CHAPTER-ONE

INTRODUCTION

1.1 General Introduction

Working capital is the part of the capital of a company that is employed in its trading. It consists of current assets and current liabilities. Current assets are those assets which can be converted into cash within an operational period. Generally, those refer to cash, marketable securities, receivable, inventory etc. Current liabilities generally means the liabilities such as bills payable, trade credit, bank, outstanding expenses, inter on unsecured loan, provision for tax, dividend etc. These liabilities should be paid in a reasonable short term period.

Working capital is also called circulating capital as it keeps on circulating in the course of business operation. Business starts with cash firstly which is converted into inventory after some times. Inventory may be invested in three ways; raw material, semi-finished goods and finished goods or goods for sale. These inventories are also converted into receivable and receivable into cash again. So it is a continuous process of business operation.

We know that firm's aim at maximizing the wealth of shareholders. In its effort to maximize shareholders wealth, the firm should earn sufficient return from its operation. Earning a sound amount of profit requires successful business activities. The firm has to invest enough funds in current assets for the success of business activity. Current assets are needed because sales do not convert into cash immediately. Investment in current assets should be just adequate, or not more not less, to the needs of the business firm. It should be realized that working capital needs of

the firm may be fluctuating with changing business activity. This may cause excess or shortage of working capital frequently. The management should be too prompt to begin an action and current imbalances. Thus; the firm should have knowledge of the sources of working capital funds as well as investment avenues where idle funds may be temporarily invested.

Thus the study of working capital is of prime importance to internal and external analysis because of its close relationship with the current day-to-day operation of a business enterprise. Management of working capital in a business enterprise is essential due to different reason. Firstly, an enterprise must determine the adequacy of investment in current assets; otherwise, it would seriously erode their liquidity base. Secondly, they must select the type of current assets suitable for investment so as to raise operational efficiency. Thirdly, they are required to ascertain the turnover of current assets that greatly determine the profitability of the enterprise. It is therefore, a recognized fact that any mistake made in management of working capital can lead to adverse affects in business and can reduce the liquidity turnover and profitability of the firm.

Working capital management is an important decision making area of an enterprise. It requires understanding for how to raise and allocate financial resource, how to relate short-term financial decision to certain long-term financial decision. (Upadhyay, 1985:40)

Working capital management involves the relationship between a firm’s short-term assets and it short-term liabilities. The goal of working capital management is to ensure that a firm is able to continue its operation and that it has sufficient ability to satisfy both mattering short-term debt and upcoming operational expense. The management of working capital involves managing inventories, accounts receivable and payable, and cash.

Working capital is used to pay short-term obligations such as your accounts payable and buying inventory. If your working capital dips too low, you risk running out of cash. Even very profitable business can run into trouble if they lose the ability to meet their short-term obligations. The calculator assists you in determining working capital needs for the next year. Working capital is used by lenders to help gauge the ability for a company to weather difficult financial periods. Working capital is calculated by subtracting current liabilities from current assets. Due to differences in business and the fact that working capital is not a ratio but an absolute amount, it is difficult to predict what the ideal amount of working capital would be for your business. To calculate working capital requirements this calculator uses the “Current Ratio” to determine a target amount of working capital see the “Current Ratio” definition for more information.

There are two concepts of working capital- gross concept and net concept. Gross working capital, simply called as working capital, refers to firm’s investment in current assets. Current assets are the assets which can be converted into cash within an accounting year and include cash balance, bank balance, short-term securities, debtors, bills receivable and stock. Net working capital refers to the different between current assets and current liabilities. Current liabilities are those claims of outsiders which are expected to nature for payment bills payable and out standing 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 execs of current assets. (Pandey, 1995:665)

Working capital management is a process of short term decision making regarding the current assets and liabilities affecting the long-term operation of an organization. It is a process of planning and controlling the level and mix of current assets of the firm as well as financing these assets. It includes decisions regarding cash and marketable securities, receivables, inventories, and current liabilities with an objective of maximizing the overalls value of a firm.

In general, the concept of working capital is synonymous with the fund available for meting day to day requirements of a company. But according to a group of authorities, working capital refers to the amount of investment in total current assets only. It means they are supporting the gross concept of working capital. Thus the gross concept of working capital denotes short-term assets only, it does not include short-term liabilities. However, a business can not exit only with the current assets, it needs current liabilities too. Actually, the amount of working capital heavily depends upon the amount of current liabilities. In this sense working capital, means the excess of current assets over current liabilities. This concert of working capital is called as net concept.

In manufacturing companies, working capital managements plays a vital role in the success or failure of there companies. Working capital management is an important aspect of the manufacturing companies. Every business firms needs various types of assets to carry out their operation. Some assets are required to meet long terms needs which are fixed assets and some are needed to meet day to day expenses and to pay current obligation which are trend as current assets. Working capital management is related to management of current assets.

1.2 Introduction of the Organization

Unilever Nepal Ltd.

Nepal Lever Ltd. was established in 1993, in collaboration with Hindustan Lever Ltd. It has changed its name to Unilever Nepal Ltd. in 2006. ULL was established to deliver the services to the customer and earn profit by providing social services. ULL produces different types of analitative product. Its products are famous as various brands i.e. surf excel, fair & lovely, lux soap, lifebuy gold, close up tooth paste, clinic plus sampoo, sunslik shampoo, Hair oil etc. ULL is a subsidiary company of Hindustan Lever Ltd. The factory is situated as Basamadi VDC-5, Hatauda, Makawanpur district. Its corporate office is located in Heritage Plaza Kamaladi in Kathmandu. ULL was formed as a public limited company in 1993 and production started from December 1994. It was registered under company act 1053. As a growing mfg. company ULL has new brands and categories in the domestic market and import substation of foreign goods too.

ULL registered a strong performance in terms of grower of volume, sales and efforts. Nepal-India chamber of commerce and industry a warded the "NICCI Award" to ULL for the Year 1999 for its best performance among the industries. In the years of 2006, the company has been awarded by INCCI achievement in operational information dissemination and utilization in large scale category.

Despite of the company achieved its market growth of 20% during the fiscal year 2065/066 its working capital position is negative, so the study focus on how can company achieved its profit maximization objective in the context of negative working capital situation.

Hetauda Cement Industry Ltd.

Heatuda Cement Industry Ltd. was established in 2033 Ashwin 13th with full ownership of Nepal government. The commercial operation was started from 2042 B.S. It produces 2,60,000 tons per year when it runs in full capacity. Primary objective of the industry was to produce cement for domestic consumption from indigenous raw materials there by alleviation shortages. the industry has Rs. 900 million government investment in share capital and loan investment from Asian Development Bank is about 350 million.

The main raw material limestone is fullfilled from Bhaise Depo and Okhare Depo other raw material imported from India and Bhutan like as gypsum, coal, iron and bag etc. The industry produces mainly two types of cement Portland cement "Shakti" and Portland slag cement "Tejasvi".

HCIL followed the four level of quantity control programme. The product is stand raised as Nepal quality standard mark. The industry had established the plant and equipment to prevent the pollution arising from dust, noise etc. The industry had started different function to fulfill the need of the society. The industry support to school building, water tap etc. to full fill the social responsibility.

1.3 Statement of the Problem

Nepalese Manufacturing Companies is using traditional approach in cash management, receivable management. A more serious aspect of working capita management has been absence of any formalized system of planning and budgeting. Main objective in managing working capital should be trade of liquidity its profit. Thus the basic problem of study is to examine the working capital management system as practices by company.

Working capital is essential for transaction motive to every business organization. The company needs working capital primarily to pay its obligation. Secondly, the holding of cash precautionary motive to meet any contingency in future, the holding of cash speculative motive to a desire, a firm to take advantage of opportunities and lastly it is balanced for compensative. Holding of cash has been found to unplanned but generally for transition motive. The strategy on collection and disbursement in organizations has been considerable liquidity position. They are not able to meet current obligation at a stated period of time.

This study is primarily focused on working capital management of ULL and HCIL or how they are managing the working capital and is the management policy appropriate?

Working capital management has been regarded as one of the conditioning factor of the decision making issues. It is needless to say that it is very difficult to determine as to how much working capital a particular business organization requires. The organization which is not willing to risks can go far more short term liquidity, which leads the firms into lower profitability. Hence it is very important to analyze and find out problems and its solutions to make efficient use of funds for minimizing the risk of loss to attain wealth maximizing objective.

The success or failure of business organization depends upon the decision making process of an organization. Among them working capital decision is also crucial decision for the organization for its existence.

Working capital of the organization can not be managed in an easy way and it should not be neglected further the manufacturing organization's problem in this regard is more difficult than that of non-mfg organizations. Manufacturing organizations should manage its level of

inventories (Raw material, WIP and finished goods) for uninterrupted production process.

1.4 Objectives of the Study

The major objective of this study is to evaluate the working capital position of Unilever Ltd. and Hetauda Cement Industry Ltd. The other objectives of the study are to focus on the importance of the proper management of working capital. The specific objectives are ass follows:

- To analyze the factors that affects the working capital.
- To asses the position of current assets and current liabilities employed by the firm.
- To study the policy of working capital adopted by the organization.
- To study the obstacles and problems in making decisions regarding management of working capital.

1.5 Research Questions

The Study tries to find out the answer of the following research questions.

- How far the working capital is managed in manufacturing organization?
- What are the major factors affecting for managing the working capital in manufacturing organization?
- How far the manufacturing organization trade off between profitability and risk?
- How far the manufacturing organization determined the financing mix i.e. how current assets will be financed?
- What are the components of working capital which affect the operating income of the organization?

- Which of the current assets are more problematic or unproductive in the organization?
- Does the organization properly adopt the working capital management policies and practices?

1.6 Significance of the Study

Working capital is the size of investment in each type of current assets. Each component of the current assets should be managed efficiently and effectively. It is because decision regarding working capital affects not only the profitability of the long run. The management of working capital should not be neglected by enterprise, other wise they will seriously erode their financial viability. As the mfg organization in Nepal which greatly influences the economy of the country. An effective and efficient management of their current assets is needed to better the profitability of the firm.

The position of working capital in mfg. organization should be properly determined and handled. Therefore the present study focused the level of working capital employed by the firms.

1.7 Limitations of the Study

The study is simply a partial requirement of master of business study program. So the study will be limited by following aspects.

- The study primarily based on data provided by the organization.
- The study only covers five fiscal years.
- The study only considered working capital management of the organization and it can not assessed other financial aspects of the organization

- Due to limiting time and resource, the study can not cover all of the areas of working capital like as working capital planning, financing, and control of working capital etc.

1.8 Organization of the Study

- Chapter one deals with introduction, background of the study, problem identifications, objectives, significance, limitation and organization of the study.
- Chapter two deals with the review of related literature and available studies in the field of working capital.
- Chapter three presents the methodology used in this study. It deals with research design, sources of data, data gathering procedures and tools used.
- Chapter four fulfills the objectives of the study by presenting the data and analyzing them with the help of various financial and statistical tools followed by methodology.
- Chapter five summarized the whole study with conclusions and recommendations.

At the end an appendix and bibliography has been included.

CHAPTER-TWO

REVIEW OF LITERATURE

The main purpose of this chapter is to review the available on working capital management in the context of Nepalese enterprise including the available information of commercial study different magazines, journal, and newspaper, book to collect the information about their subject matter. This process of studying different material, which is concerned with the selected topics of the research, is known as review of literature. Review of literature is useful in research because it provides the insight and general knowledge about the subject matter of research.

2.1 Conceptual Framework

2.1.1 Meaning of Working Capital

The management of the funds of business can be described as financial management. Financial management is mainly concerned with two aspects. Firstly fixed assets and fixed liabilities, in other words, long-term investment and sources of funds. Secondly, current assets and current liabilities, which are concerned with current uses and sources of funds. Both of these types of funds play a vital role in business finance. Business firms need various types assets in order to carry out its operation. Some assets are required to meet the needs of regular production and some other are required specially to meet day to day expenses and short-term obligation. The assets such as cash, marketable securities, account receivables and inventories, which are known as current assets, are required to be maintained at a certain level depending upon the volume of production and sales.

The cash and marketable securities are respectively considered as purely liquid and near liquid assets. Where as the account receivable and inventories are not. However, they can be liquidated as and when necessary within a period of less than one year. The capital invested on these assets in known as working. In short, working capital is the sources of financing current assets and it includes short as well as long term financing working capital is a controlling nerve of business. It is an important and integrates part of financial management as short term survival is a pre-requisite to long-term success. As pointed out, the inadequacy or mismanagement of working capital is the heading cause of business failure. Unless the payment is made at the maturity of the particular debt, the firm to terminate its business.

Firms needs cash to pay for all their day to day activities. They have to pay wages, pay for raw material pay bills and so on. The money available to them to do this is known as the firm's working capital. The main sources of working capital are the current assets that the firm can use to generate cash. However, the firm also has current liabilities and so these have to be taken account of when working out how much working capital a firm has at its disposal.

Working capital is therefore:

Working Capital = Current Assets - Current Liabilities

Thus working capital is the same as net current assets, and its an important part the top half the farm's balance sheet. It is vital to a business to have sufficient working capital to all its requirements many business have gone under, not because they were unprofitable but, because they suffered from shortages of working capital refers to cash a business requires to day-to-day operation, or more. Specially, for

financing the conversion of raw materials into finished goods, which the company sells for payment. Among the most important items of working capital are levels of inventory, accounts receivable and payable. Analysis looks at these items for signs of a company's efficiency and financial strength. The better a company manages its working capital, the less the company needs to borrow. Even companies with cash surplus need to manage working capital to ensure that those surplus are invested in ways that will generate suitable returns. Therefore, the role of working capital management is more significant for ever business organization irrespective of their nature. There have both done a number of studies on working capital management from different experts in various enterprises.

2.1.2 Concept of Working Capital

The term of working capital management is closely related with short-term finance and it is concerned with collection and allocation of the resources. Working capital management is related to the problems that the interrelationships that exist between them. Thus the management of working capital is no longer viewed as an accounting task but as a strategic method for increasing the financial performance of lending organizations. While early initiatives for reducing day's sales outstanding (DSO) have largely focused on post invoice collections and dispute management, today, the ability to drive working capital management through out the entire quoteto-cash cycle has proven to deliver an exponential effect on DSO and the overall customer experience.

There are two schools of thoughts or concepts regarding the meaning of working capital.

According to one school of thought, working capital is meant for the current assets only.

It is concerned nothing with the liabilities side. According to other school of thoughts working capital is the excess of current assets over current liabilities. The former concept which can be termed as gross concept, is important to newly established companies where liabilities have not been acquired immediately, but the latter are which can be termed as net concept, is important for both newly established and operating concerns where some amount of current liabilities has been maintained for payment of different creditors, income taxes, bills payable, secured and unsecured loan, etc. The term current assets refers to those assets which in the ordinary course of business can be or will be turned into cash within one year without undergoing a diminishing in value and without disrupting the operation of the firm such as cash, marketable securities, accounts receivables which are intended at their inception to be paid in the ordinary course of business such as accounts payable, bank over- draft and outstanding expenses etc. There are two concept of working capital gross concept and net concept.

2.1.3 Gross Concept

According to gross concept, we refer to the capital invested in current assets of a firm. It focuses only the optimum investment on current assets and financing of current assets. It includes cash, short-term securities, inventory and account receivable. The level of current assets may be fluctuating with the changing business activities. Thus, this concept can help earning more profit through maximum utilization of current assets. This concept is called qualitative concept. (Pradhan; 1986; 119)

Working capital is gross concept means the total sum of current assets only the view was supported by distinguished authorities like Mean, Baker, Milled, Pandey, Pradhan, field and Adam Smith called 'Circulating Capital' for current assets. The use of this term emphasizes

on the short-term cash cycle of the firm. The short-term cash cycle refers to the recurring transition from cash to inventory, to receivables an receivables to cash again.

