysis and interpretation of data. It consists testing of hypothesis and major finding of the research.

The last chapter covers summary conclusion and recommendation.

CHAPTER II

REVIEW OF LITERATURE

This Chapter highlights upon the literature that is available in this particular topic. This chapter is divided into two parts: first parts deals with the conceptual framework of working capital, second parts deals with relating of some available literature including review of books, articles and thesis.

2.1 Conceptual Framework

Working capital refers to the resources of the firm that are used to conduct operations to do day to day work that make the business successful. In this respect, working capital management plays a significant role in every concern including trading organizations are the major aspects of the country, which support the development of national economy. To run daily trading activities of the company, beside manpower, equipment etc. One of the major components is working capital. Simply, the term working capital management refers to the administration of all aspects of current assets and current liabilities, which affect the overall day-to-day functional areas of the organization. For instance, without cash bills can not paid , without receivable the firm can not allow timing difference between delivering goods or services and collecting the money to pay for them, without inventories the firm can not provide immediate deliveries. Thus, sometimes, the success or failure of any concern virtually depends upon the efficiency of working capital management.

It is not so simple for the manager to determine he suitable current assets investment policy, maintain proper relation of current assets with fixed and total assets. The minor mistake on decision-making about working capital may be harmful to the organization and finally may create the situation of pushing the organization into liquidation. Therefore to maintain the good balance of the working capital, it should be neither excess nor less just adequate to the need of the business firm. Adequate working capital brings security, confident and continued existence of the business. In other hand, excess investment could affect profitability and inadequate amount of working capital can threaten solvency of the firm (Pandey; 1999; 808). So, many authors have compared the working as lifeblood and controlling nerve center. Without it, one cannot imagine the future life of any concern. It is said that good working capital management is a component of good financial management and will help to enhance financial performance.

2.1.1 Concept of Working capital

1. Gross Working Capital

The term gross working capital is regarded as the firm's total current assets. It focuses only the optimum investment in current assets and financial of current assets (Khan & Jain; 1999; 604). It consists of cash, marketable securities, receivables and inventories. From the management viewpoint, gross working capital deals with the problems of management viewpoint, gross working capital deals with the problems of managing individual currents in the day-to-day operations (Kucchal;1998;157), Current assets are the most powerful part of any organization. It can affect the profitability and can create the problem in daily operations. It also enables a firm to plan and control

funds to maximize the return on investment (Kulkarni;1990;376). This concept is also known as qualitative concept.

2. Net Working Capital

Net working capital commonly defined as the difference between current assets and current liabilities. It focuses the liquidity position of the firm in long run. Net working capital can be positive or negative. Positive net working capital will arise when current assets exceed current liabilities and negative net working capital arises when current liabilities exceed current assets. Positive working capital helps to increase the profit but in reverse negative working capital may be harmful to the company. So, net working capital can be more useful for the analysis of the trade-off between profitability and risk (Khan and Jain; 1999; 15.4). The concept of net working capital is also equally important in every organization. It enables a firm to determine how much amount is left for operational requirement (Kulkarni; 1990; 376). Net working capital is not very useful for comparing the performance of different firms as a measure of liquidity, but it is quite useful for the internal control. It is also known as quantitative concept.

2.1.2 Types of Working capital Management

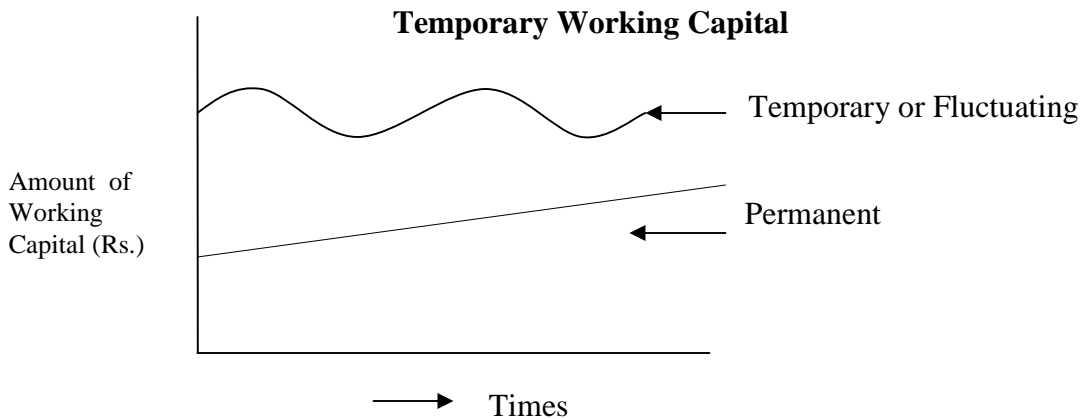
1. Permanent Working Capital

Permanent working capital is the minimum amount of current assets required throughout the year to conduct a business on a continuous and uninterrupted basis, even during the dullest season of the year. It will remain permanently in the business and will not be returned until the business is wound up (Khan and Jain; 1999;172). But it could vary from year to year depending upon the growth of the company and the stage of the business cycle in which it operates (Kulkarni;1990;376). Business firm could not be able to survive itself in the competitive market without permanent working capital. For instance, enterprises have to maintain a minimum stock of raw materials, work-in progress, finished product, spare parts etc. it always requires money for the payment of wages and salaries throughout the year (Kucchal;1988;161).

2. Temporary Working Capital

Temporary working capital is also known as variable, seasonal and fluctuate working capital. It represents the extra working capital, required at certain times during the operation year to meet some special exigency. It may be required in seasonal changes of business and certain abnormal conditions like strikes, lockouts, dull market conditions, cut-throat competition etc. therefore, the firm to meet liquidity requirements that will last only temporarily creates temporary working capital (Kucchal;1988;401)

Figure I



Sources: Pandey, Financial Management, 8th edition

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2.1.3 Working capital Policy

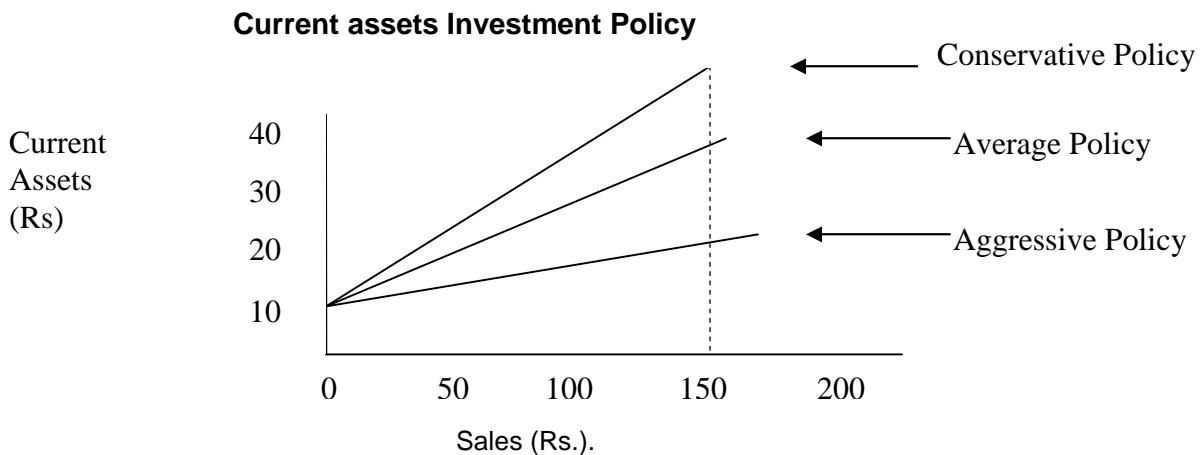
Working capital policy refers to the firm's basic policies relating (1) the target level for the each category of current assets and (2) how current assets will be financed (Weston and Brigham; 1987;401). There are basically two policies in working capital management to examine the above two issues.

1. Current Assets Investment Policy
2. Working Capital Financing Policy

3. Current assets Investment Policy:

Current assets investment policy refers to the policy regarding the total amount of current assets to be carried out to support the given level of sales. There are three alternative current assets investment policies related, moderate and restricted. Under each policy, a different amount of working capital is carried to support each level of sales (Weston and Brigham; 1987; 401)

Figure 2



Sources: Weston, Besley an Brigham, Essentials of Managerial Finance: 1996:345

i) Relaxed Current Assets Investment Policy:

In this policy, the firm holds relatively large amount of current assets i.e. cash, marketable securities, inventory and receivables to support the given level of sales. This policy creates the longer receivable collection period due to the liberal credit policy. It also used to create longer inventory and cash conversion cycles. So, the policy provides the lowest expected return on investment with lower risk to the customers.

ii) Moderate Current Assets Investment Policy;

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

iii) Restricted Current Assets Investment Policy;

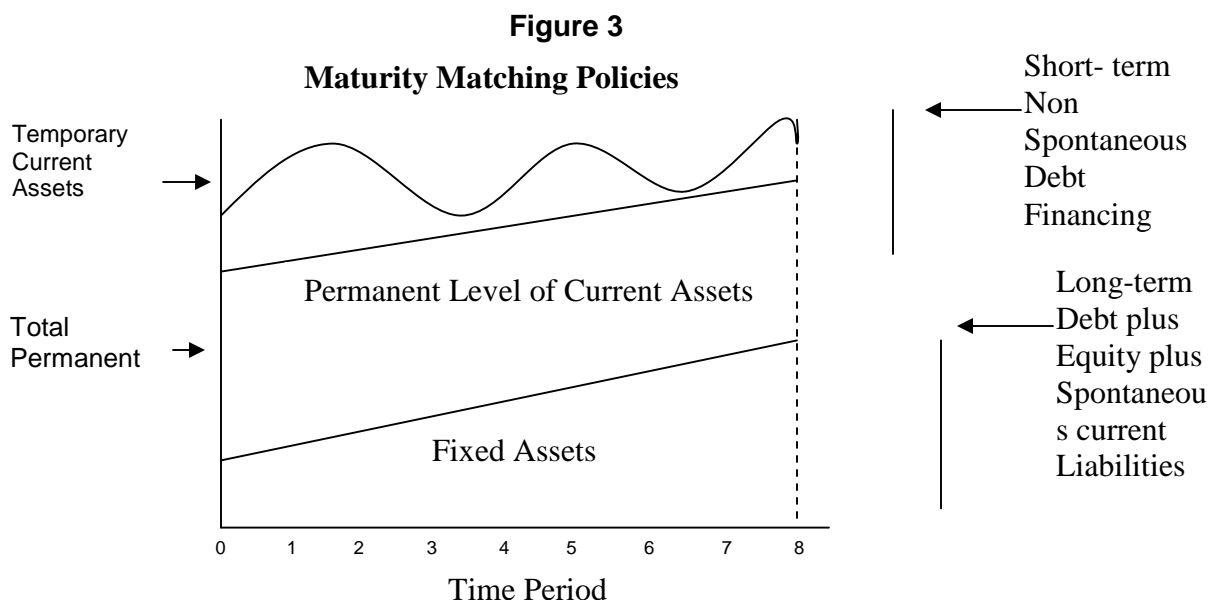
In restricted policy, firm holds the minimum amount of cash, marketable securities, inventory and receivable to supports the given level of sales. This policy tends to reduce cash conversion cycle, receivable conversion cycle. The Policy follow a tight credit policy, under which, firm used to bear the great risk to losing sales.

3. Working Capital Financing Policy

As current assets plays crucial role in any concern, it is must that working capital financing policy should clearly outline the different sources of financing in current assets. The manner in which the permanent and temporary currents are financed constitutes the firm's working capital financing policies (Weston and Brigham; 1987; 40). There are three working capital financing policies-maturity matching, aggressive and conservative.

i) Maturity Matching Policy

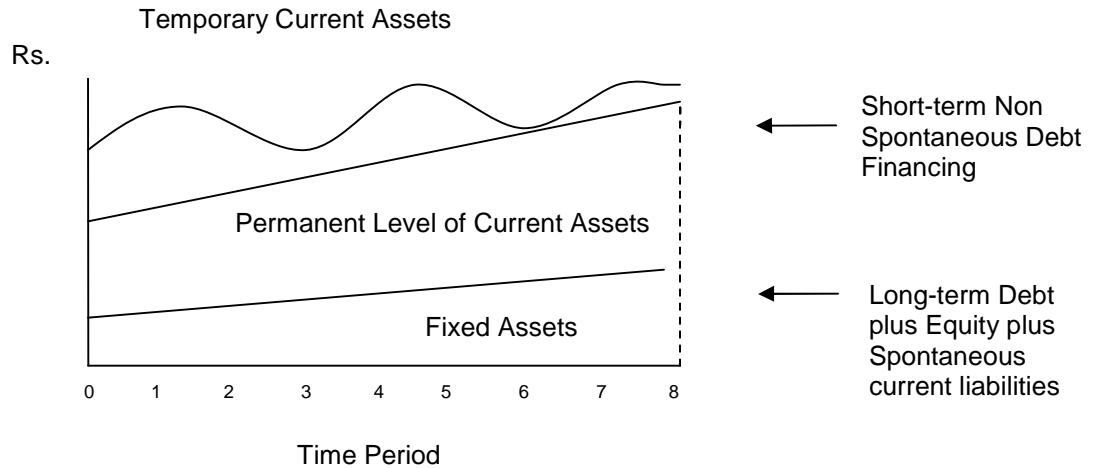
Under this policy, the firm uses long term financing to finance permanent current assets and shorts term financing to finance temporary variable currents. This situation may not be realized due to the uncertainty about the expected lived of assets. Maturity matching policy lies in between the aggressive and conservative policies. There is neither high nor low level of current assets and current liabilities. So, there will be a low profitability in the company, while under this policy. Therefore, if the firm attempts to match assets and liabilities, well call this a moderate (maturity matching or self-liquidating) working capital financing policy (Weston and Brigham; 1987; 411)



ii) Aggressive Policy

Under this policy, the firm finances not only in temporary current assets but also finances in a part of the permanent current assets with short term financing and firm may even finance in a part of their fixed assets with long term financing. This policy relies heavily on short term financing, which makes the firm more risky. There will be complicated for the firm to raise the funds during the stringent credit period. Hence, there is higher risk, higher return and low liquidity position under this aggressive policy.

Figure 4



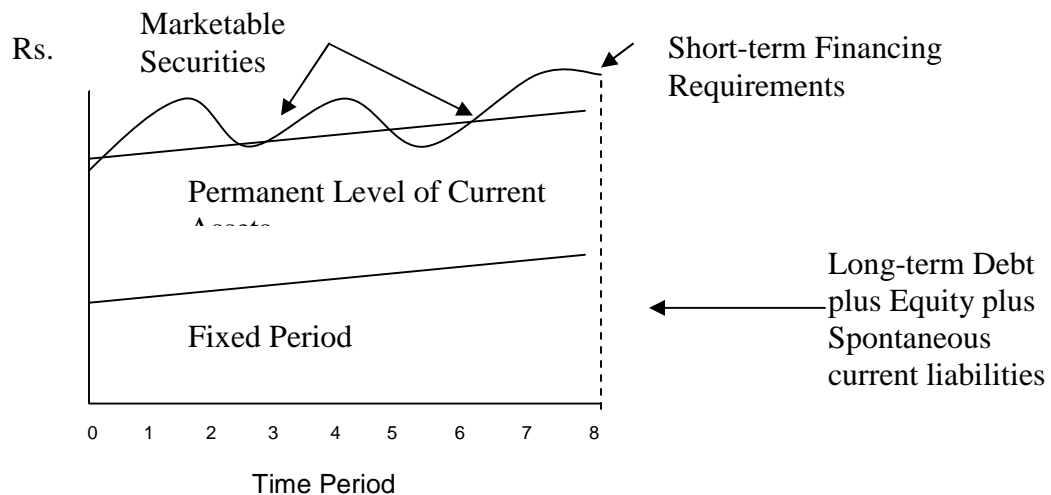
Sources: Weston, Besley and Briham , Essential of Managerial Finance: 1996:347

iii) Conservative Policy

In the conservative policy, firm use long term financing to finance not only in the permanent and fixed assets but also finances in a part of temporary current assets with long term financing. Conservative Policy also meets some of all the seasonal demands. It is comparatively less risky and earns lower return. So, this policy is known as very safe financing policy.

Figure 5

Conservative Policy



Source; Weston, Besley and Brigham, Essential of Managerial Finance; 1996; 347

2.1.4 Need For Working Capital

The need for working capital to run the day-to-day business activities cannot be overemphasized (Pandey; 1999; 809). It helps to achieve entire goal of the business and maximize the wealth of shareholders. Business firm generally hold cash for these three purposes. They are as follows.

1. Transaction Motive

The transaction motive refers to the holding of cash to meet day to day routine cash requirement of the business. It helps business to run smoothly and uninterrupted basis.

2. Precautionary Motive

The Precautionary motive refers to the holding of cash to meet the random and unforeseen fluctuations in cash flow i.e. Unpredictable changes in demand and supply, strikes, failure of important customer, unexpected slow down in collection of account receivable etc.

3. Speculative motive

The speculative motive refers to the desire of a firm to take advantages of opportunities, which present themselves at unexpected moment for example they can make purchase at favorable or reduce price on payment of immediate cash, speculate on interest rate etc.

2.1.5 Financing of Working Capital

The most important function of financial manager is to determine the level of working capital and to decide how it is to be financed to meet the organizational goal. Financing of working is concern with two major factors-cost and risk. Therefore, only appropriate financing of working capital may lead business firm. Firm can adopt different financing policies among them mainly three are given below.

1 Nature of business

Working capital requirements of a firm are basically related to the nature of business. Trading and financial firms need large sum of money to be invested in working capital. Inversely, Public utilities need limited working capital only for the use of cash sales and supply services. Working capital requires most of the manufacturing concerns to fall between the two extreme requirements of trading firm and public utilities (Pandey; 1999; 817)

1 Production Policies

Production policies are also the factor, which affects in determining the working capital requirement of any firm or organization. For instance, if a firm produces seasonal products, then it will be sold in certain month of the year and which will keep inventories at minimum level, this make working capital increases. In the same way, if the work of business done by automatic, the amount of working capital will be less and if the work of business done manually, the amount of working capital required will be more.

2 Manufacturing Process

The requirement of working capital increases due to the length of their manufacturing process or production cycle in any concern and vice versa.

3 Growths and Expansion of Business

Growth and expansion of business is also another factor, which affects to determine the requirement of working capital. If the firm grows, it has naturally more cost of working capital than those static ones and vice-versa.

4 Dividend Policy

Dividend policy also may be the factor affecting working capital requirement. The payment of dividend consumes cash balance, which decreases the working capital. Inversely, if firm does not pay dividend to the shareholders, working capital will increased.

5 Business Cycle Fluctuation

Naturally the recession period need more working capital than in the period of boom and recovery. So, business cycle fluctuation is another determinant of working capital requirement.

6 Credit Policy

If the firm follows liberal credit policy, it has to invest more in working capital. On the hand, if firm follows the stringent credit policy, it has to invest only fewer amounts in working capital.

7 Price Level Change

Price level change is also affects the requirements of working capital. A firm requires maintaining the higher amounts of working capital if the prices level rises because it needs more funds due to increase in prices and vise versa.

2.1.6 Working Capital Cash Flow Cycle

The continuing flow from cash to Supplier, to inventory, to account receivable and back into cash is know as working capital cash flow cycle / operating cycle. It continuously repeats. The cycle demonstrates the conversion of raw materials and labour to cash. Hence, this concept is also called cash conversion cycle model(Weston and Brigham;1987;405). Cash conversion cycle model has been applied to more complex business and it is useful when analyzing the effectiveness of a firm's working capital management. There are following four factors of cash conversion cycle model.

1. Inventory Conversion Period (ICP)

The length of time required converting raw material into finished goods and then to sell these goods could be defined as inventory Conversion Period. This period indicate the efficiency of the firm in selling its product. Inventory turnover is calculated by dividing the cost of goods sold by average inventory. It can be shown as follows;

$$\text{Inventory Conversion Period} = \frac{360}{\text{Inventory Turnover}}$$

$$\text{Inventory Turnover} = \frac{\text{Sales}}{\text{Stock}}$$

$$\text{Inventory Conversion Period} = \frac{\text{Inventory X Days in a year}}{\text{Sales}}$$

2 Receivable Conversion Period (RCP)

Receivable conversion period indicates the number of day's debtor's turnover into cash. It analyses to determine collection of debtors and also the efficiency of collection effects. It is one of the important financial tools for the measurement of cash conversion cycle. Generally, the longer the collection period, the more efficient is the management of credit. RCP is also know as average collection period or days sales outstanding (DSO). RCP can calculate as follows:

$$\text{Receivable Turnover} = \frac{\text{Sales}}{\text{Receivable}}$$

$$\text{Receivable Conversion Period} = \frac{360}{\text{Receivable Turn over}}$$

3 Payable deferral period (PDP)

Time required to purchase raw material and labour and the payment of cash for them are called payable deferral period. It indicates the speed of creditors, payable. A high payable conversion period is favorable for the company but too much higher period also can hamper the credit worthiness of the company. The payable deferral period can be calculated using following formula.

$$\text{Payable Deferrable Period} = \frac{\text{Payable x days in year}}{\text{Purchase}}$$

4 Cash Conversion Cycle

Cash Conversion Cycle is an important financial tool and also quick and convenient way to analyze the ongoing liquidity of the firm overtime. It generally measures the length of time that firm has funds ties up in working capital. Cash conversion cycle can be calculated bu using following formula:

$$\text{Cash conversion Cycle} = \text{Inventory Conversion Period} + \text{Receivable Conversion Period} - \text{Payable Deferrable Period.}$$

As we know that inventory and receivable are cash inflow of business and PDP is cash outflow of business. So, for the calculation of conversion cycle, RCP & ICP should be added up and PDP should be deducted

2.1.7 Working capital Management

The term finance can be defined as the management of the flows of money of an organization, whether it be a institution, corporation or government agency. Finance concern itself with the actual flows of money as well as any claims against money. The management of funds of business can be described as financial management. Financial management is mainly concerned with two aspects. Firstly, fixed assets and fixed liabilities. In other words, long term investments and sources of funds, secondly, current uses and sources of funds. Both of these types of funds play a vital role in business finance.

