

CHAPTER - ONE

1.0 INTRODUCTION

1.1 GENERAL BACKGROUND

Nepal is one of the least developed countries in the world lying as sandwiched between the two big countries, China and India. Poverty is widespread and basic necessities of many have not been fulfilled. The annual per capita GDP of Nepal is estimated to be just \$ 249 (Nepal in Figures 2002 : CBS). Large population is still dependent on traditional agriculture.

Nepalese economy is mainly based on agriculture; more than 80% of the population, but the farming is in subsistence level. The GDP contribution is 38.10% only at current price in FY 058/059 (Statistical Pocket Book, 2002: 266). The varied climate condition is a gift of nature, which could produce variety of fruits and flowers, but cultivation is not yet in commercial scale (Shrestha, 1998 : 134). Recently, the agriculture is being slowly replenished by other sectors also.

It is estimated that about 4.23% of all economically active population is involved as production labour and the manufacturing sector has contributed 8.43% to GDP at current price in FY 058/059. (Statistical Year Book 2002 : 266).

Industrialization is essential for the economic development of any country. The contribution from the industrial and service sectors are increasing and that of the agriculture is decreasing to the national economy in our context. Industrialization helps to uplift the economic standard of the people by creating more employment, earning foreign

currency through import substitution and export promotion. Hence, developing country like Nepal is emphasizing industrialization.

Nepal still has agro-based economy and without the development of this field the nation cannot go ahead. The government of Nepal should formulate policies to develop suitable and possible agro-based industries within the country. Rather, the govt. should focus on those industries also which are appropriate for the nation according to the geographical situation and other availabilities.

Ever since the inception of planned development of country, the development of industrial sector has been accorded priority for generating employment opportunity and developing sustainability in the export in a way to contribute to the domestic economy. However, this sector has not been able to make the desired contribution to the national economy.

The contribution of manufacturing industries to GDP is just 8.43% at current price in FY 058/059 (Statistical Pocket Book, 2059: 266). This state of affairs is attributed to a host of factors. Some are related to the interaction of structural weaknesses in a poor or underdeveloped infrastructure, small markets, geographical location and lack of skilled manpower. Others are policy related such as slow and ineffective privatization process, inadequate foreign investment and absence of technological upgrading (Pant, 2059: 273).

The duration of Ninth five-year plan (2054-2059 B.S.) has recently been completed. It implemented to continue the liberal economic policy. Though the Plan's targets were to privatize 30 public enterprises, so far only 16 enterprises have been privatized and that too, mostly during the earlier plans (Pant, 2059: 276).

The objectives of Ninth Plan were to a) increase contribution of industrial sector in domestic production, b) increase the earnings and reserves of foreign exchange through the identifications of commodities of comparative advantage, c) increase the production of processed goods through the arrangement of necessary infrastructure, and d) increase the income and purchasing power of people residing in rural areas with contribution of industrial sector in domestic production, through the cottage and small-scale industries.

However, most of these objectives have not been fulfilled to the desired extent and the plan's target to attain 14 percent (in terms of industrial sector's contribution to GDP) at the end of the plan is unlikely to be met (Pant, 2059: 274). The share of manufacturing in GDP went up from 6.8 percent in 2047 BS to 8.43 percent in 2058 BS, an increment of 24 percent. (Statistical Pocket Book, 2059: 266). Working capital plays vital role in the success or failure of business. The working capital is the life-blood and controlling nerve-centre of the business. The excess working capital as well as short working capital is harmful for business.

The aspect of working capital concerned with short term financing decision has received much attention in the literature of finance. Because of the earlier emphasis of financial management was more on long term financial decision, which led to the growth and development of many useful theories concerning these decisions as compared to short term financing decision.

Until recently, the aspect of working capital concerned with short term financial decisions has never received much attention in the literature of finance because the earlier emphasis of financial management was more long term financial decision which led to the growth and development of many useful theories covering these decisions as compared to short term financial decision. (Pradhan, 2043: 3)

However in recent years, it has been realized that the area of working capital intricately interwoven with the success or failure of the enterprises.

Today one may come across with such situation where shortage of funds for working capital as well as the uncontrolled over expansion of working capital has caused much business to fail and in less serve caused, has situated their growth. (Grass 1972: xi-xiii). This aspect of financial management is equally applicable to the small as well as large-scale enterprises. The only difference is that in small firm, working capital management may be the factor that decides success or failure where as in longer firms, efficient working capital management can significantly affect the firm's risk return and share price. (Gitman, Joehnk and Pinches, 1985: 320).

1.2 A BRIEF OVERVIEW OF MANUFACTURING COMPANIES INCLUDED IN THE STUDY

1.2.1 Unilever Limited

Unilever Limited (UL Ltd.) was formed as a subsidiary company of Hindustan Lever Limited, India. The factory is situated at Basamadi V.D.C. of Makawanpur district, which is about six kilometers far from Hetauda municipality, and its corporate office is situated at Heritage plaza II, Kamaladi, Kathmandu. Unilever Ltd was established in 1994 as a joint venture company between Hindustan Lever Limited, India and Nepali Promoters under the Company Act 2021.

It is the subsidiary company of foreign investment and technology transformation. The main objectives of the company is to manufacture soaps, detergent, cosmetics, toiletries, oleaginous, detergent, and other

chemical products and marketed them in and outside the country under the brand name of the products of Hindustan Lever Limited.

Unilever Ltd. Company is the first subsidiary company of Hindustan Lever Ltd outside of India with holding 80% ownership, has invested Rs. 73.3 million in equity. The authorized capital of the company is Rs. 300,000,000 (Rs. 300 million) divided into 3,000,000 thousand ordinary shares of Rs. 100 each and paid up capital is Rs. 120,000,000 (Rs. 120 million) divided into 1,200,000 (One million two hundred thousand) of Rs. 100 each.

Hindustan Lever Ltd. Holds the 80% share of Unilever Limited, which was formed as a subsidiary company of Unilever Group Company of England, with 51% share. It was started nearly in 1940 A. D. in India. Its head office is in Mumbai, India. (Introduction Brochure of UL Ltd.)

1.2.2 Bottlers Nepal Limited

Bottlers Nepal Limited (BN Ltd.) was established as a private limited company in 1984. It is one of the manufacturing and processing companies, which are manufacturing soft drinks, under the brand name Coca-Cola Company.

The company also makes the sales of the soft drinks under the registered trade name of Coca Cola company that is managed by Singapore based F & N Coca Cola Private Limited Company. Its registered office is located at Balaju, Kathmandu. The company has established a subsidiary company, Bottlers Nepal (Tarai) Limited in Chitwan District.

The main objective of the company is to produce and to sell soft drinks under the brand name of Coke, Fanta, Sprite etc in the country. 'Raw materials for the production are imported from France and Atlanta.

Flavor of the coke is prepared by the company secretly and is sold without disclosure. These are brought from countries like Singapore, India and Germany. Company has production capacity of 430 bottles per minute.

The company has authorized share capital of Rs. 64.8 million and paid up value per share is Rs. 100. It has issued capital of Rs. 43.5 million and paid up value per share is Rs. 100. It has issued capital of Rs. 43.5 million and paid up capital is Rs. 19,673,000. (Introduction Brochure of BN Ltd.)

1.2.3 Nepal Lube Oil Limited

Nepal Lube Oil Limited (NLO Ltd.) is the only public enterprise in the country, which has been established to produce Gulf Mobil and lubricants oil (in various sizes) for to meet domestic demand for the same. This lube oil, which was founded in the year 2041 B. S. (1984 AD) under the company act 1964 and is located at Bara district. This Lube Oil Ltd was financed by Nepal Oil Corporation, NIDC, National Trading Ltd, Salt Trading Ltd, Himal Cement Company and Rastriya Beema Sansthan as public sector and private investor also has invested their capital for the establishment of NLO. The Prime objective of NLO is to produce and sell the lubricant oil (i.e. Gulf Mobil) within the country in fair and reasonable price.

Nepal Lube Oil Ltd. Is one of the public undertakings of the country, which has an authorized capital of Rs. 50 million. It issued capital is Rs. 30 million and paid up capital is Rs. 20,292,200. (Introduction Brochure of NLO Ltd.)

1.3

FOCUS OF THE STUDY

Every manufacturing firm needs various types of assets to run the production process without any interruption. Some assets are required to meet the needs of regular production and some to meet the expenses and short-term obligation of a firm. So management has to manage properly different types of assets especially required to run the operation of the firm smoothly. To run daily production activities of the company, besides the manpower, equipment etc., one of the major components is working capital without which other things are useless.

There are specially two concepts of working capital: Gross concept and net concept. The gross working capital simply called as working capital refers to the firms' investment in current assets. Current assets are those assets which can be converted into cash within an accounting year and include cash, short terms securities, debtors, bills receivables, stock (inventory) and prepaid expenses. The term net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsider which can be expected to mature for payment within an accounting year and includes creditors, bills payable, bank overdraft and outstanding expenses or accrued income. Net working capital can be negative or positive. A positive net working capital will raise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets. (Pandey, 1992: 35)

Working capital management is usually described as involving the administration of these assets namely cashes marketable securities, receivables, inventories and the administration of current liabilities. It means the working capital management is concerned with the problems that arise in attempting to manage the current assets, the current

liabilities and the inter-relationship that exist between them. (Van Horne, 1991:124)

So, this study focuses on how working capital management is managing in Nepalese manufacturing companies. The working capital management practices in the Nepalese manufacturing enterprises provide totally different picture. The past trend of many manufacturing companies had given emphasis in fixed assets. So that many manufacturing companies are facing financial difficulties and lower efficiency.

Working capital can be regarded as the lifeblood of the enterprises. It refers to the administration of all aspects of the current assets and current liabilities. It includes that type of capital, which circulates from one to another form in the ordinary conduct of business. It plays vital role in every business organization whether they are trading or manufacturing concerns. As the management of current assets and current liabilities of the business organization is necessary for day-to-day operations, it plays the key role in the success or failure of an organization.

It has been seen in practice that due to volatility in nature and heavy investments in current assets, it has accounted a substantial amount of financial manager's time in managing such assets. So maintaining optimum level of working capital is the crux of the problem as it is strongly related to other trade-off between risk and return. In such circumstances an utmost care should be taken in the management of such assets.

The aspect of determining appropriate proportion of current assets in the structure of total assets comes under the preview of working capital policy. The unnecessary blocking of working capital, administrative

negligence in day to day operation and serious liquidity problem are the main causes for the failure of manufacturing companies in Nepal. Most of the Nepalese manufacturing companies are operating in loss though they are following aggressive approach of working capital management.

In order to compute the rivals in the market, working capital management is the most vital part of any firm. Since it affects all functional areas of any firm, the firm should have the sound working capital management in order to survive in the market.

1.4 STATEMENT OF THE PROBLEM

Proper financial management is the great importance for every business enterprises from the point of view of achieving success. In this respect working capital plays a significant role in every aspect and more so in trading enterprise whose structure and function depends upon it. Lack of knowledge about managing working capital causes harm to the organization and finally pushes it into liquidation. A manufacturing company must have an adequate supply of raw materials to process, labor, power, fuel etc., and then these raw materials convert into work in progress, into finished goods and the product sales in the market. It also must have capability of waiting for the market and also have an ability to sell in credit in the era of cutthroat competitions.

Neither excess working capital nor less working capital is good for the company. So it has to be managed in such a way that it will be just adequate for maintaining solvency and continuing business. Adequate working capital brings security and confidence with numerous advantages such as better terms of goods purchased, cash discount, bank loan on favorable rate of interest.

There would be steady work and thereby raises the employees' morale, efficiency and creation of sound goodwill in the company. With the adequacy of working capital a quick and steady returns to the investors would be possible and also the general raise in the management morale.

During the period of depression, more amounts may be locked up in the inventories and book debts (account receivables). During such period, if the working capital position is bad or if the organization could not provide sufficient amount of working capital, it may cause the organization come to stake.

In most enterprises, the management of working capital has been misunderstood as the 'management of money' and the managers are found over conscious about the boarding of money rather than its efficient utilization.

Regarding the management of working capital sources, most of public enterprises have never thought seriously. They are usually found to depend on HMG even for over coming the shortages of working capital in spite of trying to manage working capital needs from their own sources. Some of public enterprises have used depreciation fund and utilized surplus to overcome the poverty of working capital (Acharya, 2042: 5). Working capital management has been the most intricate and challenging area of modern corporate finance is as much as the management always faces trade-off between thee liquidity and profitability of the firm. (Acharya, 2045: 5).

The deficiency of working capital practices, administrative negligence in day to day operation, negative rate of return, inappropriate finance policy, higher production and operating expenses and poor collection payable policy are the major problems of Nepalese manufacturing companies.

Moreover, various factors have been identified for the low economic performance. Among them poor financial management is the prominent one. Financial functions in Nepalese manufacturing companies means only producing and raising of funds. And it is also seen in practice that there is lack of appropriate assets mix policy in Nepalese manufacturing companies. This study has tried to solve the following research questions.

1. What is the relationship between current assets and total assets?
2. Is there proper investment in each type of working capital?
3. Is the composition of working capital of manufacturing companies is appropriate?
4. What is the profitability position of manufacturing companies?
5. Are the manufacturing companies following appropriate working capital policy?

1.5 OBJECTIVES OF THE STUDY

The main objective of this study is to examine the working capital management of Nepalese manufacturing companies listed in Nepal Stock Exchange Limited. The following are the specific objectives of the study.

1. To analyze the current assets and current liabilities of the companies and their impact and relationship.
2. To know whether the manufacturing companies have maintained optimum level of working capital or not.
3. To analyze the profitability of manufacturing companies.
4. To identify the liquidity position of manufacturing companies.
5. To suggest for all concerned based on the findings of the research.

1.6 LIMITATIONS OF THE STUDY

- 1.6.1 Every activity has its own boundary as the same way this study has also some boundaries, which cannot be ignored. These boundaries are called as limitation of this study.
- 1.6.2 This study does not cover all the manufacturing companies of Nepal. At the time of conducting this study, data were available up to the year 063/064 BS. So this study does not include any data relating to any company after 2063/064 BS.
- 1.6.3 The study is based on 5 years data from 2059/060 BS (2003 AD) to 2063/064 BS (2007 AD). These 5 years data are derived from "nepalstock.com", the authorized web site of NEPSE and yearly audited financial statement of concerned companies and other available records. Hence, they are secondary in nature.

1.7 ORGANIZATION OF THE STUDY

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

Chapter One: Introduction

This chapter deals with Background, Evaluation of Industrial Development in Nepal, A Brief Overview of Selected Manufacturing Companies Listed in NEPSE, the Focus of the Study, Statement of the Problems, Objectives of the Study, Limitation of the Study and Organization of the Study.

Chapter Two: Literature Review

It deals with the Conceptual Framework, Types of Working Capital, Factors Determining Working Capital, Working Capital Policy, Need for Working Capital, Financing of Working Capital, Review of Journal/Articles, Review of Previous Research, and Research Gap.

Chapter Three: Research Methodology

It contains Research Methodology employed in the study. It includes the Introduction, Research Design, Nature and Sources of Data, Tools of Analysis.

Chapter Four: Presentation and Analysis of Data

This chapter contains presentation and analysis of data. In this chapter, data are collected through balance sheet and profit and loss account and one presented in tables. Analysis and interpretation of data have been performed thereafter.

Chapter Five: Summary, Conclusion and Recommendations

In this chapter summary, conclusion and recommendations of the study are included. After that all necessary recommendations are presented.

At the last part of the study, a bibliography has been included. All necessary appendices are also attached with in end.

CHAPTER - TWO

2.0 REIVEW OF LITERATURE

2.1 INTRODUCTION

The term 'Working Capital Management' deals with the matrix of current assets and current liabilities of the business, which is necessary for day-to-day operations. It is the controlling nerve of the business. The success and failure of any enterprises depends on it. The conversion process of current assets that include cash, inventory and account receivables etc. must be quick as possible to get readily available cash within one year to meet current obligations. In a like manner the current liabilities comprising sundry debtors, trade creditors, account payable, short term bank loan, outstanding expenses etc must be paid within one year as they become due. So far as the management of working capital in Nepalese manufacturing companies are concerned, different management experts have undertaken a number of studies.

2.2 CONCEPTUAL FRAMEWORK

For the purpose of the study make easier related review from some books on working capital management are studied.

The requirement of finance in business arises mainly due to two factors, viz. acquisition of fixed assets and provision of working capital. Fixed assets such as land, funds, broadly known as working capital, buildings, plants and machinery equipments etc. are essential for carrying on production and sales. The finance required to buy such materials and pay for such services is 'working capital'. The working capital is necessary to meet day-to-day revenue expenses like purchases of

materials, wage payment, meeting overhead expenses etc. From the accounting point of view, working capital is money locked up in inventory debtors and other current assets minus the money locked up with business in the form of sundry creditors, bills payable etc.

“Working Capital refers to a firm’s investment in short term assets-cash, short-term security, account receivables, and inventories. Gross working capital is defined as firm's total current assets. Net working capital is defined as current assets minus current liabilities. If the term ‘working capital’ is used without further qualification, it generally refers to gross working capital”. (Weston and Brigham, 1984: 297)

Working capital management is usually described as involving the administration of these assets namely cash, marketable securities, receivables and inventories and the administration of current liabilities. It means the working capital management is concerned with the problem that arises in attempting to manage the current assets, the current liabilities and the inter-relationship that exist between them. (Van Horne, 1994:373)

"The term working-capital originated at a time when most industries were closely related to agriculture. Processors purchased crops in the fall, processed them and sold the finished products before the next harvest, keeping minimum inventories. Short-term bank loans were used to finance the purchasing of crops and its processing. These loans were retired with the sale proceeds of the finished products. (Weston and Brigham, 1996: 144).