2.1.4 Net Concept

According to 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 on the liquidity position of the firm and suggests extending which working capital need to be financed by permanent sources of funds. It is nit very useful to compare the performance to 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. (Khan and Jain; 1999; 604)

The term net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders which are expected to nature for payment within an accounting year, and includes; creditors, bills payable, bank overdrafts and outstanding expenses or accused income. Net working capital arises when current assets exceed current liabilities. A negative we occur when current liabilities are in excels of current assets. (Pandey; 1995; 730)

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 firm's investment in current assets. Current assets are those assets, which can be converted into cash within an accounting year and includes cash short-term securities, and debtors, bills receivable, stock and prepaid expenses. (Pandey, 1995 : 735)

There are two major concepts of working capital net working capital and gross working capital. When accountants use the term working capital,

which is the dollar difference between current assets and current liabilities. This is one measure of the extent to which the firm is protected from liquidity problems. From a management viewpoint, however, it makes little sense to talk about trying to actively manage a net difference is continuously changing.

Finance analysis on the other hand, mean current assets when they speak of working capital. Therefore, their focus is on gross working capital. Since it does make since for the financial manager to be involved providing the correct amount of current assets for the firms at all times, we will adopt the concept of gross working capital. As the discussion of working capital management unfolds, concern will be to consider the administration of the firm's current assets namely cash marketable securities, receivables and inventory and the financing needed to support current assets. (Van Horne: 1996: 204)

Thus, there are two concepts of WC gross concept and net concepts. However, the concept of WC is related not only with gross concepts of WC, but also wing organization borrowings. The management of any organization ahs to pay attention towards the total amount of both current assets as well as borrowings. And along with this, the management has to check where profit earning capacity of the organization is favorable of not because it is higher than the cost of borrowings. In a corporation or any type of firms, the financial manager should pay attention to the aspects of profitability. They should also aim to ensure the liquidity of the firm. Any established business is a concept debtor. It borrows from financial institution. It purchase merchandise on credit. And it has tax obligations to the government of or the concerned authorities. Thus in every step of the business or corporation activities, there is an obligation of creditors. So, to satisfy their creditors, the firm must have that much of

liquid cash for making payment of this entire obligation in time. Hence, both concepts of net and gross working capital are necessary for the business finance. Both current assets and current liabilities are two main parts of management of working capital. In WC management we manage the financial resources needed by a firm and use it in a most profitable field without keeping any idle fund as for as possible.

2.2 Classification of Working Capital

Before turning our attention to the way working capital should be financed, we need to take a slight detour and classify working capital can be classified into two types:

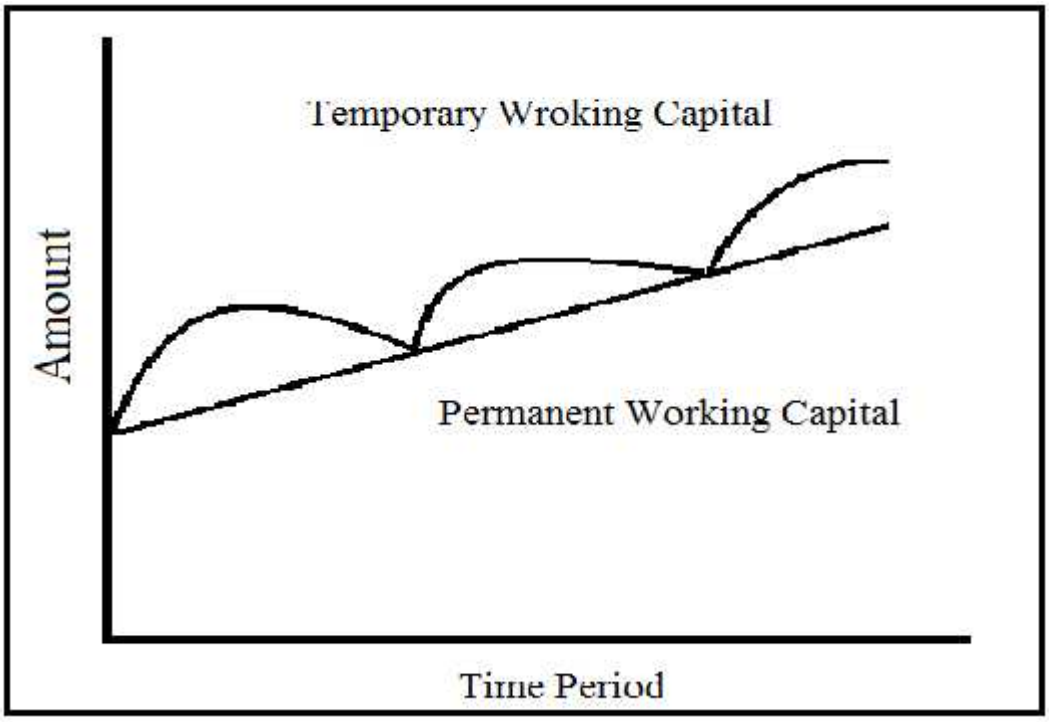
i) Permanent or fixed working capital

ii) Variable or temporary of fluctuating working capital

A firm's permanent working capital is the amount of current assets required to meet long-term minimum needs. You mioght call this "bare bones" working capital. Temporary working capital, on the other hand is the investments. Figure in below illustrates the firm's changing needs for working capital over time while highlighting both the temporary and permanent nature of those needs.

Figure No. 2.1

Permanent and temporary working capital



Source: Khan and Jain, 1999: 607

Permanent working capital is similar to the firm's fixed assets in two important respects. First, the amount investment in both of those assets groups in long term. Therefore suppliers of capital to the firm need to realize that he finding needs for current assets is long-term despite the seeming contradiction that the assets being financed are called "current". Second, for a growing firm, the level of permanent working capital needed will increase over time in the same way that a firm's fixed assets will need in increase over fixed assets in one very important respect it is constantly changing. Permanent working capital does not consist of particular current assets staying permanently in place, but is a permanent level of investment in current assets, whose individual item are constantly turning over viewed still another way. Permanent working capital is similar to the level of water that you find in a bay at low tide.

Like permanent working capital, temporary working capital also consists of current assets in a constantly changing from however, since the need for this portion of the firm's total current assets is seasonal,. We may want to consider financing this level of current assets from a source which can itself be seasonal or temporary in nature. (Van Horne; 1996; 205)

Thus the permanent working capital refers to that level of current assets which is required on a continuous basis over the entire year and the temporary working capital represents that portion of working capital which is required over permanent working capital.

2.3 Need of Working Capital

Efficient management of working capital is an integral part of overall financial management and has a bearing on the objective of maximization of the ower's wealth. Sufficient profit is needed to achieve this objective. Profit position of the firm depends upon the amount of sale. In other words a good sales program is needed to gain sufficient profit. But the amounting sales shown in the book can not reflect the real income. Some time tag between sales and cash realization is needed. As the operation cycle in this period can not be stopped, some amount of liquid assets is needed to run the operation without interruption. That very amount of liquid assets is called working capital. Indeed the concepts of working capital (gross and net) are exclusive rather they are equally significant from the management point of view. However, the firms differ in their requirement of working capital.

The management of working capital has been regarded as one of the conditioning factors in the decision making issue. It is no doubt, very difficult to point out as to how much working capital is needed by a particular company, but it is very essential to analyze and find out the

solution to make an efficient use of funds for minimizing the risk of loss to attain profit objectives. Thus goes the importance of working capital on operating life a company. A successful business keeps its working capital moving rapidly; hence it is also a lead circulating capital or a moving capital into income and profits and bank into working capital is one of the most dynamic and vital aspects of business operation. And only this movement of current assets keeps the business alive. A fully equipped factory without the stock to sell is of no use. These circumstances emphasize the importance of working capital on a business firm. (Ghimire; 2002: 73)

The need of working capital or current assets cannot be overemphasized. The objective of financial decision making is to maximize the shareholders wealth. To achieve this, it is necessary to generate sufficient profit. The magnitude of the sales among other things. A successful sales program is, in other words, necessary for earning by oany business enterprise. However, sales does not convert into cash instantaly; there invariably a time long between the sale of goods and receipt of cash there is, therefore, sufficient working capital is necessary to sustain sales activity. Technically, this is referred to as the operating or cash cycle. The operating cycle can be said to be at the heart of the need for working capital, "operating cycle is the time duration required to convert sales. After the conversion of resources into inventories, into cash". (Pandey; 1996; 73)

Most of the firms aim at maximizing the wealth of shareholders. The firm should earn sufficient return from its operation. The extent to which profit can be earned naturally depends upon the magnitude of sale among the other things for constant operation of business, every firm needs to hold

the working capital components like cash receivable, inventories etc. therefore every firm needs working capital to meet the following motives.

1) The Transactional Motive

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

2) The Precautionary Motive

Precautionary motive sis the need to hold cash and inventories to guard against the risk of unpredictable change in damage and supply forces and other factors such a 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 contingencies in future.

3) The Speculative Motive

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

a. Opportunities of profit making investment.
b. An opportunity of purchasing raw materials at a reduced price on payment of immediate cash.
c. To speculate on interest rate and
d. To make purchasing at favorable price etc. Thus firms need the working capital to meet the speculative motive.

2.4 Working Capital Cycle

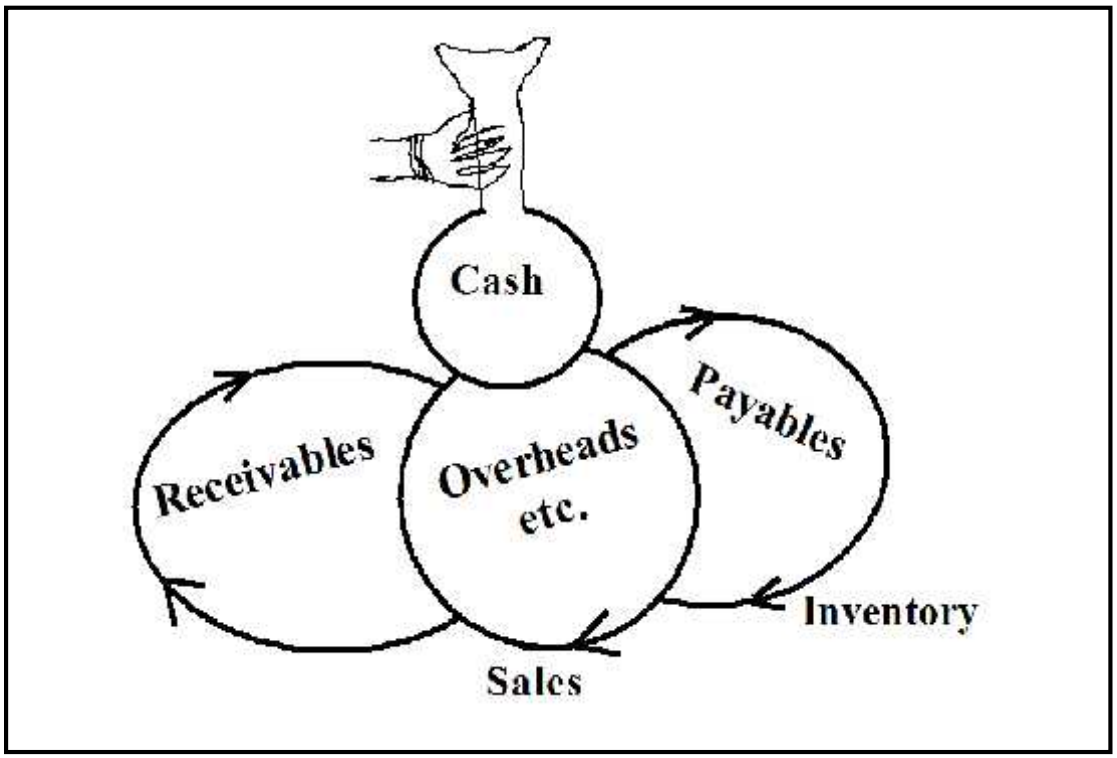
Cash flow in a cycle into, around and out of a business. It is the business's life blood and every manager's primary task is to help keep it flowing and to use the cash flow to generate profit. If a business is operating

profitability, then it should, in theory, generate cash surpluses. If it doesnot generate surpluses, the business will eventually run out of cash and expire. The factor a business expands the more cash it will need for working capital and investment. The cheapest and best sources of cash exist as working capital right within business. Good management of working capital will generate cash will help improve profit and reduce risks. Bear in mind that the cost of providing credit to customers and holding stocks can represent a substantial proportion of a firm's total profits.

There are two elements in the business cycle that absorb cash inventory (Stock and work-in-progress) and Receivables (debtors owing you money) the main sources of cash are payables (yours creditors) and equity and loans.

Figure No. 2.2

Working Capital Cycle



Source: Khan and Jain, 1999: 612

Each component of working capital (Namely inventory, receivables and payables) has two dimensions … TIME….. and MONEY, when it comes to managing working capital-TIME IS MONEY. If you can get money to move faster around the cycle (e.g. collect monies due from debtors more quickly) or reduce the amount of money tied up (e.g. reduce inventory levels relative to sales), the business will generate more cash or it will need to borrow less money to fund working capital. As a consequence, you could reduce the cost of bank interest or you'll have additional; free money available to support additional sales growth or investment. Similarly, if you can get negative improved terms with suppliers e.g. get longer credit or an increased credit limit; you effectively create free finance to help fund future sales.

It can be temporary to pay cash, if available for fixed assets e.g computers, plant, vehicles etc. If you do pay cash, remember that this is now longer available for working capital. Therefore, if cash is tight, consider other ways of financing capital investment loans, equity, leasing etc. Similarly if you dividends or increase drawing, these are cash outflows and, like water flowing downs a plug whole, they remove liquidity from the business.

2.5 Working Capital Policy

A firm's net working capital position is not only important as an index of liquidity but it is also used as a measure of the firm's risk, in this regard, means chances of the firm being unable to meet its obligations on due date.

Working capital management involves deeding upon the amount and composition of current assets and how to finance these assets. These decisions involve trade off between risk and profitability. The greater the relative proportion of liquid assets, the lesser the risk of running out of

cash all other things beings equal. Profitability unfortunately, also will be less. The longer the composite maturity schedule of securities used to finance the firm, the lesser the risk of cash involving all other thing being equal.

Again the profit of the firms is likely to be less. Resolution of the trade off between risk and profitability with respect to this decision depends upon the risk preferences of management. Working capital policy refers to the firm's basic policies regarding target level of each category of current assets and how current assets will be financed. (Westen and Bringham; 1996; 333)

So first of all, the firms have to determine how much funds should be invested in working capital in gross concept. Every firm can adopt different financing policy according to the financial manager's attitude towards the risk return trade off. One of be used to finance current assets every firm has to find out the different sources of funds for working capital.

2.5.1 Current Assets Investment Policy

Current assets investment policy regarding the total amount of current assets to be carried to support the given level of sales. How much a firm will invest in a will depend on its operating cycle. There are three alternative current assets investment policies fat out, lean and mean and moderate. (Westen and Bringham; 1996; 344)

i) Relaxed Policy

In this policy, the firm holds relatively large amount of cash, marketable securities, inventory and relievable 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.

ii) Restricted Policy

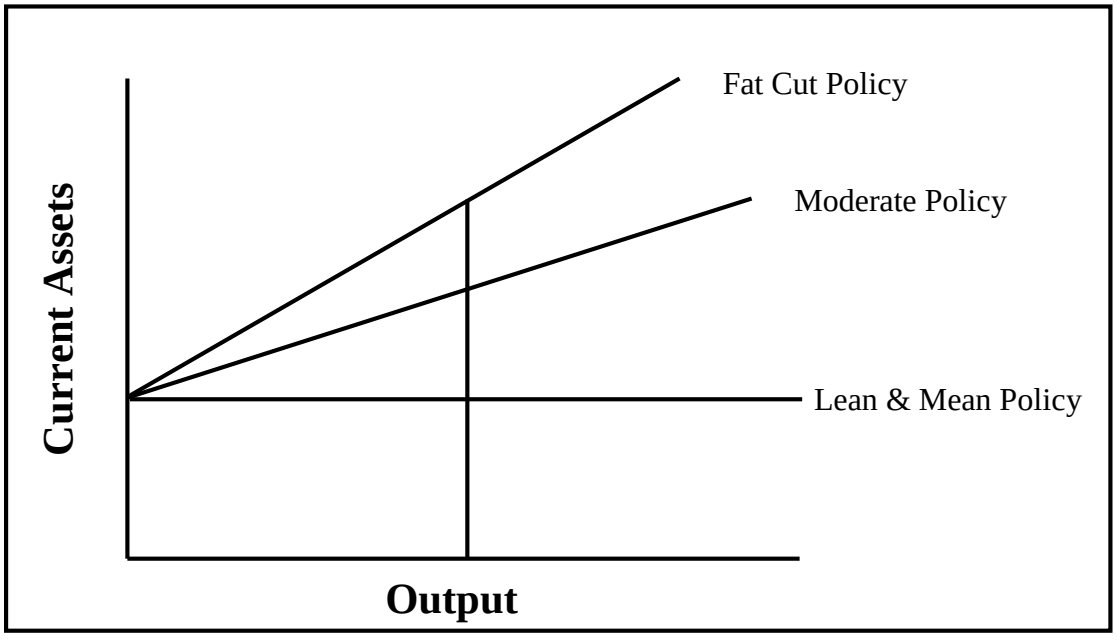
Restricted policy, a firm holds the minimum amount of cash, marketable securities, inventory and receivables to support a given level of sales. This policy tends to reduce the inventory and receivable conversion cycle. Under this policy firm follows a light credit policy and bears the risk of losing sales.

iii) Moderate Policy

In this 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.