In the words of **K.V.Smith**, "The term working capital management is closely related with short term financing and it is concerned with collection and allocation and allocation of resources. Working capital management is related to the problems that arise in attempting to manage the current assets, the current liabilities and the interrelationships that exist between them."

Working capital management refers to the resources of the firm that are used to conduct operation of day to day work that makes the business successful. Without cash, bills cannot be paid, without receivable the firm cannot allow timing different between delivering goods to services and collecting the money to pay for them, without inventories the firm cannot engage in production nor can it stock goods to provide immediate deliveries. As a result of the critical nature of current assets the management of working capital is one of the most important areas in determining whether a firm will be successful. The term working capital refers to the current assets of the firm's those items that can be converted into cash with in the year. Net working capital is defined as the difference between current assets and current liabilities.

The goal of working capital management is to support the long term operation and financial goals of the business. In effects, this involves recognizing the relationship between risk and return. Three elements must of included in analyzing the trade off between risk and return when managing working capital:

(I) Insolvency: The condition occurs when a firm can no longer pay its bills and must default on obligation and possibility declares bankruptcy. A firm without adequate level of working capital may have to 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, receivables and inventories should consider the effects to different level.

(III) Cost of Financing: When interest rates are high, its costs more to carry inventory then those rates are low. Large cash balances may not earn the return that is possible if the cash is converted into operating assets. The cost of debt and the opportunity cost of alternative investment are items to be considered when evaluating working capital level.

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

those claims of outsiders, which are accepted to mature for payment in the accounting year and include creditors, bills payable and outside 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.

By analyzing the above concept about working capital, we concluded that, all the corporation, 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 firm's point of view. Excessive investment on working capital affects a firm's profitability just as idle investment, yield nothing. In the same way, inadequate investment on working capital affects the liquidity position of the company and leads to financial embarrassment and failure of the company.

It is therefore a recognized fact that any mistake made in management of working capital can lead to adverse effects in business and reduce the liquidity, turnover and profitability and increase the cost of financing of the enterprises.

2.2 Review of Literature

Related some available literature is reviewed in this sub chapter. Various thesis works have done in different aspects of working capital of different organization are also reviewed for the purpose of justifying the study.

2.2.1 Review of Books

Some available books about working capital management are reviewed hereunder:

For the working capital management, **I.M.Pandey**, has described various aspects of working capital management. He has divided working capital management into five chapters. The first chapter deals with the concepts of working capital need for working capital, determinants of working capital. Dimension of working capital management, optimum level of current assets, and working capital trends in India. In the second chapter, he has described the management of cash and marketable securities, where he has dealt with facts of cash management motives for holding cash, cash planning, managing the cash flow, determining the optimum cash balance, investment in marketable securities. In the third chapter, he has described the management of receivables, in which he has dealt with goals of credit management optimum credit policy, aspects of credit policy credit procedures for individuals accounts. In the fourth chapter of inventory management, he has described the need to hold inventories, objectives management, inventory management techniques, selective inventory control techniques and financial manager's role in inventory management.

The management needs to determine the size of working capital as accurately as possible. It should be neither over invested nor under invested. There is no precise way to determine the exact amount of current assets for any firm. For that, the data and problems of each company should be analyzed. There is no specific rule to finance current assets. Keeping in view the constraints of individual company, a proper mix of

long term and short term sources of finance should be invested in current assets. For an orgs, therefore, it is necessary to pay proper attention to the relevant factors which generally influence the working capital requirement of the firm. Such determinants of working capital differ from one enterprise to another.

Some of the most common and important determinants are:

- Nature and Size of Business
- Sales and demand conditions
- Technology and Manufacturing Policy.
- Credit Policy
- Availability of credit
- Operating efficiency and
- Price level changes.

A firm, then taking those determinants under consideration, should determined optimum size of investment in each type of current, e.g., cash, receivable and investor. Those factors affect different enterprises differently and also vary from time to time. All factors are of separate importance and also the important of the factors changes for a firm over time.

A firm can have different level of current assets to support the same level of output. Its proportion upon the fixed assets of the firm indicates the working capital policy of the firm namely conservative and aggressive in two extreme ends. Dividing current assets by fixed assets gives current assets to fixed assets (CA/FA) ration. Assuming a constant level of fixed assets, a higher CA/FA ration means an aggressive current assets policy assuming other factors to be constant. Higher level of current assets implies greater liquidity and solvency of the firm. There is less risk of technical insolvency, but a considerable amount of funds will be tied up in current assets, which causes to lower the profitability. On the other side, to have a higher profitability, a firm can take an aggressive current assets policy maintaining lower level of current assets, which will lower the solvency of the firm and the level of risk in the same manner. Thus the reasonable approach is to balance the cost of maintaining current assets and risk associated in such a way that the trade off between risk and return are minimized.

The well Known professors **Weston and Brigham; (1987; 401)** in 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, the importance of working capital, concept of working capital, financing of working capital, the use of short term versus long term debt, relationship of current assets to fixed assets. In the next chapter they have dealt with the various components of working capital and their effective management techniques. The components of working capital they have dealt with the cash, marketable securities, receivables and inventory for the efficient management of cash, they have explained the different cash management models. They have also explained the major sources and forms of short term financing, such as trade credit, loans from commercial banks and commercial paper.

Van Horn 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 principles of inventory management and control.

Suniti Shrestha study on portfolio behavior of commercial banks in Nepal and selected two local commercial banks, three joint venture banks and one development bank as a sample for the study. Some major findings of her study are here under.

- Total deposits have been the major sources of funds for all the banks.
- Capital and reserve funds do not seem to have changed much over the year.
- The user of fund analysis shows the resources of commercial banks are allocated in liquid funds, investment on securities, loans and advances. Bills purchased and discounted.
- Among the portfolio, for Nepalese banks loan and advances share highest volume of the resources and the bills purchased and discounted the least over the year.
- The excess reserve of the commercial banks shows unused resources. The cash reserve exceeds much more than the required cash reserve.

Surendra Pradhan, in his book “**Basic Of financial Management**” has shed light on financing of working capital management as, “There are two ways of financing working capital requirement i.e., internal and external sources. Internal sources includes use of retained earnings, depreciation fund and share capital. External sources includes trade credit, advance from customer, short term deposit, cash credit, short term government loan etc.” Generally a source or a combination of various sources of financing to be used depends on the types of current assets (Permanent and variable) to be maintained. The long term sources such as stock issues, debts and bonds are appropriate to use for the permanent type of current assets only if the spontaneous type of short term sources are not enough to not available to cover the required sized of permanent assets. Types of financing may be distinguished into three groups:

- Long term financing: The sources of long term financing include long term debt (i.e. term loans and bonds), common stocks, and preferred stock and retained earnings.
- Short term financing: It includes short term bank loan, notes payable, line of credit, overdraft, factoring, pledging, blanket lien, etc. Those are obtained for the period less than one year.
- Spontaneous financing: It includes operating sources like trade credits, account payable, accruals etc.

A company can follow three approaches on the mix of short term and long term source of financing, namely conservative, aggressive and matching approach. If more short term funds are used in financing current assets and fixed assets, it can be considered as aggressive approach. Matching approach is to finance variable current assets by short term sources and permanent current assets by long term sources. In working capital management importance aspects is matching the type of financing with the type of

assets. However, the degree of managerial aggressiveness often guides in choosing a certain combination of short term and long term financial for working capital.

2.2.2 Review of Thesis

Rajendra Giri in his study “**A case Study of working Capital Management Of Balulaju Textile Industry Limited**” has attempted to evaluate "Working Capital Management of Balaju textile Industry Limited." the major findings of his study are no significant improvement in working capital during study period. Increased working capital was financed by sales of fixed assets or sources of share capital: CAs was financed by long term financing and high level of sluggish inventory's amount to unnecessary tied up of funds, impairment of profit and increased costs.

He has suggested for efficient working capital management of BTIL. It is better to fix a minimum target rate of return, make regular check to identify both excess and deficient current assets from the appropriate combination of short term and long term sources to preserve liquidity and maintain stability; take necessary actions for disposing a huge inventory with tied up working capital, involved huge carrying cost risk of losses; sick position and working inefficiency of corporation should improve.

He has set only three research questions to analyze working capital management of BTIL, which is insufficient. He has used ratio analysis as a research tools. But he has not done analysis to evaluate the relationship of current assets components with total current assets. Similarly, he has set null hypothesis but has not tested it through appropriate tools to find out whether null hypothesis is accepted or rejected. So we can say it is not fully type of research.

A analytical study of working capital management in public sector brick factory conducted by **Sushil Chandra Shrestha** tried to make a comparative assessment of working capital management of public sector brick factory of Nepal. He has analyzed various components of working capital like cash, inventory, receivable and current liabilities. The study is based on two government brick factories: Haarisiddhi and Bhaktapur brick factory. He found that there is no proper relation between liquidity turnover and profitability of two brick factories. There is no combination between fixed capital and working capital. The analysis indicates that the working capital portion is totally neglected. He has suggested using financial tools to forecast the working capital. The factories have to keep the record up to date according to standard format. The management must have to be serious regarding working capital management.

His study is basically comparative type. He has analyzed various working capital components through ratio analysis to compare between two bricks factories. he has not used hypothesis text to verify the significance of working capital components between two factories.

Anir Raj Bhandari in his thesis entitled “**A case study of Nepal bank Limited**”, has done research work for the ten years period, 2034 to 2043 B.S. he has drawn some major findings from his study were as follows. The bank has heavy liquid assets that reflect the improper utilization of the banks fund due to heavy liquid assets that reflects the improper utilization of the banks fund due to heavy growth in deposit and other borrowed capital. The volume of share capital becomes insufficient. Rate of return on shareholders investment is considered insufficient; the bank could not fully utilize its fund

and not paid attention to the portfolio management in investment.

The thesis entitled "**An appraisal of financial position of Nepal bank Limited by Narendra bahadur Amatya**" had analyses, examined and interpret the financial position of the bank. Main findings of his study are as follows: regarding the liquidity Management, bank is in a better position but the bank has been following a uniform policy to finance current assets and current liabilities.

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

The thesis entitled "**Comparative study of working capital management of NBL and Nabil Ltd**" by **Niraj K.C** aims to examine 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 & suggestion for the improvement of working capital management NBL and NABIL in the future.

Study has mentioned the following findings:

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

2.2.3 Review of Different Studies

Dr. Manohar Krishna Shrestha had carried out his article on, "Working Capital Management in Public Enterprises: A Study on financial result & Constraint". In this article he had states that manager often lacks basic knowledge of working capital and its overall impact on the operative efficiency and financial viability of public enterprises. the study has been based on sample of ten public enterprises i.e. Birgunj Sugar factory, janakpur cigarette Factory, Roghupati jute Mills, dairy development corporation, national trading Ltd., royal drugs ltd, National construction company of Nepal, harisiddhi Bricks and tile factory, napalm cheeuri ghee industry ltd and chandesowri textile factory Ltd.

the study has pointed at certain policy flows such as deficient financial planning , neglect of working capital management, deviation between liquidity and turnover etc. He has suggested some measures for their effective operation and efficient results. The problem can be sorted out through identification of needed funds, development of proper management information system, determination of sound combination of short term and long term sources to finance working capital requirements.

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

Dr.Radhe Shyam Pradhan had carried out his article on “Management of Working Capital” in his study he aims at examining the various aspects of management of working capital in selected manufacturing public enterprises of Nepal. The specific objective undertaken in his study is:

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

His study has mentioned the following findings:

-) He has found that most of the selected enterprises have been activating a trade off between risk and return thereby following neither an aggressive nor a conservative approach.
-) It has showed a poor liquidity position of most of the enterprises. this poor liquidity position has been noticed as the enterprises have either negative cash flow or negative earnings before tax or they have excessive net current debts which cannot be paid within a year.
-) The Nepalese manufacturing public enterprises have, on an average, half of their total assets in the form of current assets. Of all the different components of current assets, the share of inventories in total assets, on an average, is largest followed by receivables, and cash in most of the selected enterprises?
-) The economics of scale have been highest for inventories followed by cash and gross working capital, receivable and net working capital.
-) the regression results also shows that the level of working capital and its components and enterprises desires to hold depend, not only sales but on holding cost also.

His study is concerned with interrelationships that exist between managing current assets and current liabilities. The study manages to focus on net working capital concept. The study has employed ratio analysis, discriminate analysis and econometric models for its analysis.

From the review of above mentioned bunch of research works, it is clear that there is short of research work on comparative study of working capital management of commercial banks, i.e. between joint venture banks. This comparative study of working capital management of Nabil and Standard chartered Bank is different from other previous research works.

CHAPTER III

RESEARCH METHODOLOGY

The Research methodology is the process of arriving to the solution of the problem through planned and systematic dealing with the collection analysis and interpretation of fact and figure. It consists of research design, population and sample study, sources of data, data processing procedure and technique of analysis of data. This chapter describes the methodology employed in this study.

3.1 Research Design

Research design is a plan structure and strategy of investigation conceived so as to obtain answer to research question and to control variances. The study aim to portraying accurately up on the working capital (or current assets and current liabilities) and its impact on overall financial position of these two banks. The research design followed for this study is basically a historical end; descriptive-cum-analytical research methodology is followed.

3.2 Population and Sample

Currently there are many Joint venture banks in Nepal. Among them Nabil Bank Limited and Standard Chartered Bank Nepal Limited has been taken as sample for the study. Financial statements of latest 5 years from 2059/2060 to 2063 /2064 have been taken as sample data for the comparative study of working capital management. These joint venture banks are chosen as they account for the considerable market share of the banking sectors.

3.3 Sources of Data

The study is mainly based upon the secondary data; the data relating to financial performance are directly obtained from concerned banks. The supplementary data and performance obtained from unpublished official records of concerned banks, booklets, journals and other organization like security exchange center and Nepal Rastrya Bank.

3.4 Data Processing Procedure

Methods of analysis are applied as simple as possible. The obtained data are presented in various tables, diagrams and charts with supporting interpretation. Those details calculations that cannot show in the body part of the report are presented in appendices at the end.

3.5 Tools and Techniques of Analysis

On the basis of Historical data both financial and statistical tools are used to analytical of different variables.

3.6 Financial Tools

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

(A) Liquidity Ratio:

Liquidity ratio is employed to measure the company's ability to meet short – term obligations. This ratio is used to measure the company's short term obligations with short term resources available at a given point of time. This ratio provides insight into the present cash solvency in the event of adverse financial conditions.

1) Current Ratio:

This ratio measures the short term solvency i.e. its ability to meet short term obligation. As a measure of creditors versus current assets, it indicates each rupee of CA's available by dividing current assets by current liabilities.

$$\text{Current Ratio} = \frac{\text{CurrentAssets}}{\text{CurrentLiabilities}}$$

2) Quick Ratio

Quick ration establishes a relationship between quick as liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately without loss of value. Cash is the most liquid assets. Other assets which are considered to be relative liquid and included in quick assets are book debts and marketable securities. This quick ratio can be found out by dividing the total of quick assets by total current liabilities.

$$\text{Quick Ratio} = \frac{\text{QuickAssets}}{\text{CurrentLiabilities}}$$

3) Cash and Bank Balance to current Margin and Other Deposit Ratio.(Without Fixed Deposit)

This Ratio is employed to measure whether bank and cash balances are sufficient to cover its current calls margin including deposits. It is calculated by dividing cash and bank balances by saving margin and current deposits (excluding fixed deposits).

This ratio is calculated as

$$= \frac{\text{CashandBankBalance}}{\text{TotalDeposit(ExcludingFixedDeposit)}}$$

4) Saving deposit to Total Deposit Ratio

Saving Deposit is interest bearing short term deposit. The ratio is developed in order to find out the proportion of saving deposit, which is interest bearing and short term in nature. It is finding out by dividing total amount of saving deposits by amount of total deposit, which is given as follows.

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

B) Liquidity Ratio:

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

1) Loans and Advances to Total Deposit Ratio:

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

$$\text{Loans and Advance to Total Deposit Ratio} = \frac{\text{LoanandAdvances}}{\text{TotalDeposit}}$$

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

2) Loan and Advances to Fixed deposit ratio:

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

$$\text{Loans and Advance to Fixed Deposit Ratio} = \frac{\text{LoanandAdvances}}{\text{FixedDeposit}}$$

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

3) Loan and Advances to Saving Deposit Ratio

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

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

C) Liquidity Ratio:

Leverage refers to the ratio of debt to equity in the capital structure of the firm. Debt and equity are long term obligations and remaining parts in the liability side of the balance sheet are termed as short term obligations. Both types of obligations are required in forming the capital structure of the firm.

1) Long term Debt to Net Worth Ratio:

The long term financial position of the firm is determined by the leverage or capital structure. The different leverages ratios are maintained to measure the financial risk or proportion of outsiders fund and owners' capital used by the firm. Long term debt refers to the amount of fixed deposits and loans of the banks. The ratio measures the proportion of outsiders and owners' fund employed in the capitalization of banks. It is calculated by dividing the fixed obligation of the banks by owner's claim. It is calculated as follows:

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

2) Net Fixed Assets to Long Term Debt Ratio

Net fixed assets are applied to both physical and financial assets. This ratio is calculated to find out how many times net fixed assets are compared to the fixed liabilities. It is calculated as follows

$$\text{Net fixed Assets to Long term Debt Ratio} = \frac{\text{Net fixed Assets}}{\text{Long Term Debt}}$$

D) Profitability Ratio:

Profitability ratio indicates the degree of success in achieving desired profit. Various profitability ratios are calculated to measure the operating efficiency of business enterprises. Through profitability ratios the lender and investors want to decide whether to invest in a particular business or not. Some of the important ratios used is as follows.

1) Interest Earned to Total Assets Ratio

It is the ratio, which formed to find out the percentage of the interest earned to total assets. This is derived by dividing the amount of interest earned by the total assets of the firms.

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

2) Net Profit to Total Assets Ratio

This ratio is very much crucial for measuring the profitability of funds invested in the bank's assets. It measures the return on assets. It is computed dividing the net profit after tax by total assets. The formula used for computing this ratio is as:

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

3) Net Profit to Total Deposit Ratio

This ratio is used for measuring the interest rate of return from deposits. It is computed dividing the net profit by total deposit. The following formula is used as:

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

4) Cost of Services to Total Assets Ratio

A sound management always tries to utilize its larger amount of assets with minimum cost. This ratio in measuring the assets utilization with cost of services. The ratio can be expressed as:

$$\text{Cost of Services to Total Assets Ratio} = \frac{\text{Cost of Services}}{\text{Total Assets}}$$

E) Composition of Working Capital:

-) Cash and Bank Balance Percentage
-) Loan and Advance Percentage'
-) Government Securities Percentage
-) Misc. current Assets Percentage

3.7 Statistical Tools:

In this research study some statistical tools are used for analysis. The tools are as follows:

1) Trend Analysis

The techniques that show grandly increase or decrease of variables over a period of time known as trend analysis. With the help of trend analysis the tendency of variables over the period can be seen clearly.

2) Correlation Analysis

Correlation is the statistical tools that we can use to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between two set of figures. Among the various methods of finding out coefficient of correlation, Karl person's method is applied in the study. The result of correlation of coefficient is always between +1 and -1. When r is +1, it smears there is perfect relationship between two variables and vice versa. When r is 0, it means there is no relationship between two variables.

3) Hypothesis test

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

3.8 Period cover

This study covers a period of five years from 2059/60 to 2063/64 of the two banks. The analysis is done on the basis of the data for these five years.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

The main objectives of this study are a comparative study of the management of working capital of Nabil Bank and Standard Chartered Bank Nepal Limited. The measure variables of this study are cash and Bank balances, Loan and Advances and Government Securities. In this chapter relevant data and information of working capital as well financial performance of Nabil and Standard Chartered Bank are presented, compared and analyzed accordingly. It covers to analyze the ratio as well as trend (Method of Least square) and composition of current assets, liquidity, turnover, leverage and profitability of these banks. It also uses correlation analysis and hypothesis test.