“Working capital management is concerned with the problems that arise in attempting to manage the current assets, the current liabilities and inter-relationships that exists between them. The term current assets refers to those assets which is in the ordinary course of business can be, or will be, turned into cash within one year without undergoing a

diminution in value and without disrupting the operation of the firm. The major current assets are cash, marketable securities, account receivable and inventory. Current liabilities are those liabilities, which are intended at their inception to be paid in the ordinary course of business within a year, out of the current assets or earnings of the concern.

The basic current liabilities are account payable, bills payable, bank overdraft and outstanding expenses. The goal of working capital management is to manage the firms' current assets and current liabilities in such a way that a satisfactory level of working capital is maintained. This is so because if the firm cannot maintain to satisfactory level of working capital, it is likely to become insolvent and may be forced into bankruptcy.

The current assets should be large enough to cover its current liabilities in order to ensure a reasonable margin of safety. Each of current assets must be managed efficiently in order to maintain the liquidity of the firm while not keeping too high level of any one of them.

Each of the short-term sources of financing must be continuously managed to ensure that they are obtained and used in the best possible way. The interaction between current assets and current liabilities is, therefore, the main theme of the theory of working capital management. (Khan and Jain, 1996: 603).

It is a fact that creditors depend more upon current assets as a source of their repayment. The reason is that fixed assets because of specialization diminish in value while the current assets usually do not.

"Working Capital is defined as the difference between a company's current assets and current liabilities. The accounts, which belong this

group, are usually the most active in the company. Unlike fixed assets they reflect the company's daily activities." (Norgard, 1985: 668)

“Working capital management is the effective life blood of any business. Hence the management of working capital plays a vital role for existing of any public enterprises successfully while studying it. It is the center on the routine of day-to-day administration of current assets and current liabilities. Therefore working capital management in public enterprises is very important mainly for four reasons. Firstly public enterprises must need to determine the adequacy of investment in current assets otherwise it could seriously erode their liquidity base.

Secondly they must select the type of current assets, suitable for investment so as to raise their operational efficiency. Thirdly, they are required to ascertain the turnover of current assets, which determine the profitability of the concerns. Lastly, they must find out the appropriate sources of funds to finance the current assets

“There are specially two concept of working capital- gross and net.

Net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year and include creditors, bills payable and outstanding expenses.

Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets”. (Pandey, 1999: 800)

Gross working capital refers to the firms’ investment in current assets. Current assets are the assets which can be converted into cash within an accounting year and include cash, short-term securities, debtors, bills receivable and stock.

“According to the net concept, working capital refers to the difference between current assets and current liabilities. In other words, it is that part of current assets financed with long-term funds. It focuses the liquidity position of the firm and suggests extending which working capital needs to be financed by permanent sources of funds. It is not very useful for comparing the performance of different firms as a measure of liquidity but it is quite useful for internal control. This concept helps to compare the liquidity of the same firm over a time. (Pradhan, 1986: 19)

“Gross working capital is the amount of funds invested in the various components of current assets. It enables the firm to plan and control funds and to maximize the return on investments (Kulkarni, 1983: 388).

Gross working capital refers to the amount of funds invested in current assets that are employed in the business process. This is a going concern concept; since it is these assets that financial management are concerned with if they are to bring about productivity from other assets. The gross concept is used here, since one of the principal functions of the managers is to provide the correct amount of working capital at the right time to enable the firm to realize the greatest return on its investment.

Working capital moves from one process to another, from cash to inventories and back to cash. “Working capital had been admirably summed up by comparing it with a river which is there, but the water in it is constantly changing. (Howard and Brown, nd: 55)

The term ‘circulating working capital’ is used to designate those assets that are changed with relative rapidity from one form into another, i.e. from cash to inventories to receivables to cash. The conversion of all working capital into cash is most important, because conversion into

cash reveals profit. If the amount at end of the cycle was less than at the beginning, it means the company is running in loss.

The definitions described above convey in some way or other, same meaning. They virtually represent the characteristics of the working capital. It seems that there is consensus on the following special characteristics of the working capital. (Mathur, 1979: 96-97)

- a. **Short Life:** Working capital is characterized by assets with a life span of less than one year such as cash marketable securities, account receivable, inventories etc. This short life span leads to high volatility in the level of investment required to finance working capital.
- b. **Nearness to Cash or Liquidity:** This basic characteristic constitutes the first time of defense against technical insolvency. Cash is the most liquid assets holding zero conversion time and 100 percent conversion rate. But for inventory and marketable securities two factors i.e. (i) nearness to cash or amount of time required converting assets into cash, and (ii) price realized on conversion must be considered.
- c. **Lack of Synchronization:** Since the enterprise cannot produce on order only and cannot insist on cash payments there is always the problem of synchronization in cash receipts and disbursement. It is also due to the level of investments in working capital that is affected by the sales volume, production policies and collection policies.

In order to clarify the confusion and misunderstanding, the key terms that have been used in the study are defined as follows.

a. Sales

Sales include only trading sales and ignore the miscellaneous sales.

b. Fixed Assets

It consists of the assets of the company like site development, building, plant and machinery, furniture and fixtures and office appliance, computer.

c. Total Assets

It is the total of current assets and fixed assets

d. Investment

It includes share in other companies and holding of development bonds.

e. Current Assets

It comprises the assets like cash in hand and bank, receivable , inventories and miscellaneous current assets.

f. Current Liabilities

It includes accounts payable, loan and advances, provision of taxation and miscellaneous current liabilities and provisions.

g. Working Capital

Working capital is used in the net concept. In other words, it is the different between current assets and current liabilities.

h. Inventories

It includes the inventory of raw material, work in progress and finished goods, chemicals and other goods inventory.

i. Net Worth

It includes the ordinary share, bonus share, preference share and shareholder's reserves less inappropriate loss.

On the basis of above methodology analysis and presentation will be presented in forthcoming chapter.

2.2.1 Types of Working Capital

Working capital can be divided into following categories on the basis of necessities.

A. Permanent Working Capital

The permanent working capital may again be classified into regular working capital and reserve margin.

1. **Regular Working Capital:** Regular working capital is the minimum amount of liquid capital needed to keep up the circulation of capital from cash to inventories to receivable and back again to cash. (Chiuminatte, 1953: 6). As business expands the requirements of regular working capital also increase.
2. **Reserve Margin:** Reserve margin working capital represents the excess amount over the need for regular working capital. This working capital should be provided for unexpected and extraordinary needs.

B. Temporary or Variable Working Capital

Working capital which is temporarily or intermittently employed should be called variable working capital (Butcheet and Hicks,

1948: 478). Variable working capital is the additional amount of current assets – particularly cash, receivables and inventories which is required during the more active duration of business

C. Negative Working Capital

If the current liabilities are larger than the current assets the difference will be called as working capital deficit. "If current liabilities exceed current assets, then the working capital is clearly a negative quantity" (Batty, nd: 108). Excess of current liabilities over current assets means negative working capital, a negative liquidity, which is disastrous for a company.

2.2.2 Factors Determining Working Capital

The following factors are pertinent for having an over-all view of the forces affecting working capital needs.

1. **Nature of Business:** Working capital requirements for a company are basically related to the kinds of business it conducts. Public utilities have the lowest requirement for current assets because they have only cash sales and supply services, not products. In manufacturing companies stock in trade represents a large investment. Trading and financial firms require a large sum of money as working capital.
2. **Size of Business:** The size of business also has an important bearing in determining working capital needs of a firm. A firm with large-scale operations will need more working capital than smaller firm.
3. **Manufacturing Cycle:** It has a great impact on the working capital needs because the shorter the manufacturing period and

efficiency in production, the lesser the need of working capital to finance in working capital and vice versa.

4. **Business Fluctuations:** The situation whether an enterprise is operating in boom or recession and depression period also determines the working capital need of the enterprise.
5. **Production Policy:** The policy whether to follow uniform and level production plan or varying production plan determines the working capital needs of the individual enterprise. Naturally a firm following uniform production policy requires higher amount of working capital and vice versa.
6. **Credit Policy and Availability of Credit:** If fund are readily available from banks or credit facilities or it follows conservative sales policy then such firm needs lesser amount of working capital and vice versa.
7. **Growth and Expansion of Business:** A growing firm has to invest funds in fixed assets in order to sustain its growing production and sales. This will increase investment in current assets to support enlarged scale of operations. It will require more working capital.
8. **Cash Requirements:** Cash is one of the current assets, which is essential for the successful operations of the production cycle. Cash should be adequate and properly utilized. Adequate cash is also required to maintain good credit relations.
9. **Profit Margin:** The level of profit margin differs from firm to firm. It depends upon the nature and quality of product, marketing management and monopoly power in the market. If the firm deals with high quality product and has a sound marketing management and enjoyed the monopoly power in the market then

it earns quite high profit and vice versa. Profit is a source of working capital, because it contributes, towards the working capital as a pool by generating more internal funds.

10. **Other Factors:** Absence of co-ordination in production and distribution policies in a company leads to a high demand for working capital. The import policy of the government may also affect the requirement of the working capital for the companies as they have to arrange for funds for importing goods at specified times.

2.2.3 Working Capital Policy

Working capital policy refers to the firms' basic policies regarding (i) target levels for each category of current assets and (ii) how current assets will be financed. (Weston, Besley and Brigham, 1996: 333) So, first of all, in working capital management, firm has to determine how much funds should be invested in working capital in gross concept. Every firm can adopt different financing policies according to the financial manager's attitude towards the risk-return trade off. One of the most important decisions of finance manager is how much current liabilities should be used to finance current assets. Any firm has to find out the different source of funds for working capital. Thus, working capital policies regarding to the level of each category of current assets and their financing are discussed in the insuring part of this section.

A. Current Assets Investment Policy:

Current assets investment policy refers to the policy regarding the total amount of current assets to be carried to support the given level of sales. There are three alternative current assets investment

policies, which are as follows,: (Weston, Besley and Brigham, 1996: 344).

1. *Eat Cat Policy:*

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

2. *Lean and Mean Policy:*

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

3. *Moderate Policy:*

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

B. *Current Assets Financing Policy:*

It is the manner in which the permanent and temporary current assets are financed. Current assets are financed with funds raised from different sources. But cost and risk affect the financing of any assets. Thus, current assets financing policy should clearly outline

the sources of financing current assets. There are these various policies of current assets financing.

1. *Aggressive Policy:*

In aggressive policy, the firm finances apart of its permanent current assets with short-term financing and rest with long term financing. In other words, the firm finances not only temporary current assets but also a part of the permanent current assets with short-term financing. Figure 3 shows that short term financing finances 50% of the permanent current assets. In general, interest rate increases with time i.e. the shorter the time period; lower will be the interest rate. It is because lenders are risk adverse and risk generally increases with the length of lending period.

2. *Conservative Policy:*

In conservative policy the firm uses long term financing to finance not only fixed and permanent current assets, but also part of the temporary current assets. It means that the firm depends more on the long-term sources for financing needs. (Pandey, 1999: 829). This policy leads to high level of current assets, with long conversion cycle, low level of current liabilities and high interest cost. The risk and return are lower than that of aggressive policy and liquidity position is higher than that of aggressive one. The risk adverse management follows this policy.

3. *Moderate Matching Policy:*

It is self-liquidating approach. In this policy the firm finances the permanent current assets with long-term financing and temporary with short-term financing. It lies between the aggressive and conservative policies. It leads to neither high nor low level of current assets and current liabilities. It lies in

between a low profitability. Figure 5 shows temporary working capital is financed by short-term financing and permanent by long-term financing.

2.2.4 Need for Working Capital

The need for working capital cannot be overemphasized. The firms' aim is to maximize the wealth of the shareholders. The firm should earn sufficient return from its operation. The extent to which profit can be earned naturally depends upon the magnitude of sales among the other things. For constant operation of business, every firm needs to hold the working capital component such as cash, receivable, inventory etc. Therefore every firm needs working capital to meet the following motive.

1. The transaction Motive:

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

2. The precautionary Motive:

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

3. The speculative Motive:

Speculative motive refers to the desire of a firm to take advantage of these opportunities.

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

2.2.5 Financing of Working Capital

Every manufacturing concerns or industry requires additional assets whether they are in stable or growing conditions. When the growing firm wants to continue, they normally require fixed capital as well as working capital. Additional portion of the working capital is dominated by the same rate of sales. But this portion of the capital requirements depends upon the nature of the firm (Pandey, 1992: 823). Therefore, the most important function of financial manger is to determine the level of working capital and to decide how it is to be financed. Financing of any assets is concerned with two major factors' cost and risk. Therefore, the financial manager must determine an appropriate financing mix, or decide how current liabilities should be used to finance current assets. However, a number of financing mixes are available to the financial manager. He can resort generally three kinds of financing.

A. Long-Term Financing:

Long-term financing has high liquidity and low profitability. Ordinary share, debenture, preference share, retained earning and long term debt from financial institution are the major sources of long-term financing.

B. Short-Term Financing:

Firm must arrange short-term credit in advance. The sources of short-term financing of working capital are trade credit and bank borrowing.

1. Trade Credit:

It refers to the credit that a customer gets from suppliers of goods in normal course of business. The buying firms have not to pay cash immediately for the purchaser is called trade credit. It is mostly an informal arrangement and is granted on an open account basis. It depends upon the terms of trade credit (Van Horne, 1994: 471)

2. Bank Credit:

Bank credit is the primary institutional sources for working capital financing. For the purpose of bank credit, amount of working capital requirement has to be estimated by the borrowers and banks are approached with the necessary supporting data. After available of this data, bank determines the maximum credit based on the margin requirement of the security. Bank Credit are arranged by various ways, such as:

Loan Arrangement:

Under this arrangement the entire amount of loan is credited by the bank to the borrowers account, and the loan is repaid in installments, interest is payable on actual balance outstanding.

Over Draft Arrangement:

Under this arrangement the borrowers are allowed to overdraw on his current account with the bank up to a stipulated limit. Within this limit any number of drawings is permitted. Repayments should be made in short period.

Commercial Papers:

Only well-established high quality companies use it. The evidence of debts are unsecured short-term promissory note sold in the money market. It is sold either through dealers or directly to inventors. Besides the above form of credit, bank provide loan against the warehouses receipt, inventory, receivable. In our context, most popular sources of short-term financing are short-term loan from commercial bank and other financial institutions. Short-term loan from public deposit is also a major source of working capital financing in our country.

C. Spontaneous Financing:

Spontaneous financing arises from the normal operation of the firms. The two major sources of such financing are trade credit (i.e. credit and bills payable) and accruals. Whether trade credit is free of cost or not actually depends upon the term of credit (Pradhan, 1992: 153).

Financial manager of he firm would like to finance its working capital with spontaneous sources as much as possible. In practical

aspect, the real choice of current assets financing is either short-term or long-term sources. Thus the financial manager concentrates his power in short-term versus long-term financing. Hence, the financing of working capital depends upon the working capital policy, which is perfectly dominated by the management attitude towards the risk-return.

2.3 REVIEW OF JOURNAL/ARTICLES

As it is not possible to estimate working capital needs accurately, the firm must decide about levels of current assets to be carried. The current assets holding of the firm will depend upon working capital policy. It may follow a conservative or an aggressive policy. These policies have different risk return implications (Van Horne, Oct. 1970: 50-58).

The financial manager should determine the optimum level of current assets so that the wealth of shareholders will be maximized. In fact, optimum level of each type of current assets should be fixed (Walker, Jan-Feb, 1964: 21-35). To find out corporate bankruptcy, Zeta model was developed by Altman and others (Altman, Haldmanand, Narayanan, June, 1997: 29-54).

The authors extended the Z score model to include among other things, the capitalization of leases, and they updated its application. A sample of 53 bankrupt firm and 58 non-bankrupt firms were employed. Manufacturing and for the first time in and study retailing companies were included. On the basis of discriminatory ability, 27 original variables were reduced to 7, the return on assets ratio, the stability of earning, the interest coverage ratio, the retained earning to total assets ratio, the current ratio, the common equity to total capital ratio, and the

size of total assets using the linear discriminate model, the authors were successful in predicting bankruptcy up to 5 years prior to failure.

Successful classification ranged from 96 percent 1 year before failure to 70 percent 5 years before failure, a better performance than the Z score model. Both quadratic and linear model were tested, with the linear function winning out.

Prof. Dr. Manohar Krishna Shrestha in his study "working capital management in public enterprises" 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 based on sample of ten public enterprises i.e. Birgunj sugar Factory, Janakpur Cigarette Factory, Raghupati Jute Mills, Dairy Development Corporation, National Trading Ltd., Royal Drugs Ltd. National Construction Company of Nepal, Harisiddhi Brick and Tile Factory, Nepal Dairy Ghee Industry Ltd and Chandesowri Textile Factory Ltd. The study has pointed at certain policy flows such as deficient financial planning, negligence of working capital management, deviation between liquidity and turnover etc. He has suggested some measure for their effective operation and efficient result. The problem can be sorted out through identification of needed funds, development of management information system, determination of sound combination of short term and long-term source to finance working capital requirement. (Shrestha, July 1982- June 1982)

A study on "A comparison of financial performance of MPEs and private manufacturing enterprises" made by Rajendra Prasad Sharma selected altogether six textile industries, three from public and private sector each, for the study. In the study it was concluded that the net working capital position of both sectors, although fluctuating, has

positive working capital. There was very high liquidity position of public sector industries.

Whereas majority of private sector industries have adverse situation. Among current assets, there was encouraging use of cash and bank. Though inventory turnover in public sector industries were relatively lower than that of private sectors while debtors turnover was more or less similar in both sectors.

He also found that trade credit and other internal provision though fluctuating in nature were the main sources of financing working capital in both sector. And majority of private sector industries had relatively better use of fixed assets than other industries moreover, the earning power of public sector textile industries was very low and even negative for many years while that of private sector was quite encouraging.

He also pointed out that both sectors seemed to have neither any sort of dividend policy nor they did pay any sort of dividend. Thus there was negligible direct contribution of textile industries in the revenue generation of government during the period under study. (Sharma, 1985; 96-97)

2.4 REVIEW OF PREVIOUS RESEARCH

So far as the management of working capital in Nepalese manufacturing companies is concerned, different management experts have undertaken a number of studies. In this section, an attempt has been made to review a number of research studies that have been made by students of MBA, relating to working capital management in different PE s of Nepal.