Figure No. 2.3

Alternative Current Assets Investment Policy



Source: Khan and Jain, 1999 : 608

The relationship between output and current assets level for these alternatives is illustrated in above figure. We see from the figure that the greater the output, the greater the need for investment on current assets to support that output and sales. This relationship is based on the nation that it takes a greater proportional investment in current assets when only a few units of output are produces than it does later on, when the firm can use its current assets more efficiently.

2.5.2 Current Assets Financing Policy

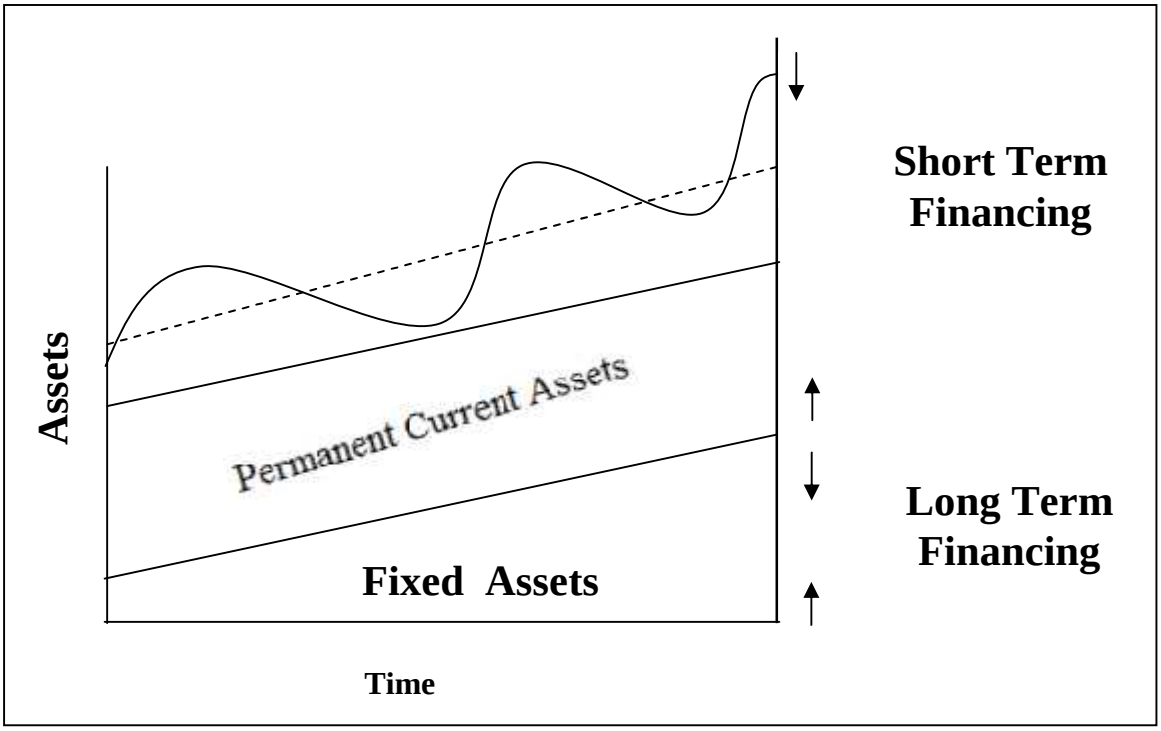
It is the manner in which the permanent and temporary current assets are financed. Current assets are financed with funds raised from different sources. But cost and risk affect the financing of any assets. Thus, current assets financing policy should clearly outline the sources of financing. There are three policies-aggressive, conservative and matching or hedging policies of current assets financing.

i) Aggressive Policy

In this policy, the firm finances a part 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 out also a part of permanent current assets with short term financing. In this policy, te liquidity position will be low and the risk will be high. A low liquidity position may expose the firm to opportunity costs. If a firm relies heavily on short-term borrowings during the period of high money, credit may be rationed and the firm may be unable to obtain all the financing its needs.

Figure No. 2.4

Aggressive Financing



Source: Khan and Jain, 1999 : 606

Above figure shows that short-term financing finances so percent of the permanent current assets. In general interest rate increases with time i.e. shorter the time, lower the interest rate. It is because lenders are risk adverse and risk generally increases with the length of lending period. Thus, under normal situation the firm borrows on a short-term financing rather then long-term financing. On the other side, if the firm finances its permanent current assets by short-term financing, then it runs the risk of renewing the borrowing again and again. This continued financing exposes the firm to certain risk. It is because, in future the retest expenses will fluctuate widely and also, it may be difficult for the firm to raise the funds during the stringent credit periods. In conclusion, there is highly risks higher return and low liquidity position under this policy.

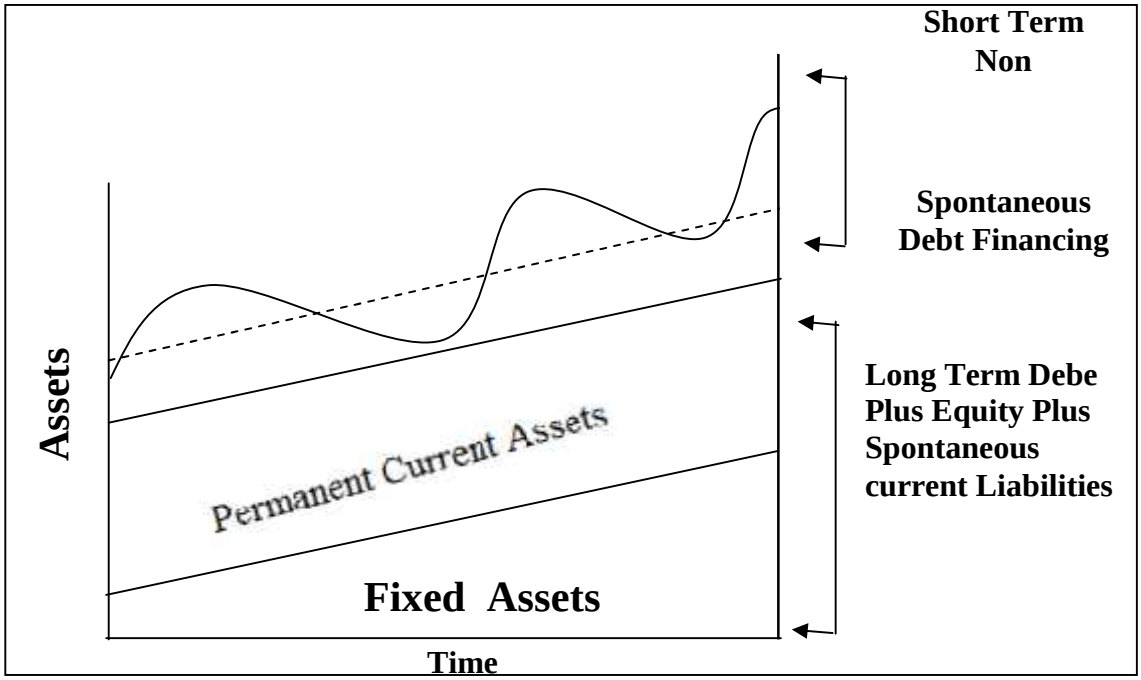
ii) Conservative policy:

In this policy, the use of short-term fund is restricted to the emergency situation when there is necessity to invest current assets. Otherwise, the long-term fund should be used as far as possible in financing of investment on current assets. However, the cost on financing in this policy will be mote, the liquidity will be relatively greater and risk will be minimized.

A firm may adopt a conservative policy in financing its current and fixed assets. The financing policy of the firm is said to be conservative when it depends more on long-term funds for financing needs. Under a conservative plan, the firm finances its stores liquidity by investing surplus funds into marketable securities. The conservative financing relies heavily on long- term financing and, therefore, is less risky. The conservative financing policy is shown on figure below. (Pandey; 1995:684)

Figure No. 2.5

Conservation financing Policy Temporary Current Assets



Source: Khan and Jain, 1999 : 606

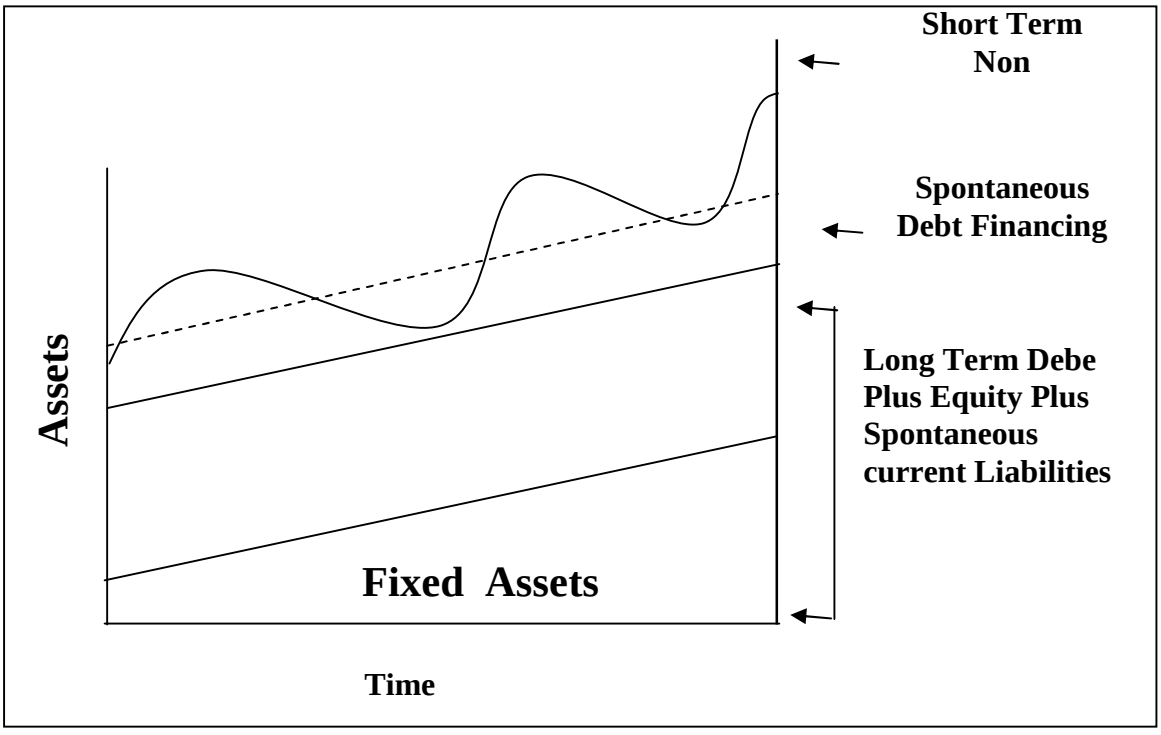
In above figure, the conservative financing policy is shown. Note that when the firm has no temporary current assets(at the level of slope); the long-term funds released can invested on marketable assets securities to build up the liquidity position of the firm.

iii) Matching policy:

In this policy, the firm finances the permanent current assets with long-term financing and temporary with short-term financing. It lies in between the aggressive and conservative policies. It deals to neither high nor low level of current assets and current liabilities. Figure in below shows the temporary working capital financed by short- term financing and long- term financing. Thus, no working capital is zero under this policy.

Figure No. 2.6

Matching Policy Temporary Current Assets



Source: Khan and Jain, 1999 : 608

Thus, when the firm follows matching policy also known as hedging policy, long-term financing will be used to finance fixed assets and permanent current assets and short-term financing to finance temporary or variable current assets. Figure 2.6 is used to illustrate the marketing policy over time. The firm's fixed assets and permanent CA are financed with long term funds and as the level of these assets increases, the long-term financing level also increases. The temporary of variable CA are finance with short term funds and as their level increases, the level of short-term financing also increases.

2.6 Financing of Working Capital

The firm's working capital assets policy is never set in a vacuum; it is always established on conjunction with the firm's working capital financing policy. Every financial company requires additional assets whether they are instable or growing conditions. The must important function of financial manager is to determine the level WC and to decide how it is to be financed. Financing of any asset is concerned with two major factors-cost and risk. Therefore, the financial manager must determine on appropriate financing mix, or decided how CL should be used to finance CA. However, a number of financing mixes are available to the financial manager. He can resort generally three kinds of financing.

i) Long-term Financing

Long-term financing has liquidity and low profitable. Ordinary share, debenture, preference share, retained earning and long-term debt of financing institution are major sources of long-term financing.

ii) Short-term Financing

A firm must arrange its short-term credit in advance. The sources of short-term financing of working capital or made credit and bank borrowing.

Trade credit refers to the credit that a customer gets from suppliers of goods in the normal course of business. The buying firms have not to pay cash immediately for the purchase is called trade credit. It is mostly account basis. Another from of trade credit is bills payable. It depends upon the term of trade credit. (Van Horne; 1996; 248)

Bank credit is the primary instructional sources for working capital financing. For the purpose of bank credit, amount of working capital required has to be estimated by the borrowers and banks are approached with the necessary supporting data. After availability of this data, bank determines the maximum credit based on the margin requirement of the security. The types of loan provided by commercial banks are loan arrangement, overdraft arrangement, commercial paper etc.

iii) Spontaneous Financing

Spontaneous financing arises from the normal operation of the firms. The two major sources of such financing are trade credit and accruals. Whether trade credit is free of cost or not actually depends upon the terms of trade credit. Financial manager of the firm would like to finance its working capital with spontaneous sources as much as possible. In practical aspect, the real choice of CA financing is either short-term or long-term sources. Thus, the financial manage concentrates his power on short-term versus long-term financing. Hence, the financing of working capital depends upon the working capital policy which is perfectly dominated by management attitude towards the risk-return.

There are three basic approaches for determining on appropriate working capital financing mix:

a) Hedging Approach

b) Conservative Approach

c) Aggressive Approach

a) Hedging Approach

The firm can adopt a financial plan which involves the match in of the expand life of assets with the expected life of the sources of funds raised to finance assets. (Pandey; 1995; 683)

In this approach the long term assets are financed by short-term funds. It is called hedging approach because it matches the risk –reducing investment strategy involving transitions of a simultaneous, but opposite nature. So, that the effect of one is likely to counter balance the effect of the other with the hedging approach short-term of seasonal variations in CA would be financed with short-term debt; the permanent components of CA would be finished with long-term debt of equity. In this approach assets are classified into three categories. (Khan and Jain, 1999)

- Funds requirement for seasonally needed CA.
- Funds requirement for regularly needed CA.
- Funds requirement for fixed or long-term assets.

According hedging approach, we should finance variables or short-term WC from CL of short-term funds and long-term funds should be used to finance the fixed portion of CA.

b) Conservative Approach

The financing policy of the firm is said to be conservative when it depends more on long term funds for financing needs. Under a

conservative plan the firm finances its permanent assets and also a part of temporary current assets, with long-term financing. In the periods when the firm has no need for temporary current assets the idle long-term funds can be invested in the tradable securities to conservative liquidity.