4.2 Trend of Working Capital

The Following table shows the working Capital of Nabil and Standard Chartered Bank Nepal Limited of the study period.

Table 4.1.A

Current Assets / Current liabilities of Nabil Bank
Rs. In million

Fiscal Year	Total Current Assets	Current Liabilities	Working Capital
2059/60	13,868.30	10342.17	3526.13
2060/61	14,244.00	10041.02	4202.98
2061/62	14,971.77	11000.91	3970.86
2062/63	18,133.81	13052.30	5081.51
2063/64	22,829.54	15698.46	7131.08

(Sources: Appendix 3)

Graph No. 1

Nabil Bank- Working Capital

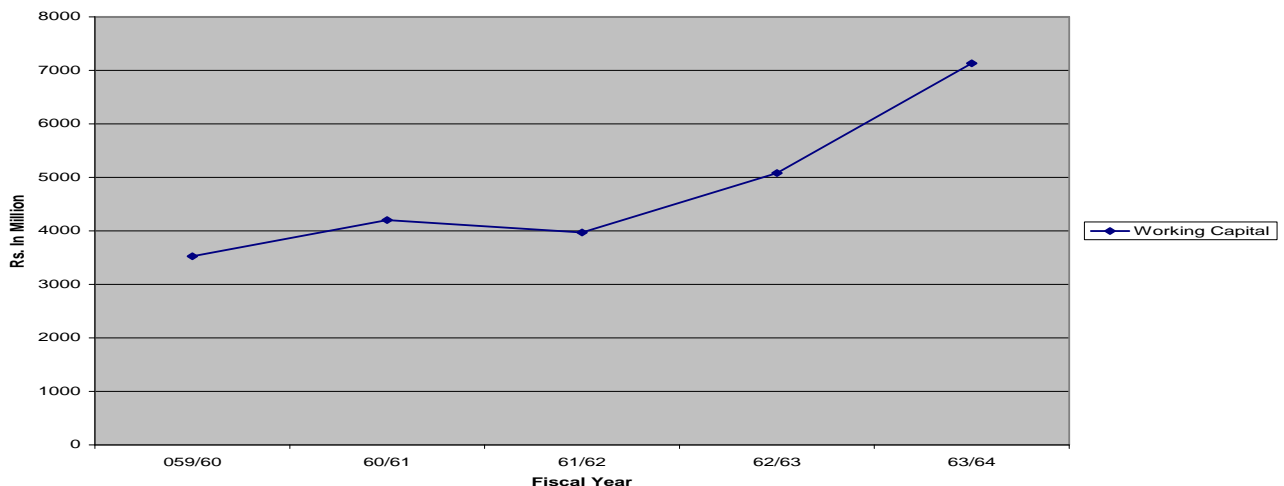


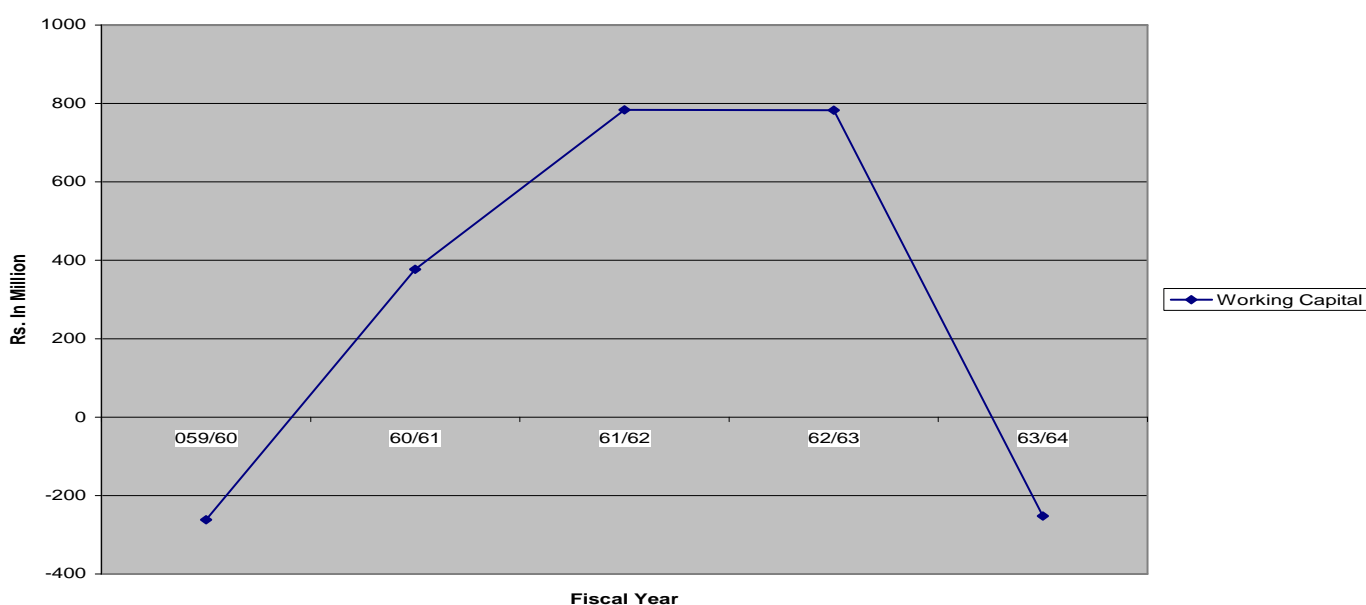
Table 4.1.B
Current Assets / Current liabilities of Standard Chartered Bank Nepal Limited
 Rs. In million

Fiscal Year	Total Current Assets	Current Liabilities	Working Capital
2059/60	17,173.94	17435.59	-261.65
2060/61	20,093.71	19716.7	377.01
2061/62	19,322.69	18539.17	783.52
2062/63	21,472.35	20689.69	782.66
2063/64	22,045.81	22298.08	-252.27

(Sources: Appendix 5)

Graph No 2

Standard Chartered Bank Nepal Ltd Working Capital



From the above table, amount of working Capital of Nabil is in increasing trend first two year but in Third year it decrease and from fiscal year 2062/63 it again started to increase. Standard Chartered Bank have minus working capital in first year Then it started to increased smoothly till fiscal year 2061/2062 then it slowly decrease in 2062/2063 and in fourth year it again goes in minus. Comparing both bank it show that Nabil have the high working capital standard chartered bank Nepal Ltd.

4.3 Composition of working capital

Different types of current assets are needed to operate any type of business. The composition of current assets or the main component of current assets at Nabil and Standard Chartered are cash and bank balance, loan and advances and government securities. 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

The following table shows the amount of cash and bank balances, Loan and advances,

Government securities and miscellaneous current assets of Nabil and Standard Chartered Bank Nepal Limited of the study period.

Table No. 4.2A
Current Assets Component of Nabil Bank

Rs. In million

Fiscal Year	Cash & Bank balance	Loan & Advances	Government Securities	Misc. Current Assets	Total Current Assets
2059/60	1,814.97	7,755.95	3,588.77	708.61	13,868.30
2060/61	1,889.22	8,189.95	3,672.63	492.20	14,244.00
2061/62	1,427.81	10,586.71	2,413.94	543.31	14,971.77
2062/63	2,365.14	12,922.54	2,301.46	544.67	18,133.81
2063/64	1,963.36	15,545.78	4,808.35	512.05	22,829.54

(Sources: Appendix 3)

Table No. 4.2B
Current Assets Component of Standard Chartered Bank

Rs. In million

Fiscal Year	Cash & Bank balance	Loan & Advances	Government Securities	Misc. Current Assets	Total Current Assets
2059/60	3,170.21	5,695.82	6,722.83	1,585.08	17,173.94
2060/61	4,241.76	6,410.24	7,948.22	1,493.49	20,093.71
2061/62	3,370.81	8,143.21	7,203.07	605.60	19,322.69
2062/63	3,253.51	8,935.42	8,644.86	638.56	21,472.35
2063/64	3,782.17	10,502.64	7,127.94	633.06	22,045.81

(Sources: Appendix 5)

From the above table, amount of current assets component of Nabil is higher in last year and the same is higher in Standard Chartered Bank from first to fourth year. Due to not equal in amount, proportion and percentage of component of current assets are required for comparative analysis.

The percentage composition of current assets that is cash and bank balance, loan and advances, government securities and miscellaneous current assets are as follow

Table No. 4.3A
Percentage Composition of Current Assets of Nabil Bank

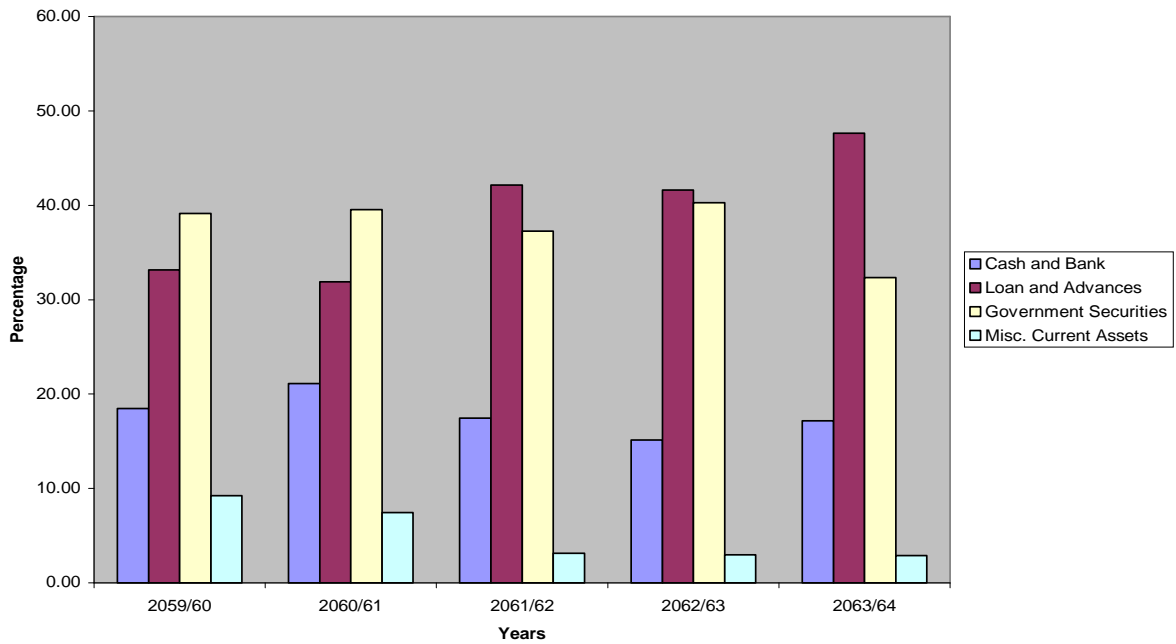
Fiscal Year	Cash & Bank balance	Loan & Advances	Government Securities	Misc. Current Assets	Total Current Assets
2059/60	13.09	55.93	25.88	5.11	100.00%
2060/61	13.26	57.50	25.78	3.46	100.00%
2061/62	9.54	70.71	16.12	3.63	100.00%
2062/63	13.04	71.26	12.69	3.00	100.00%
2063/64	8.60	68.10	21.06	2.24	100.00%
Average	11.51	64.70	20.31	3.49	

Table No. 4.3B
Percentage Composition of Current Assets of Standard Chartered Bank

Fiscal Year	Cash & Bank balance	Loan & Advances	Government Securities	Misc. Current Assets	Total Current Assets
2059/60	18.46	33.17	39.15	9.23	100.00%
2060/61	21.11	31.90	39.56	7.43	100.00%
2061/62	17.44	42.14	37.28	3.13	100.00%
2062/63	15.15	41.61	40.26	2.97	100.00%
2063/64	17.16	47.64	32.33	2.87	100.00%
Average	17.86	39.29	37.71	5.13	

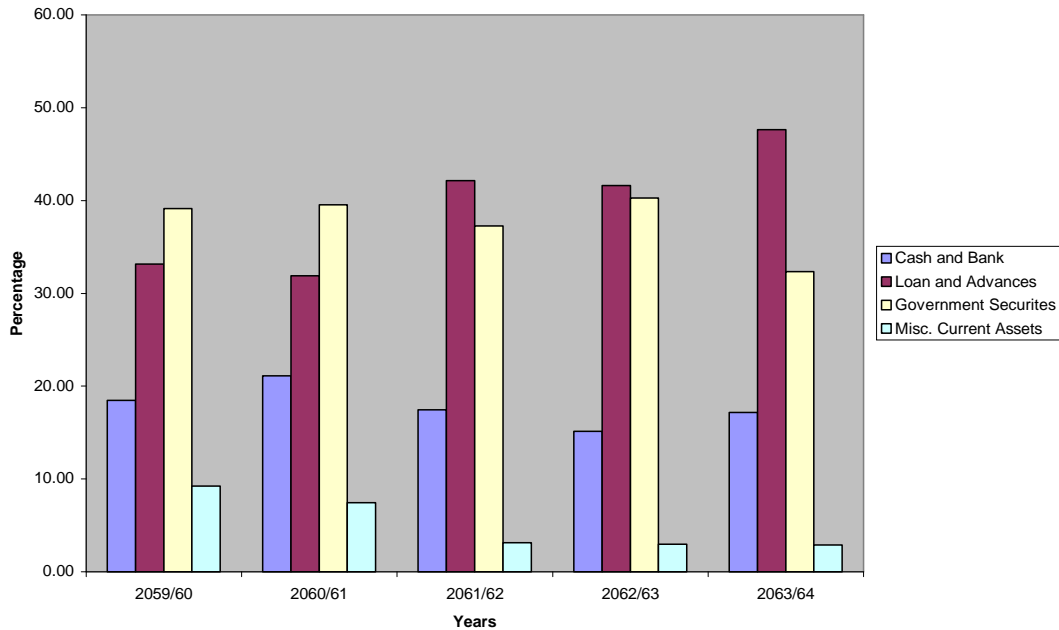
Graph No.03

Bar Diagram of Percentage Composition of Nabil's Current Assets



Graph No.04

Bar Diagram of Percentage Composition of Standard Chartered's Current Assets



4.3.1 Cash and Bank Balance Percentage of Nabil and SCBNL

Cash and bank balance percentage of Nabil are fluctuating over the study period. It is higher in second year i.e. 13.26% and lower in fifth year of study period i.e. 8.60%. The average cash and bank balance percentage of Nabil is 11.51%

The yearly cash and bank balance percentage are increasing in first two years, decreasing in next two years and increasing in last year of study period in Standard Chartered bank. It is highest in second year i.e. 21.11% and lowest in fourth year i.e. 15.15%, the average cash and bank balance percentage is 17.86%

The cash and bank balance of Standard Chartered Bank is higher for four years and lower in fifth year over the study period. The average cash and bank balance is also high in Standard Chartered Bank.

From the calculation of cash and bank balance percentage trend as per appendix 5 the value of constraints "a" and "b" is as follows

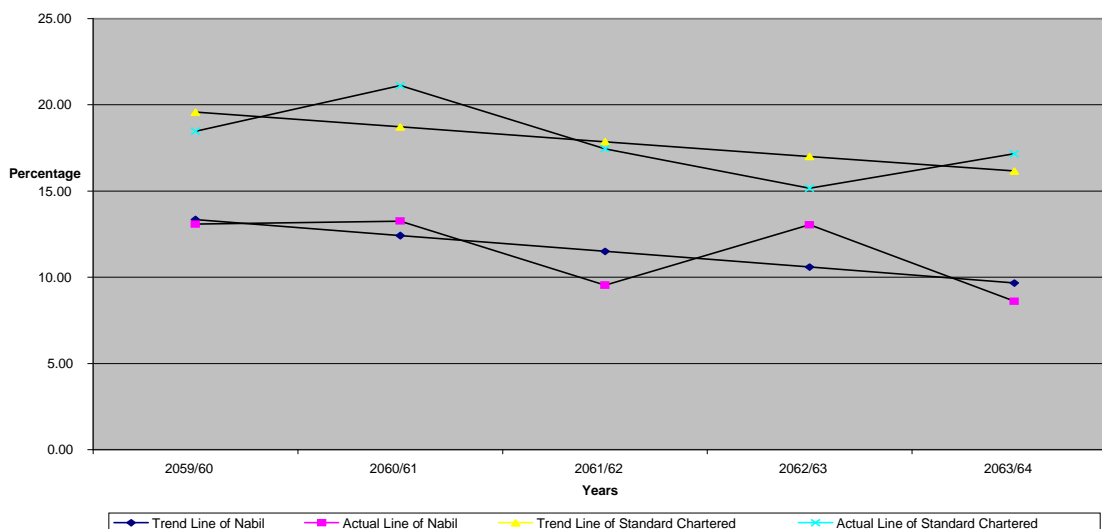
Nabil
a= 11.51
b= -0.92

Standard Chartered
a=17.86
b=-0.86

The rate of change on Cash and Bank Balance percentage "b" in both bank are negative. It implies the decreasing cash and bank balance percentage to the total current assets on banks. The greater the negative value of "b" of Nabil show faster decreasing in cash and bank balance percentage. Higher negative trend value of cash percentage of Nabil Bank indicates the better utilization of cash on income generating sources.

Graph No 5

Actual and Trend Line of Cash & Bank Balance Percentage



The graph no 03 depicts that the trend line of Standard Chartered is always higher during the study period high cash and bank balance percentage. It helps to conclude that the average cash and bank balance percentage of Standard Chartered is higher than Nabil and trend value of cash percentage indicate that Standard Chartered fastly reduces its cash percentage on total current assets than Nabil. The trend value also shows that Standard Chartered effectivly utilizes its cash balance to invest in income generating sector.

4.3.2 Loan and Advances Percentage of Nabil and SCBNL

In case of Nabil, Loan and Advances percentage are always increasing for four years and it has decrease in fifth year. It is highest in the year 2062/63 i.e. 71.26% and lowest in 2059/60 i.e. 55.93%. The range of loan and advance percentage is 71.26% to 55.93%. The average loan and advance percentage is 64.70% of Nabil. The loan and advances percentage of Nabil in the year 2059/60 and 2060/61 are less than the average i.e. 64.70%. The three years of study 2061/62, 2062/63 and 2063/64, the loan and advance percentage of Nabil are higher than the average.

Loan and advances are decreasing in first two years, increasing in third year of the study period of Standard Chartered, decreasing in fourth year and again increasing in fifth year. It is highest in the year 2063/64 i.e. 47.64% and lowest in the year 2060/61 i.e. 31.90%. The average loan and advances percentage of Standard Chartered is 39.29%. In the first two year of the study period, the loan and advances percentage is lower than the average and next three years of study period, loan and advances percentage are higher than the average percentage.

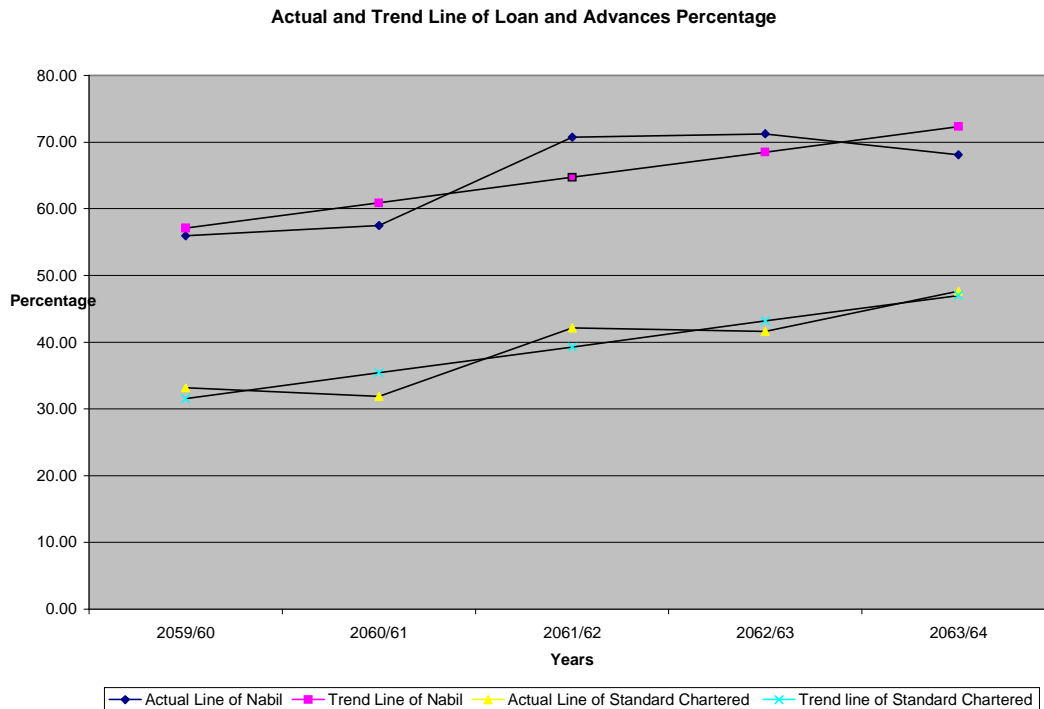
From the calculation of loan and advances percentage trend as per appendix 6, the value of the constants "a" and "b" are as follows:

Nabil
a= 64.70
b= 3.81

Standard Chartered
a=39.29
b=3.87

The trend rate or the rate of change on loan and advances percentage of Nabil and Standard Chartered Bank are positive, it implies that the loan and advance percentage of Nabil and Standard Chartered Bank are increasing but it is greater in Nabil Bank.