Arjun Lal Joshi, in his study seeks to have true insight into the “Working Capital Management of Biratnagar Jute Mill”. This study was

concerned with the management of current assets and covers five years period. (2036/37 to 2040/41). The study has embodied various financial ratios for measuring Biratnagar Jute Mills' financial viability. The study is based on secondary data and limited to gross concept of working capital.

The study has indicated mismanagement of inventory, no proper policy of cash holding and heavy dependence short-term bank credit. He has recommended for effective working capital management of mill by planning realistic turnover target specimen designing effective inventory management program, following production investment approach preparing effective sales plan and exhaustive market research program using short term bank credit up to certain reasonable limit, maintaining optimum cash balance and making proper utilization of accumulated collection debts.

A next study made by **Mr. Rajendra Giri** on 'Working Capital Management. 'A Case Study on Balaju Textile Industry Limited'. He observed five years data from 036/37 to 2040/41 for the analysis of working capital.

He used ratio analysis as a tool for this analysis. He concluded that the low utilization of plant capacity and lack of efficient management of the corporation push it to bear loss. He also found that there was no efficient and productive use of working capital. From there finding he recommended that the corporation should make regular checks to identify both excess and deficit current assets. There should be need to finance current assets from the appropriate combination of short term and long term sources. It should strengthen its production capacity with the help of sound incentive schemes to workers and preferable wages incentive plan.

Mr. Shailesh Man Shrestha has carried out another study on “Working Capital Management of Dairy Development Corporation (DDC) Nepal”. He has analyzed the financial statement of DDC for five years (1985-1989). He has focused on the working capital management with respect to cash, credit and working capital. For the purpose of the purpose of the analysis, he has used ratio analysis and test as major tools of the study.

He found the inventory has held the major share of current assets followed by cash and receivable respectively. There was the high liquidity position and low level of working capital turnover of DDC. There was no functional relationship between total assets and current assets and receivables. There was no proper relationship between current assets and share of inventory.

Another study was conducted by **Mr. Jiban Nath Sapkota** on “Working Capital Management of Himal Cement Company Ltd. (HCCL)”. He has covered five fiscal years from 044/45 to 048/49. He has used only ratio analysis for the analysis of working capital.

From the study he has concluded that the inventory, cash and receivables should be managed in optimum level. He suggested that the company should determine certain rate of return its investment and sales target should be set to recoup and overcome the problem of loss.

Mr. Sapkota has used only ratio analysis for the study of working capital management. He has missed the use of correlation coefficient in order to test the relationship and signification in between the components of the working capital management.

Mr. Basudev Giri has carried out another study on “Working Capital Management of Birgunj Sugar Factory Limited (BSFL)”. He has analyzed the financial statement of the factory for nine years (041/42 to 050/51). The objectives of the study were to analyze the net working

capital and relationship between current assets and liabilities, effect of working capital on profitability and other operations. He has used financial ratios as the major tools of the study.

He found that inventories, receivables, cash and bank balance were the major share of current assets. Inventory had held the major portion of current assets. He found the fluctuating trend in current assets and their proper use. Moreover he found the unsatisfactory profitability portion of the factory.

Mr. Radhe Shyam Pradhan has conducted a study on “Working Capital Management in Nepalese corporation”. He has focused on evaluation of the working capital portion of selected manufacturing corporations of Nepal. He has sampled 5 manufacturing and 6 non-manufacturing public enterprises. This study is concentrated in the size of the investment and need to control the investment in current assets, significance of current assets management. Major finding of the study were as follows.

1. Investment in total assets had declined over a period of time in both manufacturing and non-manufacturing corporations. However the manufacturing corporations had consistently more investment in cash and receivables as compared to non-manufacturing corporations.
2. Inventory management had a great significance in manufacturing corporations and management of cash and receivables had a great significance in non-manufacturing corporations.
3. The major motive for holding cash in Nepalese corporation was to provide a reserve for routine net outflows of cash to keep on the production process.

Next study was conducted by **Mr. Deependra Raj Sharma** on “A Study on Working Capital Management of Nepal Battery Company Limited (NBCL)”. He has covered the time period of five fiscal years from 049/50 to 053/54. His objectives were to analyze the liquidity, composition of working capital, assets utilization, and profitability. He has used secondary data. To obtain the relationship in between various variables, the ratio analysis and Karl Pearson’s correlation coefficient have been used.

He has found that of the current assets, inventory holds the longest portion followed by miscellaneous current assets; sundry debtors and cash balance respectively. Of the current assets, inventory holds the largest portion of NBCL in a fluctuating trend. Though there is positive correlation in between working capital and sales, the relationship is insignificant because of fluctuating sales volume. It shows the less utilization of working capital and net working capital.

2.5 RESEARCH GAP

I found many researches related to this topic. All the research has pointed out only in composition of working capital, is lacking liquidity position and profitability position of the companies that’s why they are not able to research in micro level.

I have used only secondary data but all of the financial tools (Composition of Working Capital, Liquidity Position and Profitability Position) have been used in this research. The latest secondary data have been collected from financial statement, annual reports and many more official websites. All the collected data and information have been properly synthesized, arranged, tabulated, calculated and graphically showed to reach at the realistic condition. Due to the above latest data

and financial tools, I tried to present realistic position of the selected companies in subject “Working Capital Management”.

CHAPTER - THREE

3.0 Research Methodology

3.1 INTRODUCTION

A systematic research studies needs to follow a proper methodology to achieve the pre-mentioned objectives. Research methodology is a sequential procedure and methods to be adopted in systematic study. (Kothari, 1984:19). The proper analysis of the study can be meaningful only on the right choice of research tools that help to come meaningful conclusion. The main objective of this study is to analyze the working capital management of Nepalese manufacturing companies (Listed in NEPSE.). In this chapter the research focus on research design, nature and sources of data, sample and sources of data, sample and population, tools used for analysis and definition of key terms.

3.2 RESEARCH DESIGN

A research design is a plan for the collection and analysis of data. It includes definite procedure and techniques, which guide to sufficient way for analyzing and evaluating the study. In order to achieve the predetermined objectives of the study, secondary data have been used. This study tries to make comparison and establish relationship between two or more variables. So the research design of this study is based on descriptive and analytical study.

3.3 NATURE AND SOURCES OF DATA

The data used in this study are basically secondary in nature but the required information has been collected through discussion and personal interview with the key personnel and employees. The secondary data have been collected from financial statements, annual reports and from “nepalstock.com” the official website of Nepal Stock Exchange Limited. All the collected data and information have been properly synthesized, arranged, tabulated and calculated to reach at the realistic analytical synthesized.

3.4 POPULATION AND SAMPLE

To get the information about working capital management, more representative and comprehensive sample are selected for wide coverage of population. There are 29 manufacturing companies listed in Nepal Stock Exchange Ltd. Out of then 3 manufacturing companies (about 10%) have been chosen for this study.

The sample manufacturing companies selected are as follows:

-) Bottlers Nepal Limited (BN Ltd.)
-) Unilever Ltd. (UL Ltd)
-) Nepal Lube Oil Ltd. (NLO Ltd.)

3.5 ANALYTICAL TOOLS USED

Quantitative method and qualitative method are used for analyzing working capital management in Nepalese manufacturing companies.

3.6 QUANTITATIVE METHOD

For measuring the effectiveness of working capital management of Nepalese manufacturing companies, two important tools under this method can be applied.

3.6.1 Financial Tools

Various financial methods are used to analyze the effectiveness of working capital management of manufacturing company. Ratio analysis is widely used tools for financial analysis, which establishes the numerical or quantitative relationship between two items. It is useful to make financial expression more meaningful and to draw appropriate conclusion from them.

Under the ratio analysis, the following ratios can be analyzed.

A. Composition of Working Capital

It is studied by analyzing following ratios.

1. Percentage of Current Assets to Total Assets (CATA)

The ratio of current assets to total assets indicates what percentages of enterprise total assets are invested in the form of current assets. It is calculated as:

$$CATA = \frac{\text{Current Assets}}{\text{Total Assets}} \times 100$$

As the percentage increases the risk and profitability of enterprises would decrease.

2. Ratio of Cash and Bank Balance to Current Assets (CBCA)

This ratio shows the proportion of cash and bank balance to current assets. It is calculated as:

$$\text{CBCA} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}} \times 100$$

Higher ratio indicates the poor cash management and vice versa.

3. *Inventories to Total Assets (ITA)*

This ratio can be calculated as:

$$\text{ITA} = \frac{\text{Inventory}}{\text{Total Assets}} \times 100$$

This ratio indicates the percentage of total assets invested in the form of inventories. Increases in inventory increases working capital and vice versa.

4. *Inventories to Current Assets (ICA)*

This ratio shows the percentage of inventories to current assets and calculated as:

$$\text{ICA} = \frac{\text{Inventories}}{\text{Current Assets}} \times 100$$

The increase in the ratio is an indication of weak current assets management of the enterprises.

5. *Receivables to Current Assets (RCA)*

This ratio shows the percentage of current assets in the form of receivables. It is calculated as follows:

$$\text{RCA} = \frac{\text{Receivables}}{\text{Current Assets}} \times 100$$

B. Liquidity Position

It is the most important part for the company. It shows the ability of the company to pay its current obligations. The liquidity positions can be computed by analyzing current ratio and quick ratio.

This ratio is computed by dividing current assets by current liabilities.

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

The higher the ratio indicates the position of the company is in liquidity and able to pay its bills. Generally the current ratio of 2:1 is considered to be satisfactory. Higher ratio indicates the greater amount of working capital and vice-versa.

1. Quick Ratio of Acid-Test Ratio (QR or ATR)

$$\text{QR or ATR} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

As the quick assets do not include the amount invested in the inventory it is reliable to measure the company's liquidity. Generally the quick ratio of 1:1 of the company is considered to be sound.

C. Profitability Position

The main objective of the company is to earn maximum profit. The position of the profitability of the company are analyzed with the help of following ratios:

1. Gross Profit Margin Ratio (GPM)

Gross profit is obtained by deducing cost of goods sold from net sales. The ratio can be obtained as:

$$\text{GPM} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

The gross profit margin ratio reflects the efficiency with which company produces each unit of product. The higher percentage indicates the better efficiency of the company.

2. Net Profit Margin Ratio (NPM)

Net profit is obtained after deducting operating expenses and income tax from gross profit. It is computed as:

$$\text{NPM} = \frac{\text{Net Profit After Tax}}{\text{Sales}} \times 100$$

3. Return on Total Assets (ROA)

This ratio is computed by dividing net profit after tax by total assets.

$$\text{ROA} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}} \times 100$$

4. Return on Working Capital (RWC)

It measures the profit with respect to current assets and can be calculated as:

$$\text{RWC} = \frac{\text{Net Profit After Tax}}{\text{Current Assets}} \times 100$$

Higher the ratio, higher the utilization of current assets to earn and vice-versa.

3.6.2 Statistical Tools

A brief introduction of the statistical tools that have been used in this study is given below.

i. Coefficient of Correlation by Karl Pearson's Method.

Karl Pearson's method is most widely used method of measuring the relationship between two variables. According to him 'r' can be calculated as under:

$$r = \frac{\sum dx \, dy}{\sqrt{\left(\sum dx^2 \right) \left(\sum dy^2 \right)}}$$

Where, x = First variable y = Second variable

N = No. of years (observations)

dx = deviation from the assumed mean of 1st variable

dy = deviation from the assumed mean of 2nd variable

ii. Probable Error (PE)

$$\text{Probable Error (PE)} = \frac{0.6745 (1 Z r^2)}{N}$$

If r is less than its PE, it is not at all significant. If r is more than PE, there is correlation. If r is more than 6 times its PE and greater than 0.5, then it is considered significant.

The value of the coefficient lies always between +1 to -1. If the value of the coefficient is +1, it shows the perfect positive correlation; where as if it is -1, it shows the negative correlation. Moreover if the coefficient of correlation has a zero value than it means that there exists no correlation between the variable under study.

iii. Simple Linear Regression Model

In case of simple linear regression analysis a single variable is used to predict another variable on the assumption of linear relationship between the given variables. The variable to be predicted is called the dependent variable and the variable on which the prediction is based is called the independent variable.

A simple regression equation, which is used in this research study, is given below.

The estimating equation of x (i.e. regression equation of X on Y) is written as follows.

$$X - \bar{X} = r \frac{\exists x}{\exists y} (Y - \bar{Y})$$

Where r = Coefficient of simple correlation between X and Y .

$\exists x$ = Standard deviation of X

$\exists y$ = Standard deviation of Y

\bar{X} = Mean of X

\bar{Y} = Mean of Y

X = Value of X to be estimated

Y = Any given value of X for which Y is to be estimated.

Similarly the estimating equation of Y (i.e. regression equation of Y on X) can be stated as under

$$Y - \bar{Y} = r \frac{\sum y}{\sum x} (X - \bar{x})$$

The simple regression equation indicates the amount of change in the value of the dependent variable for a unit change in the independent variable.

3.7 Qualitative Method

Whenever quantitative method is insufficient, opinion survey method will be used to make study more qualitative.

-) A list of question will be asked to fill out paper to the selected persons of the sampled companies on the bases of their replies, analysis can be made.
-) Personal interview will be taken with the key person of sampled companies to draw out their reactions for improvements.

CHAPTER- FOUR

4.0 PRESENTATION AND ANALYSIS OF DATA

4.1 INTRODUCTION

The main objectives of the study are to present data and analyze them with the help of various financial and statistical tools. This chapter will present the analysis of components of working capital of manufacturing companies listed in NEPSE. The major variables for this study are current assets, current liabilities, net profit, sales and total assets.

4.2 WORKING CAPITAL POLICY

Every firm wants to maximize the wealth of its shareholders. In order to achieve the target goal, it has to perform many functions. So firm has to determine how much funds should be invested in working capital in gross concept. Every firm can adopt different financing policies according to the financial manager's attitude towards the risk return trade off.

One of the most important decisions of finance manager is how much current liabilities should be used to finance current assets. Here, the researcher is going to analyze on the basis of various variables and ratio of the manufacturing companies taking five years data to indicate working capital policy. The analysis is done company wise as well as period wise.

4.2.1 Analysis on the basis of variables

4.2.1.1 Level of Current Assets

The success or failure of any manufacturing firm depends upon the proper management of current assets. Any firm has to maintain the appropriate level of current assets to run business smoothly. The analysis of three listed manufacturing companies taking five years data shows what kind of working capital policy they have followed. Due to lack of the industry average, other economic indicator and other sources, here yearly and company average are taken as standard measurement and overall average is taken as industry average in decision making process.

Table No. 4.1
Current Assets of selected Mfg. Companies

Rs. In million

S.No.	NAME OF THE CO.	2003	2004	2005	2006	2007	AVERAGE	S.D.	C.V.
1	BN LTD	532.38	447.83	453.21	436.05	445.08	462.91	35.18	0.0760
2	UL LTD	589.88	724.24	891.41	741.61	687.52	726.93	97.58	0.1342
3	NLO LTD	143.33	115.11	127.19	145.42	123.85	130.98	11.65	0.0889
	AVERAGE	421.86	429.06	490.60	441.03	418.82	440.27	48.14	0.0997
	S.D.	198.35	249.03	313.11	243.42	231.93	247.17		
	C.V.	0.4702	0.5804	0.6382	0.5519	0.5583	0.5614		

Source: Based on Annex 1

While analyzing the current assets level there is wide variation of the current assets within individual companies. The table shows that it varies from 532.38m to 445.08m decreased by 16.40% for BN Ltd., 589.88m to 687.52m increased by 16.56 % for UL Ltd. and 143.33m to 123.85m decreased by 13.59% for NLO Ltd. So the highest current assets holding are Rs 741.61m of UL Ltd. in 2006 and lowest current assets holding in Rs 115.11m of NLO Ltd. in 2004. So it reveals that

manufacturing companies have not maintained consistency in current assets lower than average. So these companies have been following aggressive approach of current assets management.

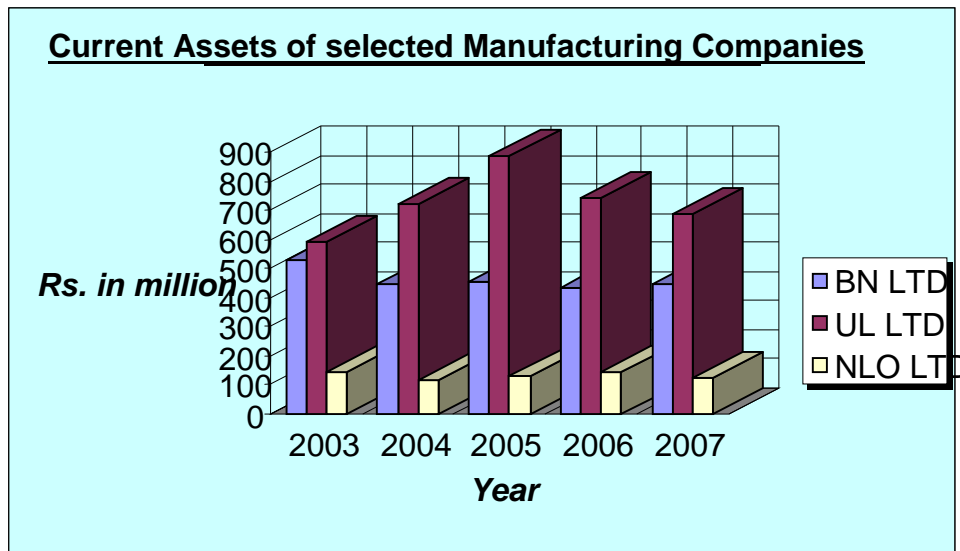
While going through period wise data all companies have current assets above the average for all five years.