The approach relies heavily on long-term financing, as a result firm has less possibility of financing the problems of shortage of funds. In conservative approach, permanent capital is used to finance all permanent assets requirement or also to met some or all of the seasonal demands. (Westen and Bringham; 1996:27)

c) Aggressive Approach

A firm can follow aggressive policy in financing its assets. Under an aggressive approach the firm finances a part of it permanent current assets with its short-term financing. "The relatively more use of short-term financing mace the firm more risky." (Pandey; 1995:685)

The grater the portion of the permanent asset need financed with short-term debt, the more aggressive the fi9nancing is said to be " (Van Horne; 1996: 209)

2.7 Determinants of Working Capital

The total requirement of working capital is determined by a wide variety of factors. The influenced of these factors is different business organizations. Perhaps none of them can neglect the management of adequate WC. Therefore, an analysis of the relevant factors should be made in order to determine the total investment in WC. The description of the factors which generally influence the WC requirement of the firm is given below.

i) Nature and size of Business

The working capital requirement of a firm is basically related to size and nature of the business. If the size of the firm is bigger then it requires more working capital. Trading and financial firms have a very limited need of working capital and have to invest abundantly in fixed assets. Their working capital requirements are nominal.

ii) Manufacturing Cycle

The manufacturing cycle starts with the purchase and use of raw material and complete with the production of finished goods. Longer the manufacturing cycle, larger will be the firm's working capital requirements. An extended manufacturing time span means a larger tie-up of funds in stocks. Thus, if there are alternative ways of manufacturing cycle should be chosen. Once a manufacturing cycle is completed within the specified period. This needs proper planning and coordination at all levels of activity. Non-manufacturing firms service and financial enterprises do not have manufacturing cycle. (Pandey; 1995;674)

iii) We just noted that a strategy of constant production may be maintained in order to resolve the working capital problems arising due to seasonal changes in the demand for the firm's product. A steady production policy will cause inventories to accumulate during the off-season periods and the firm will be exposed to greater inventory costs and risks. Thus, if costs and risks of maintaining a constant production schedules in accordance with changing demand. Those firms, whose productive capacities can be utilized for manufacturing varied product, can have the advantage of diversified activities and solve their working capital problem. (Pandey; 1995; 675)

iv) Credit Policy

Credit policy also affects the working capital of a firm. Working capital requirement depends on terms of sales. Different term may be followed by different customers according to their credit worthiness.

v) Operating Efficiency

The operating efficiency of a firm relates to the optimum utilization of resources at minimum costs. The firm can not effectively is low working capital turnover is improved with a better operation and financial efficiency of a firm. Efficiency of operation accelerates the pace of cash cycle and improves the working capital turnover. It releases the pressure on working capital by improving profitability and improving the internal generation of fund.

vi) Profit Margin

The net profit is a source of working capital to the extent that has been earned in cash. The capacity to generate profit differs from company to company. "Some firms enjoy a dominant position, due to quality product or good marketing management of monopoly power in the market and earn a high profit margin." Higher profit margin contributes to more working capital. (Pandey, 1995 : 678)

2.8 Working Capital Cash Flow Cycle

The continuing flow from cash to supplier, to inventory, to account receivable and back into cash is known as working capital cash flow cycle & operating cycle. It continuously repeats. The cycle demonstrates the conversion of raw materials and labour to cash. Hence, this concept is also called cash conversion cycle model (Westen and Bringham; 1987; 405). Cash conversion cycle model has been applied to more complex business and it is useful when analyzing the effectiveness of a firm's

working capital management. There are following four factors of cash conversion cycle model.

1. Inventory Conversion Period (ICP)

The length of time required converting raw materials into finished goods and then to sell these goods could be defined as inventory conversion period. This period indicates the efficiency of the firm in selling its products. Inventory turnover is calculated by dividing the cost of sold by average inventory. It can be shown as follows:

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

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

$$\text{Inventory Conversion Period} = \frac{Inventory \mid Days\,in\,Year}{Sales}$$

2. Receivable Conversion Period (RCP)

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

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

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

3. Payable Deferral Period (PDP)

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

$$\text{Payable Deferral Period} = \frac{Payable \mid Days\,in\,Year}{Purchase}$$

4. Cash Conversion Cycle

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

Cash Conversion Cycle = Inventory Conversion Period + Receivable Conversion Period – Payable Deferral Period

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

2.9 Review of Related Journals/ Articles

This part mainly focuses on the review of articles/journals published by different management experts in the field of working capital management.

M. K. Shrestha in his study "Working capital management in public enterprises" (June, 1983) states that manager after lacks basic knowledge of working capital and its overall impact on the operative efficiency and

financial viability of public enterprises which are Birgunj Sugar development corporation, National Trading Ltd., Royal Drugs Ltd., National construction company of Nepal, Harisidhhi Brick & Tile factory, Nepal Dairy Ghee Industry Ltd. and Chandeswori Textile factory Ltd. The study has pointed at certain policy such as deficient financial planning, negligence of working capital management, deviation between liquidity and turnover etc. He has suggested some measures for their effective operation. The problem can be sorted through identification of needed funds, development of management information system, determination of sound combination of short-term source to finance working capital requirements.

R. S. Pradhan has published another article relating to working capital management. He studied on "The demand for working capital by Nepalese corporation." (July, 1988) he anmalyzed the selected nine manufacturing public corporation with the 12 year data from 1973-1984. Regression education has been adopted for the analysis. He has summarized that the earlier studies concerning about the demand for cash and inventories respectively. The pooled regression results show the presence of economics of scale with respect to the demand for working capital and its various components. The regression results suggest strongly that the demand for working capital and its components is function of both sales and their cost. The estimated result show that the inclusion of capacity utilization variable in model seems to have contributed to the demand function cash and net working capital only. The effect of capacity utilization on the demand for inventories receivables and gross working capital is doubtful.

Dr. Acharya has published another article relating to working capital management. He has described the two major problems-operational

problems and organization of problems, regarding the working capital management in Nepalese PE's. The operational problems he found are increase of current liabilities than current assets. Not allowing the current ratio of 2:1 and slow turnover of inventory. Similarly, change in working capital in relation to fixed capital had very low impacts over the profitability, than transmutation of capital employed to sales, absent of apathetic management information system, break even analysis, funds flow analysis and ratio analysis were either not done or ineffective for performance evaluation. Finally, monitoring of the proper functioning of working capital management has never been considered managerial job. In the second part he has listed the organizational problems in the PE's. In most of the PE's there is lack of regular internal and external audit system as well as evaluation of financial results. Similarly, very few PE's have been able to present their capital requirement, functioning of finance department is not satisfactory and some PE's are even facing the under utilization of capacity.

Pradhan and Koirala had jointly conducted a study on "Working capital management of Nepalese corporations." They had focused on evaluation of working capital of selected manufacturing and non-manufacturing public enterprises. This study was concentrating public enterprise. This study was concentrated in the size of investment in current assets, significance of current assets management. The major finding of he study were as follows;

- Investment on total assets had declined over a period of time in both the manufacturing corporations. However, the manufacturing corporations consistently had more investment in cash and receivables as compared to non-manufacturing corporations.

- Inventory management was of great significance in manufacturing corporations and the management of cash and receivables was of great significance in non-manufacturing corporations.
- Management of working capital was more difficult than that of fixed capital.
- The major motive for holding cash in Nepalese corporations was to provide a reserve for routine net outflows of cash to keep on the production process.

2.10 Review of Related Thesis

Prem Kumar Shrestha (1994) has carried out a research on "A study on working capital management in Bhirkuti Paper Mills Ltd." His main objective is to analyze the current assets and current liabilities and their impact and relationship to each other. His major findings are as follows;

- Cash and bank balance holds the largest part of current assets.
- There is increasing trend in liquidity an decreasing trend in current assets.
- There is discouraging profitability caused by the low return on total investment of the mill.

Om Bikram Gurung (2002) has carried out his research on "A study on working capital management of Nepal Lever Ltd." The main objective of his study is to examine the working capital management of Nepal lever ltd. The major findings of his study are as follows;

- Inventory holds the major portion of current assets followed by miscellaneous current assets, sundry debtors, cash and bank balance.
- The liquidity position of NL. Ltd. Is satisfactory but not perfect though increasing trend implies that liquidity position can be expected to be good in future.
- There is not trade off between liquidity and profitability however profitability of NL Ltd. Is satisfactory.

Basudev Shrestha (2002) has carried out his research on "A study in working capital management of Dairy Development Corporation." The main objective of the study is to analyze the current assets and current liabilities and their impact and relationship to each other. The major findings of his study are as follows:

- The major components of current assets in DDc are inventory, cash and bank balance, sundry debtors and miscellaneous current assets in which inventory hold the major portion respectively in each year.
- The company's investment in working capital has been increasing. The average investment in current assets is lower with respect to fixed asses during the study period and DDC has no clear vision about the investment in current assets to fixed assets portion.
- The average receivable turnover and ACD is in fluctuating trend during the study period.
- There is ineffective liquidity position and unsatisfactory profitability ratio is DDC.

- The overall return position DDC is negative i.e. not in favorable condition. It is because of inefficient utilization of CA-TA and shareholders wealth.

Ajita Budhathoki (2008) has carried out his study on "A study on working capital management of Himalayan Bank Ltd." His basic objective of the study is to evaluate the working the working capital position of Himalayan Bank Ltd. The other objectives of this study are to throw light on the importance of proper management of working capital in HBL.

The Major findings of the study are as follow:

a. Working capital position of HBL was in increasing trend up to FY 061/0062 and there after it was on decreasing trend.
b. There is a positive relationship between loan and advance and deposit.
c. The bank has been given efforts to decrease its cost of service over the study period.

Dhurba Karki (2008) has carried out his study on working capital position of Dabur Nepal Pvt. Ltd. The basic objective of the study is to highlight the practice of working capital management and its impact over profitability. The other objectives of the study are:

a. Study the practice of working capital of Dabur Nepal Pvt. Ltd.
b. Analyse the current assets and current liabilities of Dabur Nepal Pvt. Ltd.
c. Study the impact of working capital on profitability.

Findings of the study are as follow:

The trend of current assets to fixed assets is in fluctuating trend. It shows that the Dabur Nepal is following a aggressive policy of current ration and quick ratio of organization is in decreasing trend.

2.11 Research Gap

None of the research is conducted till now to find out the comparative position of working capital of manufacturing organization. The present study explores the position of working capital in ULL and HCIL. Most of the researches are conducted as a case study of single enterprise. So, the study presents the comparative frame work of working capital position and working capital policy adopted by the organization. The present study try to find out the answer of the different research questions which based on overall working capital position of the organizations as well as policy and management of working capital. The study analyzes the position of working capital and explains the different components of working capital on statistical basis.

CHAPTER-THREE

RESEARCH METHODOLOGY

3.1 Introduction

A brief introduction of this study has been already presented in the first chapter. Besides the reviews of literature with possible review of ideas, theories and research finding have also been presented in second chapter now, it is important to have choice of research methodology that helps to make my analysis meaningful. So, this chapter deals with the methodology adopted for the study.

Research methodology refers to the various sequential steps to be adopted by the researcher in studying a problem with certain object in view. (Kothari; 1986; 19)

In this study, research methodology has been paid due attention to achieve the objectives of the study.

3.2 Research Design

Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research question and to control variances. The plan is the overall scheme of program of the research. (Kreelings ; 1986; 275)

Research design means a definite procedure and technique which guides the study and propounds ways for doing research. For the study of working capital management of ULL and HCIL, research design followed is an exploratory research approach. In this study a descriptive and analytical survey is done. The justifications for the choice of these methods are many and various. The descriptive method is preferred because it includes reliable data and information converting a long time

and avoids numerous complex variables operating into formulation and adoption of credit and investment policies.

3.3 Sources of Data

The data & information used in this study are secondary in nature. The main sources of secondary data are annual reports and audited financial statements of the company.

3.4 Population & Sample

Among all of the manufacturing organizations two organizations are taken as sample for the study.

3.5 Collection of Data

Financial data required to achieve the set objectives of this study have been directly extracted from the balance sheet and income statement of the company. In order to collect the supportive data a detail review of the related documents have been carried out.

3.6 Data Processing Analysis

This study is mainly based on the secondary data. Thus, after collection of financial statement, master sheet of financial data was prepared and necessary financial data have been extracted and tabulated as per the need of this study. In order to process the data financial statement and other available information were reviewed. These data were grouped in different tables and charts according to their nature and analytical statistical tools are used for analyzing quantitative data to reach true sincere conclusion.

3.7 Research Variable

Working capital was major research variable of this study. As being the research based on working capital management, total assets, total deposit, current assets, current liabilities, total investment, total loan and advances etc. were also taken as secondary research variables.

3.8 Tools Used

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

3.8.1 Financial Tools

In this research study various financial tools are employed for the analysis. The analysis of this study is based on following financial tools.

a) Working Capital

Working capital is used by lenders to help gauge the ability for a company to weather difficult financial periods. Working capital is calculated by subtracting current liabilities from current assets. Due to differences in business and the fact that working capital is not a ration but an absolute amount, it is difficult to predict what the ideal amount of working capital would be for the business. (www.planware.org)

Therefore:

Working Capital (WC) = Current Assets(CA) – Current Liabilities (CL)

b) Liquidity Ratios

Liquidity ratios indicate the firm's ability to meet it maturing short-term obligations. Your liquidity ratio is measure your company's ability to generate each to meet your short-term financial commitments. The current ratio measures debts over the next 12 months, while the quick ratio measures liquidity available for immediate demands. As stated, a

ratio of 1:0 or greater is generally acceptable but depends on the nature of the company.

A comparatively low ratio can mean that your company might have difficulty meeting your obligations and may not be able to take advantage of opportunities that require quick cash. Paying off your liabilities can improve this ratio you may want to delay purchases or consider long term borrowing to repay short term debt. A too high ratio may mean that your capital is being underemployed. You may want to invest your capital.

i) Current Ratio

Current ratio measures the short term solvency, i.e. its ability to measure short term obligation. In other words, current ratio measures the ability to pay debts. As a measure of creditors versus current assets, it indicates each rupee of current assets available by dividing current assets by current liabilities.

$$\text{Current Ratio (CR)} = \frac{Current\ Assets\ (CA)}{Current\ Liabilities\ (CL)}$$

Current assets include cash, and those assets which can be converted into cash within a year, such as debtor, receivable, cash and bank balance, prepaid expenses inventory etc. Current liabilities mean all obligations maturity with in a year. Under the current liabilities include secondary creditor, provision for taxation, bank loan, miscellaneous current liabilities and provision.

ii) Quick Ratio

Quick ratio establishes a relationship between quick of liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Cash is the most liquid asset. Other assets which are considered to be relatively liquid and

included except inventory of stock. Inventory can not be converted into cash immediately. This quick ratio can be found out by dividing the total of quick assets by total current liabilities.

$$\text{Quick Ratio (QR)} = \frac{Quick\ Assets\,(QA)}{Current\ Liabilities\,(CL)}$$

iii) Percentage of Current Assets to Sales (CAS)

Sales are only that activity which generates fund from outside. So it is the most important parts of manufacturing industries. The amount invested on current assets is support the given level of sales. It is calculated as:

$$\text{CAS} = \left(\frac{Current\ Assets\,(CA)}{Sales} \mid 100\right)\%$$

As the percentage of CAS increases the risk and profitability also increases.

iv) Percentage of Current Assets to Fixed Assets (CA/FA)

For the success of any organization, firm should invest in current assets as well as fixed assets support a particular level of output.