Graph No. 06



The graph no. 04 depicts that the trend line and actual line of loan and advance percentage of Nabil is always higher than Standard Chartered Bank. The trend line of both Nabil and Standard Chartered are upward slope. The above analysis help us to conclude that the loan and advances percentage of Nabil are better than Standard Chartered. This loan and advance percentage of total current assets indicates that the greater portion of current assets is employed for income generating purpose in Nabil.

4.3.3 Government Securities Percentage of Nabil and SCBNL

In case of Nabil, percentage of government securities is fluctuating in the study period. It was highest in the year 2059/60 i.e. 25.88% and lowest in the year 2062/63 i.e. 12.69%, and the average investment in government securities in 20.31% of Nabil. It is decreasing in first four years and increasing in last year of study period.

The yearly percentage of government securities of Standard Chartered is always higher than the same of Nabil all over the study period. It is increasing in first two years and fourth year of study period and decreasing in third and fifth year. The average government securities percentage of Standard Chartered is 37.71% which is higher than Nabil i.e. 20.31%.

From the calculation of government securities percentage trend as per appendix 7, the

value of constant "a" and "b" are as follows:

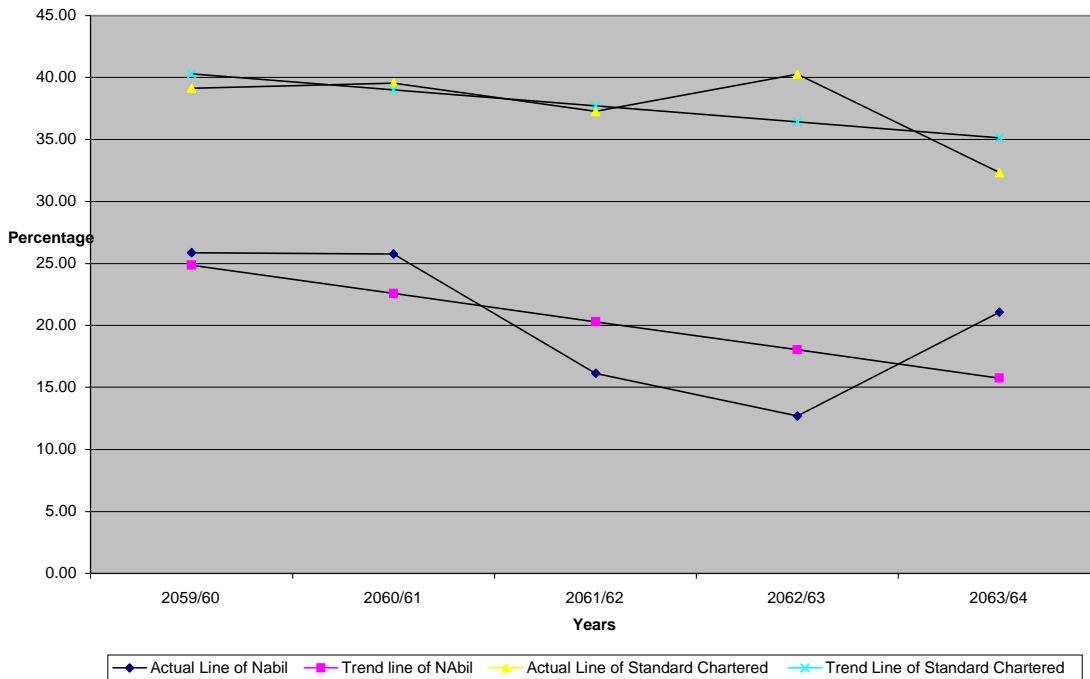
Nabil
 $a = 20.31$
 $b = -2.27$

Standard Chartered
 $a = 37.71$
 $b = -1.29$

The average investment in government securities percentage of Standard Chartered Bank is higher than Nabil Bank but the trend rate "b" of both banks is negative. It implies that the investment in government securities in total current assets in Nabil and Standard Chartered Bank is decreasing.

Graph No. 7

Actual and Trend Line of Government Securities Percentage



The graph no. 05 depicts that the trend line and actual line of government securities percentage of Standard Chartered are always higher than Nabil. The trend line of both banks has downward slope. The above analysis helps us to conclude that the government securities percentage on total current assets of Standard Chartered is better than Nabil. It shows that Standard Chartered has priority to invest on government securities rather than loan and advances due to not availability of secured investment sector.

4.3.4 Miscellaneous Current Assets percentage

Miscellaneous current assets percentage of Nabil is low in comparison to other current assets of the study period. It is highest in 2059/60 i.e. 5.11% and lowest in the year 2063/64 i.e. 2.24%, the average miscellaneous current assets percentage is 3.49%.

Miscellaneous current assets percentage of Standard Chartered is always fluctuating. It is highest in 2059/60 i.e. 9.23% and lowest in the year 2063/64 i.e. 2.87%, the average miscellaneous current assets percentage is 5.13%. in Standard Chartered which is

higher than that of Nabil i.e. 3.49%.

From the above analysis, we conclude that Standard Chartered has higher amount of idle miscellaneous current assets on total assets.

4.4 Ratio and Trend Analysis

Ratio analysis is powerful financial tools to measure the financial performance of banks comparatively. As mentioned in research methodology liquidity, turnover, capital structure and profitability ratio are calculated. To find the overall performance as well as general movement of important ratio, trend analysis, method of least square is used.

4.5. Liquidity Ratio

Liquidity of any business orgs is directly related with working capital or current assets and current liabilities of that organization. In other words, one of the main objectives of working capital management is keeping sound liquidity position. Bank is a different organization which is engaged in mobilization of funds. So without sound liquidity position, banks are not able to operate its function. To measure the bank's solvency position or ability to meet its short term obligation, various liquidity ratios are calculated and to know the trend of liquidity, trend analysis of major liquidity ratios has been considered.

4.5.1. Current Ratio

This ratio indicates the current short term solvency position of bank. Higher current ratio indicates better liquidity position. In other words, current ratio represents a margin of safety i.e. a 'cushion' of protection for creditors and the highest the current ratio, greater the margin of safety, large the amount of current assets in relation to current liabilities, more the banks ability to meet its current obligations. It is calculated as follows:

Current Ratio= Current Assets/ Current Liabilities

The following table shows the current ratio to compare the working capital management of Nabil and standard chartered.

Table No. 4.4
Current Ratio (Times)

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	CA	CL	Ratio	CA	CL	Ratio
2059/60	13,868.30	10,342.17	1.34	17,173.94	17,435.59	0.98
2060/61	14,244.00	10,041.02	1.42	20,093.71	19,716.70	1.02
2061/62	14,971.77	11,000.91	1.36	19,322.69	18,539.17	1.04
2062/63	18,133.81	13,052.30	1.39	21,472.35	20,689.69	1.04
2063/64	22,829.54	15,698.46	1.45	22,045.81	22,298.08	0.99
Average			1.39			1.01

Sources:Appendix.3&5

The above table no. 4.3 depicts that the current assets of Nabil are gradually increasing for the study period. Current liabilities of Nabil are decreasing in second year and increasing in next three years in the study period. In standard chartered, current assets are gradually increasing in first two years, decreasing in third years and gradually increasing in last two years. Current liabilities are increasing for all the times. Current ratio of Nabil as well as standard chartered is always fluctuating. The highest ratio of Nabil is 1.45 in the year 2063/64 and lowest ratio is 1.34 in the year 2059/60.

In standard chartered, the ratio is highest in the year 2061/62 i.e. 1.04 and lowest in the year 2059/60 i.e. 0.98. The yearly ratios of Nabil are always higher than the standard chartered. Therefore, the average ratio of Nabil i.e. 1.39 is higher than the average ratio of standard chartered i.e. 1.01.

As per Appendix 10, the value of constant 'a' and 'b' are as follows

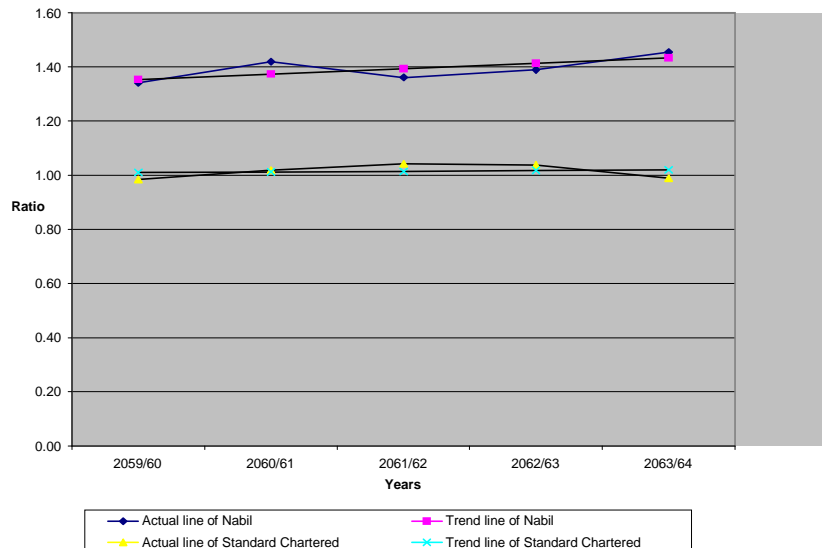
Nabil
a= 1.39
b= 0.02

Standard Chartered
a=1.01
b=0.003

The rate of change in current ratio 'b' of both banks is positive and it implies the increasing trend of current ratio.

Graph No. 8

Actual and Trend Line of Current Ratio



The Graph No.6 depicts that the trend line and actual line of Nabil are always higher than standard chartered bank. The current ratio trend line of both banks is upward slope.

The above analysis helps us to conclude that the liquidity position of Nabil is better than that of standard chartered bank. Nabil has more ability to meet its current obligations than standard chartered.

4.5.2 Quick Ratio

Quick ratio establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of original value. Cash is a most liquid asset. Other assets which are considered to be relatively liquid and included quick assets are book debts and marketable securities. This quick ratio can be found out by dividing the total of quick assets by total current liabilities.

Quick Ratio= Quick Assets/ Current Liabilities.

For this study, cash and bank balances and government securities are included in quick assets. The following table shows the quick ratio of Nabil and Standard Chartered.

Table No. 4.5
Quick Ratio (Times)

(Rs. in million)

Fiscal Year	Nabil			Standard Chartered		
	QA	CL	Ratio	QA	CL	Ratio
2059/60	5403.74	10342.17	0.52	9893.04	17435.59	0.57
2060/61	5561.85	10041.02	0.55	12189.98	19716.70	0.62
2061/62	3841.75	11000.91	0.35	10573.88	18539.17	0.57
2062/63	4666.60	13052.30	0.36	11898.37	20689.69	0.58
2063/64	6771.71	15698.46	0.43	10910.11	22298.08	0.49
Average			0.44			0.56

Sources:Appendix.3&5

The above table No. 4.4 depicts that the quick ratio of Nabil are always fluctuating over the study period. The ratio is higher in the year 2060/61 i.e. 0.55 and lower in the year 2061/62 i.e. 0.35. The average ratio is 0.44. The yearly ratio in 2059/60 and 2060/61 are higher than the average ratio. In three years of study period i.e. 2061/62, 2062/63 and 2063/64 the yearly ratio of Nabil are less than the average ratio.

In standard chartered, ratios are also fluctuating over the study period. The quick ratio is higher in 2060/61 i.e. 0.62 and lower in the year 2063/64 i.e. 0.49. The average quick ratio of standard chartered is 0.56. In the year 2060/61 and 2062/63, the yearly quick ratios are higher than the average ratio. In the year 2063/64, the yearly quick ratio is less than the average ratio and in 2059/60 and 2061/62, the yearly quick ratio and average ratio are same. The yearly quick ratios of standard chartered are always higher than the same of Nabil. So, the average quick ratio of standard chartered is higher than Nabil Bank.

As per appendix 11, the value of constant 'a' and 'b' are as follows:

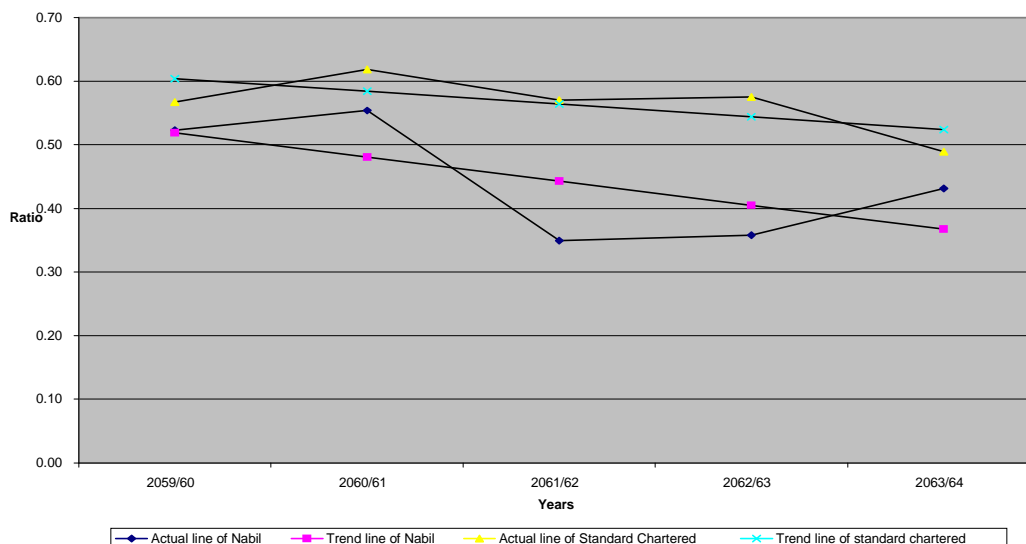
Nabil
a= 0.44
b= -0.04

Standard Chartered
a=0.56
b=-0.02

The rate of change in quick ratio 'b' of both banks is negative. It implies that both banks reduce its liquidity slowly.

Graph No.9

Actual and Trend Line of Quick Ratio



The Graph No. 7 depicts that the trend line and actual line of quick ratio of standard chartered are always higher than Nabil Bank. But the trend line of both Nabil and Standard Chartered are downward slope. The above analysis helps us to conclude that the quick ratios of Standard Chartered are always better than Nabil.

It shows the better liquidity position of Standard Chartered than Nabil.

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

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

Cash and Bank Balance to Deposit Ratio= Cash and Bank Balances/Total Deposit

Table No. 4.6
Cash and Bank Balance to Total Deposit Ratio (Excluding Fixed Deposits)

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Cash and Bank	Total Deposit	Ratio	Cash and Bank	Total Deposit	Ratio
2059/60	1814.97	8654.41	0.21	3170.21	16621.84	0.19
2060/61	1889.22	9007.05	0.21	4241.76	18791.95	0.23
2061/62	1427.81	10166.74	0.14	3370.81	17623.85	0.19
2062/63	2365.14	12047.15	0.20	3253.51	19789.03	0.16
2063/64	1963.36	13945.46	0.14	3782.17	20525.02	0.18
Average			0.18			0.19

Sources:Appendix.3&5

The above table no. 4.5 depicts that the ratio are constant in first two years and decreasing in third and fifth years and increasing in fourth years. The ratio is highest in 2059/60 & 2060/61 i.e. 0.21 and lowest in 2061/62 and 2063/64 i.e. 0.14. The average ratio of Nabil is 0.18. In the first two years and fourth year, the yearly ratios are higher than the average ratio but yearly ratios of rest two years are less than the average ratio.

In Standard Chartered, ratios are increasing in the first two years and decreasing in last three years during the study period. The higher ratio is 0.23 in 2060/61 and lower ratio is 0.16 in 2062/63. the average ratio of standard chartered i.e. 0.19 is lower than the yearly ratio of second year i.e. 2060/61, constant in two year i.e. 2059/60 & 2061/62 and higher in the last year i.e. 2062/63 and 2063/64. The yearly ratio of standard Chartered is greater than the Nabil Bank in three years of study where as yearly ratio of Nabil are greater in two years of study therefore there is little difference in average ratio of Nabil and Standard chartered i.e. 0.18 and 0.19. The average ratio of standard chartered is highest than that of Nabil.

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

4.5.4 Saving Deposit to Total Deposit Ratio

Saving Deposit is interest bearing short term deposit. The ratio is developed in order to find out the proportion of saving deposit, which is interest bearing and short term in nature. It is find out

By dividing the total amount of saving deposit by the amount of total deposit which is given as follows:

Saving Deposit to total Deposit= Saving Deposit/Total Deposit

The following table shows the bank's saving deposit to total deposit ratio:

Table No. 4.7
Saving Deposit to Total Deposit Ratio

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Saving Deposit	Total Deposit	Ratio	Saving Deposit	Total Deposit	Ratio
2059/60	5229.72	13,447.66	0.39	10633.16	18755.63	0.57
2060/61	5994.12	14,119.00	0.42	12771.83	21161.44	0.60
2061/62	7026.33	14,586.61	0.48	13030.93	19335.09	0.67
2062/63	8770.76	19,347.40	0.45	14597.67	23061.03	0.63
2063/64	10187.35	23,342.29	0.44	15244.38	24647.02	0.62
Average			0.44			0.62

Sources:Appendix.3&5

The above table no. 06 depicts that the amount of saving deposits are gradually increasing in both banks during the study period. The saving deposits to total deposits ratios of Nabil are mounting in first four years and then decreasing in fifth year but the same ratio of Standard Chartered bank are gradually increasing in first three years and decreasing in last two years. The average ratio of Nabil i.e. 0.44 is lower than its yearly ratio in third and fourth year, constant in fifth year and higher than yearly ratio in first and second year during study period. The average ratio of Standard Chartered bank i.e. 0.62 is higher than its yearly ratio in first two years, equal to last year and lower than yearly ratio in third and fourth year of study period. The yearly ratio as well as average ratio of Standard Chartered is always higher than the same of Nabil.

Although saving deposit is short term liability but its nature is long term than current, margin and other deposits so the large portion of saving deposit in total deposits shows the liquidity of the bank. Bank also pays interest on saving deposit but current, margin and other deposit are nominal cost fund. from the above analysis, saving deposit to total deposit ratio of Standard Chartered is better than the same of Nabil. It implies that Standard Chartered is more liquid bank than Nabil. It also shows that Standard Chartered pays higher amount of interest on deposits which reduce the profitability of standard Chartered Bank. Increasing ratio of Standard Chartered shows that it is raising more fund from saving deposits.

4.6. Activity to Turnover Ratio

Activity ratios are used to evaluate the efficiency with which the firm manages and utilizes its assets. These ratios are also employed to evaluate the speed with which assets are being converted and turnover. These ratios, more over help in measuring the banks ability to utilize their available resources.

4.6. 1 Loan and Advance to Total Deposit Ratio

This ratio measures the extent to which banks are successful in utilizing the outsider's fund for the profit generating purpose. In other words, how quickly total collected deposit are converted into loan and advance given to the client to earn income. It is calculated as follows

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

The following table shows the effectiveness in utilization of total deposits of Nabil and Standard Chartered.

Table No. 4.8
Loan & Advance to Total Deposit Ratio

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Loan & Advance	Total Deposit	Ratio	Saving Deposit	Total Deposit	Ratio
2059/60	7,755.95	13,447.66	0.58	5,695.82	18,755.63	0.30
2060/61	8,189.95	14,119.00	0.58	6,410.24	21,161.44	0.30
2061/62	10,586.71	14,586.61	0.73	8,143.21	19,335.09	0.42
2062/63	12,922.54	19,347.40	0.67	8,935.42	23,061.03	0.39
2063/64	15,545.78	23,342.29	0.67	10,502.64	24,647.02	0.43
	Average		0.64			0.37

Sources: Appendix 3&5

The Above table no 4.7 depicts that loan and advances of Nabil are increasing gradually during study period. Loan and advances to total deposit ratios are gradually decreasing except in third year of study period in Nabil. The average ratio of Nabil's is 0.64 which is higher than its yearly ratio of first two years and lower than its yearly ratio in last three years of study period.

For Standard Chartered, the loan and advances are fluctuating each year. The ratios are also fluctuating. The average ratio is 0.37. The ratio is highest in 2063/64 i.e. 0.43 and lowest in 2059/60 and 206/61 i.e. 0.30 of the study period. The average ratio is higher than the yearly ratio in first two years and lower than the yearly of last three years. The yearly average ratio of Nabil is always higher than the same of Standard Chartered.