The researcher has calculated the standard deviation of individual company. Here, the table shows the standard deviation, which represents, the average change in current assets of individual companies in different years. The highest standard deviation is 97.58 of UL ltd where as lowest is 11.65 of NLO ltd. Similarly, BN ltd. has 35.18.

Coefficient of variations shows the information of current assets of individual company in different years in percentage. The highest fluctuation is 13.42 percent of UL ltd. and the lowest information is 7.60 percent of BN ltd.

Similarly coefficient of variation on yearly-based data has no more variation in comparison to company-based data. Here, the highest information is 63.82 percent on 2005 and the lowest fluctuation is 47.02 percent on 2003.

Figure: 1



The above chart, figure: 1 shows the position of current assets of selected manufacturing companies.

4.2.1.2 Level of Current Liabilities

Current liabilities are the integral part of the working capital management. Current liabilities are defined as all the payment that has to be paid by the company within an accounting period. It includes sundry creditors, provision for taxation, unclaimed dividend, provision for bonus, outstanding bills etc.

Table No. 4.2

Current Liabilities of Selected Mfg. Cos.

		<i>Rs. In million</i>							
S.No.	NAME OF THE CO.	2003	2004	2005	2006	2007	AVERAGE	S.D.	C.V.
1	BN LTD	332.85	174.02	228.99	275.48	289.78	260.22	54.38	0.2090
2	UL LTD	426.45	543.71	882.02	742.23	690.82	657.05	158.13	0.2407

3	NLO LTD	105.40	76.09	87.40	105.66	82.60	91.43	12.06	0.1319
	AVERAGE	288.23	264.61	399.47	374.46	354.40	336.23	74.86	
	S.D.	134.81	201.36	346.08	269.41	253.27	240.93		
	C.V.	0.4677	0.7610	0.8663	0.7187	0.7146	0.7057		

Source: Based on Annex 2

There is wide variability in the size of current liabilities (CLs) for the individual manufacturing company. The highest current liabilities is Rs 882.02m of UL ltd. for the year 2005 and lowest is Rs.76.09m of NLO ltd. for the year 2004.

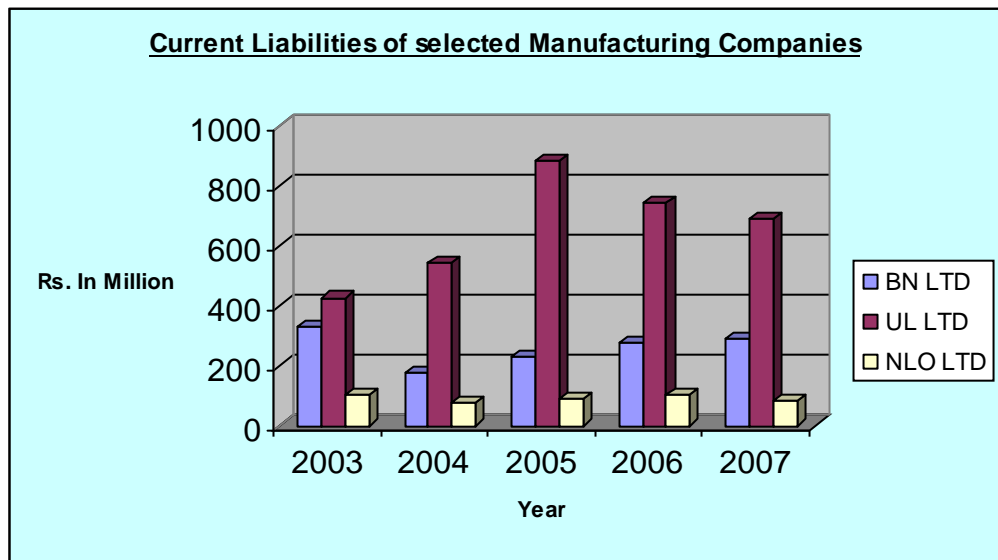
The table shows that most of the companies in most of the year are following the aggressive approach of CLs. The overall average of current liabilities is Rs. 336.23m. The average CLs of UL ltd. is more than the overall average. So it is following aggressive approach whose as BN ltd and NLO ltd have lower than that so they are following conservative approach of CLs. There is wide variability in the size of current liability between the companies; such variability seems to be due to the inconsistent working capital policy

While going through the standard deviation there is high change in current liabilities of UL ltd. by Rs 158.13 million where as the lowest change is Rs 12.06 million of NLO ltd.

Coefficient of Variation shows the fluctuations of the current liabilities in percentage. Here, the table shows that there is high fluctuation of current liabilities of UL ltd. by 24.07 percentage where as the lowest fluctuations in current liabilities is 13.19 percent of NLO ltd. It shows that a current liability of NLO Ltd. is less volatile in comparison to other companies'.

Similarly yearly-based data shows that there is least variation in comparison to company-based data. The highest fluctuation in coefficient of variation is 86.63 percent in 2005 and the lowest fluctuation is 46.77 percent in 2003.

Figure: 2



The above chart, figure: 2 shows the position of current liabilities of selected manufacturing companies.

4.2.1.3 Size of net working capital

The net working capital of a firm is the difference between current assets and current liabilities. Net working capital indicates a cushion or margin of safety or protection provided to the creditors. The average net working capital position of selected manufacturing companies is computed in the table given below.

Table No. 4.3

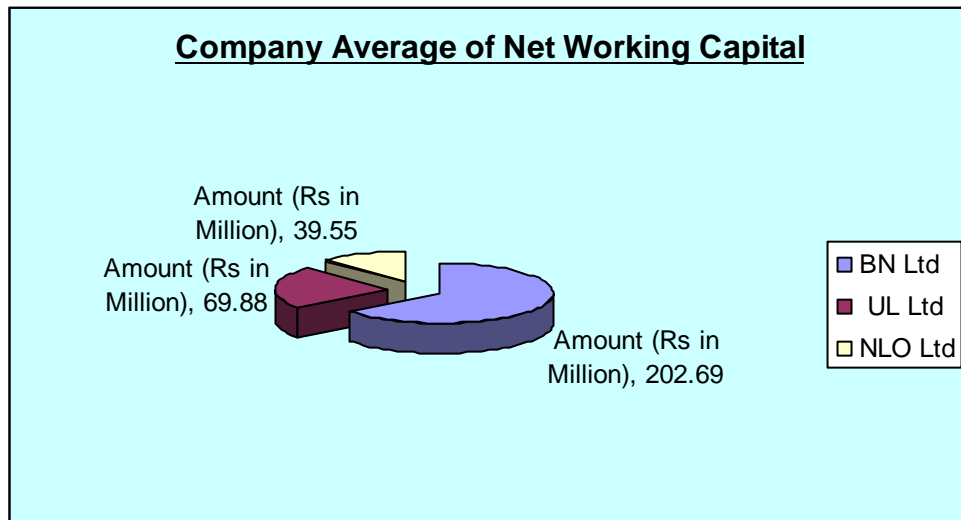
Company Average of Net Working Capital

S.No	Company	Amount (Rs in Million)
1	BN Ltd	202.69
2	UL Ltd	69.88
3	NLO Ltd	39.55
Company Average		104.04

Source: Based on Annex 3

The above table shows the average net working capital of selected listed manufacturing companies of the study period. The overall company average of net working capital is Rs 104.04 million. The highest amount of net working capital is Rs 202.69 million of BN Ltd and lowest amount of net working capital is Rs 39.55 million of NLO Ltd. The amount of net working capital is widely varied among the selected manufacturing companies. Similarly BN Ltd have the net working capital above the average amounting Rs 202.69 million

Figure: 3



The above chart, figure: 3 shows the position of company average net working capital of selected manufacturing companies.

Table No. 4.4

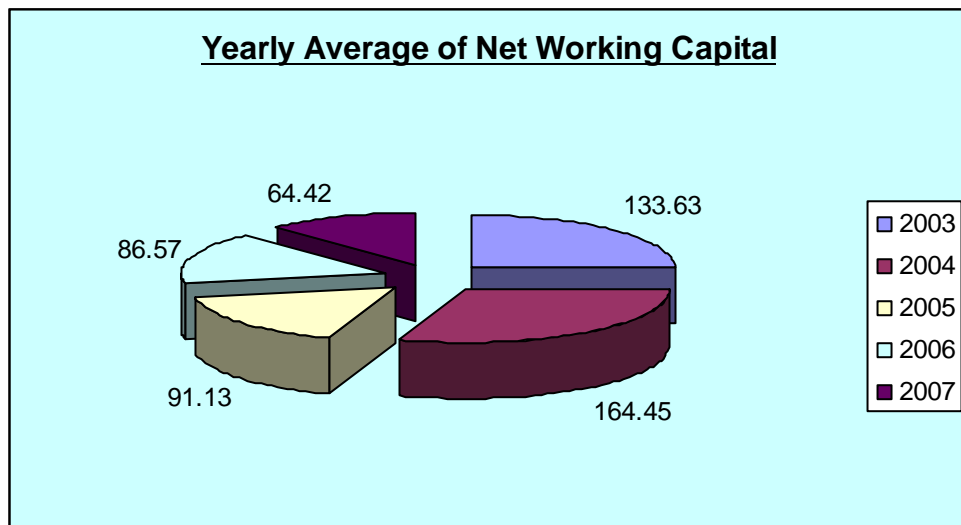
Yearly Average of Net Working Capital

S.No	Year	Amount (Rs in Million)
1	2003	133.63
2	2004	164.45
3	2005	91.13
4	2006	86.57
5	2007	64.42
Yearly Average		104.08

Source: Based on Annex 3

The above table shows the yearly average of net working capital of the study period from 2003 to 2007, which is Rs 104.08 million. There is up and down in the yearly average of net working capital. The lowest amount of net working capital is Rs. 64.42 million in the year 2007 and the highest is Rs 164.45 million in the year 2004.

Figure: 4



The above chart, figure: 4 shows the position of yearly average net working capital of selected manufacturing companies.

4.2.2 Analysis Based on Ratio

Many factors determine working capital needs. A selective approach is adopted to evaluate working capital needs of listed manufacturing companies because of liquidity turnover and profitability.

4.2.2.1 Analysis of Liquidity Position

Liquidity position indicates the ability to pay its short-term obligation. Liquidity position of the firm depends on its working capital policy. If the firm follows aggressive policy, it has low liquidity position, while conservative policy has high liquidity position.

Table No. 4.5

Current Ratio of Selected Listed Manufacturing Companies

S.NO.	NAME OF THE COMPANY	2003	2004	2005	2006	2007	AVERAGE
1	BN LTD	1.60	2.57	1.98	1.58	1.54	1.85
2	UL LTD	1.38	1.33	1.01	1.00	0.99	1.14
3	NLO LTD	1.36	1.51	1.45	1.38	1.50	1.44
	AVERAGE	1.45	1.80	1.48	1.32	1.34	1.55

Source: Based on Annex 6

Current ratio measures the short-term solvency of the firm. This ratio is the crude measurement of liquidity position of the firm. This ratio is calculated by dividing current asset by current liabilities.

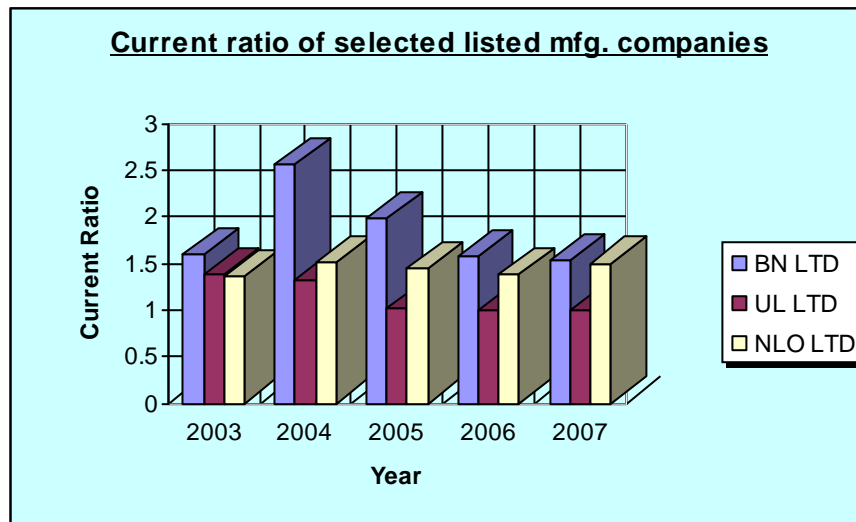
The higher the liquidity position, the lesser the need for additional working capital since it will be better for them to have the best use of existing liquidity position. On the other hand, manufacturing companies having lower liquidity position must raise the amount of working capital to save themselves from serious future liquidity crisis.

The current ratio for BN Ltd is 1.85 times 1, which have reasonable liquidity position that is nearly standard ratio of 2 times 1. This ratio is also above the overall average i.e. 1.55. Among three companies, one companies have higher than overall average and rest 2 have lower than overall average. The current ratio of UL Ltd is 1.14:1 and NLO Ltd is 1.44:1. Therefore, these two companies have current ratio below the standard of 2:1. However, there is serious liquidity position of UL LTD and NLO LTD. It is thus imperative to increase the amount of working capital.

There is wide variation of current ratio within the individual company. The highest ratio within the company is 2.57 times 1 of BN Ltd in 2004 and the lowest ratio is 0.99 times 1 of UL Ltd in the year 2007. This

volatile nature of current ratio shows that there is no specific working capital policy.

Figure: 5



The above chart, figure: 5 shows the position of current ratio of selected manufacturing companies.

4.3 Composition of Working Capital

To operate the business, different kinds of assets are needed. For the day to day business operation different types of current assets are required. The composition of current assets i.e. working capital of manufacturing companies' listed in NEPSE are analyzed below.

4.3.1 Composition of Current Assets

The success and failure of any business depends on its utilization of resources, which again depends on the day-to-day business activities. To run day-to-day business activities more efficiently appropriate level of current assets, which is called gross working capital should be maintained.

A high ratio of current assets in total assets structure does not always convey a high liquidity position because current assets consists of cash, receivable and inventories. Moreover, except cash, receivables and inventories have to wait for conversion into cash. Therefore, they are less liquid. Hence, for qualitative consideration of the current assets its composition should be seriously examined. The quality of current assets can be judged with the individual holding of cash receivable and inventories to its total current assets holding. The relationship has been established by computing the ratio of cash, receivable and inventories to current assets as below.

4.3.1.1. Average Ratio of Cash to Current Assets

The following table shows the company average of cash receivable and inventory to current assets of Sample Company. The company average of cash to current assets is 0.168 i.e. 16.80%. It is the overall average of the company. It means that the manufacturing companies use the cash 16.80% of current assets. The lowest holding of cash is 1.7% by NLO Ltd. On the other hand, UL Ltd holds the highest current assets i.e. by 45% of current assets. The ratio of cash to current assets is widely varied among the selected manufacturing companies.

The higher investment in cash means the higher ideal fund in the company, which earn nothing rather decreases the profitability of the firm. On the other hand, the lowest investment in cash means unable to meet its maturing liabilities on time or firms risk of insolvency is high. The fluctuating trend of the cash shows that firms are not able to meet its maturing liabilities on time.

Table No. 4.6

Company Average Ratio of Cash & Bank Balance, Receivable, Inventory and Other Current Assets to Current Assets

S.No	Company	Cash to CA	Receivable to CA	Inventory to CA	Other CA to CA
1	BN Ltd	0.036	0.18	0.47	0.36
2	UL Ltd	0.450	0.16	0.30	0.12
3	NLO Ltd	0.017	0.51	0.28	0.12
Company Average Ratio		0.168	0.28	0.35	0.20

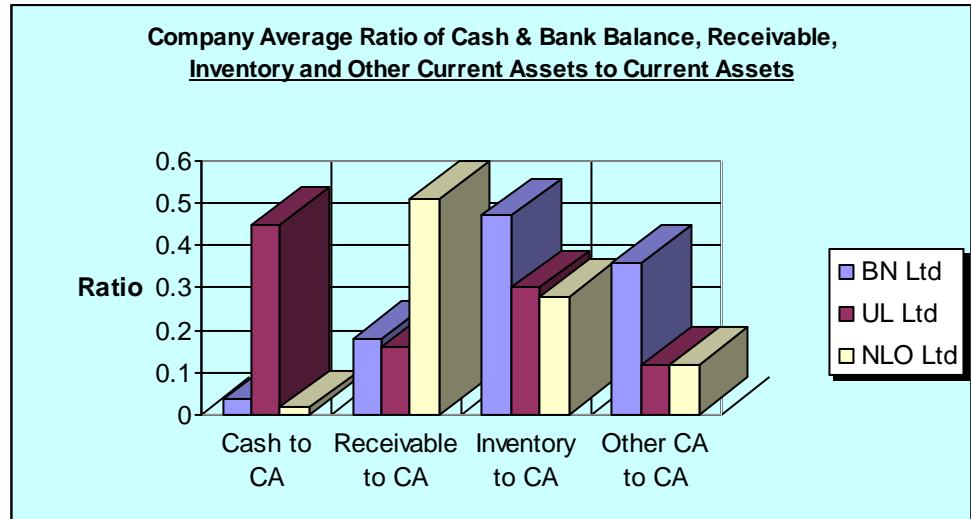
Source: Based on Annexes 6

4.3.1.2. Average Ratio of Receivable to Current Assets

The company average ratio of receivable to current assets is 28%. It is the overall average of the company. It means that the manufacturing companies receivable in total current assets is 28%.

The ratio of receivable to current assets shows that the highest for NLO Ltd is 51% and the lowest of UL Ltd is 16%. The ratio of receivable to current is widely varied among the selected manufacturing companies. The ratio of BN Ltd is 18%. Two of the companies have lower than the average.

Figure: 6



The above chart, figure: 6 shows the position of company average ratio of Cash & Bank Balance to Current Assets, Receivable to Current Assets, Inventory to Current Assets and Other Current Assets to Current Assets of selected manufacturing companies.