It is calculated as:

$$\text{CAFA} = \left(\frac{Current\ Assets}{Fixed\ Assets} \mid 100\right)\%$$

v) Cash & Bank Balance to Current Assets (CBCA)

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

$$\text{CBCA} = \left(\frac{Cash\,\&\,Bank}{Current\ Assets} \mid 100\right)\%$$

Higher the percentages lower the risk and profitability of the business.

c) Turnovers Ratio

i) Inventory Turnover Ratio (ITR)

This ratio establishes the relationship between costs of sold and average inventory or sales and closing inventory. The objective of this ratio is to measure the ability of the firm to utilize its inventory. This ratio is expressed as:

$$\text{ITR} = \frac{Sales}{Clo\sin g\ Inventory}$$

It indicates the speed with which the inventory converted into sales. Generally, high ratio indicates either the same volume of sales has been maintained with lower investment in stock or the volume of sales has increased without any increase in the amount of stock.

ii) Receivable or Debtors Turnover Ratio (RTR)

The liquidity position of any firms depends upon the quality of debtors to a great extent. The receivable turnover indicates the collection efficiency of the firm. The higher ratio indicates the efficient management of credit & vice-versa. The receivables turnover ratio is given by:

$$\text{RTR} = \frac{Credit\ Sales}{Debtors}$$

iii) Total Assets Turnover (TATR)

This ratio establishes the relationship between net sales and total assets. The objective of computing this ratio is to determine the efficiency with which the total assets are utilized.

$$\text{TATR} = \frac{Sales}{Total\ Assets}$$

It indicates the firm's ability to generate sales per rupee of investment in total assets.

iv) Average Collection Period/ Days of Sales Outstanding (DSO)

Average length of time required to collect account ratio receivables.

$$\text{DSO} = \frac{Sundry\ Debtors}{\frac{Sales}{365}}$$

v) Cash and Bank Balance Turnover Ratio (CBBTR)

It shows the effectiveness of management to manage the cash with reference to application of cash in ordinary course of business. It measures how rapidly cash can convert into sales in the divided by cash and bank balance which can be shown in the following formula:

$$\text{CBBTR} = \frac{Sales}{Cash\ \&\ Bank\ Balance}$$

The higher the ratio indicates how rapidly cash is converted into sales and good cash management and low ratio shows and weak cash management.

d) Profitability Ratios

i) Gross Profit Margin (GPM)

Gross profit margin ratio indicates the percentage of profit after cost of production. This ratio is measure of productive efficiency. A high profit margin reflects the higher cost of production and a low gross profit margin reflects the higher cost of production. Gross profit margin ratio is given by:

$$\text{GPM} = \left(\frac{Gross\ \Pr ofit}{Sales} \mid 100\right)\%$$

ii) Net Profit Margin (NPM)

Net profit margin is obtained after deduction all operating expenses and income tax from gross profit. It is shows the percentage of net profit out of total sales. This ratio shows the overall measurement of the company's ability to earn net profit. It is computed by dividing net profit by sales and given by:

$$NPM=(\frac{Net\ Profit\ After\ Tax}{Sales}|100)\%$$

iii) Return on Total Assets (ROA)

This ratio studies the relationship between net profit after tax and total assets. This ratio is computed by dividing net profit after tax by total assets.

$$ROA=(\frac{Net\ Profit\ After\ Tax}{Total\ Assets}|100)\%$$

3.8.2 Statistical Tools

Besides the financial tools, various statistical tools have been used to conduct this study. The result of analysis has been properly tabulated, compared, analyzed and interpreted. In this study, the following statistical tools are used for analysis.

i) Trend Analysis

It is important to analyze trends in ratio as well as their absolute levels, for the trends give clue to whether the financial situation is improving or whether it is deteriorating. In other word trend analysis of ratio indicates the direction of changes. The significance of a trend analysis of ratio lies in the fact that the analyst can know the direction of movement i.e. whether the movement is favorable on net. Thus, the tools that are used to

show gradually increase of decrease of variables over a period can be seen clearly.

ii) Correlation Analysis

The correlation analysis is the technique used to measure the closeness of the relationship between the variables. It helps us in determining the degree of relationship between two or more variables. It describes not only the magnitude of correlation but also its direction. The coefficient of correlation is a number. This indicates to what extent two variables are related with each other and to what extent variables in one leats to the variation in the other and it is denoted by 'r'.

The value of coefficient of correlation always lies between ± 1. A value of -1 indicates a perfect negative relationship between the variables and a value of +1 indicates a perfect positive relationship. A value of zero indicates that there is no relation between the variables. The zero correlation coefficient means the variables are uncorrelated. The closer is +1 or -1, the closer the relationship between variables and closer r is to zero (0), the less close relationship. The algebraic sign of the correlation coefficient indicates the direction of the relationship between two variables whether direct or inverse, while the numerical value of the coefficient is concerted with the strength, or closeness of the relationship between two variables. The correlation coefficient can be calculated as;

$$r = \frac{Cov(XY)}{\pm_x \pm_y}$$

$$\text{or, } r = \frac{(x - \bar{x})(y - \bar{y})}{(N - 1) \pm_x \pm_y}$$

$$\text{or, } r = \frac{N \quad XY - \quad X \quad Y}{\sqrt{N \quad X^2 - (\quad X)^2}\sqrt{N \quad Y^2 - (\quad Y)^2}}$$

Where,

$|\exists_x$ $|\exists_y$ Are the standard deviation of the distributions of x and y values respectively.

Cov (x, y) = Covariance of x, y values.

$$= \frac{(x \, Z \bar{x})(y \, Z \bar{y})}{(N \, Z1)}$$

n= Number of items in the series.

X and y = Variables

iii) Probable Error (PE)

The probable error of the correlation coefficient is applicable for the measurement of reliability of the computed value of the correlation coefficient (r) it is also denoted by:

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

where,

r = Correlation Coefficient

N = No. of Pairs of Observation

It can be interpreted whether its calculated value of (r) is significant or notsignificant. If (r) is less than 6PE, than the relationship between the two variables is insignificant and when (r) is greater than 6PE the relationship is significant.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

The major objective of the chapter is to evaluate the working capital position of Hetauda Cement Industry Ltd. and Unilever Ltd. Overall objective of the study is highlight by presenting and analyzing the data obtained from concerned organization. This chapter will present the analysis of component of working capital of both organizations. In this chapter relevant data and information of working capital as well as financial performance of Unilever Ltd. and Hetauda Cement Industry Ltd. are presented and analyzed accordingly. This chapter presents composition of current assets and current liabilities relationship between current assets, fixed assets, turnover position, liquidity position, profitability position and financing of working capital. It also uses correlation analysis between different components of working capital.

4.1 Working Capital Policy

Working capital means current assets less current liabilities. Working capital measures how much amount in liquid assets of a company has available to build business. Working capital policy is the basic policy of the firm. Working capital management refers to the administration of all current assets and current liabilities in a proper way.

Every business organization wants to maximize the wealth of shareholders in order to obtain the target goal; it has to determine the reasonable level of current assets and current liabilities in the organization. Working capital policy reflects the level of current assets and current liabilities maintained in the organization.

4.2 Components of Current Assets

To operate the business, different kinds of assets are required for the day to day operation of the business different types of current assets are required. For smooth operation of business appropriate level of current should be maintained by the organization. A high amount of investment made in current assets adversely affects the profitability position of the organization but provides higher liquidity position. The composition of current assets in ULL and HCIL are cash and bank balance, stock, receivables, prepaid expenses, loan and advances etc. Moreover receivables, inventories and prepaid expenses are not easily converted into cash. Therefore they are less liquid assets. Hence for qualitative consideration of the current assets and its composition should be seriously examined. The qualitative aspect of current assets can be judged with the individual evaluation of current assets components.

The following table shows the amount of current assets items of ULL and HCIL.

Table No. 4.1
Components of Current Assets HCIL *(Rs. in Lakhs)*

FY	Cash & Bank Balance		Loan, Advance & Deposit		Inventory		Receivables		Total CA Amount
	Amt.	%	Amt.	%	Amt.	%	Amt.	%	
060/61	110.81	2.45	1828.29	40.44	2545.25	56.3	36.80	0.81	4521.15
061/62	502.63	10.67	1728.81	36.71	2396.57	50.88	82.06	1.74	4710.07
062/63	1251.19	23.72	1718.39	32.58	2299.31	43.59	5.55	0.11	5274.44
063/64	1182.14	22.45	1452.31	27.58	2625.92	49.87	5.15	0.10	5265.52
064/65	1305.22	20.86	2109.34	33.78	2834.26	54.53	7.29	0.12	6256.11
065/66	1482.22	21.66	2306.92	33.72	3044.06	44.5	8.31	0.12	6841.52
Average	**972.37**	**16.97**	**1857.34**	**34.14**	**2624.23**	**49.95**	**24.19**	**0.50**	**5478.14**
S.D.	**539.52**	**8.52**	**305.40**	**4.29**	**277.13**	**5.14**	**30.84**	**0.67**	**900.72**
C.V.	**55.49**	**50.23**	**16.44**	**12.57**	**10.56**	**10.30**	**127.48**	**133.70**	**16.44**

Source: Annual Report of HCIL

Above table shows that the components of current assets of HCIL which consists cash and bank balance, receivables, loan & advance and stock in FY 2060/61 the major portion of the current assets occupies by inventory which was 56.3% of current assets and another assets and loan and advances which was 40.44% cash and bank balance was the small part of current assets. In FY 061/62 cash and bank balance is slightly increased which was 10.67% of current assets and inventory as well as loan and advances were slightly decreased as compared to FY 060/61. In FY 2061/62 the amount of cash balance is increased and inventory and loan and advances were decreased. In this year cash and bank balance was 23.72% of current assets. In FY 2063/64 cash and bank balance is decreased by approximately 1% but the inventory amount is increased by 6%. In FY 2064/65 cash and bank balance is decreased by 1.59% whereas loan & advance is amount is increased by 6.14%. In FY 2065/66 there is no change in cash, receivables and inventory position as compared to previous year. Receivables amount shows the small portion of current assets in various FY which represents that most of the sales made by HCIL were on cash basis. The average percent of cash & bank balance, loan advance and deposit, inventory and receivables were 49.95 percent, 34.14 percent, 16.97 percent and 0.50 percent respectively. CV of receivables was highest which is 133.70, percent and CV of inventory was only 10.56 percent it shows that inventory is less fluctuating during the study period.

Table No. 4.2

Components of Current Assets in ULL *(Rs. in Lakhs)*

FY	Cash & Bank Balance		Loan, Advance & Deposit		Inventory		Receivables		Total CA Amount
	Amt.	%	Amt.	%	Amt.	%	Amt.	%	
060/61	3915.32	54.06	514.35	7.1	1842.16	25.44	970.63	13.4	7242.45
061/62	4433.11	49.73	606.17	6.8	2297.65	25.78	1577.21	17.69	8914.15
062/63	2426.72	32.72	1044.48	14.08	2561.68	34.54	1383.19	18.66	7416.06
063/64	1016.02	15.87	802.91	12.55	3216.25	50.26	1364.50	21.32	6399.68
064/65	989.89	13	1041.48	13.67	4101.17	53.87	1481.33	19.46	7613.86
065/66	3820.50	48.23	563.29	7.11	2473.17	31.22	1065.08	13.44	7927.97
Average	**2766.93**	**35.60**	**762.11**	**10.22**	**2748.68**	**36.85**	**1306.99**	**17.33**	**7585.70**
S.D.	**1519.49**	**17.93**	**238.61**	**3.56**	**797.99**	**12.32**	**238.41**	**3.25**	**828.97**
C.V.	**54.92**	**50.38**	**31.31**	**34.83**	**29.03**	**33.44**	**18.24**	**18.78**	**10.93**

Source: Annual Report of ULL

From the above table the components of current assets shows that the major amount of current assets was cash and bank balance in FY 2060/61 which was 54.06% and next major part is stock and receivables. In F.Y 2061/62, 2062/63, 2063/64, 2064/065 the position of cash balance was in decreasing trend. 2061/062 it was decreased by 5% and in 2063/64 it was also decreased by 17% but in fy2065/66 it was increased and gone up by 15.23% and reached to 48.23% of current assets, loan and advance,

deposit amount is in the constant trend in FY 2062/63, 2063/64, 2064/65 and it was decreased by 6% in FY 2065/66.

Another major part of current assets was stock in ULL. It was 25.44% in FY 2060/61 and 25.78% in FY 2061/62 and slightly increased in FY 2062/63. In FY 2063/64 it was drastically increased and 50% of current assets were occupied by inventory. In FY 2064/65 it was also increased and occupied 53.87% of current assets. In FY 2065/66 inventory was 31.32% of current assets .receivables amount shows the 13% to 4% of current assets in various FY.

In comparison of HCIL, ULL shows the sound working capital management. Being a private owned company ULL is a good position in comparison of HCIL.ULL makes credit sales also, the amount of receivables is not more than 21% of current assets which shows that the credit sales made by ULL is not adversely affect the WC. In HCLL the major part of current assets is occupied by loan & advance and inventory but in ULL major part is occupied by cash balance and than after inventory. The average percent of inventory and cash balance were 36.85 percent and 35.60 percent which shows that these two items occupies the major portion of current assets for loan and advance average percent was 10.22 percent and for receivables it was 17.33 percent.

Cash and bank balance is highly fluctuating since it has higher CV. Which were 54.92 percent and receivables was less fluctuating it has 18.24 percent coefficient of Variation.

4.3 Components of Current Liabilities

Current liabilities is a short term obligation which is payable within a year. It is the integral part of working capital policy. The composition of

current liabilities at ULL and HCIL are sundry creditors, provisions, short terms loan etc. the following table depicts the amount and their percentage of different components of current liabilities.

Table No. 4.3

Components of Current Liabilities in HCIL *(Rs. in Lakhs)*

FY	Creditors & Other Payables		Short Term Loan		Long Term Loan		Provisions		Total Amount
	Amt.	%	Amt.	%	Amt.	%	Amt.	%	
060/61	3734.91	0.412	75.23	0.0083	3233.8	0.357	2019.58	0.223	9063.52
061/62	4003.3	43.26	0.01	0	3193.8	34.51	2057.27	22.23	9254.4
062/63	3974.05	41.68	0.01	0	2993.8	31.4	2566.2	26.92	9534.1
063/64	3860.95	41.47	0.01	0	2443.8	26.25	3004.53	32.27	9309.3
064/65	1617.74	16.06	0	0	4108.41	40.8	4343.97	43.14	10070
065/66	1086.62	11.63	0	0	5218.14	55.87	3035.06	32.5	9339.8
Average	**3046.26**	**25.75**	**12.54**	**0.00**	**3531.96**	**31.53**	**2837.77**	**26.21**	**9428.52**
S. D.	**1326.31**	**18.67**	**30.71**	**0.00**	**985.14**	**18.37**	**858.81**	**14.52**	**348.79**
C.V.	**43.54**	**72.50**	**244.83**	**244.95**	**27.89**	**58.25**	**30.26**	**55.40**	**3.70**

Source: Annual Report of HCIL

Current liabilities of HCIL includes creditors and other payables, short term loans, long term loan which matured in the year and provisions creditors is the major portion of current liabilities in HCIL. Creditors show the constant ratio in FY 2060/061 to 2063/64 between 41.21 percent and 43.26 percent, it was reduced by 27% in FY 2064/65 and further reduced by 5% in FY 2065/66. When long term loan payable was increased in FY 2064/65 and 2064/65. The amount of provision was also in increasing trend. Short term loan is the small portion of working capital which was 0.83% in FY 060/61 and it was negligible amount in other FY. Another major source of CL was provisions which was constant in FY 2060/61 and 2061/62 and increased slightly in FY 2062/063, 2063/064 and 2064/065 in FY 2065/066 it was decreased by 11%. The average percent of creditors, long term loan matured within a year, provisions and short term loan were 32.45 percent, 37.42 percent, 29.89 percent and 0.83 percent in HCIL. The major protion of CL

occupies long term loan payable in a year. Short term loan is highly fluctuating it has 244.83 percent coefficient of variation. Provision is less fluctuating than other current liabilities.

Table No. 4.4

Composition of Current Liabilities in ULL *(Rs in Lakhs)*

FY	Creditors		Short Term Loans		Provision		Total Amount
	Amt.	%	Amt.	%	Amt.	%	
060/61	3357.16	61.75	-	-	2079.90	38.25	5437.06
061/62	3702.37	41.98	-	-	5117.85	58.02	8820.23
062/63	3533.09	47.6	-	-	3889.23	52.34	7422.32
063/64	3857.82	50.25	-	-	3819.83	49.75	7677.65
064/65	3841.11	47.15	-	-	4304.61	52.85	8145.73
065/66	2667.01	52.42	-	-	2420.96	47.58	5087.97
Average	**3493.10**	**50.19**			**3605.40**	**49.80**	**7098.49**
S.D.	**447.31**	**6.66**			**1151.78**	**6.66**	**1503.59**
C.V.	**12.81**	**13.27**			**31.95**	**13.37**	**21.18**

Source: Annual Report of ULL

In above table we can found that the components of current liabilities which consists creditors and provisions there is no short term loan in ULL. The total current liabilities of ULL are increased in FY 2061/62 and in FY 2060/63 it was decreased then after it was slowly increased in 2063/64 and in 2064/65. But in FY 2065/66 it was decreased and reduced to only 5087.97 lakhs. The amount of creditors is high in FY 2060/61 and lowest in 2061/62.the amount of provisions is highest in FY 2061/62 where as it was minimum in FY 2060/61. Both of the items of current liabilities represent 40% to 50% of current liabilities in several fiscal year. The average percent of creditors was 50.19 percent and for creditors it was 49.80 percent. The amount of provisions is less fluctuating than

provision CV for creditors was 12.81 percent and for provisions it was 31.95 percent.