The above analysis helps to conclude that loan and advance to total deposit ratio or total deposit turnover ratio of Nabil is better than Standard Chartered. It is the indication of better performance of Nabil. Thus, Nabil is employing the fund more efficiently for the profit generating purpose on loan and advance than Standard Chartered.

4.6.2 Loan and Advances to fixed Deposit Ratio

This ratio examines that how many times the fund is used in loan and advances against fixed deposit. Fixed deposits are interest bearing long term obligation where as loan and advances are the major sources of investment in generating income for the commercial banks. It is calculated as follows:

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

The following table shows the effective loan and advance to fixed deposit ratio of Nabil and Standard Chartered

Table No. 4.9
Loan & Advance to Fixed Deposit Ratio

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Loan & Advance	Fixed Deposit	Ratio	Saving Deposit	Fixed Deposit	Ratio
2059/60	7,755.95	4,793.25	1.62	5,695.82	2,133.79	2.67
2060/61	8,189.95	5,111.95	1.60	6,410.24	2,369.49	2.71
2061/62	10,586.71	4,419.87	2.40	8,143.21	1,711.24	4.76
2062/63	12,922.54	7,300.25	1.77	8,935.42	3,272.00	2.73
2063/64	15,545.78	9,396.83	1.65	10,502.64	4,122.00	2.55
	Average		1.81			3.08

Sources: Appendix.3& 5

The above table no 4.8 depicts that the loan and advances to fixed deposit ratio of Nabil is always fluctuating. It is decreasing in first two years and last two years but increasing in third year. It is highest in third year i.e. 2.40 and lowest in second year i.e. 1.60. The average ratio is 1.81 which is higher than the yearly ratio in 2059/60, 2060/61, 2062/63 and 2063/64, and lower than the yearly ratio in 2061/62.

The ratios of Standard Chartered Bank are increasing in first three years and decreasing for last two years of study period. It is highest in third year i.e. 4.76 and lowest in last fifth year i.e. 2.55. The average ratio of Standard Chartered is 3.08 which is lower than yearly

ratio in 2061/62 and higher than in all other years of study period. The yearly ratios of Standard Chartered are always greater than the same of Nabil. The average ratio of Standard Chartered is higher than Nabil.

The above analysis helps to conclude that loan and advance to fixed deposits ratio of Standard Chartered is better than Nabil because of lower amount of fixed deposit. The ratio becomes higher on Standard Chartered than Nabil. The ratio implies that Standard Chartered is utilizing its fixed deposits in loan and advances more efficiently.

4.6.3 Loan and Advances to Saving Deposits Ratio:

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

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

The following table shows the loan and advances to saving deposit ratio of Nabil and Standard Chartered:

Table No. 4.10
Loan & Advance to Saving Deposit Ratio
(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Loan & Advance	Saving Deposit	Ratio	Saving Deposit	Saving Deposit	Ratio
2059/60	7,755.95	5,229.72	1.48	5,695.82	10,633.16	0.54
2060/61	8,189.95	5,994.12	1.37	6,410.24	12,771.83	0.50
2061/62	10,586.71	7,026.33	1.51	8,143.21	13,030.93	0.62
2062/63	12,922.54	8,770.76	1.47	8,935.42	14,597.67	0.61
2063/64	15,545.78	10,187.35	1.53	10,502.64	15,244.38	0.69
		Average	1.47			0.59

Sources: Appendix.3& 5

The above table no 4.9 depicts that the loan and advances to saving deposit ratio of Nabil is decreasing for first two years and fourth year and increasing in third and last years. The ratio of Nabil is highest in 2063/64 i.e. 1.53 and lowest in 2060/61 i.e. 1.37. The average ratio of Nabil is 1.47 which is lower than the yearly ratio in first, third and fifth year, equal to yearly ratio in fourth year 2062/63 and higher than yearly ratio in second year.

The ratios of Standard Chartered are fluctuating during the study period. For Standard Chartered, the ratio is highest in 2063/64 i.e. 0.69 and lowest in 2060/61 i.e. 0.50. The average ratio is 0.59 which is lower than its yearly ratio in last three years and higher than yearly ratio in first two years of study period. The yearly ratios of Nabil are always

exceeding Standard Chartered, so the average ratio of Nabil is higher than Standard Chartered.

From the above analysis, it can be concluded that the loan and advance to saving deposit ratio of Nabil are better than the same of Standard Chartered. It implies that Nabil is utilizing short term fund of outsiders more effectively than Standard Chartered.

4.7 Capital Structure or Leverage Ratio:

Leverage refers to the ratio of debt to equity, in the capital structure of the firm, debt and equities are long term obligation and remaining parts in the liability side of the balance sheet are termed as short term obligation. Both types of obligation are required in forming the capital structure of the firm. The appropriate mix of all types of securities in capital structure results sound position of the firm. Therefore a firm has a strong short term liquidity as well as long term financial position. The long term financial position of the firm is determined by the leverage or capital structure. The difference ratios are mentioned to measure the financial risk or property of outsiders fund and owners' capital used by the firm.

4.7.1 Long Term Debt to Net worth Ratio:

Here, long term debt refers to the amount of fixed deposits and loans of the banks. The ratio measures the proportion on outsiders and owners' fund employed in the capitalization of bank. It is calculated by dividing the fixed obligation of the banks by owners' claim. It is calculated as follows

$$\text{Long Term Debt to Net worth Ratio} = \frac{\text{LongTermDebt}}{\text{NetWorth}}$$

The following table shows the long term debt to net worth ratio of Nabil and Standard Chartered:

Table No. 4.11
Long Term Debt to Net Worth Ratio

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Long Term Debt	Net Worth	Ratio	Long Term Debt	Net Worth	Ratio
2059/60	4,906.27	1,314.19	3.73	2,196.00	1,368.91	1.60
2060/61	5,222.75	1,481.68	3.52	2,429.61	1,495.75	1.62
2061/62	4,527.75	1,657.64	2.73	1,771.91	1,582.50	1.12
2062/63	7,402.67	1,874.99	3.95	3,332.50	1,754.14	1.90
2063/64	9,497.88	2,057.06	4.62	4,182.25	2,116.37	1.98
Average			3.71			1.64

Sources: Appendix.3& 5

The above table no 4.10 depicts that the long term debt on Nabil is fluctuating and net worth is gradually increasing all over the study period. So the yearly ratios of Nabil are also fluctuating. The average ratio of Nabil is 3.7. For Standard Chartered long term debt is fluctuating and net worth is gradually increasing all over the study period. The average ratio is 1.64. The yearly ratios of Nabil are very much higher than Standard Chartered so the average ratio of Nabil is two times higher than Standard Chartered.

From the above analysis, it can be concluded that the long term debt to net worth ratio of Nabil are greater than standard Chartered which implies that the proportion of outsiders' claim in total capitalization is higher in Nabil. The large amount of fixed deposit which is long term liabilities makes ratio very much higher in case of Nabil. But in standard Chartered, it is not compelled to accept fixed deposits. if it is not secured in profitable opportunities to invest the collected funds. Thus the ratio of Standard chartered is lower. So Nabil has more risky and aggressive capital structure than Standard Chartered.

4.7.2 Net fixed Assets to Long term Debt Ratio

Here, Net Fixed assets are applied to both physical and financial assets. This ratio is calculated to find out how many times net fixed assets are, in comparison to the fixed liabilities. It is calculated as follows:

$$\text{Net Fixed Assets to Longterm Debt} = \frac{\text{NetFixedAssets}}{\text{LongtermDebt}}$$

The following table shows the net fixed assets to long term debt ratio:

Table No. 4.12
Net Fixed Assets to Long Term Debt Ratio

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Net Fixed Assets	Long Term Debt	Ratio	Net Fixed Assets	Long Term Debt	Ratio
2059/60	251.92	4,906.27	5.13	191.71	2,196.00	8.73
2060/61	338.13	5,222.75	6.47	136.24	2,429.61	5.61
2061/62	361.24	4,527.75	7.98	71.41	1,771.91	4.03
2062/63	319.08	7,402.67	4.31	101.30	3,332.50	3.04
2063/64	286.90	9,497.88	3.02	125.60	4,182.25	3.00
Average			5.38			4.88

Sources: Appendix.3& 5

The above table no.4.11 depicts that the yearly ratios of Nabil are increasing for first three years and decreasing for last two years. The ratio is highest in the year 2061/62 i.e. 7.98% and lowest in the year 2063/64 i.e. 3.02%. For Standard Chartered, the yearly ratios are gradually decreasing over the study period. The ratio is highest in 2059/60 i.e. 8.73% and lowest in the year 2063/64 i.e. 3.00%.The yearly ratio of Nabil are always higher than the same of standard Chartered except in the year 2059/60.The average ratio of Nabil is higher than Standard Chartered.

From the above analysis, it can be concluded that net fixed assets covers low proportion of long term debt in both banks. In other words, large portion of long-term debt is used in current assets of both banks, in standard chartered, net fixed assets covers very low portion of long term debt than standard chartered.

4.8 Profitability Ratios

Profit is an important factor that determines the firms' expansion and diversification. A required level is necessary for the firms' growth and survives in the competitive environment. Various ratios can be developed upon the profit upon different circumstances. These different ratios are called profitability ratios, which are required to support the purpose of the study.

4.8.1 Interest Earned to Total Assets Ratio

It is the ratio which is formed to find out the percentage of the investment earned to total assets. This is derived by dividing the amount of interest earned by the total amount of interest earned by the total assets of the firm.

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

The following table shows the interest earned to total assets ratio of Nabil and standard Chartered:

Table No. 4.13
Interest Earned to Total Assets ratio

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Interest Earned	Total Assets	Ratio	Interest Earned	Total Assets	Ratio
2059/60	1,340.93	16,562.63	8.10	1,503.60	21,000.50	7.16
2060/61	1,334.11	16,745.45	7.97	1,584.01	23,642.06	6.70
2061/62	1,438.92	17,186.30	8.37	1,573.36	21,893.58	7.19
2062/63	1,721.36	22,329.96	7.71	1,772.13	25,776.33	6.88
2063/64	2,052.07	27,253.40	7.53	2,000.72	28,596.70	7.00
Average			7.93			6.98

Sources: Appendix.3,4,5&6

The above table no.4.12 depicts that interest are increasing during the study period in Nabil. The interest earned to total assets ratio of Nabil are fluctuating during the study period. It is increasing in first & third year and decreasing in next three years. The ratio is highest in the year 2061/62 i.e. 8.37 and lowest in the year 2063/64 i.e. 7.53. The average ratio of Nabil is 7.93. In standard chartered, interest earned is increasing all the year. The ratio is fluctuating over the study period. The highest ratio is in the year 2061/62 i.e. 7.19 and lowest in the year 2060/61 i.e. 6.70. The yearly ratio of Nabil is always higher than standard chartered bank. So, the average ratio of Nabil is higher than standard chartered Bank.

So the above analysis helps to conclude that the interest earned to total ratio of Nabil is better than standard chartered. This implies that Nabil is efficiently using its total assets (funds) to earn interest income.

4.8.2 Profit to Total Assets Ratio

This ratio is useful in measuring the profitability of all financial resources invested in the firm's assets. The return on assets or profit to assets ratio is calculated by dividing the amount of net profit by the amount of total assets employed. The ratio can be expressed as:

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

The following table shows the net profit to total assets ratio of Nabil and standard chartered .

Table No. 4.14
Net profit to Total assets Ratio (%)

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Net Profit	Total Assets	Ratio	Net Profit	Total Assets	Ratio
2059/60	416.25	16,562.63	2.51	506.95	21,000.50	2.41
2060/61	455.31	16,745.45	2.72	537.80	23,642.06	2.27
2061/62	518.79	17,186.30	3.02	539.20	21,893.58	2.46
2062/63	635.24	22,329.96	2.84	658.65	25,776.33	2.56
2063/64	673.52	27,253.40	2.47	701.50	28,596.70	2.45
Average			2.71			2.43

Sources: Appendix.3,4,5&6

The above table no. 4.13 depicts that the overall profitability ratio i.e. net profits to total assets ratio of Nabil are fluctuating for the study period. The ratio is highest in the year 2061/62 i.e. 3.02% and lowest in the year 2063/64 i.e. 2.47 %. The average ratio of Nabil is 2.71%. The ratio of standard chartered is fluctuating during the study period. The ratio is highest in the year 2062/63 2.56% and lowest in the year 2060/61 i.e. 2.27%. The average ratio of standard chartered is 2.43%. The yearly as well as average ratio of Nabil are always higher than standard chartered .

The above analysis helps us to conclude that the overall profitability of Nabil is better than standard chartered. Nabil is more efficiently using its working capital fund of assets to earn higher rate of profit.

4.8.3 Net Profit to total Deposit Ratio

Deposits are mobilized for investment in loans and advances to the public in generating revenue. The ratio measures the percentage of profit earned from utilization of the total deposits. It is calculated as follows:

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

The following table shows net profit to total ratio of Nabil and Standard Chartered:

Table No. 4.15
Net Profit tototal Deposit Ratio (%)

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Net Profit	Total Deposit	Ratio	Net Profit	Total Deposit	Ratio
2059/60	416.25	13,447.66	3.10	506.95	18,755.63	2.70
2060/61	455.31	14,119.00	3.22	537.80	21,161.44	2.54
2061/62	518.79	14,586.61	3.56	539.20	19,335.09	2.79
2062/63	635.24	19,347.40	3.28	658.65	23,061.03	2.86
2063/64	673.52	23,342.29	2.89	701.50	24,647.02	2.85
Average			3.21			2.75

Sources: Appendix.3,4,5&6

The above table no. 4.14 depicts that the ratio of Nabil are decreasing except in the year 2061/62. The ratio is highest in the year 2061/62 i.e. 3.56%. And lowest in the year 2063/64 i.e. 2.89%. The average ratio of Nabil is 3.21%. For standard chartered, the ratio are increasing over the study period except in the year 2060/61. The ratio is highest in the year 2062/63 i.e. 2.86 and lowest in the year 2060/61 i.e. 2.54%. The average ratio is 2.75%. The yearly ratios are always higher for the Nabil than the standard chartered. So the average ratio of Nabil is higher than standard chartered.

The above analysis helps to conclude that the net profit to total deposit ratio of Nabil are better than standard chartered. Mobilization of outsiders fund is important to earn profit for commercial banks. Thus, Nabil has better performance on mobilization of total deposits.

4.9 Cost of Services to Total Assets Ratio

A sound management always tries to utilize its larger amount of assets with minimum cost. This ratio is useful in measuring the assets utilization with cost of services. This ratio can be expressed as:

$$\text{Cost of Services to Total Assets Ratio} = \frac{\text{Cost of Services}}{\text{Total Assets}}$$

The following table shows the cost bearing for services taken by Nabil and Standard Chartered:

Table No. 4.16
Cost of Services to Total Assets Ratio (%)

(Rs in million)

Fiscal Year	Nabil			Standard Chartered		
	Cost of Services	Total Assets	Ratio	Cost of Services	Total Assets	Ratio
2059/60	527.93	16,562.63	3.19	383.48	21,000.50	1.83
2060/61	463.79	16,745.45	2.77	410.50	23,642.06	1.74
2061/62	443.06	17,186.30	2.58	402.72	21,893.58	1.84
2062/63	576.95	22,329.96	2.58	471.43	25,776.33	1.83
2063/64	795.87	27,253.40	2.92	612.84	28,596.70	2.14
Average			2.81			1.87

Sources: Appendix.3,4,5&6

The above table No. 4.15 depicts that the cost of service are decreasing in Nabil Bank except in the year 2063/64. The ratio is highest in the year 2059/60 i.e. 3.19% and lowest in the year 2062/63 i.e. 2.58%. The average ratio of Nabil is 2.81%. For standard chartered, the cost of services is fluctuating during the study period. The highest ratio is in the year 2063/64 i.e. 2.14% and lowest in the year 2060/61 i.e. 1.74%. The average ratio is 1.87%. The yearly ratio of Nabil is always higher than the same of standard chartered.

From the above analysis, we can conclude that the cost of services to total assets of Nabil is better than that of standard chartered, which shows that the profitability position of Nabil is quite satisfactory in comparison to standard chartered.

4.10 Correlation Analysis

Correlation analysis is the statistical tool that we can use to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degrees of relationship between two sets of figures. Among the various method of finding out co-efficient of correlation, Karl Pearson's method is applied in the study. The result of coefficient of correlation is always between +1 to -1. When r is +1 means there is perfect relationship between two variables and vice-versa. When r is 0, it means there is no relationship between two variables.

4.10.1. Coefficient of Correlation between investment on Government Securities and Total Deposit:

The coefficient of correlation between investment on government securities and total deposit is to measure the degree of relationship between two variables. Although, bank utilizes its deposits on loan and advances but some part of idle deposit are invested on government security. The purpose of computing correlation coefficient is to justify whether the excess deposits are significantly used in government or not as whether there is any relationship between these two variables.

The following table no. 4.16 shows the coefficient of correlation between deposit and government securities i.e. r, pEr, 6PEr of Nabil and Standard Chartered Bank.

Table No. 4.17

Bank	r	PEr	6PEr
Nabil	0.41	0.25	1.5
Standard Chartered	0.43	0.24	1.44

From the above table No. 4.16, we can find that the coefficient of correlation between government securities and total deposit, value of 'r' is 0.41 in Nabil and 0.43 in standard chartered. It shows highly positive relationship between these two variables in both banks. By considering the probable error, since the value of 'r' is less than six times of pEr, so we can say that the value of 'r' is not significant i.e. there is no significant relationship between investment on government securities and total deposits in both banks.

From the above analysis, it can be concluded that there is significant relationship between investment in government securities and total deposits in both banks.

4.10.2 Coefficient of correlation between loan and advances and total deposit:

The coefficient of correlation between loan and advances and total deposits is to measure the degree of relationship between major components of current assets i.e. loan and advances and major sources of fund on bank i.e. total deposits. In correlation analysis, deposit is independent variables (Y) and loan and advances is dependent variables (X). The purpose of computing coefficient of correlation is to justify whether the deposits are significantly used in loan and advances or not and whether there is any relationship between these two variables. To find out the correlation (r) various calculation are done.

The following table no. 4.17 shows the coefficient of correlation between loan and advances and total deposits i.e. r, pEr, 6PEr of Nabil and Standard Chartered Bank during the study period.

Table No. 4.18

Bank	r	PEr	6PEr
Nabil	0.97	0.02	0.12
Standard Chartered	0.83	0.10	0.60

From the above table no.4.17, we can find out that the correlation coefficient between loan and advances and total deposits of Nabil 'r' is 0.97, which shows highly positive relationship between these two variables. By considering the probable value of 'r' i.e. 0.97 is more than 6 times of PEr i.e. 0.12, we can say that the value of 'r' is highly significant i.e. there is significant relationship between total deposits and loan and advances.

On the other hand, we observe co-efficient of correlation between total deposits and loan and advances in case of standard chartered, it had been found that the value of 'r' is 0.83, which shows the highly positive relationship between these two variables. Moreover, on the basis of value of 6PEr i.e. 0.60, we can further conclude that the relationship between total deposits and loan and advances is highly significant because 'r' is more than 6PEr i.e. 0.83greater than 0.60.

From the above analysis, it can be concluded that there is highly significant relationship between loan and advances and total deposits in both banks. Both banks have utilized its total deposit on loan and advances effectively but higher value of 'r' in Nabil shows better relationship a well as utilization of deposits on loan and advances than standard chartered.

4.10.3 Co-efficient of correlation between cash and bank balance and current liabilities:

Cash and Bank balance is most liquid component of current assets. This is required to meet the unexpected short term obligation i.e. current liabilities. The coefficient of correlation between cash and bank baleen and current liabilities is to measure the degree of relation ship between cash and bank balance and current liabilities. To find out the correlation various calculations are done. The following table no. 4.18 shows the coefficient of correlation between cash and bank balance and current liabilities i.e. r, pEr,

6PEr of Nabil and Standard Chartered.

Table No. 4.19

Bank	r	PEr	6PEr
Nabil	0.43	0.25	1.50
Standard Chartered	0.41	0.25	1.50

From the above table no 4.18, we can find that coefficient of correlation between cash and bank balance and current liabilities in Nabil 'r' is 0.43, it shows positive relationship between these two variables, By considering the probable error, since the value of 'r' i.e. 0.43 is less than the six times of PEr i.e. 1.50, we can say that the value of 'r' is not significant. On the other hand when we observe coefficient of correlation between cash and bank balance and current liabilities, in case of standard chartered, it has been found out hat the value of 'r' is 0.41, which shows the positive relationship between these two variables. On the base of value of 6PEr i.e. 1.50, we can conclude that the relationship between cash and bank balance and current liabilities is not significant.

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

4.10.4 Coefficient of correlation between Loan and Advances and Net Profit

The basic function of commercial banks is to collect deposits and invest these funds on loans and advances to generate higher profit. Large amount of loan and advances generate higher profit. The coefficient of correlation between loan and advances and net profit is to measure the degree of relationship between loan and advances and net profit. In, correlation analysis, loan and advances is independent variables (Y) and net profit is dependent variables (x). The purpose of computing the correlation of the coefficient is to justify whether the loan and advances are significantly generate profit or not and whether there is any relationship between these two variables. The following table no. 4.19 shows the r, PEr and 6PEr of Nabil and Standard Chartered during the study period.