4.3.1.3. Average Ratio of Inventory to Current Assets

The volume of inventories and its percentage in total current assets has in fluctuating trend during the study period. The overall company average ratio of inventory to current assets is 35%. UL Ltd and NLO Ltd have the ratio of 30% and 28% respectively which is below the average. BN Ltd have the ratio above the average with 47%. Higher percentage of inventory holding causes higher carrying cost and lower profitability as well as lower inventory turnover. It is also the result of less efficient inventory management.

The ratio of receivable is lower so it seems appropriate management of receivable management. It depends upon nature of production, competition, nature of goods etc. Therefore, it differs from one company to another. However, the gradual increase ratio and high variability of ratio seems to be an indication of inconsistent credit policy of the manufacturing enterprises. The inventory depends upon the nature and type of business. Manufacturing industries need more inventory

compared to public utilities. In the above calculation, the size of the inventory is increasing.

4.3.1.4. Average Ratio of Other Current Assets to Current Assets

The overall ratio of other current assets to current assets is 20%. It is the overall average of the company. The ratio of other current assets to total current assets shows that highest is 36% of BN Ltd. The ratio of NLO Ltd and UL Ltd is 12%. Two of the companies' ratio is below the average and rest two has above the average.

4.3.2 Percentage of Current Assets on Total Assets

The requirements of current assets depend on the nature of business. Current assets are generally required to meet working capital, which are to fulfill the need of daily business requirements. The table given below represents the percentage of current assets on total assets.

Table No. 4.7

Company Average of Current Assets to Total Assets

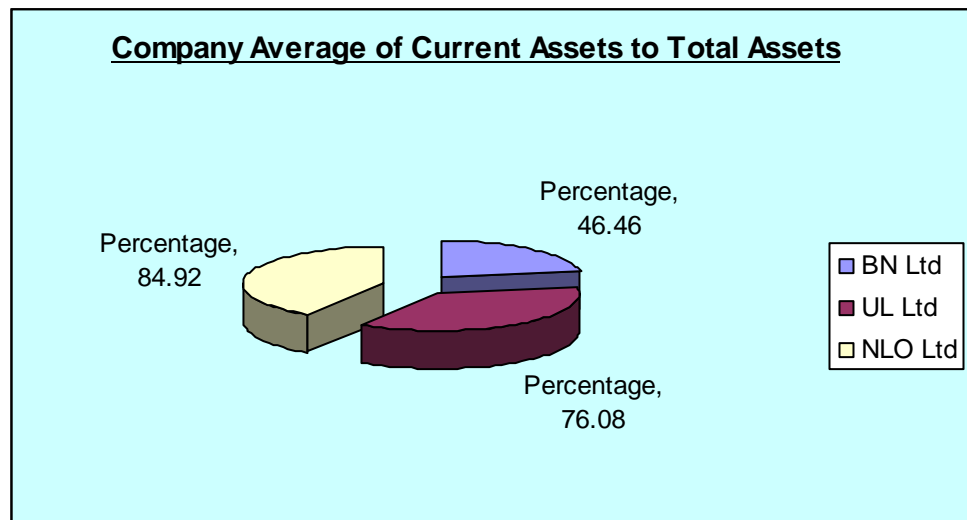
S.No	Company	Percentage
1	BN Ltd	46.46
2	UL Ltd	76.08
3	NLO Ltd	84.92
Company Average		69.15

Source: Based on Annexes 7

The above table shows the company average of current assets on total assets of the selected listed manufacturing companies. The overall company average is 68.15%. It means that the manufacturing companies use the current assets as 68.15% of total assets. The highest use of current assets is 84.92%. The lowest uses of current assets are 46.46%. The percentage current assets to total assets are widely varied among the selected manufacturing companies.

Higher level of current assets indicates good liquidity position of the firm but at the same time, it reversibly affects on the profitability of the firm.

Figure: 7



The above chart, figure: 7 show the position of company average of Current Assets to Total Assets of selected manufacturing companies.

4.4 Liquidity Position

Liquidity is crucial which makes easier for firm's day-to-day operation. The first and foremost objective of adopting appropriate working capital management is to maintain appropriate and optimum level of liquidity in order to enable the enterprises to meet current short term obligation, when they become due for the payment liquidity is a pre-requisite for the avoidance of technical insolvency and ultimately for the survival of the enterprises.

However, it is very crucial problem in maintaining the appropriate liquidity in any companies as it indicates risk return trade off with higher or lower liquidity level. High liquidity reduces risk of unnecessary current assets in business and decreases firm's profitability. Liquidity denotes the ability for payment of short-term liabilities. Liability is closely related with the net working capital, so the researcher has made an effort to analyze the size of net working capital and current ratio

4.4.1. Current Ratio

Current ratio measures the short-term solvency of the firm in gross term i.e. its ability to meet short-term obligation. This ratio is crude measurement of liquidity position of a firm. As a measure of short-term current financial liquidity, it indicates the rupees of current assets available for each rupee of current liabilities obligation.

Table No. 4.8

Company Average of Current Ratio

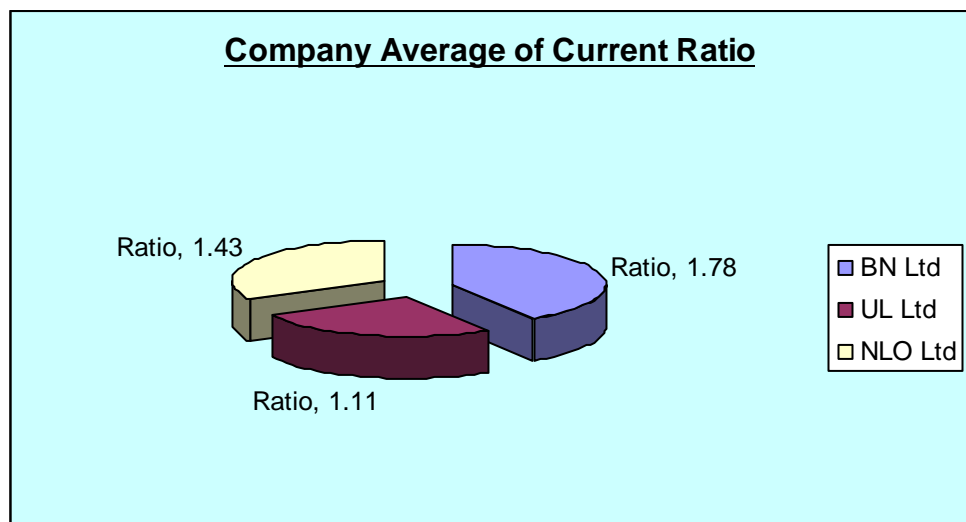
S.No.	Company	Ratio
1	BN Ltd	1.78
2	UL Ltd	1.11
3	NLO Ltd	1.43
Company Average		1.44

Source: Based on Annex 7

The above table shows the company average current ratio of selected manufacturing companies of the study period. The company average current ratio is 1.48 times 1. It is the overall average of the company. The highest current ratio is 1.78 of BN Ltd and the lowest current ratio of 1.11 of UL Ltd. BN Ltd have the ratio greater than average and rest two companies UL Ltd and NLO Ltd have ratio lower than the average.

The current ratio is considered as perfect when the ratio comes to 2:1. The overall current ratio of the company is not satisfactory.

Figure: 8



The above chart, figure: 8 shows the position of company average of Current Ratio of selected manufacturing companies.

4.5 Turn Over Position

The behavior of working capital utilization and improvement can be analyzed with the help of turnover ratio. This reflects the speed and rapidity, with which assets are converted into sales that results the efficiency of the enterprise. This ratio measures the degree of effectiveness in use of resources or funds by an enterprise. This is based on the relationship between the sales and investment in different assets. This section examines the turnover position of selected manufacturing companies.

4.5.1 Net working capital Turnover Ratio

The working capital need of listed manufacturing companies also depend upon the quickness of turnover i.e. the time taken to convert current assets into cash. The more easily assets can be converted into cash, the more liquid it is. Manufacturing companies with higher turnover of assets need lesser working capital as compared to manufacturing companies having lower turnover. The speeds with which the circulating assets complete its round determine the adequacy of working capital needs in manufacturing companies.

Table No. 4.9

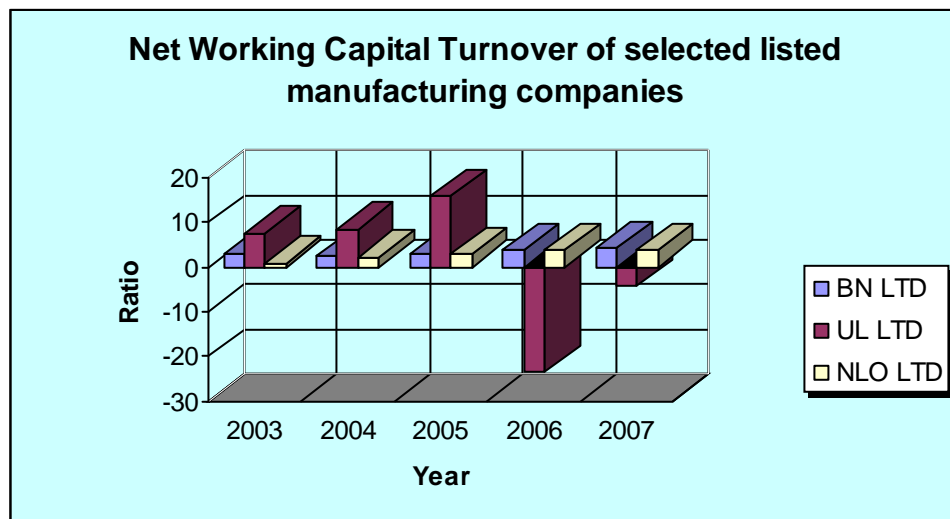
Net Working Capital Turnover of Selected Listed Manufacturing companies

S.No.	NAME OF THE CO.	2003	2004	2005	2006	2007	AVERAGE
1	BN LTD	2.88	2.31	2.74	3.87	4.05	3.17
2	UL LTD	7.62	8.45	15.81	-23.70	-4.41	3.07
3	NLO LTD	0.90	2.17	2.97	3.74	3.87	2.73
	AVERAGE	3.80	4.31	1.17	-5.36	-1.17	-

Source: Based on Annex 8

All three manufacturing companies, namely BN Ltd, UL Ltd and NLO Ltd enjoy adequate turnover of assets. Therefore, for these companies the working capital needs are not very much stressing. Turnover itself is sufficient to generate additional working capital and there is no need to top additional sources of financing. The turnover of these companies is 3.17 times of BN Ltd, 3.07 times of UL Ltd and 2.73 times of NLO Ltd.

Figure: 9



The above chart, figure: 9 shows the position of Net Working Capital Turnover of selected manufacturing companies.

4.5.2 Current Assets Turnover Ratio

The current assets turnover ratio indicates the adequacy of sales in relation to the investment in current assets. Generally a high current assets turnover ratio indicates efficient utilization of current assets. To find out the utilization of current assets of manufacturing companies, the current assets turnover ratio has been calculated and presented below.

Table No. 4.10

Company Average of Current Assets Turnover Ratio

S.No.	Company	Ratio
1	BN Ltd.	1.34
2	UL Ltd.	1.98
3	NLO Ltd.	0.96
Average		1.43

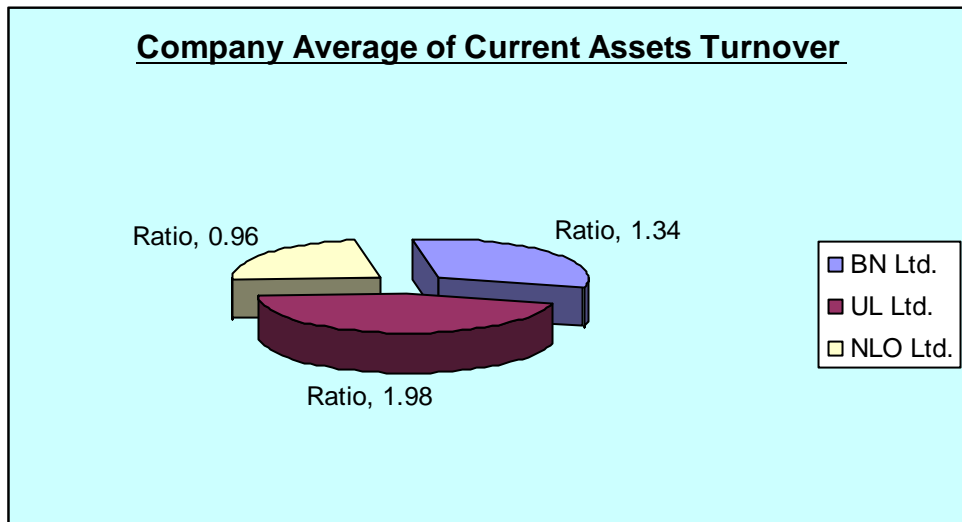
Source: Based on Annex 9

The above-mentioned table shows the current assets turnover ratio of the selected Nepalese manufacturing companies listed in NEPSE. The overall company average of for the study period in 1.43 times. The highest turnover ratio is 1.98 times of UL ltd and the lowest turnover ratio is 0.96 times of NLO ltd. Two of the companies have turnover ratio lower than the overall average and rest have more than the average. Higher current assets turnover ratio indicates the higher utilization of current assets and lower turnover ratio indicates that the companies have poor current assets management.

It is found that the current assets turnover ratio of Nepalese manufacturing companies is low, which indicates that the utilization of working capital during the study period is low. Higher level of current

assets with unmanaged production and sales have contributed for lower turnover in manufacturing companies.

Figure: 10



The above chart, figure: 10 show the position of company average of current assets turnover of selected manufacturing companies.

4.5.3 Inventory Turnover Ratio

Inventories are the stock of the product, a company manufactures for the sales and the components that make up a product. Inventory is the most important part of the current assets. The shortage of required inventory results irregular production and hamper of the production process and in the other hand excess inventory causes unnecessary holding of capital. It result increase in cost. Inventory turnover ratio measures the liquidity of inventory.

Table No. 4.11

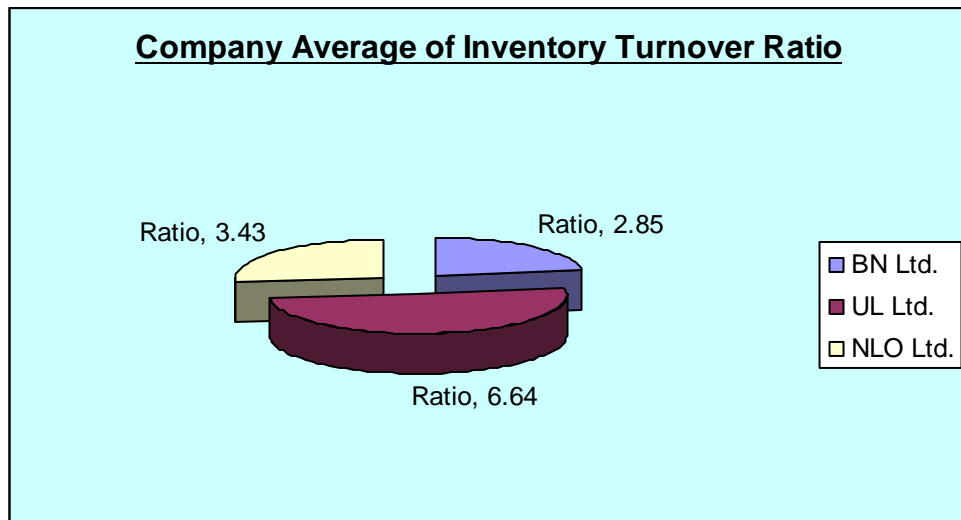
Company Average of Inventory Turnover Ratio

S.No.	Company	Ratio
1	BN Ltd.	2.85
2	UL Ltd.	6.64
3	NLO Ltd.	3.43
Average		4.307

Source: Based on Annex 9

The above-mentioned table shows the inventory turnover ratio of the selected manufacturing companies. The overall average of the companies is 4.307 times. UL ltd. have the inventory turnover ratio of 6.64, which is more than the average, and rest three companies have less than the average. Highest turnover ratio is 6.64 times of UL ltd and the lowest ratio is 2.85 times of BN ltd. Higher turnover shows the higher degree of liquidity of inventories and vice versa.

Figure: 11



The above chart, figure: 11 shows the position of company average of inventory turnover ratio of selected manufacturing companies.

4.5.4 Receivable Turnover Ratio

Receivable is another major component of current assets. So, its degree of liquidity plays a vital role in the liquidity position of the firm. Thus, the measure of actual liquidity position of the firm remains uncompleted without the analysis of the liquidity of receivables. So, receivable turnover has been used to measure the liquidity position of receivable. It indicates the number of times the receivable is turned out during the year. Higher turnover shows the higher degree of liquidity of receivable and vice versa.