4.4 Net Working Capital of ULL and HCIL

Every manufacturing concern needs the working capital for its on interrupted production process. To achieve the goal of the organization, the working capital financing decision is an integral decision of the organization. The amount invested in working capital should be neither more nor less because both the position of working capital affects not only liquidity but also profitability of the organization .the access of the firm in sources of funds also affects the financing policy of working capital. the organization has to raise funds required for working capital from different sources like short term, long term and spontaneous financing. The following table shows the amount of working capital and financial from short term as well as long term sources of funds.

Table No. 4.5

Working Capital of HCIL *(Rs. In Lakhs)*

FY	CA	CL	WC
060/61	4521.15	9063.52	(4542.37)
061/62	4710.07	9254.39	(4544.32)
062/63	5274.44	9534.06	(4259.62)
063/64	5265.58	9309.29	(4043.77)
064/65	6256.11	10070.11	(3814.00)
065/66	6841.58	9339.82	(2498.30)
Average	**5478.16**	**9428.53**	**-3950.40**
S.D.	**900.74**	**348.83**	**766.12**
C.V.	**16.44**	**3.70**	**-19.39**

Source: Annual Report of HCIL

The working capital position of HCIL is negative in study period. CA is less than CL in different period, it shows that CL is invested in permanent assets which is the danger situation for the company .the working capital position of HCIL is not satisfactory .being a government owned

organization govt. granted different subsidy and guarantee for the payment. By observing the above figure we can conclude that the HCIL is not operating properly in terms of working capital management, receivables management, cash management and inventory management. Current assets is 50% less than current liabilities which indicates a danger situation for the organization .but the negative figure of WC was constantly improved in different FY and it was 2498(lakhs) in FY 2065/66 where it was 4542(lakhs) in FY 2060/61. Standard deviation of current assets is 900.74 percent and current liabilities is 348.83 percent, CV of CA is 16.44 percent and CL is more consistent than current assets.

Table No. 4.6

Working Capital of ULL *(Rs. In Lakhs)*

FY	CA	CL	NWC	STF		LTF	
				Amt.	%	Amt	%
060/61	7242.45	5437.06	1805.39	5437.06	75.07	1805.39	24.93
061/62	8914.15	8820.23	93.92	8820.23	98.95	93.92	1.05
062/63	7416.06	7422.32	(6.26)	-	-	-	-
063/64	6399.68	7677.65	(1277.97)	-	-	-	-
064/65	7613.86	8145.73	(531.86)	-	-	-	-
065/66	7921.97	5087.97	2834.00	5087.97	64.23	2834.00	35.77
Average	**7584.70**	**7098.49**	**486.20**	**6448.42**	**79.42**	**1577.77**	**20.58**
S.D.	**828.48**	**1503.59**	**1536.07**	**2061.45**	**17.76**	**1384.15**	**17.76**
C.V.	**10.92**	**21.18**	**315.93**	**31.97**	**22.37**	**87.73**	**86.30**

Source: Annual Report of ULL

The working capital position of ULL was fluctuating in several years. In FY 2060/61 there was RS 1805(lakhs) NWC and it was decreased in 2061/62 to Rs 93(lakhs). In FY 2062/63 to 2064/65 WC was negative .in FY 2063/64 there was a negative WC Rs 1278(lakhs) and in FY the company is able to improve working capital position which 2834(lakhs).

In FY 2060/61 financing of current assets is made through current liabilities i.e short term financing which was 75.07% and through long term financing was 24.93%. Investment made in current assets by long term sources of fund is known as working capital. In FY 2061/62 investment made in current assets through short term financing was 98.95% where as through long term sources of fund was only 1.05% .therefore the working capital is only 1.05% of current assets in FY 2062/63 to 2064/65 there is negative NWC. It means current liabilities is invested in long term assets. In FY 2065/66 there was a dramatically changes in the situation of working capital .it was increased to 5088(lakhs) current assets is financed through long term sources of fund was 35.77% and through short term sources of fund was 64.23%.

Coefficient of Variation of CA is 10.92 percent and for CL it is 21.18 percent and for WL it is 315.94 percent it shows that CA is more consisted than CL but WL is highly fluctuating since it has 315.94 percent coefficient of variation.

In comparison of HCIL, ULL shows satisfactory position in the level of working capital. Being a multinational company NWC position of ULL should be made in reasonable level neither it is too low nor it is too high. It is observed from the above data both of the companies should try to improve the position of working capital.

4.5 Current Assets Investment Policy

Every firm needs current assets as well as fixed assets to operate its activities effectively. Current assets policy refers to the policy of regarding the total amount of current assets required to support the given level of sales. The firm may follow different investment policy according to their attitudes towards the risk and the nature of business. The current assets policy of the HCIL & ULL have been analyzed in the terms of relationship between current assets with sales and current assets with fixed assets.

4.5.1 Ratio of Current Assets to Fixed Assets (CAFA)

For the purpose of success of any manufacturing concerns firms should invest in current assets as well as fixed assets to support a particular level of output. Therefore the firm should determine the proper portion of current assets with fixed assets .the level of current assets can be measured by relating current assets to fixed assets ratio. Higher the ratio indicates a conservative current assets policy (WC) and lower the ratio indicates an aggressive policy. Aggressive policy assures that higher profitability high risk and poor liquidity.

Table No. 4.7

Current Assets to Fixed Assets Ratio of HCIL *(Rs. in Lakhs)*

FY	CA	FA	CA to FA
060/61	4521.15	3109.32	5.45
061/62	4710.07	2868.57	1.64
062/63	5274.44	2655.35	1.99
063/64	5265.52	2548.98	2.07
064/65	6256.11	2489.09	2.51
065/66	6841.58	2632.46	2.60
Average	**5478.15**	**2717.30**	**2.71**
S.D.	**900.74**	**231.52**	**1.39**
C.V.	**16.44**	**8.52**	**51.29**

Source: Annual Report of HCIL

The above table shows the investment made in fixed assets is fluctuating and in increasing trend but the investment made in fixed assets in decreasing trend. The ratio of current assets to fixed assets is in increasing trend of HCIL. In FY 2060/61 it was 1.454 times and in FY 2065/66 it was 2.5989 times. Investment made in current assets is higher than the fixed assets. It shows the conservative policy of working capital.

The standard deviation of CA is 900.74 and SD of FA is 231.521. Where the CV of CA is 16.44 percent and CV of FA is 8.52 percent. SD of CA is higher than FA. CV of CA is more than FA. It shows that FA is more consistent than CA.

Table No. 4.8

Current Assets to Fixed Assets Ratio of ULL *(Rs. in Lakhs)*

FY	CA	FA	CA to FA
060/61	7242.45	1357.11	5.34
061/62	8914.15	1277.76	6.98
062/63	7416.06	1457.76	5.09
063/64	6399.68	1489.34	4.30
064/65	7613.86	1402.18	5.43
065/66	7921.97	1441.46	5.50
Average	**7584.7**	**1404.27**	**5.44**
S.D.	**828.48**	**77.09**	**0.87**
C.V.	**10.92**	**5.49**	**16.04**

Source: Annual Report of ULL

It's position shows also a higher of CA to fixed assets. The ratio was fluctuating during the study period .it varies form 4.297 to 6.976 times during the study period .current assets of ULL was 6 times more than fixed assets .it shows a conservative working capital position .investment made in current assets and fixed assets are fluctuating in the study period.

Standard deviation of CA is 828.48 and where as SD of FA is 77.09. Higher the amount of CA than FA it shows higher value of standard

deviation. The CV of CA is 10.92. Where as it was 5.49 percent for FA. It shows that FA is more consistent that CA.

4.5.2 Current Assets to Sales Ratio of HCIL & ULL

Sales are only that activity which generates cash inflow so it is vital for manufacturing company. The survival and growth of every manufacturing firm depend upon the proportion of sales of the product which they produce. The company's sales policy depends upon the availability of resources and demand for the product. It is greatly affected by the financial policy of the organization upon their strategic planning. Therefore the co-ordination between these elements of the company is the most necessary .thus the company invests in current assets to support the given level of sales, which depends upon the current assets investment policy and the attitude of management. When a firm holds relatively large amount of current assets to support a given level of turnover then it is called relaxed policy. When a firm holds relatively minimum amount of current assets to support the turnover then it is called restricted policy and between these two policies is called a moderate policy.

The relationship between these two policies are presented below.

Table No. 4.9

Ratio of Current Assets to Sales *(Rs. In Lakhs)*

FY	HCIL			ULL		
	CA	**Sales**	**CA to Sales**	**CA**	**Sales**	**CA to Sales**
060/61	4521.15	6554.05	0.69	7242.45	15249.01	0.47
061/62	4710.07	6587.20	0.72	8914.15	14848.95	0.60
062/63	5274.44	6559.69	0.80	7416.06	14696.86	0.50
063/64	5265.58	7063.04	0.75	6399.68	18185.28	0.35
064/65	6256.11	9896.91	0.63	7613.86	21445.89	0.36
065/66	6841.58	9982.77	0.69	7921.97	26258.27	0.30
Average	**5478.16**	**7799.63**	**0.71**	**7584.70**	**18447.38**	**0.43**
S.D.	**900.74**	**1729.91**	**0.59**	**828.48**	**4632.81**	**0.11**

C.V.	**16.44**	**22.18**	**82.47**	**10.92**	**25.11**	**26.21**

Source: Annual Report of HCIL & ULL

The ratio of current assets to sales was fluctuating in HCIL during the study period. It varies from 63% to 80%. WC position of HCIL shows relaxed policy. When the current assets are more than 50% of sales it is known as relaxed policy. In order to maximize the sales of the company the company should invest moderate amount in current assets.

The ratio of ULL was also fluctuating and it is varies from 30% to 60%. It was highest in FY 2061/62 and it was minimum in 2065/66. The company is reducing its ratio in FY 2063/64, 2064/65 and in FY 2065/66. It shows that the company followed a lean and mean policy or restricted policy of current assets.

Coefficient of Variation of CA is 16.44 percent where as it was 22.18 percent in HCIL sales. It shows that CA is more consistent that sales.

In ULL CV of CA is 10.92 percent and for sales the CV is 25.11 percent it also indicates that the sales is highly fluctuating then CA in ULL.

4.6 Turnover Position

The behaviour of working capital utilization and improvement can be analyzed with the help of turnover ratio .these ratios measure the effectiveness with which a firm uses its available resources. Turnover ratio indicates the efficiency with which the resources are being concerted in to sales. The turnover ratio and conversion period depends on the firm's working capital policy .is the firm follows a conservative , it will have low inventory turnover ratio and high conversion period and is the firm follows a aggressive policy, it will have high turnover ratio lowest conversion period.

4.6.1 Inventory Turnover Ratio and Inventory Conversion Period

Inventories are the stock of raw material finished goods and semi finished goods. Inventory is the major part of the current assets. The shortage of required inventory results irregular production and hamper the production process. The high level or low level of inventory is the unfavorable situation of the business organization.

Table No. 4.10
Inventory Turnover Ratio and Inventory Conversion Period of HCIL

FY	Sales (in Lakh)	Inventory (In Lakh)	ITR (Times)	ICP (Days)
060/61	6554.05	2545.25	2.58	142
061/62	6587.20	2396.37	2.75	133
062/63	6559.69	2299.31	2.85	128
063/64	7063.04	2625.92	2.69	136
064/65	9896.91	2834.26	3.49	105
065/66	9982.77	3044.06	3.28	112
Average	**7773.94**	**2624.20**	**2.94**	**126**
S.D.	**1688.92**	**277.16**	**0.36**	**14**
C.V.	**21.73**	**10.56**	**12.35**	**11**

Sources: Annual Report of HCIL

The above table shows that TTR of HCIL is fluctuating between 2.575 times to 3.492 times during the study period. The inventory turnover ratio of HCIL is in increasing trend it shows the remarkable sign of good performance .but the turnover ratio is very low, due to this reason inventory conversion period is fluctuating 105 to 142 days. Inventory conversion period is higher period, but the situation is improving.

The SD of net sales and closing inventory is 1688.92 and 277.17 respectively CV is 21.73 percent 10.57 percent respectively. Closing Inventory is more consistent than sales.

Table No. 4.11

Inventory Turnover Ratio and Inventory Conversion Period of ULL

FY	Sales (in Lakh)	Inventory (In Lakh)	ITR (Times)	ICP (Days)
060/61	15249.01	1842.16	8.28	44
061/62	14848.95	2297.65	8.20	45
062/63	14696.86	2561.68	5.74	64
063/64	18185.28	3216.25	5.65	65
064/65	21445.89	4101.17	5.23	70
065/66	26258.27	2473.17	10.62	35
Average	**18447.38**	**2748.68**	**7.29**	**54**
S.D.	**4632.81**	**797.99**	**2.11**	**14**
C.V.	**25.11**	**29.03**	**28.94**	**27**

Source: Annual Report of ULL

Inventory turnover ratio of ULL is fluctuating between 5.229 to 10.62 times and conversion period is fluctuating 35 days to 70 days in FY. The turnover ratio was 8.278 times and conversion period was 44 days and the turnover ratio is decreased in 2061/62, 2062/63, 2063/64, 2064/65. But the situation was improved and it was 10.62 times in 2065/66 and conversion period was 35 days.

Standard deviation of sales is 18447.38 and for closing inventory it is 797.99 and CV of sales is 25.11 percent and for inventory it is 29.03 percent it shows that sales is more consistent than inventory in ULL.

In comparison of HCIL and ULL inventory turnover ratio and conversion period is satisfactory and it shows the better utilization of inventory for converting it into sales. From the point of view of ITR and inventory conversion period ULL's position is better than HCIL.

4.6.2 Receivables or Debtors Turnover Ratio & Average Collection Period

Receivables (debtors) is the another major portion of current assets. It shows the efficiency of the firm with collection of book debts. The higher ratio, the better utilization of resources and quickly collection of cash from creditor of cash from credit sales.

Table No. 4.12

Receivables Turnover and ACP of HCIL

FY	Sales (Rs. In Lakh)	Debetors (Rs. In Lakh)	DTR (Times)	ACP (Days)
060/61	6554.05	36.80	178.08	3
061/62	6587.20	82.06	80.27	5
062/63	6559.69	5.55	1182.07	1
063/64	7063.04	5.15	1372.45	1
064/65	9896.91	7.29	1357.45	1
065/66	9982.77	8.31	1201.01	1
Average	**7773.94**	**24.19**	**895.22**	**2**
S.D.	**1688.92**	**30.84**	**599.27**	**2**
C.V.	**21.73**	**127.48**	**66.94**	**84**

Source: Annual Report of HCIL

It is observed from the above data that most of the sales of HCIL are made in cash basis. Therefore amount of receivables is the small portion of current assets. The turnover ratio is excessively high in HCIL and average collection period is 1 day to 5 days. It shows that HCIL policy on credit sales and collection is restricted policy.

Standard deviation of sales is 1688.92 and for debtors it is 30.84 and CV of sales 21.72 percent and it is 127.48 percent for debtors. It shows that a sundry debtor is highly fluctuation than net sales.

Table No. 4.13
Receivables Turnover and ACP of ULL

FY	Sales (Rs. In Lakh)	Debtors (Rs. In Lakh)	DTR (Times)	ACP (Days)
060/61	15249.01	970.63	15.71	24
061/62	14848.95	1577.21	9.41	39
062/63	14696.86	1383.19	10.63	35
063/64	18185.28	1364.50	13.33	28
064/65	21445.89	1481.33	14.48	26
065/66	26258.27	1065.02	24.66	15
Average	**18447.38**	**1306.98**	**14.70**	**28**
S.D.	**4632.81**	**238.42**	**5.41**	**8**
C.V.	**25.11**	**18.24**	**36.83**	**30**

Source: Annual Report of ULL

The receivables turnover on ULL is normal to be said as per fast moving consuming goods manufacturing organization. Turnover ratio is varies from 9 times to 24 times on ULL and average collection period is range from 15 days to 39 days . It was highest in 2061/62 and collection period is minimum in 2065/66. The industry maintaining its turnover ratio and ACP on reasonable basis.