Table No. 4.20

Bank	r	PEr	6PEr
Nabil	0.98	0.01	0.06
Standard Chartered	0.92	0.05	0.28

From the above table, we can find that coefficient of correlation between loans and advance and net profit of Nabil is '0.98' which shows highly positive relationship between these two variables. By considering the probable error, since the value of 'r' i.e. 0.98 is greater than the 6PEr i.e. 0.06, we can say that the value of 'r' is significant.

On the other hand, when we observe coefficient of correlation between loans and advances and net profit in case of standard chartered, it has been found that the value of 'r' is 0.92 which shows the highly positive relationship between these two variables. Values of 'r' in standard chartered in higher than 6PEr, it shows that the relationship between these two variables is highly significant.

From the above analysis it can be concluded that there is no significant relationship between loans and advances and net profit in Nabil, but it is highly significant in standard chartered.

4.11 Test of Hypothesis

A hypothesis is a speculative statement of the relation between two or more variables. Hypothesis always in declarative sentence form and they relate either generally or specifically variable or variables. There are two criteria for 'good' hypothesis and hypothesis statement. One hypothetical statement is about the relations between variables, second hypothesis carries a clear allegation for testing the stated relation. These criteria mean that hypothesis statement certain two or more variables that are computable and they specify how the variables are related³⁴.

As stated in chapter one, some conceptual framework of null and alternative hypothesis between Nabil and standard chartered in various are formulated and tested as follows:

Hypothesis 1

H₀: There is no significant difference in composition of working capital between Nabil and Standard Chartered.

H₁: There is significant difference in composition of working capital between Nabil and Standard Chartered.

Hypothesis 2

H₀: There is no significant difference in liquidity position between Nabil and Standard Chartered.

H₁: There is significant difference in liquidity between Nabil and Standard Chartered.

Hypothesis 3

H₀: There is no significance difference in profitability position between Nabil and Standard Chartered.

H₁: There is significance difference in profitability position between Nabil and Standard Chartered.

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

4.12 Composition of Working Capital

To judge whether there is significant difference in composition of working capital between Nabil and Standard Chartered, following null hypothesis and alternative hypothesis are formulated and tested.

Null Hypothesis,

Ho: There is no significance difference in composition of working capital between Nabil and Standard Chartered.

Alternative Hypothesis,

H1: There is significance difference in composition of working capital between Nabil and Standard Chartered.

The following table exhibits the mean value of various percentages measuring the composition or structure of working capital of Nabil and Standard Chartered.

Table No. 4.21

S.N	Composition	Nabil Mean	S.C.Mean	Cal't'Value	Tabulated 't'Value	Result/Decision
1	Cash and Bank Balance	11.51	17.86	4.54	2.31	Ho is Rejected
2	Loan and Advances	64.70	39.29	5.72	2.31	Ho is Rejected
3	Government Securities	20.31	37.71	5.83	2.31	Ho is Rejected
4	Misc. Current Assets	3.49	5.13	1.16	2.31	Ho is Accepted

(Sources: Appendix 16, 17, 18 & 19)

From the above table it is clear that the cash and bank balance , Loan and advances , Government Securities percentage of Nabil and Standard Chartered significantly different but Misc. Current assets on total current assets of the bank is not significant difference.

4.12.1 Liquidity Position

To judge whether there is significance difference in liquidity position between Nabil and Standard Chartered, following null hypothesis and alternative hypothesis are formulated and tested.

Null Hypothesis,

Ho: There is no significant difference in liquidity position between Nabil and Standard Chartered.

Alternative Hypothesis,

H1: There is significance difference in liquidity position Between Nabil and Standard Chartered.

The following table exhibits the mean value of various ratios measuring the liquidity of Nabil and Standard Chartered and their't' Value.

Table No. 4.22

S.N	Composition	Nabil Mean	S.C.Mean	Cal't'Value	Tabulated 't'Value	Result/Decision
1	Current Ratio	1.39	1.01	16.11	2.31	Ho is Rejected
2	Quick Ratio	0.44	0.56	2.60	2.31	Ho is Rejected
3	Cash and Bank Balance to Deposit Ratio (Excluding Fixed Deposit)	0.18	0.19	0.63	2.31	Ho is Accepted
4	Saving Deposit to total Deposit Ratio	0.44	0.62	7.80	2.31	Ho is Rejected

From the above table, it is clear that the current ratio, quick ratio and saving deposit to total deposit ratio of Nabil and Standard Chartered are significantly different. On the other hand Cash and Bank Balance to deposit ratio of Nabil and Standard Chartered are not significantly different.

4.12.2 Profitability Position

To Judge whether there is significance difference in profitability position between Nabil and Standard Chartered, the following null hypothesis and alternative hypothesis are formulated and tested.

Null Hypothesis,

Ho: There is no significant difference in profitability position between Nabil and Standard Chartered.

Alternative Hypothesis,

H₁; There is no significance difference in profitability position between Nabil and Standard Chartered.

The following table shows the mean value of various ratios measuring the profitability of Nabil and Standard Chartered and their student's't' value.

Table No. 4.23

S.N	Composition	Nabil Mean	S.C.Mean	Cal't'Value	Tabulated 't'Value	Result/Decision
1	Interest earned to Total Assets	7.93	6.98	5.50	2.31	Ho is Rejected
2	Net Profit to Total Assets	2.71	2.43	0.69	2.31	Ho is Accepted
3	Net Profit to Total Deposits	3.21	2.75	3.70	2.31	Ho is Rejected
4	Cost of Services to Total Assets	2.81	1.87	2.28	2.31	Ho is Accepted

From the above table it is clear that the Interest Earned to total Assets and Net Profit to Total Deposit of Nabil and Standard Chartered are significantly difference and Net Profit to Total Assets and Cost of Services to Total Assets are not significantly different.

Forecasting of working capital

Forecasting of working capital is done according to investment planning and analyzing past working capital.

4.13 Major Findings

The major findings of this study during the period of five years in Nabil and Standard Chartered from the analysis are summarized below.

1. The major components of current assets in Nabil and Standard Chartered are cash and Bank balance, loan and advance and government securities. In the study period the proportion of cash and bank balance, loan and advances and government securities to total current assets on an average are 11.51%, 64.70% and 20.31% on Nabil and 17.86%, 39.29% and 37.71% on Standard Chartered respectively. So it is found that the average cash and bank balance and government securities percentage are higher on standard chartered than Nabil and loan and advances percentage is higher in Nabil than Standard Chartered. The trend value of Loan and Advances is positive and cash and bank balance and government securities are negative, it shows that Nabil increases its funds on income generating current assets. The trend value of loan and advances proportion is positive while government securities proportion is negative on Standard Chartered; it shows income generating current assets is positive. It shows that the management of loan and advances is good in both Nabil and Standard Chartered.
2. The liquidity positions of bank are analyzed with current ratio, quick ratio and cash and bank balance to deposit ratio. The current ratio of Nabil is ranging in between 1.45 to 1.34 and ratio of Standard Chartered is ranging in between 1.04 to 0.98. Nabil and Standard Chartered are able to maintain its current ratio of 1.39 and 1.01 in an average respectively on the study period. The current ratio trend value of Nabil and Standard Chartered are positive, the average quick ratio of Nabil and Standard Chartered are 0.44 and 0.56 respectively. Cash and Bank balance to deposit (excluding fixed deposit) ratio of Standard Chartered is also higher than the same of Nabil so it found that the liquidity position of Standard Chartered (except in current ratio) is higher than Nabil. The trend of liquidity ratio, i.e. quick ratio and cash and bank balance to deposit ratio of Nabil and Standard Chartered are decreasing. It shows that both banks try to reduce its idle cash and bank balance. It also shows that liquidity position of Standard Chartered is always better than Nabil in the study period. Although higher liquidity means lower risk as well as lower profit but in commercial bank higher liquidity is not always the cause of lower profitability.
3. Saving Deposit to total deposit ratio of Standard Chartered are always higher than the same of Nabil for the study periods. The ratio of Nabil is ranging in between 39% to 48% with an average of 44%. The ratios of Standard Chartered ranging in between 57% to 67% with an average of 62%. It shows that Standard Chartered has more than 50% deposit on saving account out of total deposit. So it is found that Standard Chartered has more short term and less costly sources of fund than Nabil.
4. The average value of loan and advances to total deposit ratio, loan and advance to fixed deposit ratio and loan and advance to saving deposit ratio are 0.64, 1.81 and 1.47 on Nabil and 0.37, 3.08 and 0.59 on Standard Chartered. The trends of these ratios of both the banks are fluctuating. Form the analysis of turnover of these two banks found that Nabil has better turnover than Standard Chartered. Thus Nabil has better turnover than Standard Chartered. Thus Nabil has better utilization of deposits in income generating activity than Standard Chartered. It also shows that Nabil has better investment efficiency on loans and advances.

5. Long term debt to net worth ratio of Nabil is always higher than Standard Chartered on study period. The average long term debt to net worth is 3.71% on Nabil and 1.64% on Standard Chartered. It shows that average net fixed assets to long term debt ratio is 5.38% on Nabil and 4.88% on Standard Chartered. It shows that net fixed assets cover very low portion of long term debt on both the banks. But net fixed assets to long term debt ratio of Nabil are always higher (except in first year) than Standard Chartered. So it is found that large portion of long term debt is used in current assets of both banks but relatively it is higher on Nabil than Standard Chartered. It also shows that both banks follows conservative working capital policy but Nabil has more conservative working capital policy than Standard Chartered. Due to more conservative working capital policy risk of insolvency is lesser but cost of fund is higher on Nabil than Standards Chartered.
6. Profitability is the measure of efficiency. The profitability position of Nabil and Standard Chartered are analyzed from various angles. The average value of interest earned to total assets ratio of Nabil i.e. 7.93% is higher than the same of Standard Chartered i.e. 6.98%. The trend value of interest earned to total assets ratio of both banks are decreasing. Net profit to total assets ratios and net profit to total deposit ratio are always higher on Nabil than Standard Chartered. Cost of Service to total assets ratio of both banks are fluctuating, which rang from 2.77% to 3.19% on Nabil and 1.74% to 2.14% on Standard Chartered. So it is found that profitability position of Standard Chartered is far better although Nabil earned higher interest than Standard Chartered.
7. Correlation between investment on government security and total deposit of Nabil as well as Standard Chartered are not significant. It shows that there is no relationship between investments on government security and total deposits on both banks. Loan and Advances and total deposit of Nabil are significantly correlated with coefficient value r , 0.97. It is also significantly correlated on standard chartered with coefficient value r , 0.83. It shows that both banks utilize its total deposit on loan and advances effectively but relationship as well as utilization of deposits is better on Nabil.
8. Coefficient of correlation between cash and bank balance and current liabilities is 0.43 on Nabil and 0.41 on Standard Chartered. Although coefficient values on both banks are positive, By considering the probable error, since the value of ' r ' is less than the six times of PEr in both banks, we can say that the value of ' r ' is not significant. It shows that holding of cash and bank balance of both the banks is not related with current liabilities.
9. While testing the hypothesis of composition of the working capital it has been observed that the mean value of proportion of cash and bank balance, loan and advance, and government securities on total current assets of Nabil are statistically different than Standard Chartered.
10. While testing the hypothesis of liquidity management, it has been observed that the mean value of current ratio, quick ratio and saving deposit to total deposit ratio of Nabil are statistically different than Standard Chartered but cash and Bank balance to deposit ratio of Nabil and Standard chartered are not significantly different. In overall it shows that liquidity management policy of these two banks is significantly different.
11. While testing the hypothesis of profitability position, it is observed that the mean value of interest on total assets and net profit to total deposit of Nabil are statistically different than Standard Chartered but net profit to total assets and cost of service to total assets ratio of Nabil not significantly different to Standard Chartered.

Chapter V

Summary Conclusion and Recommendation

5.1 Summary

There is no universal definition of working capital that is accepted by everyone. Some have made it quite simple stating it was the difference between current assets and current liabilities. Others consider it as being equal to the total of current assets. The prime object of any business is to make a profit. Whether or not this is accomplished depends to a great extent on the manner of its administration of working capital. However there are special problems in connection with these funds which require special operating and financial skills of a very high order.

Joint venture bank has been helpful in transferring foreign investment and advanced technology from one country to another. The liberal trade and investment policies have facilitated joint venture banks to invest in Nepal. The establishment of joint venture banks is greater in developing countries like Nepal.

In financial sector, there are various commercial banks established as joint venture. after implementation of open market policy, joint venture commercial banks are opened as private banks. In competitive financial market, performance of joint venture banks is very good. The main objectives of the study were to study the comparative analysis of the working capital as well as financial; performance of joint venture bank, i.e. Nabil and Standard Chartered Banks. To fulfill these objectives and other specific objectives as described in chapter one, an appropriate research methodology has developed which increase the ratio analysis as a financial tools and trend analysis, correlation coefficient and test of hypothesis as statistical tools. The major ratio analysis consists of composition of working capital position, liquidity position, turnover position, capital structure position and profitability position. Under these, main ratio and trend position are studied in chapter four. In order to test the between various component of working capital, Karl Pearson's correlation coefficient (r) is calculated and analyzed. Some null hypothesis formulated in chapter three tested in appendix and results are analyzed in chapter four.

Nepal Arab Bank Limited, the first commercial joint venture bank of Nepal, was incorporated in 1984 A.D and Nepal Grind lays Bank Limited was established in 1985 as a third joint venture in Nepal. The necessary data derived from the balance sheet and Profit and Loss account of Nabil and Standard Chartered Banks for the period of five years from the fiscal year 2059/60 to 2063/64. Now in this chapter an attempt has been made to present some suggestion and recommendation.

The Present study has analyzed and examined the optimization of working capital in Nabil Bank Limited and SCBNL Bank. The study has tried to answer of certain questions stated in the research methodology. This study has highlighted about the application of detailed and systematic approach of working capital management of joint ventures banks. The basic objective of the present study is to highlight the impact of liquidity on Profitability position of Banks. According with consistent to this broad objective other sub objectives are laid down.

The Scope of this study is limited to randomly selected banks i.e. Nabil Bank Limited and Standard Chartered Bank Nepal Limited and only five years trend and data have been analyzed. The study has been organized in five main chapters consisting of introduction, review of literature, research methodology, presenting and analysis of data, and findings, summary and recommendations.

Related literature have been reviewed which consists about various books, some report periodicals, etc. Review of literature has been made mainly on these grounds. Commercial banks in Nepal, broad picture of working capital management and a review of previous research work.

Analytical and descriptive research design is followed mainly: secondary data have been collected and used. Primary data have been used as per necessity. Statistical tools like correlation coefficient, hypothesis test have been used to analyse the data. Similarly financial tools like financial ratios have been used.

These data have been analyzed with various statistical and financial tools wherever necessary.

5.2 Conclusion and Recommendations

Following recommendations are made on the basis of the above study;

1. Out of total current assets, proportion of loan and advances is less than 50% on Standard Chartered and it is increasing trend. Although bank should give priority to investment their fund on loan and advances to get higher return but more than 50% of current assets are covered by either less profitable or non-profitable current assets components so Standard Chartered should seriously adjust its policy of investment on loan and advances in total current assets.
2. Fixed deposit and saving deposit turnover position are also not satisfactory on both banks. Due to poor turn over position, the chances of bad debts and non earning idle fund are high on both banks. So Nabil as well as Standard Chartered should give proper attention in collection of over dated loans and advances and utilization of idle funds as loans and advances.
3. Although interest earned to total assets ratio and net profit ratio are higher on Nabil. It is due higher cost on Nabil. So Nabil should reduce its cost by operating in proper way so that it can have least operating cost which further maximize its profitability and maximize share holders' returns.
4. By adopting the matching working capital policy instead of adopting conservative working capital policy Nabil as well as Standard Chartered can improve in its profitability in short run as well as in long run.
5. Proportion of saving deposit to total deposit is less than 50% in Nabil. Due to less costing process of fund in saving deposit than fixed deposit, Nabil should try to increase its saving deposit accounts balance than other account. But it seems better in Standard Chartered.
6. By turnover ratios of Nabil's investment policy is seems quite satisfactory than Standard Chartered. So Standard Chartered should utilize its deposit in income generating activity by better investment efficiency on loan and advances.

Appendix 01

Nabil Bank Limited

Nepal Arab Bank Limited, the first commercial joint venture bank of Nepal, was incorporated in 1984 A.D. the authorized capital of this bank was Rs 100 million and paid up capital was Rs 28 million 400 thousand .The 50% share of Nabil owned by Dubai Bank Limited was transferred to Emirates Bank international Ltd. Dubai by virtue of its annexation with the later. Nepal Industrial Development Corporation, Rastriya Bima Sansthan and Security purchase and Sales Corporation share 10%, 5% and 5% respectively and rest 30% share of this bank has been issued for the general public of Nepal later on Emirates Bank Limited, sold its entire 50% equity holding to National Bank Ltd, Bangladesh. Now National Bank Limited is managing the bank in accordance with the Technical Services Agreement signed between it and the bank on June 1995. Its present capital structure is as follows;

Authorized Capital	500 Millions
Issued Capital	491.65 Millions
Paid Up Capital	491.65 Millions

Appendix 02

Standard Chartered Bank Nepal Limited

Under the company act of 1984, Nepal Grindlays Bank Limited was established in 1985 as a third joint venture in Nepal. The Bank originally started its operation in 1986; ANZ Grindlays Bank Limited is the foreign joint venture partner with 50% equity investment. ANZ Grindlays Bank PLC is managing the bank under joint and technical services signed between Grindlays Bank PLC and Nepali promoters. Later on, the ownership of 50% share of ANZ has been transferred from august 2000, to Standard Chartered Bank; Remaining 35% share capital belongs to Nepal Bank Limited and Public holds 15% share capital. The name of Nepal Grindlays Bank Limited has been changed to Standard Chartered Bank Nepal Limited, effective from 16th July 2001. Its present capital structure is as follows;

Authorized Capital	1,000.00 Millions
Issued Capital	500.00 Millions
Paid Up Capital	413.25 Millions

Appendix 3
Nabil Bank Limited
Five Years Balance Sheet

Particulars	2059/60	2060/61	2061/62	2062/63	2063/64
Assets					
Cash & Bank Balance	1,814.97	1,889.22	1,427.81	2,365.14	1,963.36
Loan & Advances	7,755.95	8,189.95	10,586.71	12,922.54	15,545.78
Government securities	3,588.77	3,672.63	2,413.94	2,301.46	4,808.35
Misc. Current Assets	708.61	492.20	543.31	544.67	512.05
Total Current Assets	13,868.30	14,244.00	14,971.77	18,133.81	22,829.54
Fixed Assets (Gross)	433.13	550.17	611.28	616.60	604.22
Less Depreciation	181.21	212.04	250.04	297.52	317.32
Net Fixed Assets	251.92	338.13	361.24	319.08	286.90
Misc. Assets	2,442.41	2,163.32	1,853.29	3,877.07	4,136.96
Total Assets	16,562.63	16,745.45	17,186.30	22,329.96	27,253.40
Laibilities					
Current Liabilities					
Saving Deposits	5,229.72	5,994.12	7,026.33	8,770.76	10,187.35
Current & Other Deposits	3,424.69	3,012.93	3,140.41	3,276.39	3,758.11
Short Term Loan	961.46	229.66	17.06	173.20	882.57
Bills Payable	108.94	173.50	119.75	112.61	83.51
Tax Provision	0.00	0.00	15.35	34.60	0.00
Staff Bonus	66.36	71.94	84.20	89.80	99.50
Dividend Payable	94.14	36.88	17.06	435.08	509.42
Misc. Current Liabilities	456.86	521.99	580.75	159.86	178.00
Total Current Liabilities	10,342.17	10,041.02	11,000.91	13,052.30	15,698.46
Fixed Deposits	4,793.25	5,111.95	4,419.87	7,300.25	9,396.83
Long Term Liabilities	113.02	110.80	107.88	102.42	101.05
Net Worth	1,314.19	1,481.68	1,657.64	1,874.99	2,057.06
Total Capital & Liabilities	16,562.63	16,745.45	17,186.30	22,329.96	27,253.40

(Sources: *Five years Annual financial report of Nabil Bank Limited*)