Table No. 4.12

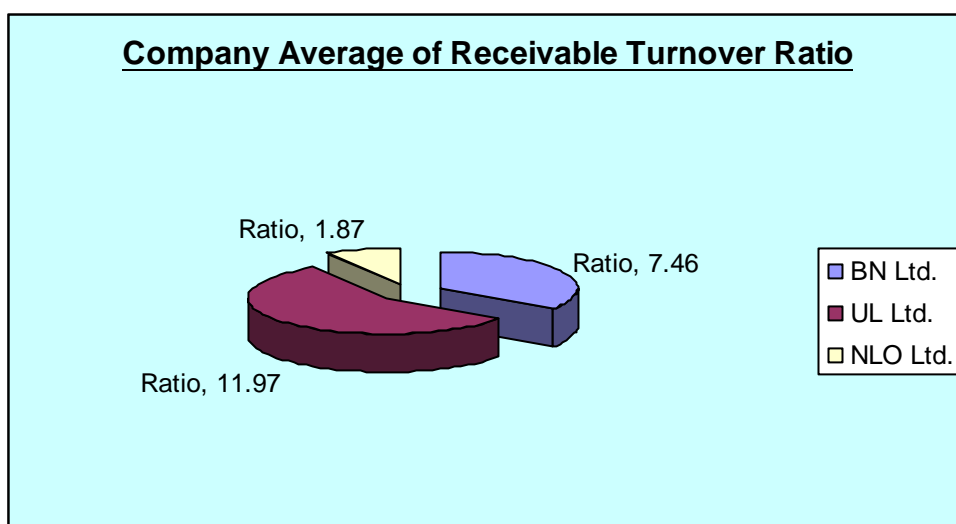
Company Average of Receivable Turnover Ratio

S.No.	Company	Ratio
1	BN Ltd.	7.46
2	UL Ltd.	11.97
3	NLO Ltd.	1.87
Average		7.10

Source: Based on Annex 10

Here the above given table shows the companies' average of receivable turnover ratio of selected manufacturing companies listed in NEPSE. Company average of receivable turnover ratio is widely varied within individual companies. The highest turnover ratio is 11.97 times of UL ltd and the lowest turnover ratio is 1.87 times of NLO ltd. The overall companies' average of account receivable turnover ratio is 7.10 times. Two of the companies have turnover ratio lower than the overall average and rest one has more than the average.

Figure: 12



The above chart, figure: 12 show the position of company average of receivable turnover ratio of selected manufacturing companies.

4.6 Profitability Position

A company should earn profits to survive and grow over a period. Profit is a basic long-term objective of a commercial enterprise. Profitability is a measure of operating efficiency and the search for it provides on incentives to achieve efficiency. The profitability of a firm can be measured by its profitability ratio. Profitability can be measured with the help of the following ratio.

4.6.1 Profit (loss) Margin Ratio

This ratio measures the relationship between net profit and sales of the enterprise and indicates the cost/price effectiveness of the operation. It also indicates the management efficiency in overall management function of the firm. The ratio has been calculated and presented below.

Table No. 4.13

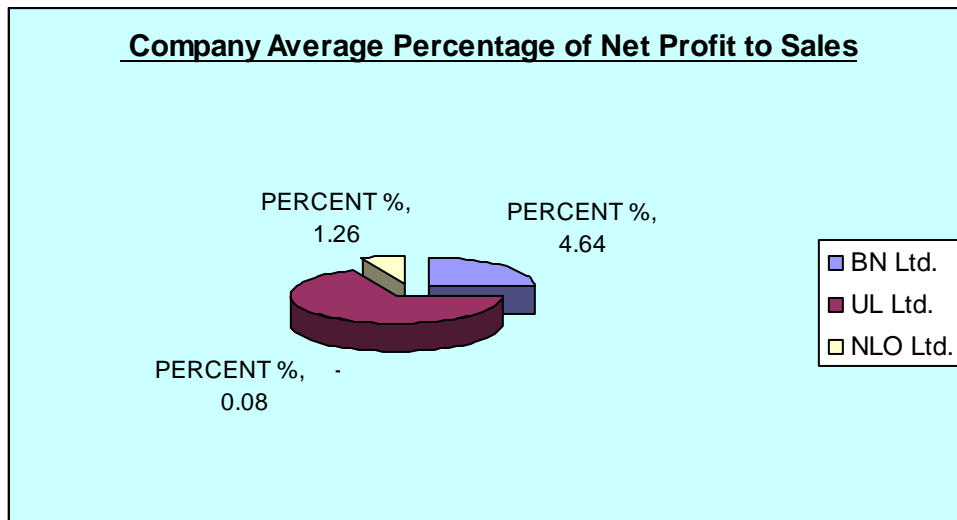
Company Average Percentage of Net Profit to Sales

S.NO.	COMPANY	PERCENT %
1	BN Ltd.	4.64
2	UL Ltd.	12.96
3	NLO Ltd.	1.26
	AVERAGE	6.29

Source: Based on Annex 10

The above-mentioned table shows the company average percentage of net profit to sales of the selected listed manufacturing companies. The overall company average of net profit to sales is 6.29 percentages. It indicates that there is profit of 6.29 paisa per rupee sales of selected manufacturing companies; The highest profit ratio is 12.96 percent of UL Ltd followed by BN Ltd is 4.64 percent and NLO Ltd is 1.26 percent.

Figure: 13



The above chart, figure: 13 shows the position of company average percentage of net profit to sales of selected manufacturing companies.

4.6.2 Return on Total Assets (RTA)

Return on total assets ratio shows the relationship between the total assets and net profit. This ratio also helps to understand the utilization of assets of the enterprise. It measures profitability of all financial resources invested in the firm's assets. It gives the earning power of the firm from utilizing its total investment. The average return on total assets is presented below.

Table No. 4.14

Company Average of Return on Total Assets

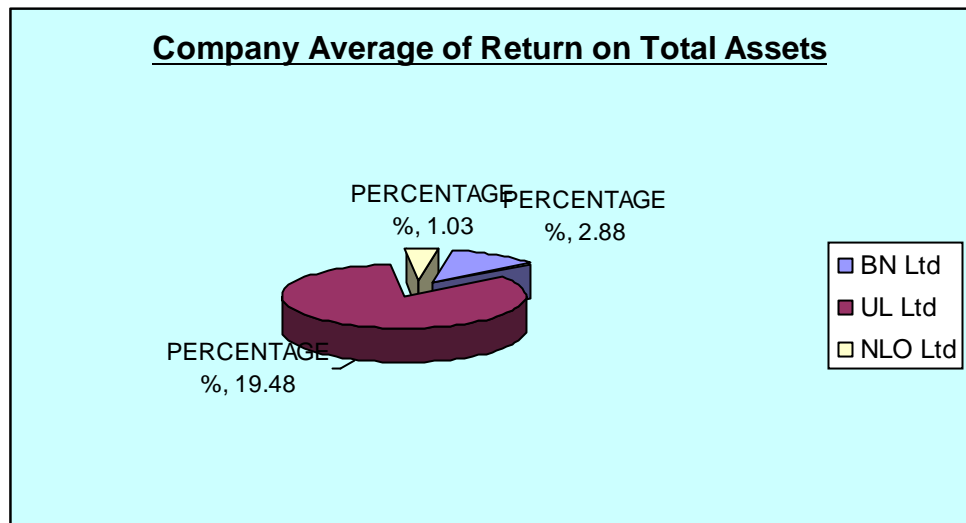
S.NO.	COMPANY	PERCENTAGE %
1	BN Ltd	2.88
2	UL Ltd	19.48
3	NLO Ltd	1.03

	AVERAGE	7.80
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Source: Based on Annex 11

The above-mentioned table shows the company average of return on total assets of selected listed manufacturing companies. The overall company average for the study period is 7.80 percent. It indicates that there is 7.80 paisa profit in a rupee of the total assets of manufacturing companies. Among the selected manufacturing companies, The highest return is 19.48 percent of UL Ltd followed by 2.88 percent of BN Ltd and 1.03 percent of NLO Ltd

Figure: 14



The above chart, figure: 14 shows the position of company average of return on total assets of selected manufacturing companies.

4.7 Analysis of Relationship Between Working Capital Variables

The financial performance of manufacturing companies is directly related to their ability to manage working capital, management efficiently and effectively. The use of financial tools has already given

adequate trust in showing the analysis of various variables to determine the working capital management. To make the analysis more fruitful and weighty certain statistical tools have been used. Here various problem error and regression analysis are used to show the relationship between the followings.

4.7.1 Relationship between Net Working Capital and Sales

Following analysis shows the correlation between net working capital and sales based on yearly average.

Table No. 4.15

Relationship between Net Working Capital and Sales

<i>Rs. In Million</i>							
Year	Net working capital (X)	Sales (Y)	$(X - \bar{X})$ x	$(X - \bar{X})^2$ x ²	$(Y - \bar{Y})$ y	$(Y - \bar{Y})^2$ y ²	$(X - \bar{X})(Y - \bar{Y})$ xy
2003	133.63	657.84	29.67	880.3089	-70.03	4904.201	-2077.79
2004	164.45	747.24	60.49	3659.04	19.37	375.1969	1171.691
2005	91.13	739.24	-12.83	164.6089	11.37	129.2769	-145.877
2006	66.17	746.75	-37.79	1428.084	18.88	356.4544	-713.475
2007	64.42	748.28	-39.54	1563.412	20.41	416.5681	-87.011
	$\bar{X} = 103.96$	$\bar{Y} = 727.87$		$\sum x^2 = 7695.454$		$\sum y^2 = 6181.697$	$\sum xy = -2572.46$

Source: Security Board Nepal

$$\text{Now, } t_x = X \sqrt{\frac{1}{N} (X - \bar{X})^2}$$

$$= \sqrt{\frac{7695.454}{5}}$$

$$= 39.23$$

$$t_y = Y \sqrt{\frac{1}{N} (Y - \bar{Y})^2}$$

$$= \sqrt{\frac{6181.697}{5}}$$

$$= 35.16$$

To show the correlation between net working capital and sales, Karl Pearson's coefficient of correlation (r) is determined. For this purpose, net working capital and sales are interrelated variables. So that both

variable relation are explored. Let us calculate the "r" to show the relationship between them.

$$\begin{aligned} \text{Correlation coefficient } r_{xy} &= \frac{\sum xy}{\sqrt{\sum x^2 \cdot \sum y^2}} \\ &= \frac{22572.40}{\sqrt{7695.454 \cdot 6181.697}} \\ &= -0.3723 \end{aligned}$$

The value of r is -0.3723, which shows that there is negative correlation between net working capital and sales. A negative correlation coefficient indicates the negative relationship between net working capital and sales i.e. increase in net working capital bring decrease in sales and vice versa.

To test the statistical significance of the calculated correlation coefficient the probable error (P.E.) calculated below.

$$\begin{aligned} \text{P.E. (r)} &= \frac{0.6745 (1 - r^2)}{\sqrt{n}} \\ &= \frac{0.6745 [1 - (-0.3723)^2]}{\sqrt{5}} = 0.2598 \end{aligned}$$

Since $r < 6 \text{ P.E. (r)}$ the value of r is not significant.

A regression line also can be fitted to show the degree of relationship between net working capital and sales. For this purpose, net working capital is taken as an independent variable and sales as a dependent

variable. The regression line of sales (Y) on net working capital (X) is given below.

$$Y - \bar{Y} = r \frac{\sum y}{\sum x} (X - \bar{X})$$

We have	x	y
Mean	103.96	727.87
S.D.	39.23	35.16
r (xy)	-0.3723	

$$\dots Y - 727.87 = -0.3723 \frac{35.16}{39.23} (X - 103.96)$$

$$\dots Y = -0.3337X + 693.18$$

The regression coefficient -0.3337 indicates that there exists negative relationship between net working capital and sales. It also indicates that a rupee increase in net working capital brings Rs 0.33 decrease in sales.

4.7.2 Relationship between Current Assets and Sales

The relationship between current assets and sales is calculated as follows:

Table No. 4.16

Relationship between Current Assets and Sales

Rs. In Million

Year	Current Assets (X)	Sales (Y)	$(X - \bar{X})$ x	$(X - \bar{X})^2$ x ²	$(Y - \bar{Y})$ y	$(Y - \bar{Y})^2$ y ²	$(X - \bar{X})(Y - \bar{Y})$ xy
2003	425.80	657.84	-15.262	232.9386	-70.03	4904.201	1068.798
2004	429.06	747.24	-12.002	144.048	19.37	375.1969	-232.479
2005	490.61	739.24	49.548	2455.004	11.37	129.2769	563.3608
2006	441.02	746.75	-0.042	0.001764	18.88	356.4544	-0.79296
2007	418.82	748.28	-22.242	494.7066	20.41	416.5681	-453.959
	$\bar{X} = 441.062$	$\bar{Y} = 727.87$		$\sum x^2 = 3326.689$		$\sum y^2 = 6181.697$	$\sum xy = 944.9277$

Source: Security Board, Nepal

$$\text{Now, } t_x = X \sqrt{\frac{1}{N} \sum (X - \bar{X})^2}$$

$$t_y = Y \sqrt{\frac{1}{N} \sum (Y - \bar{Y})^2}$$

$$X \sqrt{\frac{3326.689}{5}}$$

$$Y \sqrt{\frac{6181.697}{5}}$$

$$= 25.79$$

$$= 35.16$$

The relationship between sales and current assets is positive. Karl Pearson's coefficient of correlation "r" is used to find out the correlation between current assets and sales. It can be calculated as follows:

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

Correlation coefficient r_{xy}=

$$= \frac{944.9277}{\sqrt{3326.689 \cdot 6181.697}}$$

$$= + 0.2084$$

The value of r is +0.2084, which shows that there is highly positive correlation between current assets and sales.

To test the significance of correlation coefficient, the probable error is calculated as below

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

$$= \frac{0.6745 [1 - (0.2084)^2]}{\sqrt{5}}$$

$$= 0.2885$$

Since $r > 6 \text{ P.E.}(r)$ the value of r is highly significant. There is no doubt that if sales increases the investment in current assets will also increase and vice versa

To show the degree of relationship between current assets and sales a simple regression line is drawn below for this purpose current assets are assumed dependant upon sales.

The regression line of current assets (x) and sales (y) is as follow . . .

$$\frac{\dagger y}{\dagger x}$$

$$X - \bar{X} = r (Y - \bar{Y})$$

We have x y

Mean 441.062727.87

S.D. 25.7935.16

r(xy) 0.2885

$$\dots X - 441.062 = 0.2885 \times \frac{25.79}{35.16} (Y - 727.87)$$

$$X = 0.2116 Y - 287.032$$

The result indicates that if one rupee increases in the sales the amount of current assets will be increases by Re 0.21.

4.7.3 Relationship between Sales and Receivable

Table No. 4.17

The Relationship between Sales and Receivables is calculated as follows

Rs. In Million

Year	Receivable (X)	Sales (Y)	$(X - \bar{X})$ x	$(X - \bar{X})^2$ x ²	$(Y - \bar{Y})$ y	$(Y - \bar{Y})^2$ y ²	$(X - \bar{X})(Y - \bar{Y})$ xy
2003	76.10	657.84	-14.122	199.4309	-70.03	4904.201	988.9697
2004	92.01	747.24	1.788	3.196944	19.37	375.1969	34.63356
2005	99.70	739.24	9.478	89.83248	11.37	129.2769	107.7649
2006	90.74	746.75	0.518	0.268324	18.88	356.4544	9.77984
2007	92.56	748.28	2.338	5.466244	20.41	416.5681	47.71858
	$\bar{X} = 90.222$	$\bar{Y} = 727.87$		$\sum x^2 = 298.1949$		$\sum y^2 = 6181.697$	$\sum xy = 1188.861$

Source: Security Board, Nepal

$$\text{Now, } t_x X \sqrt{\frac{1}{N} (X Z \bar{X})^2}$$

$$t_y X \sqrt{\frac{1}{N} (Y Z \bar{Y})^2}$$

$$X \sqrt{\frac{298.1949}{5}}$$

$$X \sqrt{\frac{6181.697}{5}}$$

$$= 7.72$$

$$= 35.16$$

The relationship between receivables and sales is shown by the following calculation.

$$\text{Correlation coefficient } r_{xy} = \frac{xy}{\sqrt{x^2 \cdot y^2}}$$

$$= \frac{1188.861}{\sqrt{298.1949 \cdot 6181.697}}$$

$$= + 0.8756$$

The value of r is +0.8756, which shows that there is highly positive correlation between receivables and sales.

To test the significance of the correlation coefficient the probable error is calculated as below:

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

$$= \frac{0.6745 [1 Z(0.8756)^2]}{\sqrt{5}}$$

$$= 0.0704$$

Since $r > 6 \text{ P. E. (r)}$ the value of the r is highly significant. It means that receivable increases at increasing level of sales and vice versa.

To see the linear relationship receivable is taken as a dependent variable and sales is taken as an independent variable. Based on the above assumptions the regression line of receivable (x) on sales (y) is calculated a shown below.

$$X - \bar{X} = r \frac{\frac{\uparrow x}{\uparrow y}}{\quad} (Y - \bar{Y})$$

We have, x y

Mean 90.22727.87

S.D. 7.7235.16

$r(xy)$ 0.0704

$$\dots X - 90.22 = 0.0704 \times \frac{7.72}{35.16} (Y - 727.87)$$

$$X = 0.0155Y + 78.97$$

The result shows that one rupee increase in the sales causes that the receivables increase by Rs 0.02. Thus, management of manufacturing companies should evaluate risk-return trade off extending the additional sales. 100 percent increase in sales lead to only 2% increase in receivable

4.7.4 Relationship between Net Profit and Net Working Capital

Table No. 4.18

The relationship between Net Profit and Net Working Capital is calculated as follows

Rs. In Million

Year	Net Profit (X)	Net Working Capital (Y)	$(X - \bar{X})_x$	$(X - \bar{X})^2_x$	$(Y - \bar{Y})_y$	$(Y - \bar{Y})^2_y$	$(X - \bar{X})(Y - \bar{Y})_{xy}$
2003	41.03	133.63	-31.156	970.6963	29.67	880.3089	-924.399
2004	59.63	164.45	59.63	3555.737	164.45	27043.80	9806.154
2005	75.66	91.13	75.66	5724.436	91.13	8304.677	6894.896
2006	87.76	66.17	87.76	7701.818	66.14	4378.469	5807.079
2007	96.85	64.42	96.85	9379.923	64.42	4149.936	6239.077
	$\bar{X} = 72.186$	$\bar{Y} = 103.96$		$dx^2 = 27332.61$		$dy^2 = 44757.19$	$dxy = 27822.81$

Source: Security Board, Nepal

Now, $t_x X \sqrt{\frac{1}{N} (X Z \bar{X})^2}$ $t_y X \sqrt{\frac{1}{N} (Y Z \bar{Y})^2}$

$$X \sqrt{\frac{27332.61}{5}}$$

$$= 73.94$$

$$X \sqrt{\frac{44757.19}{5}}$$

$$= 94.61$$

The relationship between net profit and net working capital is shown by the following calculation.

$$\begin{aligned} \text{Correlation coefficient } r_{xy} &= \frac{xy}{\sqrt{x^2 \cdot y^2}} \\ &= \frac{27822.81}{\sqrt{27332.61 \cdot 44757.19}} \\ &= + 0.7955 \end{aligned}$$

The value of r is +0.7955, which shows that there is perfectly positive correlation between net profit and net working capital.