Standard deviation of sales and receivables were 4632.81 and 238.42 respectively and CV of sales is 21.72 percent and 16.15 percent for debtors it shows that debtors is more consistent than sales.

Cash conversion cycle indicates the time taken to collect the cash. How far the company is able to collect the cash is explained by cash conversion cycle.

Table No. 4.14

Cash Conversion Cycle = ICP + RCP - PDP

(In Days)

	HCIL				ULL			
FY	**RCP**	**ICP**	**PDP**	**Cash Conversion Cycle**	**RCP**	**ICP**	**PDP**	**Cash Conversion Cycle**
060/61	3	180	265	82	24	69	125	32
061/62	5	185	306	118	39	208	142	105
062/63	1	165	285	119	35	98	135	-2
063/64	1	191	281	89	28	90	108	10
064/65	1	143	82	62	26	108	101	33
065/66	1	138	49	88	15	53	57	33
Average	**2**	**167**	**212**	**43**	**28**	**105**	**112**	**21**

Source: Table No. 4.12 & 4.13 & Appendix VI, VII

Above table shows there is the highest collection period is 88 days in FY 2065/66 in HCIL. Where as the highest period in ULL was 105 days in FY 2061/62. In HCIL it was negative since 2060/61 to 2063/64 it shows that the company is able to take cash in advance form clients and there is not delay time for collection of dues amount. In FY 2064/65 and in 2065/66 it was positive. Overall position of CLL in HCIL is satisfactory. Average Collection Period was negative 43 days.

In ULL it was fluctuating. Highest period was 105 days in FY 2061/62, which is unfavorable for company. The lowest collection period was -32 days in FY 2060/61. The average period was 21 days.

4.6.3 Total Assets Turnover Ratio

This ratio shows the relationship between sales and total assets. The main objective of this ratio is to determine the efficiency with which the total assets are realized.

Table No. 4.15
Total Assets Turnover Ratio of HCIL

FY	Sales (Rs. In Lakh)	Total Assets (Rs. In Lakh)	TATR (In Times)
060/61	6554.05	4521.15	1.45
061/62	6587.20	4710.07	1.40
062/63	6559.69	5274.44	1.24
063/64	7063.04	5265.58	1.34
064/65	9896.91	6256.11	1.58
065/66	9982.77	6783.15	1.47
Average	**7773.94**	**5468.42**	**1.42**
S.D.	**1688.92**	**883.19**	**0.12**
C.V.	**21.73**	**16.15**	**8.21**

Source: Annual Report of HCIL

The above table shows the total assets turnover ratio of six years. It was ranging from 1.24 times to 1.58 times. The sales and total assets both are in increasing trend. Total assets turnover ratio of HCIL is 1.24 times to 1.58 times which is the minimum amount than average industry ratio. It shows that the assets are not properly utilized for generating revenues.

Standard deviation of sales is 1688.92 and for total assets it is 883.19. CV for sales is 21.73 percent and for total assets it is 16.15 percent. In comparison of total assets sales is highly fluctuating.

Table No. 4.16

Total Assets Turnover Ratio of ULL

FY	Sales (In Lakh)	Total Assets (In Lakh)	TATR (In Times)
060/61	15249.01	9397.20	1.62
061/62	14848.95	10989.56	1.35
062/63	14696.86	9671.47	1.52
063/64	18185.28	10025.52	1.81
064/65	21445.89	10852.54	1.98
065/66	26258.27	11966.63	2.19
Average	**18447.38**	**10483.82**	**1.75**
S.D.	**4632.81**	**963.45**	**0.31**
C.V.	**25.11**	**9.19**	**17.77**

Source: Annual Report of ULL

The table shows that the total assets turnover ratio of ULL. The ratio is highest than HCIL's ratio, which shows that the assets are properly utilized for increasing the revenue in ULL. The ratio is range from 1.35 to 2.194 times. The ratio was fluctuating during the study period. In FY 2060/61 it was 1.623 and In FY 2061/62 and in FY 2062/63 it was decreased to 1.52 times and than after it was increased and highest one in FY 2065/66. It shows that the industry is improving its position in respect of utilization of total assets of generating sales.

Standard deviation of sales is 4632.81 and for total assets it is 963.45 and CV of sales 25.11 percent and for total assets 9.19 percent it shows that total assets is more consistent than sales.

The comparative analysis between HCIL and ULL the position of ULL is better than HCIL in respect of total assets turnover ratio.

4.6.4 Cash and Bank Balance Turnover Ratio

It shows the effectiveness of management in case of application of cash in ordinary course of business. It measures how rapidly cash can convert into sales in the company. It is calculated by Sales divided by cash and bank balance.

Table No. 4.17

Cash and Bank Balance Turnover Ratio of HCIL *(Rs. in Lakhs)*

FY	HCIL			ULL		
	Net Sales	**Cash & Bank Balance**	**Ratio (*Times*)**	**Net Sales**	**C & Bank Balance**	**Ratio (*Times*)**
060/61	6554.05	110.81	59.15	15249.01	3915.32	3.89
061/62	6587.20	502.63	13.11	14848.95	4433.11	3.35
062/63	6559.69	1251.19	5.24	14696.86	2426.72	6.06
063/64	7063.04	1182.14	5.97	18185.28	1016.02	17.90
064/65	9896.91	1305.22	7.58	21445.89	989.89	21.66
065/66	9982.77	1482.22	6.74	26258.27	3820.50	6.87
Average	**7773.94**	**972.37**	**16.30**	**18447.38**	**2766.93**	**9.96**
S.D.	**1688.92**	**539.52**		**4632.81**	**1519.49**	
C.V.	**21.73**	**55.49**		**25.11**	**54.92**	

Source: Annual Report of HCIL & ULL

The above table shows the turnover position of the cash and bank balance maintained by the HCIL and ULL during the study period. Both of the companies have cash and bank balance and turnover ratios are in fluctuating trend.

The ratio of HCIL is in decreasing trend and the highest ratio was 59.15 times in FY 2060/61, the average ratio was 16.3 times. whereas in ULL the lowest ratio is 3.35 in FY 2061/62 and the highest ratio is 21.66 in FY 2064/65.

SD of Net sales and cash and bank balance is 1688.92 and 539.52 in HCIL as well as CV was 21.72% and 55.49% respectively. It shows that the cash & bank balance varies highly than net sales.

In ULL SD of Net Sales and Cash and Bank balance was 4632.81 and 1519.49 where as CV was 25.114% for net sales and for cash and bank balance it was 54.92%. It indicates that the net sales have less co-variation than cash and bank balance. So net sales is more consistent in ULL in comparison of HCIL.

4.7 Liquidity Ratio

Liquidity ratio indicates the company's ability to pass its short term obligations. Liquidity of any organization is directly related with working capital. In other words one of the main objectives of working capital management is keeping sound liquidity position. The industry, which is relatively, maintained the sound working capital position to maintain its day to day requirement. Liquidity is a prerequisite for the avoidance of technical insolvency and ultimately for the survival of an enteritis. However it is a very crucial problem in maintaining the appropriate liquidity of an organization as it indicates the risk return trade with highest or lower liquidity level. Higher liquidity reduces the risk but decreases the profitability and vice versa.

4.7.1 Current Ratio

Current ratio measures the short term solvency of the firm. Higher the ratio represents the better liquidity position .in other words it represents a margin of safety i.e a cushion of protection for creditors and the highest the current ratio greater the margin of safety. Current ratio is calculated by dividing current assets to current liabilities. Current assets includes: Inventory, cash & bank balances, loan advance, deposit, receivables etc. and current liabilities includes sundry creditors and provisions.

Table No. 4.18

Current Ratio of HCIL *(In Lakhs)*

FY	Current Assets	Current Liabilities	Current Ratio
060/61	4521.15	9063.52	0.50
061/62	4710.07	9254.39	0.51
062/63	5274.44	9534.06	0.55
063/64	5265.52	9309.29	0.57
064/65	6256.11	10070.11	0.62
065/66	6841.52	9339.82	0.73
Average	**5478.14**	**9428.53**	**0.58**
S.D.	**900.72**	**348.83**	**0.09**
C.V.	**16.44**	**3.70**	**14.94**

Source: Annual Report of HCIL

The current ratio is less than the standard ratio of 2: 1. Current ratio shows the poor liquidity position of HCIL. The ratio is ranges from 0.4988 times to 0.7225 times, the ratio in increasing trend. The company is not able to pay its current obligations in time.

There is a high risk in the organization and due to aggressive working capital position of the company, it's a matter of problem to management how it will manage the resources to pay short term obligation in time. Current liabilities are fully unsecured with the current assets. The ratio is in increasing trend but the trend is slow.

Standard deviation of CA is 900.73 and for CL 348.83 and CV of CA is higher than CL. It shows that CA is more fluctuating than CL and CL is more consistent.

Table No. 4.19

Current Ratio of ULL *(Rs. in Lakhs)*

FY	Current Assets	Current Liabilities	Current Ratio
060/61	7242.45	5437.06	1.33
061/62	8914.15	8820.23	1.01
062/63	7416.06	7422.32	1.00
063/64	6399.68	7677.65	0.83
064/65	7613.86	8145.73	0.93
065/66	7921.97	5087.97	1.56
Average	**7584.70**	**7098.49**	**1.11**
S.D.	**828.48**	**1503.59**	**0.28**
C.V.	**10.92**	**21.18**	**24.76**

Source: Annual Report of ULL

The above table shows that the current assets and current liabilities position of ULL during the study period. The ratio shows that it is less than normal standard ratio 2:1. The organization is not able to pay its current liabilities in time. ULL is a manufacturing company and its current ratio shows the poor liquidity position, which adversely of the organization. Even in some cases it distorts the production process of the organization due to fund crisis in the organization. The ratio is in fluctuating trend. It was 1.32 times in 2060/61 and decreased in 2061/62 and continuously decreased upto 2063/64 and than after. It was slightly improving and highest one in 2065/66.

SD of CA is 828.48 for CL it is 1503.59, where as CV of CL is more than CA it shows that CA is more consistent than CL.

In comparison of HCIL the working capital position and current ratio of ULL is satisfactory.

4.7.2 Quick Ratio

Current ratio measure the short term solvency position on gross term. it includes other non liquid assets too. Thus it does not measure the actual liquidity position of the firms. Quick ratio is a more rigorous test of liquidity than the current ratio and when used in conjunction with it. It gives a better picture of the firm's ability to meet its short term debts out of short term assets. Quick ratio is calculated by dividing the quick assets by the current liabilities.

Table No. 4.20

Quick Ratio of HCIL *(Rs. in Lakhs)*

FY	Quick Assets	Current Liabilities	Quick Ratio
060/61	1975.90	9063.52	0.22
061/62	2313.50	9254.39	0.25
062/63	2975.13	9534.06	0.31
063/64	2639.60	9309.29	0.28
064/65	3421.86	10070.11	0.34
065/66	3797.46	9339.82	0.41
Average	**2853.91**	**9428.53**	**0.30**
S.D.	**683.58**	**348.83**	**0.07**
C.V.	**23.95**	**3.70**	**22.27**

Source: Annual Report of HCIL

The higher portion of non liquid assets (inventory) in HCIL the quick ratio shows the poor liquidity position of HCIL. The ratio is in fluctuating trend. The ratio is for below than normal standard ratio of 1:1. The poor liquidity position of HCIL indicates that the mismanagement of resources in the organization to meet its needful activities.

SD of quick assets 683.58 and CL 348.83 and CV of quick assets is more than CL it shows that quick assets is highly fluctuating than CL.

Table No. 4.21

Quick Ratio of ULL *(Rs in Lakhs)*

FY	Quick Assets	Current Liabilities	Quick Ratio
060/61	5400.29	5437.06	0.99
061/62	6616.50	8820.23	0.75
062/63	4854.38	7422.32	0.65
063/64	3183.43	7677.65	0.41
064/65	3512.70	8145.73	0.43
065/66	5448.80	5087.97	1.07
Average	**4836.02**	**7098.49**	**0.72**
S.D.	**1292.02**	**1503.59**	**0.27**
C.V.	**26.72**	**21.18**	**38.27**

Source: Annual Report of ULL

Quick ratio of ULL shows the fluctuating trend it is nearest to standard ratio in FY 2060/61 and more than standard ratio of 1:1 in FY 2065/66. In FY 2061/62,2062/63 it shows the less than standard but not so below than normal ratio which shows that the portion of non liquid assets in ULL is small amount .quick ratio of ULL shows the better quality of its current assets.

SD of quick assets is 1292.02 and for CL it is 1503.59 where as CV of quick assets is 26.72% and it is 21.18% for CL. Therefore the CL is more consistent than quick assets in ULL.

In comparison with HCIL the ULL shows the better position to meet its short term obligations.

4.8 Profitability Position

The profitability ratio shows the degree of success in achieving desired profit. Profitability is a measure of operating efficiency and the search for it provides incentives to achieve efficiency. The profitability position of the firm also depends on the working capital policy. When the firm is applying a conservative working capital policy has a tow profitability ratio and the firm with an aggressive policy has a high profitability ratio .the profitability of a firm can measured with the help of the following ratios.

4.8.1 Gross Profit Margin

Earning the profit is the main objective of every business organizations. The gross profit provides the information about the manufacturing cost of the product and sales on it. The gross profit ratio is the excess of sales over cost of goods sold.

Table No. 4.22

Gross Profit Margin of HCIL *(Rs in Lakhs)*

FY	Sales	Gross Profit	Gross Profit Ratio(%)
060/61	6554.05	1477.90	22.55
061/62	6587.20	1871.71	28.41
062/63	6559.69	1539.28	23.47
063/64	7063.04	2114.41	29.94
064/65	9896.91	2752.58	27.81
065/66	9982.77	2932.56	29.38
Average	**7773.94**	**2114.74**	**26.93**
S.D.	**1688.92**	**611.79**	**3.14**
C.V.	**21.73**	**28.93**	**11.65**

Source: Annual Report of HCIL

The above table shows the % of gross profit to sales. The gross profit ratio is in fluctuating trend it would be increased in FY 2062/63, 2063/64 where as it was decreased in 2064/65 and again increased in FY 2065/66. It was highest in 2065/66 and lowest figure in 2062/63. Gross profit margin is not a satisfactory for the organization which shows that the manufacturing process cost is high amount in the organization.

SD of sales in HCIL is 1688.92 and for GP is 611.79, where as CV is 21.72% for sales and for GP it is 28.93%. Therefore it is concluded that sales in more consistent than GP.

Table No. 4.23

Gross Profit Margin of ULL

FY	Sales	Gross Profit	Gross Profit Ratio(%)
060/61	15249.01	5557.92	36.45
061/62	14848.95	5470.77	36.84
062/63	14696.86	5294.49	36.03
063/64	18185.28	5369.08	29.52
064/65	21445.86	7743.78	36.11
065/66	26258.27	9292.70	35.39
Average	**18447.37**	**6454.79**	**35.06**
S.D.	**4632.80**	**1674.09**	**2.75**
C.V.	**25.11**	**25.94**	**7.86**

Source: Annual Report of ULL

The above table depicts the gross profit margin ratio of ULL. It was in constant trend in study period except in FY 2063/64. In other period shows the constant trend 35% to 36% of gross margin ratio.

SD of sales and GP are GP are 4632.80 and 1674.09 respectively and CV is 25.11% and 25.94% for sales and GP. It shows that the sales and GP are fluctuating in same trend.

In comparison of HCIL & ULL company shows a satisfactory result. It was more than 7% of HCIL ratio.

4.8.2 Net Profit Margin

Net profit margin shows the relationship between sales and net profit. Another yard stick is to measure the profitability of the business is net profit ratio.

The following ratio shows the profitability margin of ULL and HCIL.