Appendix 4
Nabil Bank Limited
Five Years Profit and Loss Statement

Particulars	2059/60	2060/61	2061/62	2062/63	2063/64
Interest Earned	1,017.87	1,001.62	1,068.75	1,309.99	1,587.76
Commision and Dividend	144.41	135.96	128.88	138.29	150.61
Exchange Income	144.08	157.32	184.88	185.48	209.92
Dividend	0.42	0.46	0.48	0.47	0.72
Others	34.15	38.75	55.93	87.13	103.06
A. Operating Income	1,340.93	1,334.11	1,438.92	1,721.36	2,052.07
Interest Paid	317.35	282.95	243.54	357.17	555.71
On Borrowing	9.85	17.48	15.64	11.20	22.58
On Deposits	307.50	265.47	227.90	345.97	533.13
Salary & Allowances	210.58	180.84	199.52	219.78	240.16
B. Cost of Services	527.93	463.79	443.06	576.95	795.87
C. Provosion For Bonus	66.36	71.94	84.20	89.80	99.50
D. Other General Expenses	182.73	187.36	166.92	124.98	149.57
E. Gross Profit	563.91	611.02	744.74	929.63	1,007.13
F. Depreciation	35.04	46.27	58.71	57.72	52.82
G. Operating Profit	528.87	564.75	686.03	871.91	954.31
H. Income from Other Sources	86.53	92.32	71.76	26.07	40.74
I. Pre Tax Profit	615.40	657.07	757.79	897.98	995.05
J. Provision For Taxes	199.15	201.76	239.00	262.74	321.53
K. Net Profit	416.25	455.31	518.79	635.24	673.52

(Sources: *Five years Annual financial report of Nabil Bank Limited*)

Appendix 5
Standard Chartered Bank Nepal Limited
Five Years Balance Sheet

Particulars	Rs. In Million				
	2059/60	2060/61	2061/62	2062/63	2063/64
Assets					
Cash & Bank Balance	3,170.21	4,241.76	3,370.81	3,253.51	3,782.17
Loan & Advances	5,695.82	6,410.24	8,143.21	8,935.42	10,502.64
Government securities	6,722.83	7,948.22	7,203.07	8,644.86	7,127.94
Misc. Current Assets	1,585.08	1,493.49	605.60	638.56	633.06
Total Current Assets	17,173.94	20,093.71	19,322.69	21,472.35	22,045.81
Fixed Assets (Gross)	415.22	404.49	394.38	417.70	428.13
Less Depreciation	223.51	268.25	322.97	316.40	302.53
Net Fixed Assets	191.71	136.24	71.41	101.30	125.60
Misc. Assets	3,634.85	3,412.11	2,499.48	4,202.68	6,425.29
Total Assets	21,000.50	23,642.06	21,893.58	25,776.33	28,596.70
Laibilities					
Current Liabilities					
Saving Deposits	10,633.16	12,771.83	13,030.93	14,597.67	15,244.38
Current & Other Deposits	5,988.68	6,020.12	4,592.92	5,191.36	5,280.64
Short Term Loan	79.16	78.28	55.93	0.00	400.00
Bills Payable	54.84	59.02	56.30	55.75	36.17
Tax Provision	0.00	0.00	0.00	0.00	5.60
Staff Bonus	76.08	85.95	86.60	93.94	101.60
Dividend Payable	9.47	10.73	11.77	499.98	341.74
Misc. Current Liabilities	594.20	690.77	704.72	250.99	887.95
Total Current Liabilities	17,435.59	19,716.70	18,539.17	20,689.69	22,298.08
Fixed Deposits	2,133.79	2,369.49	1,711.24	3,272.00	4,122.00
Long Term Liabilities	62.21	60.12	60.67	60.50	60.25
Net Worth	1,368.91	1,495.75	1,582.50	1,754.14	2,116.37
Total Capital & Liabilities	21,000.50	23,642.06	21,893.58	25,776.33	28,596.70

(Sources: Five years Annual financial report of Standard Chartered Bank Nepal Limited)

Appendix 6
Standard Chartered Bank Nepal Limited
Five Years Profit and Loss Statement

Particulars	2059/60	2060/61	2061/62	2062/63	2063/64
Interest Earned	1,001.36	1,042.18	1,058.68	1,189.61	1,411.98
Commision and Dividend	215.20	198.95	184.83	222.93	221.21
Exchange Income	232.52	273.05	266.86	283.47	309.09
Dividend	0.00	0.00	0.05	0.09	0.26
Others	54.52	69.83	62.94	76.03	58.18
A. Operating Income	1,503.60	1,584.01	1,573.36	1,772.13	2,000.72
Interest Paid	255.15	275.81	254.13	303.20	413.06
On Borrowing	10.70	15.53	7.55	2.11	5.34
On Deposits	244.45	260.28	246.58	301.09	407.72
Salary & Allowances	128.33	134.69	148.59	168.23	199.78
B. Cost of Services	383.48	410.50	402.72	471.43	612.84
C. Provosion For Bonus	76.08	85.95	88.68	93.94	101.61
D. Other General Expenses	261.26	247.78	220.78	249.90	247.07
E. Gross Profit	782.78	839.78	861.18	956.86	1,039.20
F. Depreciation	67.61	66.20	65.95	18.92	18.18
G. Operating Profit	715.17	773.58	795.23	937.94	1,021.02
H. Income from Other Sources	0.00	0.00	2.91	1.33	4.91
I. Pre Tax Profit	715.17	773.58	798.14	939.27	1,025.93
J. Provision For Taxes	208.22	235.78	258.94	280.62	324.43
K. Net Profit	506.95	537.80	539.20	658.65	701.50

(Sources: *Five years Annual financial report of Standard Chartered Bank Nepal Limited*)

Appendix 7
Calculation of Trend Value of Cash and Bank balance to Current Assets Ratio:

X	X ²	Nabil			Standard Chartered		
		Y ₁	XY ₁	Y _{C1} =a+bx	Y ₂	XY ₂	Y _{C2} =a+bx
-2	4	13.09	-26.17	13.34	18.46	-36.92	19.58
-1	1	13.26	-13.26	12.43	21.11	-21.11	18.72
0	0	9.54	0.00	11.51	17.44	0.00	17.86
1	1	13.04	13.04	10.59	15.15	15.15	17.01
2	4	8.60	17.20	9.67	17.16	34.31	16.15
	X ² =10.00	y ₁ =57.53	XY ₁ =-9.19		Y ₂ =89.32	XY ₂ =-8.56	

Nabil

$$a = \frac{Y_1}{N} = \frac{57.53}{5} = 11.51$$

$$b = \frac{XY_1}{X^2} = \frac{-9.19}{10} = -0.92$$

Standard Chartered

$$a = \frac{Y_2}{N} = \frac{89.32}{5} = 17.86$$

$$b = \frac{XY_2}{X^2} = \frac{-8.56}{10} = -0.86$$

Appendix 8
Calculation of Trend Value of Loan and Advances to Current Assets Ratio:

X	X ²	Nabil			Standard Chartered		
		Y ₁	XY ₁	Y _{C1} =a+bx	Y ₂	XY ₂	Y _{C2} =a+bx
-2	4	55.93	-111.85	57.08	33.17	-66.33	31.56
-1	1	57.50	-57.50	60.89	31.90	-31.90	35.43
0	0	70.71	0.00	64.70	42.14	0.00	39.29
1	1	71.26	71.26	68.51	41.61	41.61	43.16
2	4	68.10	136.19	72.32	47.64	95.28	47.03
	X ² =10.00	y ₁ =323.49	XY ₁ =38.10		Y ₂ =196.46	XY ₂ =38.66	

Nabil

$$a = \frac{Y_1}{N} = \frac{323.49}{5} = 64.70$$

$$b = \frac{XY_1}{X^2} = \frac{38.10}{10} = 3.81$$

Standard Chartered

$$a = \frac{Y_2}{N} = \frac{196.46}{5} = 39.29$$

$$b = \frac{XY_2}{X^2} = \frac{38.66}{10} = 3.87$$

Appendix 9
Calculation of Trend Value of Investment on Government Securities to Current Assets Ratio:

X	X ²	Nabil			Standard Chartered		
		Y ₁	XY ₁	Y _{C1} =a+bx	Y ₂	XY ₂	Y _{C2} =a+bx
-2	4	25.88	-51.76	24.85	39.15	-78.29	40.30
-1	1	25.78	-25.78	22.58	39.56	-39.56	39.01
0	0	16.12	0.00	20.31	37.28	0.00	37.71
1	1	12.69	12.69	18.04	40.26	40.26	36.42
2	4	21.06	42.12	15.76	32.33	64.66	35.13
	X ² =10.00	y ₁ =101.54	XY ₁ =-22.72		Y ₂ =188.57	XY ₂ =-12.92	

Nabil

$$a = \frac{Y_1}{N} = \frac{101.54}{5} = 20.31$$

$$b = \frac{XY_1}{X^2} = \frac{-22.72}{10} = -2.27$$

Standard Chartered

$$a = \frac{Y_2}{N} = \frac{188.57}{5} = 37.71$$

$$b = \frac{XY_2}{X^2} = \frac{-12.92}{10} = -1.29$$

Appendix 10
Calculation of Trend Value of Current Ratio:

X	X ²	Nabil			Standard Chartered		
		Y ₁	XY ₁	Y _{C1} =a+bx	Y ₂	XY ₂	Y _{C2} =a+bx
-2	4	1.34	-2.68	1.35	0.98	-1.97	1.01
-1	1	1.42	-1.42	1.37	1.02	-1.02	1.01
0	0	1.36	0.00	1.39	1.04	0.00	1.01
1	1	1.39	1.39	1.41	1.04	1.04	1.02
2	4	1.45	2.91	1.43	0.99	1.98	1.02
	X ² =10.00	y ₁ =6.96	XY ₁ =0.20		Y ₂ =5.07	XY ₂ =0.03	

Nabil

$$a = \frac{Y_1}{N} = \frac{6.96}{5} = 1.39$$

$$b = \frac{XY_1}{X^2} = \frac{0.20}{10} = 0.02$$

Standard Chartered

$$a = \frac{Y_2}{N} = \frac{5.07}{5} = 1.01$$

$$b = \frac{XY_2}{X^2} = \frac{0.03}{10} = 0.003$$

Appendix 11
Calculation of Trend Value of Quick Ratio:

X	X ²	Nabil			Standard Chartered		
		Y ₁	XY ₁	Y _{C1} =a+bx	Y ₂	XY ₂	Y _{C2} =a+bx
-2	4	0.52	-1.04	0.52	0.57	-1.13	0.60
-1	1	0.55	-0.55	0.48	0.62	-0.62	0.58
0	0	0.35	0.00	0.44	0.57	0.00	0.56
1	1	0.36	0.36	0.41	0.58	0.58	0.54
2	4	0.43	0.86	0.37	0.49	0.98	0.52
	X ² =10.00	y ₁ =2.21	XY ₁ =-0.38		Y ₂ =2.82	XY ₂ =-0.20	

Nabil

$$a = \frac{Y_1}{N} = \frac{2.21}{5} = 0.44$$

$$b = \frac{XY_1}{X^2} = \frac{Z0.38}{10} = -0.038$$

Standard Chartered

$$a = \frac{Y_2}{N} = \frac{2.82}{5} = 0.56$$

$$b = \frac{XY_2}{X^2} = \frac{Z0.02}{10} = -0.02$$

Appendix 12
Calculation of Correlation Coefficient between Government Securities(GS) and Total Deposits (TD) of Nabil

GS (X)	TD (Y)	x(X- \bar{x})	x ²	y(Y- \bar{y})	y ²	xy
3,588.77	13,447.66	231.74	53,703.43	-3,520.93	12,396,962.15	-815,940.78
3,672.63	14,119.00	315.60	99,603.36	-2,849.59	8,120,174.57	-899,331.24
2,413.94	14,586.61	-943.09	889,418.75	-2,381.98	5,673,838.25	2,246,423.40
2,301.46	19,347.40	-1,055.57	1,114,228.02	2,378.81	5,658,727.50	-2,510,998.36
4,808.35	23,342.29	1,451.32	2,106,329.74	6,373.70	40,624,026.20	9,250,275.38
X=16,785.15	Y=84,842.96		x ² =4,263,283.30		Y ² =72,473,728.66	xy=7,270,428.41

$$\bar{X} = \frac{X}{N} = \frac{16785.15}{5} = 3357.03 \qquad \bar{Y} = \frac{Y}{N} = \frac{84842.96}{5} = 16968.59$$

$$\text{Correlation (r)} = \frac{XY}{\sqrt{X^2 Y^2}} = \frac{7270428.41}{\sqrt{4263283.30 \times 72473728.66}} = 0.41$$

$$\text{PEr} = (0.6745) \frac{1Zr^2}{\sqrt{N}} = (0.6745) \times \frac{1Z(0.41)^2}{\sqrt{5}} = 0.25$$

$$6\text{PEr} = 6 \times 0.25 = 1.5$$

Calculation of Correlation Coefficient between Government Securities(GS) and Total Deposits (TD) of Standard Chartered

GS (X)	TD (Y)	x(X- \bar{x})	x ²	y(Y- \bar{y})	y ²	xy
6,722.83	18,755.63	-806.55	650,529.35	-2,636.41	6,950,668.23	2,126,408.64
7,948.22	21,161.44	418.84	175,423.59	-230.60	53,177.28	-96,584.42
7,203.07	19,335.09	-326.31	106,480.83	-2,056.95	4,231,051.53	671,212.23
8,644.86	23,061.03	1,115.48	1,244,286.71	1,668.99	2,785,520.94	1,861,716.06
7,127.94	24,647.02	-401.44	161,157.29	3,254.98	10,594,881.78	-1,306,691.39
X=37,646.92	Y=106,960.21		x ² =2,337,877.77		Y ² =24,615,299.77	xy=3,256,061.13

$$\bar{X} = \frac{X}{N} = \frac{37646.92}{5} = 7529.38 \qquad \bar{Y} = \frac{Y}{N} = \frac{106960.21}{5} = 21392.04$$

$$\text{Correlation (r)} = \frac{XY}{\sqrt{X^2 Y^2}} = \frac{3256061.13}{\sqrt{2337877.77 \times 24615299.77}} = 0.43$$

$$\text{PEr} = (0.6745) \frac{1Zr^2}{\sqrt{N}} = (0.6745) \times \frac{1Z(0.43)^2}{\sqrt{5}} = 0.24$$

$$6\text{PEr} = 6 \times 0.25 = 1.44$$

Appendix 13
Calculation of Correlation Coefficient between Loan and Advances (LA) and Total Deposits (TD) of Nabil

LA (X)	TD (Y)	x(X- \bar{x})	x ²	y(Y- \bar{y})	y ²	xy
7,755.95	13,447.66	3,244.24	10,525,067.22	-3,520.93	12,396,962.15	11,422,734.35
8,189.95	14,119.00	2,810.24	7,897,426.38	-2,849.59	8,120,174.57	8,008,026.02
10,586.71	14,586.61	-413.48	170,962.40	-2,381.98	5,673,838.25	984,892.39
12,922.54	19,347.40	1,922.35	3,695,444.90	2,378.81	5,658,727.50	4,572,911.07
15,545.78	23,342.29	4,545.59	20,662,424.81	6,373.70	40,624,026.20	28,972,243.39
$\bar{x}=55,000.93$	$\bar{y}=84,842.96$		$\bar{x}^2=42,951,325.72$		$\bar{y}^2=72,473,728.66$	$\bar{x}\bar{y}=53,960,807.22$

$$\bar{X} = \frac{X}{N} = \frac{55000.93}{5} = 11000.18 \qquad \bar{Y} = \frac{Y}{N} = \frac{84842.96}{5} = 16968.59$$

$$\text{Correlation (r)} = \frac{XY}{\sqrt{X^2 Y^2}} = \frac{53960807.22}{\sqrt{42951325.72 \times 72473728.66}} = 0.97$$

$$\text{PEr} = (0.6745) \frac{1Zr^2}{\sqrt{N}} = (0.6745) \times \frac{1Z(0.97)^2}{\sqrt{5}} = 0.02$$

$$6\text{PEr} = 6 \times 0.02 = 0.12$$

Calculation of Correlation Coefficient between Loan and Advances (LA) and Total Deposits (TD) of Standard Chartered:

LA (X)	TD (Y)	x(X- \bar{x})	x ²	y(Y- \bar{y})	y ²	xy
5,695.82	18,755.63	-2,241.65	5,024,976.79	-2,636.41	6,950,668.23	5,909,902.41
6,410.24	21,161.44	-1,527.23	2,332,419.26	-230.60	53,177.28	352,181.37
8,143.21	19,335.09	205.74	42,330.59	-2,056.95	4,231,051.53	-423,205.53
8,935.42	23,061.03	997.95	995,912.19	1,668.99	2,785,520.94	1,665,573.25
10,502.64	24,647.02	2,565.17	6,580,117.65	3,254.98	10,594,881.78	8,349,584.94
$\bar{x}=39,687.33$	$\bar{y}=106,960.21$		$\bar{x}^2=14,975,756.47$		$\bar{y}^2=24,615,299.77$	$\bar{x}\bar{y}=15,854,036.44$

$$\bar{X} = \frac{X}{N} = \frac{39687.33}{5} = 7937.46 \qquad \bar{Y} = \frac{Y}{N} = \frac{106960.21}{5} = 21392.04$$

$$\text{Correlation (r)} = \frac{XY}{\sqrt{X^2 Y^2}} = \frac{15854036.44}{\sqrt{14975756.47 \times 24615299.77}} = 0.83$$

$$\text{PEr} = (0.6745) \frac{1Zr^2}{\sqrt{N}} = (0.6745) \times \frac{1Z(0.83)^2}{\sqrt{5}} = 0.10$$

$$6\text{PEr} = 6 \times 0.10 = 0.60$$

Appendix 14
Calculation of Correlation Coefficient between Cash and Bank Balance (CB) and Current Liabilities (CL) of Nabil

CB (X)	CL (Y)	x(X- \bar{X})	x ²	y(Y- \bar{Y})	y ²	xy
1,814.97	10,342.17	-77.13	5,949.04	-1,684.80	2,838,557.78	129,948.78
1,889.22	10,041.02	-2.88	8.29	-1,985.95	3,944,005.35	5,719.54
1,427.81	11,000.91	-464.29	215,565.20	-1,026.06	1,052,803.23	476,390.33
2,365.14	13,052.30	473.04	223,766.84	1,025.33	1,051,297.51	485,021.16
1,963.36	15,698.46	71.26	5,077.99	3,671.49	13,479,824.13	261,630.23
X=9,460.50	Y=60,134.86		x ² =450,367.36		Y ² =22,366,488.00	xY=1,358,710.04

$$\bar{X} = \frac{X}{N} = \frac{9460.50}{5} = 1892.10$$

$$\bar{Y} = \frac{Y}{N} = \frac{60134.86}{5} = 12026.97$$

$$\text{Correlation (r)} = \frac{XY}{\sqrt{X^2 Y^2}} = \frac{1358710.04}{\sqrt{450367.36 \times 22366488.00}} = 0.43$$

$$\text{PEr} = (0.6745) \frac{1Zr^2}{\sqrt{N}} = (0.6745) \times \frac{1Z(0.43)^2}{\sqrt{5}} = 0.25$$

$$6\text{PEr} = 6 \times 0.25 = 1.50$$

Calculation of Correlation Coefficient between Cash and Bank Balances (CB) and Current Liabilities (CL) of Standard Chartered:

CB (X)	CL (Y)	x(X- \bar{X})	x ²	y(Y- \bar{Y})	y ²	xy
3,170.21	17,435.59	-393.48	154,828.08	-2,300.26	5,291,177.67	905,109.33
4,241.76	19,716.70	678.07	459,776.21	-19.15	366.57	-12,982.29
3,370.81	18,539.17	-192.88	37,203.47	-1,196.68	1,432,033.45	230,817.26
3,253.51	20,689.69	-310.18	96,212.87	953.84	909,818.38	-295,865.24
3,782.17	22,298.08	218.48	47,732.64	2,562.23	6,565,043.07	559,791.76
X=17,818.46	Y=98,679.23		x ² =795,753.27		Y ² =14,198,439.13	xY=1,386,870.82

$$\bar{X} = \frac{X}{N} = \frac{17818.46}{5} = 3563.69$$

$$\bar{Y} = \frac{Y}{N} = \frac{98679.23}{5} = 19735.85$$

$$\text{Correlation (r)} = \frac{XY}{\sqrt{X^2 Y^2}} = \frac{1386870.82}{\sqrt{795753.27 \times 14198439.13}} = 0.41$$

$$\text{PEr} = (0.6745) \frac{1Zr^2}{\sqrt{N}} = (0.6745) \times \frac{1Z(0.41)^2}{\sqrt{5}} = 0.25$$

$$6\text{PEr} = 6 \times 0.25 = 1.50$$

Appendix 15
Calculation of Correlation Coefficient between Loan and Advances (LA) and Net Profit (NP)
of Nabil