To test the significance of correlation coefficient the probable error is calculated as below.

$$\begin{aligned} \text{P.E. (r)} &= \frac{0.6745(1 - r^2)}{\sqrt{n}} \\ &= \frac{0.6745[1 - (0.7955)^2]}{\sqrt{5}} \\ &= 0.1108 \end{aligned}$$

Since $r < 6 \text{ P.E.}$ the value of r is not significant. It shows that the increase in net working capital may not increase net profit. To show the degree of relationship between net profit and net working capital a simple regression line is drawn below assuming net profit dependent upon net working capital.

The regression line of net profit (X) on net working capital (Y) is as follows:

$$\frac{\uparrow x}{\uparrow y}$$

$$X - \bar{X} = r (Y - \bar{Y})$$

We have, x y

Mean 72.183103.96

S.D. 73.9494.61

r(xy) 0.1108

$$\dots X - 72.183 = 0.1108 \times \frac{73.95}{94.61} (Y - 103.96)$$

$$X = 0.0866Y + 63.18$$

Since the regression coefficient is positive the net working management of Nepalese manufacturing companies is found to some extend good.

4.8 Major Finding of The Study

The major findings of the study are as follows:

A. Finding on Working Capital Policy

The major finding of the study shows that there is wide variation of the current assets within individual companies. The overall average

coefficient of variation is 9.97%. UL Ltd and NLO are following aggressive policy BN Ltd is following conservative policy. Similarly the size of the current liabilities of the individual manufacturing companies is widely varied. The overall average coefficient of variation among the companies is 19.38 percent. Out of 3 companies BN Ltd and UL Ltd are following aggressive policy but NLO Ltd have current liabilities below the average and is following conservative policy.

B. Findings on Working Capital Management

Working capital management of Nepalese companies is analyzed with the help of various key ratios. The main findings from the analysis are given below:

The ratio of cash to current assets is widely varied among the manufacturing companies during the study period from 2003 to 2007. Maximum holding of cash to current assets is 0.45 times of UL Ltd and minimum ratio is 0.017 of NLO Ltd. Here the higher investment in cash means higher idle fund in the company and the lowest investment in cash means unable to meet its maturing liabilities on time.

The overall company average of receivable to current assets ratio is 28 percent. The highest ratio is 0.51 of NLO Ltd and the lowest ratio is 0.16 of UL Ltd. Only NLO Ltd has the ratio above the average and rest other three companies have ratio below the average.

There is no consistency in the company average of current assets to total assets. The overall company average of current assets to total assets is 69.15 percent. Here the highest ratio is 84.92 percent of NLO LTD where as the lowest ratio is 46.46 percent of BN Ltd. Higher level of current asset indicate good liquidity position of the firm but at the same time it reversibly affects on the profitability of the firm.

There is wide variation of company average of net working capital of Nepalese manufacturing companies. The overall company average of net working capital is RS 104.04 million. The highest net working capital is RS 202.69 million of BN Ltd and the lowest net working capital RS 39.55 million of NLO Ltd.

The liquidity position of Nepalese manufacturing companies is not similar among different companies. The liquidity position of BN Ltd is good. The current ratio of all companies lies between 1 and 2 and can be considered as average.

The current assets turnover ratio of the Nepalese manufacturing companies is also widely varied. Among the individual companies. Higher turnover of current assets is always desirable as it indicates the maximum utilization of current assets. But the company average of current assets turnover for the study period is 1.43 times. The highest turnover ratio is 1.98 times of UL Ltd and the lowest ratio is 0.96 times of NLO Ltd.

Similarly the inventory turnover ratio is fluctuating among the manufacturing companies. The highest turnover ratio is 6.64 times

of UL ltd and the lowest ratio is 2.85 times of BN LTD. The overall company ratio is 4.307 times.

As going through the receivable turnover ratio there is great fluctuation between individual companies. The overall company average of receivable turnover ratio is 7.10 times. The highest ratio is 11.97 times of UL Ltd and the lowest ratio is 1.87 times of NLO Ltd. The ratio of NLO Ltd show that they are not able to collect debt within short period of time.

The company average percentage of net profit to sales is 6.29. The highest percentage is 12.96 of UL Ltd and the lowest percentage is 1.26 of NLO Ltd.

Similarly the overall company average of return on total assets is 7.80 percent. The highest percentage is 19.48 of UL Ltd and the lowest is 1.03 percent of NLO Ltd.

C. Findings on Statistical Analysis

Besides the major findings on financial tools the major findings on statistical tools is presented below.

List of The Statistical Findings

Analysis	NWC to sales	CA to sales	Sales to Receivable	Net Profit to Net Working Capital
Correlation coefficient r (xy)	-0.3723	0.2084	0.8756	0.7955
Probable Error PE(r)	0.2598	0.2885	0.0704	0.1108
Regression coefficient	-0.3337	0.2116	0.0155	0.0866

The analysis shows that the correlation coefficient between current assets and sales, sales and receivables, net profit to net working capital is positive. In case of, current assets to sales and sales to receivables, the coefficient correlation (r) is greater than 6 times P.E.(r). This indicates that the correlated correlation coefficients are statistically significant. But coefficient of correlation (r) of sales to inventory and net profit to net working capital is less than 6 times P.E. (r). So their correlation coefficients are not significant.

The results of regression analysis have showed that there is positive relationship between net working capital, current assets and sales, sales and receivables, net profit and net working capital.

CHAPTER- FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY

The study is concentrated on the various aspects of the working capital management with special references to the selected listed manufacturing companies of Nepal. It covers the period of five years from 2003 to 2007 A.D. It includes the data of 3 manufacturing companies listed in Nepal Stock Exchange Ltd. This study has focused on the liquidity position working capital policy followed by manufacturing companies' cash conversion period. Besides these some statistical techniques are used to analyze the collected facts in order to examine their relationship to each other.

This chapter summarizes the whole study, draws the major findings conclusions and forwards the recommendation for efficient working capital management of Nepalese manufacturing companies listed in NEPSE.

The first chapter focuses the brief introduction of the study, industrialization and its role in Nepal. It attempts a little bit to introduce the working capital management of Nepalese manufacturing companies. It has attempted to set the objectives, significance and limitations of the study. Finally it presents the study of the organization.

The second chapter deals with review of literature, which includes the conceptual framework, different view of different writers, books, journals and articles. Review of literature section has attempted to review the studies done so far on the same topic of different organizations.

Research Methodology is studied in third chapter. It has included the research design. It presents nature and sources of data, data collection and processing techniques and financial and statistical tools used. Financial ratios like current ratio, current assets to fixed assets, cash and bank balance, inventory and receivable to current assets and different turnover ratios have been used. Karl Pearson's coefficient of correlation, probable error and regression analysis have been used.

Presentation and analysis of data are studied in the fourth chapter. In this chapter working capital policy is analyzed in two ways. On the basis of variables, level of current assets, current liabilities, size of net working capital is analyzed. There is fluctuation in current assets of individual companies with highest coefficient of variation of 13.42% of UL Ltd to lowest coefficient of variation of 7.60% of BN Ltd.

Working capital policy is analyzed on the basis of ratio also. While going through the overall average composition of current assets, 16.80% is invested in cash, 28% in receivable, and 35% in inventory and rest in other assets, which measures 20.%. Overall average of current assets to total assets is 69.15% fluctuating highest 84.92% to lowest of 46.46%. Current ratio of all companies are satisfactory.

In the analysis of relationship between working capital variable, the correlation coefficient is perfect positive except between net profit and net working capital and it is highly significant only between current assets and sales, sales and receivable. The regression coefficient indicates that there exists positive relationship between each of the cases.

5.2 CONCLUSION

In conclusion it can be said safely that listed manufacturing companies cannot neglect the management of current assets. It has been observed that there is no current assets management and specific working capital policy. To run day-to-day business activities more efficient level of current assets, which is also called gross, working capital should be maintained. Due to lack of target for current assets holding in the long run and the absence of sources of financing, most of the manufacturing companies financial situation is deteriorating.

Working capital policy shows that management has not seriously examined the working capital policy so that most of the manufacturing companies are following aggressive policy but opposite impact in revenue. The theory of high risk and high return is not applied here. By taking high risk company has negative return. Similarly liquidity, profitability and turnover position are found unfavorable

Manufacturing companies have not made suitable financing planning for determining their working capital needs. This proves the fact that there exists high variability of working capital and lower liquidity position in manufacturing companies.

The average current assets turnover ratio is 1.43 times. The current assets turnover ratio is widely varied within and among the companies. The lower turnover ratio and high variation in it shows that Nepalese manufacturing companies have not fully utilized the current assets.

All these facts imply that it has not set any fixed rule about the liquidity management. The companies do not take seriously about the liquidity management and its overall liquidity position is unfavorable.

From this analysis it can be said that some of the Nepalese manufacturing companies are suffering from financial sickness.

The correlation coefficient of the variable selected for the statistical analysis are found perfect positive to each other except net profit to net working capital. The coefficients are also statistically significant except for sales to inventory and net profit to net working capital .a positive correlation means both of the variables are moving towards the same direction. The simple regression analysis proved that the theoretical relationship among the variables is supported by Nepalese data.

5.3 RECOMMENDATIONS

Based on the findings of the study following recommendations are forwarded for the improvement of the working capital management of Nepalese manufacturing companies listed in NEPSE and all other concerned stakeholders:

1. There are many ways to achieve effective management of cash in the manufacturing companies such as minimization of cost, better synchronization of cash flows, slowing disbursements and more frequent requisitioning of cash to branches etc. Most of the Nepalese manufacturing companies have deficit cash balance. So, they should estimate the requirement of cash immediately. If the cash appears more than requirement, the company should invest such idle fund in marketable securities.
2. There should be neither over investment nor lower investment in account receivable. The main determinants of the size of investments are terms of sale; the selection of customers to be given credit, paying practices of customers, efficiency in collecting receivable and so on. One of the way to control investment in receivable is to find out receivable as a percent of sales .The other ways are preparing a schedule of receivable,

analyzing credit worthiness of customers, minimizing float and so on. For effective management of working capital of manufacturing companies, they should adopt the definite credit and collection policies, which help to operate business with lower level of working capital.

3. Most of the Nepalese manufacturing companies have liquidity crises. So the manager of manufacturing company should take the following step to deal with liquidity problem.

) Control and reduce investment in inventory .The slackness in the inventories can be controlled by co-ordination between schedule of raw materials requirements and production with consumer demand

) Increase short term or long term debt or issue equity.

) Control overhead and increase awareness of the need for effective assets management.

4. The fluctuation in the current assets holding leads to conclude that selected manufacturing companies do not seem to have seriously examined their working capital policy. And due to lack of target for current assets holding in the long run and the absent of sources of financing, most of the manufacturing companies' financial situation is deteriorating. So there must be compulsory formulation of working capital policy for Nepalese manufacturing companies.
5. It is found that the current assets turnover of some Nepalese manufacturing companies is very low and net working capital is negative which indicates the utilization of working capital and total assets during the study period is very low.

6. Manufacturing companies with higher turnover of assets need lesser working capital as compare to the manufacturing companies having lower turnover. These companies must speed the circulating assets to complete its round because it leads to lesser need of working capital. Thus higher the turnover of assets, lesser will be the needs of working capital.
7. To increase the turnover the utilization of inventories those lying in the form of store and stock should be marked as soon as possible and they should also adopt modern inventory system and enforce them from time to time. The preparation of cash budget and monitoring their quick collection will result higher turnover of assets.
8. Sales directly affect the need of current assets or working capital. As the sales increases, the current assets level will also increase. The manufacturing companies must boost up the sales volume through sales agents. Hence there should be proper relation and interactions among production, marketing and sales department during the planning of sales, which help to meet sales target.
9. Risk is the opportunity for the business to make profit thus the management should not consider it as danger. It is the ability to manage the current assets properly and efficiently. For the efficient utilization of current assets the management should first identify its strength points and weakness, and then the strength should be utilized to take the opportunity in the business.
10. To develop the managerial ability to take risk there should be training, participation in management conferences, foreign enterprises tour etc. for the managerial level employees.

BIBLIOGRAPHY

Books

- Agrawal, N.K. (1983), Management of Working Capital, Sterling Publication P. Ltd., New Delhi.
- Batty, J. (1975), Management Accountancy, Macdonald and Evans, Estover, Plymouth: 67
- Butcheet, F. F.; Hicks C.M. (1948), Corporate Finance, Hamper and Low, New York.
- Chiuminatte, R.M. (1993), Secretary and Treasures, Quaoated in Lillion Doris, Business Financial Handbook.
- Gitman, L.J.; Jochnk Michael D. and Pinches Geomge E. (1985), Managerial Finance, New York Publisher
- Grass, Martin (1972), Control of Working Capital, Gower Press Limited, Essax.
- Howard, L.R.; Brown J.R. (1993), Principles and Practices of Management Accounting, Richard Clay Ltd.
- Jain, Premila (1996), Financial Management, Pointer Publications, Jaipur.
- Khan, M.Y.; Jain P.K. (1996), Financial Management Text and Problems, Tata McGraw Hill, New Delhi
- Kulkarni, P.V. (1983), Financial Management, 2nd edition Himalaya Publishing House, Bombay.
- Mathur, Iqbal (1979), Introduction to Financial Management, Mamillan Publishing Co. Inc., New Delhi.
- Mohasin, M. (1981), Financial Planning and Control, Vikas Publishing House Pvt. Ltd., New York.
- Norgard, Corine T. (1985), Management Accounting, Prentice Hall Inc. Englewood Cliffs N.J.
- Pandey, I.M (1999), Financial Management, 8th Revised Edition Vikash Publishing House Pvt. Ltd., New Delhi.
- Pradhan, Radhe Shyam 1986 Management of Working Capital National Book Organization, New Delhi.
- Pradhan, Surendra (1992), Basic of Financial Management, Educational Enterprises Pvt.Ltd.,Kathmandu

Van Home, James C. (1994), Financial Management and Policy, Prentice Hall of India P. (Ltd.), New Delhi

Weston, J Fred; Besley Scott and Brigham, Eugene F. (1996), Essentials of Managerial Finance, 11th Edition, Chicago, The Dryden Press, Forth,

Weston, J Fred; Brigham, Eugene F. (1996), Essentials of Managerial Finance, The Dryden Press, Chicago

Journals, Reports & Others

Acharya, Dr. K (1988), The management of working Capital in the Public Enterprises of Nepal, Nepalese Development Studies.

Acharya, Dr. K. Jan-March (1985), Problems and Impediment in the Management of Working Capital in Nepalese Enterprises, Bulletin of ISC, Vol. 10, No.3: 5

Altman, Edward I.; Holdmanand, Robert G. Narayanan, P., June (1997), Zeta Analysis: A New Model to Identify Bankruptcy Risk Corporations, Journal of Banking and Finance: 29-54

HMG/FOM (2002), Economic Survey, Kathmandu.

HMG/NPC Secretariat CBS (2002), Statistical Pocket Book Nepal, Kathmandu

Pant, Dr. Bhubanesh Baiakh (2059), Reviving the Industrial Sector, Mirmire Vol.2000 NRB, Banker's Club, Thapathali

Pradhan, Dr.R.S. (1988), The Demand for Working Capital by Nepalese Corporation, The Nepalese Management Review, Vol. 8, No. 1.

Sharma, Rajendra Prasad (1985), Financial Performance of Public and Private Sectors MEs in Nepal, The Journal of Development and Administrative Studies, Vol.6, 7 & 8, 1984-86, CEDA, T.U., Kathmandu: 96-97

Shrestha, Bishnu Kumar (2001), Office Practice and Accountancy, Koselee Prakashan, Kathmandu.

Shrestha, Chandi April-March (1998) Industrial Development and Foreign Direct Investment, HMG from Revenue Administrative Training Centre, Lalitpur: 134

Shrestha, Dr. Manohar Krishana (July 1982 - June 1983), Working Capital Management in PEs: A Study on Financial results and constraints, A Quarterly ISDOC Bulletin, Kathmandu, Vol.8:1-4.

Van Home, James C. October (1970), A Risk-Return Analysis of a Firm's Working Capital Positions, Engineering Economist: 50-58.

Walker, E.W. (Jan-Feb 1964), Towards a Theory of Working Capital, Engineering Economist: 21-23.

Dissertations

Giri, Basudev (1996), Working Capital Management in Birgunj Sugar Factory Limited, An Unpublished Dissertation; MBA, T.U.

Giri, Rajendra (1998), Working Capital Management, A Case Study of Balaju Textile Industry Limited, An Unpublished Dissertation, MBA, T.U.

Joshi, Arjun Lal (1986), A Study on Working Capital Management of Biratnagar Jute Mill Ltd., An Unpublished Dissertation, MBA, T.U.

Sapkota, Jiban Nath (1994), A Study on Working Capital Management of Himal Cement Company Limited, An Unpublished Dissertations; MBA, T.U.

Shrestha, Shailesh Man (2049), A Study on Working Capital Management of Dairy Development Corporation Nepal, An Unpublished Dissertation, MBA, T.U.

Pradhan, Radhe Shyam, July (1982), Aspect of Working Capital Management in Nepalese corporations, Institute of Management, T.U., Kirtipur.

Sharma, Deependra Raj; (1999), A Study on Working Capital Management of Nepal Battery Company Limited, An Unpublished Dissertation, M.B.A., T.U.

Gurung, Om Bikram (2002), A study on working capital management of Nepal Lever Limited, An Unpublished Dissertation, M.B.A. T.U.

Web Sites

<http://www.bok.com>, <http://www.bus.utk.edu/finance>,

<http://www.edunepal.com.np>

<http://www.nepalstock.com>

<http://www.nrb.org.np>, <http://www.nyse.com>, <http://www.sebonp.com>
<http://www.stocks.about.com>.

ANNEX – 1

Table No. 4.1
Current Assets of selected Mfg. Cos.

Rs. In million

S. N.	NAME OF THE CO.	2003	2004	2005	2006	2007	AVERAGE	S.D.	C.V.
1	Bottlers Nepal Ltd. (BN Ltd.)	532.38	447.83	453.21	436.05	445.08	462.91	35.18	0.0760
2	Uniliver Ltd. (UL Ltd.)	589.88	724.24	891.41	741.61	687.52	726.93	97.58	0.1342
3	Nepal Lube Oil Ltd. (NLO Ltd.)	143.33	115.11	127.19	145.42	123.85	130.98	11.65	0.0889
	AVERAGE	421.86	429.06	490.60	441.03	418.82	440.27	48.14	0.0997
	S.D.	198.35	249.03	313.11	243.42	231.93	247.17		
	C.V.	0.4702	0.5804	0.6382	0.5519	0.5583	0.5614		

Source: Security Board, Nepal

Formula:-

$$x^2 = (X - \bar{X})^2 S.D() = \sqrt{\frac{x^2}{n}} \quad C.V = \frac{\dagger}{\epsilon} \times 100\%$$

$$\text{BN Ltd.} \bullet \quad x^{2'} = 6186.95 S.D = \sqrt{\frac{7010.25}{5}} \quad C.V = \frac{37.44}{475.18} \times 100\% \\ = 35.18 \quad = 0.0760$$

$$\text{UL Ltd.} \bullet \quad x^{2'} = 47612.26 S.D = \sqrt{\frac{65762.08}{5}} \quad C.V = \frac{114.68}{705.09} \times 100\% \\ = 97.58 \quad = 0.1342$$

$$\text{NLO Ltd.} \bullet \quad x^{2'} = 678.09 S.D = \sqrt{\frac{964.85}{5}} \quad C.V = \frac{13.89}{128.58} \times 100\% \\ = 11.65 \quad = 0.0889$$

ANNEX - 2

Table No. 4.2

Current Liabilities of selected Manufacturing Companies

Rs. In million

S.No.	NAME OF THE CO.	2003	2004	2005	2006	2007	AVERAGE	S.D.	C.V.
1	Bottlers Nepal Ltd. (BN Ltd.)	332.85	174.02	228.99	275.48	289.78	260.22	54.38	0.2090
2	Uniliver Ltd. (UL Ltd.)	426.45	543.71	882.02	742.23	690.82	657.05	158.13	0.2407
3	Nepal Lube Oil Ltd. (NLO Ltd.)	105.40	76.09	87.40	105.66	82.60	91.43	12.06	0.1319
	AVERAGE	288.23	264.61	399.47	374.46	354.40	336.23	74.86	0.1938
	S.D.	134.81	201.36	346.08	269.41	253.27	240.93		
	C.V.	0.4677	0.7610	0.8663	0.7187	0.7146	0.7057		

Source: Security Board, Nepal

Formula:-

$$x^2 = (X - \bar{X})^2 S.D. = \sqrt{\frac{x^2}{n}} \quad C.V = \frac{\dagger}{\pounds} \times 100\%$$

$$\text{BN Ltd.} \bullet \quad x^{2'} = 14787.53 S.D = \sqrt{\frac{19790.52}{5}} \quad C.V = \frac{62.91}{270.29} \times 100\% \\ = 54.38 \quad = 0.2090$$

$$\text{UL Ltd.} \bullet \quad x^{2'} = 125029.86 S.D = \sqrt{\frac{174723.20}{5}} \quad C.V = \frac{186.93}{598.05} \times 100\% \\ = 158.13 \quad = 0.2407$$

$$\text{NLO Ltd.} \bullet \quad x^{2'} = 727.18 S.D = \sqrt{\frac{914.80}{5}} \quad C.V = \frac{13.52}{89.86} \times 100\% \\ = 12.06 \quad = 0.1319$$

ANNEX - 3

Company Average of Net Working Capital

Table No. 4.3

Rs. In million

S.No.	Company	Amount
1	BN Ltd.	462.91 - 260.22 = 202.69
2	UL Ltd.	726.93 - 657.05 = 69.88
3	NLO Ltd.	130.98 - 91.43 = 39.55
Company Average		104.04

Source: Based on Annex 1 & 2

Note: - Avg. Current Assets from Table 4.1 –
Avg. Current Liabilities from Table 4.2 = Table 4.3 (in company based)

Yearly Average of Net Working Capital

Table No. 4.4

Rs. In million

S.No.	F.Y. Year	Amount
1	2003	421.86 - 288.23 = 133.63
2	2004	429.06 - 264.61 = 164.45
3	2005	490.60 - 399.47 = 91.13
4	2006	441.03 - 374.46 = 86.57
5	2007	418.82-354.40 = 64.42
Yearly Average		104.08

Source: Based on Annex 1 & 2

Note: - Avg. Current Assets from Table 4.1 -
Avg. Current Liabilities from Table 4.2 = Table 4.4 (in yearly based)

ANNEX – 4

CASH

Year/Co.	BN Ltd.	UL Ltd.	NLO Ltd.	Total	Avg.
2003	5.34	317.40	2.29	325.03	108.34
2004	13.75	391.53	0.70	405.98	135.33
2005	1.92	443.31	2.91	448.14	149.38
2006	35.93	242.67	3.18	281.78	93.93
2007	26.70	260.58	1.89	289.17	96.39
Total	83.64	1655.49	10.97	-	-
Avg.	16.73	331.10	2.19	-	-

RECEIVABLE

Year/Co.	BN Ltd.	UL Ltd.	NLO Ltd.	Total	Avg.
2003	88.04	64.78	75.49	228.31	76.10
2004	124.18	97.06	54.79	276.03	92.01
2005	80.85	157.72	60.53	299.10	99.70
2006	63.66	138.32	70.25	272.23	90.74
2007	59.89	142.23	75.56	277.68	92.56
Total	416.62	600.11	336.62	-	-
Avg.	83.32	120.02	67.32	-	-

INVENTORY

Year/Co.	BN Ltd.	UL Ltd.	NLO Ltd.	Total	Avg.
2003	227.22	126.11	30.57	383.90	127.97
2004	184.98	184.22	31.60	400.80	133.60
2005	246.28	229.76	36.39	512.43	170.81
2006	176.94	256.18	38.26	471.38	157.13
2007	254.56	284.68	46.98	586.22	195.41
Total	1089.98	1080.95	183.80	-	-
Avg.	218.00	216.19	36.76	-	-

Source: Security Board, Nepal

ANNEX – 5

OTHER CURRENT ASSETS

Year/Co.	BN Ltd.	UL Ltd.	NLO Ltd.	Total	Avg.
2003	223.59	81.60	14.72	319.91	106.64
2004	124.92	51.43	9.40	185.75	61.92
2005	146.38	60.62	10.32	217.32	72.44
2006	159.53	104.45	18.41	282.39	94.13
2007	174.85	128.63	26.87	330.35	110.12
Total	829.27	426.73	79.72	-	-
Avg.	165.85	85.35	15.94	-	-

TOTAL CURRENT ASSETS

Year/Co.	BN Ltd.	UL Ltd.	NLO Ltd.	Total	Avg.
2003	544.18	589.88	143.33	1277.39	425.80
2004	447.83	724.24	115.11	1287.18	429.06
2005	453.21	891.41	127.20	1471.82	490.61
2006	436.05	741.61	145.41	1323.07	441.02
2007	445.08	687.52	123.85	1256.45	418.82
Total	2326.35	3634.66	654.90	-	-
Avg.	465.27	726.93	130.98	-	-

SALES

Year/Co.	BN Ltd.	UL Ltd.	NLO Ltd.	Total	Avg.
2003	609.65	1244.73	119.15		
2004	632.11	1524.90	84.71		
2005	614.74	1484.89	118.10		
2006	621.83	1469.68	148.75		
2007	628.98	1456.18	159.67		
Total	3107.31	7180.38	630.38	-	-
Avg.	621.46	1436.08	126.08	-	-

Source: Security Board, Nepal

ANNEX – 6

Table No. 4.5

Current Ratio of selected listed Manufacturing Companies in Nepal.

Current Ratio=Current Assets/Current Liabilities.

S.NO.	NAME OF THE COMPANY	2003	2004	2005	2006	2007	AVERAGE
1	BN Ltd.	$\frac{532.38}{332.85} = 1.60$	$\frac{447.83}{174.02} = 2.57$	$\frac{453.21}{228.99} = 1.98$	$\frac{436.05}{275.48} = 1.58$	$\frac{436.05}{275.48} = 1.58$	1.84
2	UL Ltd.	$\frac{589.88}{426.45} = 1.38$	$\frac{724.24}{543.71} = 1.33$	$\frac{891.41}{882.02} = 1.01$	$\frac{741.61}{742.23} = 1.00$	$\frac{741.61}{742.23} = 1.00$	1.24
3	NLO Ltd.	$\frac{143.33}{105.40} = 1.36$	$\frac{115.11}{76.09} = 1.51$	$\frac{127.19}{87.40} = 1.45$	$\frac{145.42}{105.66} = 1.38$	$\frac{145.42}{105.66} = 1.38$	1.42
	AVERAGE	1.31	1.65	1.58	1.92	1.92	1.55

Source: Annex 1 & 2

Table No. 4.6

Company Average Ratio of Cash & Bank Balance, Receivable, Inventory & Other Current Assets to Current Assets

S.No.	Company	Cash to CA	Receivable to CA	Inventory to CA	Other CA to CA
1	BN Ltd.	$\frac{86.39}{2375.90} = 0.036$	$\frac{471.94}{2375.90} = 0.20$	$\frac{1020.76}{2375.90} = 0.43$	$\frac{830.84}{2375.90} = 0.35$
2	UL Ltd.	$\frac{1457.24}{3525.45} = 0.41$	$\frac{490.04}{3525.45} = 0.14$	$\frac{940.72}{3525.45} = 0.27$	$\frac{458.29}{3525.45} = 0.13$
3	NLO Ltd.	$\frac{10.40}{642.88} = 0.016$	$\frac{392.00}{642.88} = 0.51$	$\frac{156.09}{642.88} = 0.24$	$\frac{56.80}{642.88} = 0.09$
Company Average Ratio		0.121	0.23	0.38	0.225

Source: Based on Annex 4 & 5

ANNEX – 7

Total Assets

Year/Co.	BN Ltd.	JSM Ltd.	UL Ltd.	NLO Ltd.	Total	Avg.
2002	1036.04	788.59	571.34	129.18	2525.15	631.29
2003	1038.41	772.28	784.88	163.58	2759.15	689.79
2004	886.56	760.87	939.71	133.72	2720.86	680.22
2005	975.27	747.82	1098.95	144.23	2966.27	741.57
2006	1048.35	721.71	967.15	160.73	2897.94	724.49
Total	4984.63	3791.27	4362.03	731.44	-	-
Avg.	996.93	758.25	872.41	146.29	-	-

Source: Security Board, Nepal

Table No. 4.7

Company Average of Current Assets to Total Assets

S.No	Company	Percentage
1	BN Ltd.	$\frac{477.54}{996.93} = 47.90$
2	JSM Ltd.	$\frac{270.54}{758.25} = 35.68$
3	UL Ltd.	$\frac{669.26}{872.41} = 76.71$
4	NLO Ltd.	$\frac{128.38}{146.29} = 87.76$
Company Average		62.01

Source: Based on Annexes 5 & 7

$$\frac{\text{Current Assets}}{\text{Total Assets}}$$

Table No. 4.8

Company Average of Current Ratio

S.No	Company	Ratio
1	BN Ltd.	1.84
2	JSM Ltd.	1.68
3	UL Ltd.	1.24
4	NLO Ltd.	1.42

Company Average	1.55
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Source: Based on Annex 1 & 2

ANNEX – 8

Table No. 4.9

Net Working Capital Turnover of selected listed manufacturing companies.

NAME OF THE CO.	2002	2003	2004	2005	2006	AVERAGE
BN Ltd.	3.22	2.88	2.31	2.74	3.87	3.00
JSM Ltd.	-6.50	-28.51	17.69	6.22	3.58	-1.50
UL Ltd.	7.02	7.62	8.45	15.81	-23.70	3.04
NLO Ltd.	3.67	0.90	2.17	2.97	3.74	2.69
AVERAGE	1.85	-4.28	7.66	6.94	-3.13	-

$$\text{Net Working Capital Turnover} = \frac{\text{Sales}}{\text{CA ZCL}}$$

Cos.	2002	2003	2004	2005	2006
BN Ltd.	$\frac{535.49}{506.43 \text{ Z}340.11}$	$\frac{609.65}{544.18 \text{ Z}332.85}$	$\frac{632.11}{447.83 \text{ Z}174.02}$	$\frac{614.74}{453.21 \text{ Z}228.99}$	$\frac{621.83}{436.05 \text{ Z}275.48}$
JSM Ltd.	$\frac{646.74}{240.08 \text{ Z}339.64}$	$\frac{725.04}{264.24 \text{ Z}289.67}$	$\frac{718.95}{278.56 \text{ Z}237.91}$	$\frac{855.32}{291.35 \text{ Z}153.91}$	$\frac{730.88}{278.49 \text{ Z}74.71}$
UL Ltd.	$\frac{1236.05}{399.14 \text{ Z}223.21}$	$\frac{1244.73}{589.88 \text{ Z}426.45}$	$\frac{1524.90}{724.24 \text{ Z}543.71}$	$\frac{1484.89}{891.41 \text{ Z}882.02}$	$\frac{1469.68}{741.61 \text{ Z}742.23}$
NLO Ltd.	$\frac{136.00}{110.83 \text{ Z}73.76}$	$\frac{119.15}{143.33 \text{ Z}105.54}$	$\frac{48.71}{115.11 \text{ Z}76.09}$	$\frac{118.10}{127.20 \text{ Z}87.40}$	$\frac{148.75}{145.41 \text{ Z}105.66}$

Source: Based on Annex 1, 2 & 5

ANNEX – 9

Table No. 4.10

Company Average of Current Assets Turnover Ratio

S.No.	Companies	$\frac{Avg.Sale}{Avg.CA}$	Ratio
1	BN Ltd.	$\frac{602.76}{477.54}$	1.26
2	JSM Ltd.	$\frac{735.39}{270.54}$	2.72
3	UL Ltd.	$\frac{1392.05}{669.26}$	2.08
4	NLO Ltd.	$\frac{121.34}{128.38}$	0.95
Average			1.75

Source: Based on Annex 1 & 5

$$\text{Avg. Current Assets Turnover} = \frac{\text{Average Sales}}{\text{Average CA}}$$

Table No. 4.11

Company Average of Inventory Turnover Ratio

S.No.	Company	$\frac{Avg.Sale}{Avg.CA}$	Ratio
1	BN Ltd.	$\frac{602.76}{204.15}$	2.95
2	JSM Ltd.	$\frac{735.39}{156.69}$	4.69
3	UL Ltd.	$\frac{1392.05}{188.14}$	7.40
4	NLO Ltd.	$\frac{121.39}{31.22}$	3.90
Average			4.735

Source: Based on Annex 4 & 5

$$\text{Avg. of Inventory Turnover} = \frac{\text{Average Sales}}{\text{Average Inventory}}$$

ANNEX – 10

Table No. 4.12

Company Average of Receivable Turnover Ratio

S.No.	Company	$\frac{\text{Avg.Sales}}{\text{Avg.Rec.}}$	Ratio
1	BN Ltd.	$\frac{602.76}{94.39}$	6.39
2	JSM Ltd.	$\frac{735.39}{18.91}$	38.89
3	UL Ltd.	$\frac{1392.05}{98.00}$	14.20
4	NLO Ltd.	$\frac{121.34}{65.80}$	1.84
Average			15.33

Source: Based on Annex 4 & 5

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

Table No 4.13

Company Average Percentage of Net Profit to Sales

S.NO	COMPANY	$\frac{\text{Avg.NPAT}}{\text{Avg.Sale}}$	PERCENT %
1	BN Ltd.	$\frac{34.35}{602.76} \times 100$	5.70
2	JSM Ltd.	$\frac{20.59}{735.39} \times 100$	-0.08
3	UL Ltd.	$\frac{140.78}{1392.05} \times 100$	10.11
4	NLO Ltd.	$\frac{2.80}{121.34} \times 100$	2.31
AVERAGE			4.51

Source: Based on Annex 5 & 11

ANNEX – 11

Net Profit

<i>Year/ Co.</i>	<i>BN Ltd.</i>	<i>JSM Ltd.</i>	<i>UL Ltd.</i>	<i>NLO Ltd.</i>	<i>Total</i>	<i>Avg.</i>
2002	48.61	-5.02	42.61	6.22	92.42	23.11
2003	25.67	-5.29	93.17	4.24	117.79	29.45
2004	37.80	8.81	140.78	0.31	187.70	46.93
2005	34.73	2.54	189.20	3.06	229.53	57.38
2006	24.96	-4.01	238.16	0.17	259.28	64.82
<i>Total</i>	171.77	-2.97	703.92	14.00	-	-
<i>Avg.</i>	34.35	-0.59	140.78	2.80	-	-

Source: Security Board, Nepal

Table No. 4.14

Company Average of Return on Total Assets

S.NO	COMPANY	PERCENTAGE %
1	BN Ltd.	$\frac{34.35}{996.93} = 3.45$
2	JSM Ltd.	$\frac{20.59}{758.25} = -0.08$
3	UL Ltd.	$\frac{140.78}{872.41} = 16.34$
4	NLO Ltd.	$\frac{2.80}{146.29} = 1.91$
	AVERAGE	5.41

Source: Based on Annex 7 & 11