LA (X)	NP (Y)	x(X- \bar{x})	x ²	y(Y- \bar{y})	y ²	xy
7,755.95	416.25	-3,244.24	10,525,067.22	-123.57	15,270.04	400,896.73
8,189.95	455.31	-2,810.24	7,897,426.38	-84.51	7,142.28	237,498.66
10,586.71	518.79	-413.48	170,962.40	-21.03	442.35	8,696.23
12,922.54	635.24	1,922.35	3,695,444.90	95.42	9,104.59	183,427.17
15,545.78	673.52	4,545.59	20,662,424.81	133.70	17,875.16	607,736.83
X=55,000.93	Y=2,699.11		x ² =42,951,325.72		Y ² =49,834.41	xy=1,438,255.62

$$\bar{X} = \frac{X}{N} = \frac{55000.93}{5} = 11000.18 \qquad \bar{Y} = \frac{Y}{N} = \frac{2699.11}{5} = 539.82$$

$$\text{Correlation (r)} = \frac{XY}{\sqrt{X^2 Y^2}} = \frac{1438255.62}{\sqrt{42951325.72 \times 49834.41}} = 0.98$$

$$\text{PEr} = (0.6745) \frac{1 Z r^2}{\sqrt{N}} = (0.6745) \times \frac{1 Z (0.98)^2}{\sqrt{5}} = 0.01$$

$$6\text{PEr} = 6 \times 0.01 = 0.06$$

Calculation of Correlation Coefficient between Loan and Advances (LA) and Net Profit (NP)
of Standard Chartered

LA (X)	NP (Y)	x(X- \bar{x})	x ²	y(Y- \bar{y})	y ²	xy
5,695.82	506.95	-2,241.65	5,024,976.79	-81.87	6,702.70	183,523.56
6,410.24	537.80	-1,527.23	2,332,419.26	-51.02	2,603.04	77,919.07
8,143.21	539.20	205.74	42,330.59	-49.62	2,462.14	-10,209.02
8,935.42	658.65	997.95	995,912.19	69.83	4,876.23	69,687.13
10,502.64	701.50	2,565.17	6,580,117.65	112.68	12,696.78	289,043.81
X=39,687.33	Y=2,944.10		x ² =14,975,756.47		Y ² =29,340.89	xy=609,964.55

$$\bar{X} = \frac{X}{N} = \frac{39687.33}{5} = 7937.46 \qquad \bar{Y} = \frac{Y}{N} = \frac{2944.10}{5} = 588.82$$

$$\text{Correlation (r)} = \frac{XY}{\sqrt{X^2 Y^2}} = \frac{609964.55}{\sqrt{14975756.47 \times 29340.89}} = 0.92$$

$$\text{PEr} = (0.6745) \frac{1 Z r^2}{\sqrt{N}} = (0.6745) \times \frac{1 Z (0.92)^2}{\sqrt{5}} = 0.05$$

$$6\text{PEr} = 6 \times 0.05 = 0.30$$

Appendix 16
Calculation of "t" Value
Cash Percentage (CP) on Total Current Assets

Nabil			Standard Chartered		
CP(X)	$X - \bar{X}$	$(X - \bar{X})^2$	CP(Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$
13.09	1.58	2.50	18.46	0.59	0.35
13.26	1.76	3.09	21.11	3.25	10.53
9.54	-1.97	3.88	17.44	-0.42	0.18
13.04	1.54	2.36	15.15	-2.71	7.36
8.60	-2.91	8.44	17.16	-0.71	0.50
$\Sigma X = 57.53$		$(\Sigma X - \bar{X})^2 = 20.27$	$\Sigma Y = 89.32$		$(\Sigma Y - \bar{Y})^2 = 18.92$

$$\bar{X} = \frac{\Sigma X}{N} = \frac{57.53}{5} = 11.51 \qquad \bar{Y} = \frac{\Sigma Y}{N} = \frac{89.32}{5} = 17.86$$

$$S^2 = \frac{(\Sigma X Z \bar{X})^2 \Gamma (\Sigma Y Z \bar{Y})^2}{N_1 \Gamma N_2 Z^2} = \frac{20.27 \Gamma 18.92}{5 \Gamma 5 Z^2} = 4.90$$

$$\text{Test Statistic (t)} = \frac{\bar{X} Z \bar{Y}}{\sqrt{S^2 \frac{1}{N_1} \Gamma \frac{1}{N_2}}} = \frac{11.51 Z 17.86}{\sqrt{4.90 \frac{1}{5} \Gamma \frac{1}{5}}} = -4.54$$

$$|t| = 4.54$$

Appendix 17
Calculation of "t" Value
Loan and Advance Percentage(LA) on Total Current Assets

Nabil			Standard Chartered		
LA(X)	$X - \bar{X}$	$(X - \bar{X})^2$	LA(Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$
55.93	-8.77	76.96	33.17	-6.13	37.54
57.50	-7.20	51.85	31.90	-7.39	54.63
70.71	6.01	36.15	42.14	2.85	8.12
71.26	6.56	43.08	41.61	2.32	5.39
68.10	3.40	11.54	47.64	8.35	69.68
$\Sigma X = 323.49$		$(\Sigma X - \bar{X})^2 = 219.58$	$\Sigma Y = 196.46$	107.14	$(\Sigma Y - \bar{Y})^2 = 175.36$

$$\bar{X} = \frac{\Sigma X}{N} = \frac{323.49}{5} = 64.70 \qquad \bar{Y} = \frac{\Sigma Y}{N} = \frac{196.46}{5} = 39.29$$

$$S^2 = \frac{(\Sigma X Z \bar{X})^2 \Gamma (\Sigma Y Z \bar{Y})^2}{N_1 \Gamma N_2 Z^2} = \frac{219.58 \Gamma 175.36}{5 \Gamma 5 Z^2} = 49.37$$

$$\text{Test Statistic (t)} = \frac{\bar{X} Z \bar{Y}}{\sqrt{S^2 \frac{1}{N_1} \Gamma \frac{1}{N_2}}} = \frac{64.70 Z 39.29}{\sqrt{49.37 \frac{1}{5} \Gamma \frac{1}{5}}} = 5.72$$

$$|t| = 5.72$$

Appendix 18
Calculation of "t" Value
Government Securities (GS) on Total Current Assets

Nabil			Standard Chartered		
GS(X)	$X - \bar{X}$	$(X - \bar{X})^2$	GS(Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$
25.88	5.57	31.02	39.15	1.43	2.05
25.78	5.48	29.99	39.56	1.84	3.39
16.12	-4.18	17.51	37.28	-0.44	0.19
12.69	-7.62	58.00	40.26	2.55	6.48
21.06	0.75	0.57	32.33	-5.38	28.97
$\Sigma X = 101.54$		$\Sigma (X - \bar{X})^2 = 137.09$	$\Sigma Y = 188.57$		$\Sigma (Y - \bar{Y})^2 = 41.08$

$$\bar{X} = \frac{\Sigma X}{N} = \frac{101.54}{5} = 20.31 \qquad \bar{Y} = \frac{\Sigma Y}{N} = \frac{188.57}{5} = 37.71$$

$$S^2 = \frac{(\Sigma X - \bar{X})^2 \Gamma (\Sigma Y - \bar{Y})^2}{N_1 \Gamma N_2 \cdot 2} = \frac{137.09 \Gamma 41.08}{5 \Gamma 5 \cdot 2} = 22.27$$

$$\text{Test Statistic (t)} = \frac{\bar{X} - \bar{Y}}{\sqrt{S^2 \left(\frac{1}{N_1} \Gamma \frac{1}{N_2} \right)}} = \frac{20.31 - 37.71}{\sqrt{22.27 \left(\frac{1}{5} \Gamma \frac{1}{5} \right)}} = -5.83$$

$$|t| = 5.83$$

Appendix 19
Calculation of "t" Value
Misc Current Assets (MCA) on Total Current Assets

Nabil			Standard Chartered		
MCA(X)	$X - \bar{X}$	$(X - \bar{X})^2$	MCA(Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$
5.11	1.62	2.63	9.23	4.10	16.82
3.46	-0.03	0.00	7.43	2.30	5.31
3.63	0.14	0.02	3.13	-1.99	3.98
3.00	-0.48	0.23	2.97	-2.15	4.64
2.24	-1.25	1.55	2.87	-2.26	5.09
$\Sigma X = 17.44$		$(\Sigma X - \bar{X})^2 = 4.44$	$\Sigma Y = 25.64$		$(\Sigma Y - \bar{Y})^2 = 35.84$

$$\bar{X} = \frac{\Sigma X}{N} = \frac{17.44}{5} = 3.49 \qquad \bar{Y} = \frac{\Sigma Y}{N} = \frac{25.64}{5} = 5.13$$

$$S^2 = \frac{(\Sigma X Z \bar{X})^2 \Gamma + (\Sigma Y Z \bar{Y})^2}{N_1 \Gamma N_2 Z^2} = \frac{4.44 \Gamma 35.84}{5 \Gamma 5 Z^2} = 5.03$$

$$\text{Test Statistic (t)} = \frac{\bar{X} Z \bar{Y}}{\sqrt{S^2 \frac{1}{N_1} \Gamma \frac{1}{N_2}}} = \frac{3.49 Z 5.13}{\sqrt{5.03 \frac{1}{5} \Gamma \frac{1}{5}}} = -1.16$$

$$|t| = 1.16$$

Appendix 20
Calculation of "t" Value
Current Ratio (CR)

Nabil			Standard Chartered		
CR(X)	$X - \bar{X}$	$(X - \bar{X})^2$	CR(Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$
1.34	-0.05	0.003	0.98	-0.03	0.001
1.42	0.03	0.001	1.02	0.00	0.000
1.36	-0.03	0.001	1.04	0.03	0.001
1.39	0.00	0.000	1.04	0.02	0.001
1.45	0.06	0.004	0.99	-0.03	0.001
$\Sigma X = 6.96$		$(\Sigma X - \bar{X})^2 = 0.008$	$\Sigma Y = 5.07$		$(\Sigma Y - \bar{Y})^2 = 0.003$

$$\bar{X} = \frac{\Sigma X}{N} = \frac{6.96}{5} = 1.39 \qquad \bar{Y} = \frac{\Sigma Y}{N} = \frac{5.07}{5} = 1.01$$

$$S^2 = \frac{(\Sigma X Z \bar{X})^2 \Gamma + (\Sigma Y Z \bar{Y})^2}{N_1 \Gamma N_2 Z^2} = \frac{0.008 \Gamma 0.003}{5 \Gamma 5 Z^2} = 0.001$$

$$\text{Test Statistic (t)} = \frac{\bar{X} Z \bar{Y}}{\sqrt{S^2 \frac{1}{N_1} \Gamma \frac{1}{N_2}}} = \frac{1.39 Z 1.01}{\sqrt{0.001 \frac{1}{5} \Gamma \frac{1}{5}}} = 16.11$$

$$|t| = 16.11$$

Appendix 21
Calculation of "t" Value
Quick Ratio (QR)

Nabil			Standard Chartered		
QR(X)	X- \bar{x}	(X- \bar{x}) ²	QR(Y)	Y- \bar{y}	(Y- \bar{y}) ²
0.52	0.08	0.01	0.57	0.00	0.00
0.55	0.11	0.01	0.62	0.05	0.00
0.35	-0.09	0.01	0.57	0.01	0.00
0.36	-0.09	0.01	0.58	0.01	0.00
0.43	-0.01	0.00	0.49	-0.07	0.01
$\sum x=2.21$		$(\sum X-\bar{x})^2=0.03$	$\sum y=2.82$		$(\sum Y-\bar{y})^2=0.01$

$$\bar{X} = \frac{\sum X}{N} = \frac{2.21}{5} = 0.44$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{2.82}{5} = 0.56$$

$$S^2 = \frac{(\sum X - \bar{X})^2}{N_1} + \frac{(\sum Y - \bar{Y})^2}{N_2} = \frac{0.03}{5} + \frac{0.01}{5} = 0.005$$

$$\text{Test Statistic (t)} = \frac{\bar{X} - \bar{Y}}{\sqrt{S^2 \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}} = \frac{0.44 - 0.56}{\sqrt{0.005 \left(\frac{1}{5} + \frac{1}{5} \right)}} = -2.60$$

$$|t| = 2.60$$

Appendix 22
Calculation of "t" Value

Cash and Bank Balance to Deposit Ratio (CBDR), (Excluding Fixed Deposits)

Nabil			Standard Chartered		
CBDR(X)	X- \bar{x}	(X- \bar{x}) ²	CBDR(Y)	Y- \bar{y}	(Y- \bar{y}) ²
0.21	0.03	0.00	0.19	0.00	0.000
0.21	0.03	0.00	0.23	0.03	0.001
0.14	-0.04	0.00	0.19	0.00	0.000
0.20	0.02	0.00	0.16	-0.03	0.001
0.14	-0.04	0.00	0.18	-0.01	0.000
$\sum x=0.90$		(X- \bar{x}) ² =0.01	$\sum y=0.96$		(Y- \bar{y}) ² =0.002

$$\bar{X} = \frac{\sum X}{N} = \frac{0.90}{5} = 0.18 \qquad \bar{Y} = \frac{\sum Y}{N} = \frac{0.96}{5} = 0.19$$

$$S^2 = \frac{(\sum X Z \bar{X})^2 \Gamma + (\sum Y Z \bar{Y})^2}{N_1 \Gamma N_2 Z^2} = \frac{0.01 \Gamma 0.002}{5 \Gamma 5 Z^2} = 0.001$$

$$\text{Test Statistic (t)} = \frac{\bar{X} Z \bar{Y}}{\sqrt{S^2 \frac{1}{N_1} \Gamma \frac{1}{N_2}}} = \frac{0.18 Z 0.19}{\sqrt{0.001 \frac{1}{5} \Gamma \frac{1}{5}}} = -0.63$$

$$|t| = 0.63$$

Appendix 23
Calculation of "t" Value

Saving Deposit to Total Deposits Ratio (SDTDR)

Nabil			Standard Chartered		
SDTDR(X)	X- \bar{x}	(X- \bar{x}) ²	SDTDR(Y)	Y- \bar{y}	(Y- \bar{y}) ²
0.39	-0.05	0.002	0.57	-0.05	0.003
0.42	-0.01	0.000	0.60	-0.02	0.000
0.48	0.04	0.002	0.67	0.05	0.003
0.45	0.02	0.000	0.63	0.01	0.000
0.44	0.00	0.000	0.62	0.00	0.000
$\sum x=2.18$		(X- \bar{x}) ² =0.005	$\sum y=3.10$		(Y- \bar{y}) ² =0.006

$$\bar{X} = \frac{\sum X}{N} = \frac{2.21}{5} = 0.44 \qquad \bar{Y} = \frac{\sum Y}{N} = \frac{2.82}{5} = 0.62$$

$$S^2 = \frac{(\sum X Z \bar{X})^2 \Gamma + (\sum Y Z \bar{Y})^2}{N_1 \Gamma N_2 Z^2} = \frac{0.03 \Gamma 0.01}{5 \Gamma 5 Z^2} = 0.001$$

$$\text{Test Statistic (t)} = \frac{\bar{X} Z \bar{Y}}{\sqrt{S^2 \frac{1}{N_1} \Gamma \frac{1}{N_2}}} = \frac{0.44 Z 0.62}{\sqrt{0.001 \frac{1}{5} \Gamma \frac{1}{5}}} = -7.80$$

$$|t| = 7.80$$

Appendix 24
Calculation of "t" Value

Interest Earned to Total Assets Ratio (IETAR)

Nabil			Standard Chartered		
IETAR(X)	$X - \bar{X}$	$(X - \bar{X})^2$	IETAR(Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$
8.10	0.16	0.03	7.16	0.18	0.03
7.97	0.03	0.00	6.70	-0.28	0.08
8.37	0.44	0.19	7.19	0.20	0.04
7.71	-0.23	0.05	6.88	-0.11	0.01
7.53	-0.41	0.16	7.00	0.01	0.00
$\Sigma X=39.67$		$(X - \bar{X})^2=0.43$	$\Sigma Y=34.92$		$(Y - \bar{Y})^2=0.16$

$$\bar{X} = \frac{\Sigma X}{N} = \frac{39.67}{5} = 7.93 \qquad \bar{Y} = \frac{\Sigma Y}{N} = \frac{34.92}{5} = 6.98$$

$$S^2 = \frac{(X - \bar{X})^2 \Gamma (Y - \bar{Y})^2}{N_1 \Gamma N_2 \cdot 2} = \frac{0.43 \Gamma 0.16}{5 \Gamma 5 \cdot 2} = 0.07$$

$$\text{Test Statistic (t)} = \frac{\bar{X} - \bar{Y}}{\sqrt{S^2 \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}} = \frac{7.93 - 6.98}{\sqrt{0.07 \left(\frac{1}{5} + \frac{1}{5} \right)}} = 5.50$$

$$|t| = 5.50$$

Appendix 25
Calculation of "t" Value

Net Profit to Total Assets Ratio (NPTAR)

Nabil			Standard Chartered		
NPTAR(X)	$X - \bar{X}$	$(X - \bar{X})^2$	NPTAR(Y)	$Y - \bar{Y}$	$(Y - \bar{Y})^2$
2.51	-0.20	0.04	2.41	-0.02	0.57
2.72	0.01	0.00	2.27	-0.16	0.60
3.02	0.31	0.09	2.46	0.03	0.67
2.84	0.13	0.02	2.56	0.12	0.63
2.47	-0.24	0.06	2.45	0.02	0.62
$\Sigma X=13.57$		$(X - \bar{X})^2=0.21$	$\Sigma Y=12.16$		$(Y - \bar{Y})^2=3.10$

$$\bar{X} = \frac{\Sigma X}{N} = \frac{13.57}{5} = 2.71 \qquad \bar{Y} = \frac{\Sigma Y}{N} = \frac{12.16}{5} = 2.43$$

$$S^2 = \frac{(X - \bar{X})^2 \Gamma (Y - \bar{Y})^2}{N_1 \Gamma N_2 \cdot 2} = \frac{0.21 \Gamma 3.10}{5 \Gamma 5 \cdot 2} = 0.41$$

$$\text{Test Statistic (t)} = \frac{\bar{X} - \bar{Y}}{\sqrt{S^2 \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}} = \frac{2.71 - 2.43}{\sqrt{0.41 \left(\frac{1}{5} + \frac{1}{5} \right)}} = 0.69$$

$$|t| = 0.69$$

Appendix 26
Calculation of "t" Value
Net Profit to Total Deposit Ratio (NPTDR)

Nabil			Standard Chartered		
NPTDR(X)	X- \bar{x}	(X- \bar{x}) ²	NPTDR(Y)	Y- \bar{y}	(Y- \bar{y}) ²
3.10	-0.11	0.01	2.70	-0.04	0.00
3.22	0.02	0.00	2.54	-0.21	0.04
3.56	0.35	0.12	2.79	0.04	0.00
3.28	0.07	0.01	2.86	0.11	0.01
2.89	-0.32	0.10	2.85	0.10	0.01
$\Sigma x=16.05$		(X- \bar{x}) ² =0.24	$\Sigma y=13.74$		(Y- \bar{y}) ² =0.07

$$\bar{X} = \frac{\Sigma X}{N} = \frac{16.05}{5} = 3.21 \qquad \bar{Y} = \frac{\Sigma Y}{N} = \frac{13.74}{5} = 2.75$$

$$S^2 = \frac{(\Sigma X Z \bar{X})^2 \Gamma (\Sigma Y Z \bar{Y})^2}{N_1 \Gamma N_2 Z^2} = \frac{0.24 \Gamma 0.07}{5 \Gamma 5 Z^2} = 0.04$$

$$\text{Test Statistic (t)} = \frac{\bar{X} Z \bar{Y}}{\sqrt{S^2 \frac{1}{N_1} \Gamma \frac{1}{N_2}}} = \frac{3.21 Z 2.75}{\sqrt{0.04 \frac{1}{5} \Gamma \frac{1}{5}}} = 3.70$$

$$|t| = 3.70$$

Appendix 27
Calculation of "t" Value
Cost of Services to Total Assets Ratio (CSTAR)

Nabil			Standard Chartered		
CSTAR(X)	X- \bar{x}	(X- \bar{x}) ²	CSTAR(Y)	Y- \bar{y}	(Y- \bar{y}) ²
3.19	0.38	0.14	1.83	-0.05	0.57
2.77	-0.04	0.00	1.74	-0.14	0.60
2.58	-0.23	0.05	1.84	-0.04	0.67
2.58	-0.22	0.05	1.83	-0.05	0.63
2.92	0.11	0.01	2.14	0.27	0.62
$\Sigma x=14.04$		(X- \bar{x}) ² =0.26	$\Sigma y=9.37$		(Y- \bar{y}) ² =3.10

$$\bar{X} = \frac{\Sigma X}{N} = \frac{14.04}{5} = 2.81 \qquad \bar{Y} = \frac{\Sigma Y}{N} = \frac{9.37}{5} = 1.87$$

$$S^2 = \frac{(\Sigma X Z \bar{X})^2 \Gamma (\Sigma Y Z \bar{Y})^2}{N_1 \Gamma N_2 Z^2} = \frac{0.26 \Gamma 3.10}{5 \Gamma 5 Z^2} = 0.42$$

$$\text{Test Statistic (t)} = \frac{\bar{X} Z \bar{Y}}{\sqrt{S^2 \frac{1}{N_1} \Gamma \frac{1}{N_2}}} = \frac{2.81 Z 1.87}{\sqrt{0.42 \frac{1}{5} \Gamma \frac{1}{5}}} = 2.28$$

$$|t| = 2.28$$

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