Table No. 4.24

Net Profit Margin of HCIL *(Rs in Lakhs)*

FY	Sales	Net Profit	Net Profit Margin (%)
060/61	6554.05	207.22	3.17
061/62	6587.20	657.18	9.98
062/63	6559.69	398.88	6.08
063/64	7063.04	781.01	11.06
064/65	9896.91	945.55	9.55
065/66	9982.77	1063.25	10.66
Average	**7773.94**	**675.51**	**8.42**
S.D.	**1688.92**	**325.74**	**3.12**
C.V.	**21.73**	**48.22**	**37.09**

Source: Annual Report of HCIL

The net profit margin ratio shows the fluctuating trend in HCIL it was fluctuating between 3.17% to 11.06%. The lowest profit margin ratio is 3.17% in FY 2060/61 and highest is 11.05% in FY 2063/64. The net profit margin ratio shows the poor profitability position of the organization.

SD of Net Profit is 325.75 and for sales it is 1688.92 where as CV is 21.73% and 48.22% for sales and Net Profit. CV of sales is less than profit after tax so sales are more consistent than Net Profit.

Table No. 4.25

Net Profit Margin of ULL *(Rs in Lakhs)*

FY	Sales	Net Profit	Net Profit Margin (%)
060/61	15249.01	1407.83	9.23
061/62	14848.95	1891.99	12.74
062/63	14696.86	2381.57	16.21
063/64	18185.28	2630.65	14.47
064/65	21445.89	3351.22	15.63
065/66	26258.27	4440.43	16.91
Average	**18447.38**	**2683.95**	**14.20**
S.D.	**4632.81**	**1084.47**	**2.84**
C.V.	**25.11**	**40.41**	**20.00**

Source: Annual Report of ULL

Net profit margin ratio of ULL shows the increasing trend and the ratio is higher than HCIL .therefore profit ratio shows the better performance of the organization .the net profit margin ratio is lowest in FY 2060/61 and highest ratio in FY 2065/66.

SD of Net Profit is 1084.47 and for sales it is 4632.81 and coefficient of variation of sales and net profit is 25.11% and 40.41 respectively. Sales is more consistent than net profit.

4.8.3 Return on Total Assets

Return on total assets ratio shows the relationship between the total assets and net profit after tax. It measured the profitability of all financial resources invested in the firm's assets. It shows the earning power ratio of the firm from utilizing total investment.

Table No. 4.26

Return on Total Assets of HCIL *(Rs in Lakhs)*

FY	Net Profit After Tax	Total Assets	ROA (%)
060/61	207.22	4521.15	4.58
061/62	657.18	4710.07	13.95
062/63	398.88	5274.44	7.56
063/64	781.01	5265.52	14.83
064/65	945.55	6256.11	15.11
065/66	1063.25	6783.15	15.68
Average	**675.51**	**5468.41**	**11.95**
S.D.	**325.74**	**883.20**	**4.69**
C.V.	**48.22**	**16.15**	**39.20**

Source: Annual Report of HCIL

The above table shows that return on total assets which shows the fluctuating trend it was increased from 4.5% to 13.95% in FY 2061/62 but it was decreased in FY 2062/63 and again increased in last three years. It varies from 4.58% to 15.67%. The highest ROA is 15.67% in FY 2065/66.

SD of net profit after tax 325.75 and \for total assets it is 833.19 where as CV is 48.22% for net profit and for total assets it is 16.15%. Therefore total assets are more consistent than net profit.

Table No. 4.27

Return on Total Assets of ULL *(Rs in Lakhs)*

FY	Net Profit After Tax	Total Assets	ROA (%)
060/61	1407.83	9397.20	14.98
061/62	1891.99	10989.56	17.22
062/63	2381.57	9671.47	24.62
063/64	2630.65	10025.52	26.24
064/65	3351. 2174	10852.54	30.88
065/66	4440.43	11966.63	37.11
Average	**2683.95**	**10483.82**	**25.18**
S.D.	**1084.47**	**963.45**	**8.29**
C.V.	**40.41**	**9.19**	**32.93**

Source : Annual Report of ULL

The above table shows the return on total assets of ULL. It was in increasing trend in ULL.ROA is continuously increased up to FY 2065/66. The highest ROA is 37% is 2065/66 and lowest ROA is 14.98% in 2060/61.

SD of NPAT is 1084.47 and for total assets it is 963.45 where as coefficient of variation is 40.41% and for 9.19%. Therefore total assets is more consistent than net profit.

In comparison of ULL and HCIL profitability position is better than the HCIL. The assets of HCIL are not properly utilized to earn more profit but ULL is betterly utilized its assets to earn profit.

4.9 Statistical Analysis

To make the analysis more fruitful and meaning full certain statistical tools have been used. Here, Karl person's correlation coefficient and probable error is used to describe the relationship between gross working

capital and other variables like as net profit, gross profit, sales, fixed assets and current liabilities.

The correlation coefficient measure the degree of relationship between two set of figures. It is denoted by "r" and result is lies between t 1 to t-1 when r is equal to or closest to one it means there is a strong correlations between the two variables and when r is nearest to zero it shows that there is no relationship between the two variables.

Probable error is used to describe the significance or insignificance relationship between two variables if **r** is less then 6PE it is not significance if **r** is more than 6PE there is a strong correlation between two variables or it is considered the relationship between the two variables are highly significant.

Table No. 4.28

Relationship Between Gross Working Capital and other Variables of HCIL

Variables	Correlation Coefficient (r)	Probable Error (PE)	Remarks
CA to NPAT	0.8409	0.4838	Significant
CA to FA	-0.7105	0.8181	Insignificant
CA to Sales	0.9397	0.193152	Significant
CA to GP	0.9175	0.26134	Significant
CA to CL	0.5557	1.142	Insignificant

Source: Appendix I, II, III, IV, V

The correlation coefficient between CA to NPAT is 0.8409 and r is greater than 6PE which shows that there is a strong and positive relationship between CA and NPAT. Hence there is a significant impact on net profit after tax due to increase or decreased in working capital.

The correlation coefficient between CA to FA is -0.7105 which shows that there is an adverse relationship between CA and FA. r is less than 6PE which shows an insignificant relationship between CA to FA.

The correlation coefficient CA to sales is 0.9397 which shows the strong and positive correlation between sales and CA and r is greater than 6PE which indicates there is a significant impact upon current assets due to changes in sales.

The correlation coefficient between CA to GP is 0.91 and r is greater than 6PE which shows that there is a prefect positive relationship between current assets and gross profit. Increased or decreased in gross profit positively affects upon gross working capital (current assets).

The correlation coefficient (r) between current assets and current liabilities is 0.5557. It shows that there is a positive relationship between the two variables but r is less than 6PE, therefore there is no significant relationship between CA and CL.

Table No. 4.29

Relationship between gross working capital and other variables of ULL

Variables	Correlation Coefficient (r)	Probable Error (PE)	Remarks
CA to NPAT	0.02377	1.65125	Insignificant
CA to FA	-0.7865	0.6302	Significant
CA to Sales	0.0025	1.65	Insignificant
CA to GP	0.21157	1.578	Insignificant
CA to CL	0.23553	1.56	Insignificant

Source: Appendix I, II, III, IV, V

There is an adverse relationship between current assets and fixed assets in ULL. However “r” is a greater than 6PE therefore there is a significant adverse relationship between fixed assets and gross working capital of ULL. Correlation coefficient between CA to NPAT is 0.02377 and it is a small amount which indicates there is no relationship between CA and NPAT and there is not significant relationship between CA and NPAT.

The correlation coefficient between CA to sales is only 0.0025 and 6 probable error is 1.65 therefore “r” is less than 6P.E which shows there is no significant relationship between CA and sales. Hence, there is no significant impact on working capital due to increase or decrease in working capital.

There is a positive relationship between CA and GP and CA to CL. But the relationship is less amounts. CA to GP is not significant relationship. Gross profit does not affect the increment and decrease of working capital. r is less than 6PE which shows insignificant relationship between CA and GP like wise CA to GP. The correlation coefficient between CA to CL is 0.24 and r is less than 6PE which indicates that there is not significant relationship between CA and CL or CL does not affect the changes in CA.

4.10 Major Findings of the Study

1) The major components of current assets in HCIL are inventory, cash and bank balance, loan and advance and receivables. Among them inventory holds the major portion of current assets. The current assets of HCIL during the study period seem to be inventory trend. The receivables of HCIL are very small amount which indicates that most of the sales in HCIL are made on credit basis. The components

of current assets in ULL are cash and bank balance, loan advance and deposit, receivables and inventory. Stock receivables and cash and bank balance are the major portion of current assets. The current assets is in fluctuating trend in ULL.

2) Sundry creditors hold the major portion of current liabilities in HCIL and ULL and second major portion of CL is provision in HCIL and ULL. CL of ULL is in fluctuating trend where is HCIL it was in increasing trend.

3) The working capital position of HCIL is negative during the study period. CL is two times more than CA it shows that the company invests its short term funds in to long term assets. working capital position of ULL is in fluctuating trend it was positive in FY 2060/61, 2061/62 and 2065/66 but it was negative in 2062/63, 2063/64 and 2064/65. Working capital is financed by long term sources of funds in 2060/61 is 35.77%.

4) The ratio of current assets of fixed assets is in increasing trend during the study period of HCIL where as it was in fluctuating trend of ULL. Current assets of both companies are higher than FA it shows conservative working capital policy of the firm.

5) The ratio of current assets to sales was in fluctuating trend of both companies. The ratio of current assets to sales is 50% in HCIL which represent a relaxed working capital policy as a same in ULL it was less than 50% which shows a lean and mean or restricted policy of financing current assets.

6) The inventory turnover of HCIL is in increasing trend where as it was fluctuating in ULL. In comparison of HCIL and ULL shows the

better performance in terms of inventory turnover and inventory conversion period.

7) Receivables turnover in HCIL is highest than ULL .HCIL does not make any credit sales. It sales are made on credit basis, the collection period is 1 day to 5 days. Where as in ULL the collection period id ranges from 15 to 39 days. The average Cash conversion cycle of HCIL is 43 & ULL is 21.

8) The total assets turnover ratios of both companies are in fluctuating trend. It is increasing or decreasing each year during the study period.

9) The liquidity positions of both companies are analyzed with the help of current ratio and quick ratio. The current ratio of HCIL is ranges from 0.49 to 0.73 times which shows the very poor liquidity position of the firm. The current ratio of ULL is ranges from 0.83 to 1.55 times. The ratio of ULL is also less than the normal ratio.

10) The quick ratios of both companies are less than one which is the normal standard of quick ratio. Quick ratio of both companies shows fluctuating trend. ULL position is better than HCIL in terms of quick ratio.

11) The profitability is one of the measures of overall efficiency of the management. The profitability positions of both companies are analyzed with the help of gross profit margin, net profit margin and return on assets. GP ratio of both companies shows fluctuating trend. Where as NP ratio also shows the fluctuating trend. The profitability position of ULL is better than HCIL. Return on total assets ratio is also in fluctuating trend in both companies.

12) Karl prison's correlation coefficient between current assets and fixed assets of both companies shows negative figure, which shows adverse relationship between current assets and fixed assets, correlation coefficient between current assets to sales, current assets to net profit after tax, current assets to gross profit and current assets to current liabilities of HCIL shows positive correlation but it shows the insignificant relationship between CA to sales, CA to GP, CA to NPAT, CA to CL due to r is less than 6PE.

Where as in ULL the correlation coefficient between CA to NPAT, CA to sales, CA to GP shows a significant and positive relationship bur CA to CL shows a positive and insignificant relationship.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The first chapter presents about the brief introduction of the topics, industrialization in Nepal. Brief introduction of the sample organization, objectives of the study, problem issued by the study, limitations and plans of the study. To study about working capital management in Nepalese organization, two organizations are taken a sample.

Second chapter dealt with the review of literature, conceptual framework of the study, review of books and journals and articles. Review of literature section has also attempted to review the studies done so far on the same topic on different organizations.

Third chapter is related with research methodology used for the proposed study. It includes research design, nature and sources of data, data collocation and processing techniques and financial and statistical tools used. Financial ratios likes as current ratio, quick ratio, turnover ratio, profitability ratio as well as Karl person's correlation coefficient and problem error have been used to analyze the trend off between working capital and other variables.

The fourth chapter includes the presentation and analysis of data derived from HCIL and ULL. To analysis the working capital policy current assets to fixed assets, current assets to sales and proportion of current assets to short term sources and long term sources are used. It has also analyzed impact of working capital on the liquidity, turnover and profitability position and the composition of current assets and current liabilities are analyzed. Finally the relationship between current assets (gross working capital) and other variables like as CL, FA, NPAT sales

and gross profit are analyzed with help of correlation coefficient and probable error.

According to the study WC position of HCIL negative during the study period but the negative figure was improving year by year. The working capital position of ULL shows fluctuating trend it was positive in FY 2060/61 and FY 2061/62. It was negative in three year 2062/63, 2063/64 and 2064/65 and in FY 2065/66 it was positive and drastically improved the position of working capital.

From the point of view of liquidity turnover and profitability of ULL shows the better performance than HCIL. The relationship between CA to FA is negative in both companies. CA to sales, CA to GP, CA to NPAT, CA to CL shows a positive correlation coefficient in HCIL. Where as in ULL the correlation coefficient between CA to CL, CA to sales, CA to GP, CA to NPAT shows a small amount of insignificant relationship.

5.2 Conclusion

For a smooth operation of a business concern a sound management of working capital is required gross working capital management represents the management of current assets of the firm. Different organization can adopt different working capital policy according to the management attitude towards risk return trade off.

The fluctuating trend of CA to FA ratio, large investment in current assets to improve the sale and the greater use of short term source to finance the current assets prove that the both of companies have practicing the conservative working capital policy.

From the point of view of turnover ratio of ULL is bitterly utilized its assets than HCIL inventory turnover ratio, receivables turnover ratio and total assets turnover ratio of ULL is satisfactory than HCIL.

The current ratio and quick ratio of both of the companies shows the figure below than standard. Both of the companies have poor liquidity position.

Profitability position of HCIL and ULL is not better than normal ratio. HCIL shows the poor performance of profitability than ULL, GP ratio, NP ratio and ROA of HCIL is fluctuating trend where as in ULL it was in increasing trend.

From the correlation coefficient analysis we can conclude that in ULL there is no significant relationship between CA to sales, CA to NPAT, CA to GP, CA to CL and CA to FA. Where as in HCIL it is observed that there is a significant relationship between CA & sales, CA to GP and CA to NPAT.

5.3 Recommendations

On the basis of findings and conclusions of the study some recommendations have been made for the overall improvement of the working capital management in HCIL and ULL.

1) **Maintain Sufficient Working Capital**

   Working capital is an essential to meet short term obligations. Working capital position of HCIL is negative therefore the company should try to maintain sufficient working capital by additional amount invest in current assets. The ULL trend is fluctuating and the company should also try to maintain constant trend of working capital.

2) **Invest Additional Fund in Fixed Assets**

   CA to FA ratio of both companies shows that CA is higher than FA. Profitability point of view it is not sound structure therefore both of the companies should investment additional funds in to fixed assets to increase its earning capacity.

3) Investment Made in Current Assets

The current ratio and quick ratio of both companies are less than normal ratio. Thus the organization should try to increased current assets to meet its short term obligations.

4) Utilized the Assets

Profitability ratios of both companies are not satisfactory but the result of ULL is much more satisfactory than HCIL. Therefore the management of HCIL should try to utilized its assets to earned profit

5) Maintain Reasonable Level of Inventory

Inventory turnover ratio of HCIL is very low with high conversion period. Thus the management is advised to reduce its conversion period and increased the turnover ratio. The ratio of ULL is satisfactory but the management should try to reduce its conversion period. In FY 2065/66 the company ULL maintains 15 days conversion period. It is advised for the management of ULL to maintain the same ratio in future.

6) Matching Concept Should be Used

The investment policy in fixed assets and current assets of both companies are not properly managed and it is not sound structure. In HCIL short term liabilities are used for other activities like as investment in fixed assets, govt. securities it is not sound practice. The organizations should try to maintain matching concept of working capital.

7) Improved Profitability Position

The profitability position can be improve by the company by reducing higher operating cost, managing sound working capital level and properly managed the assets.

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D. Reports

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Appendix - I

Correlation Coefficient between Current Assets and Current Liabilities of HCIL

Rs. in Million

Year	CA(x)	CL(y)	x^2	y^2	xy
2060/061	452	906	204304	820836	409512
2061/062	471	925	221841	855625	435675
2062/063	527	953	277729	908209	502231
2063/064	526	931	276676	866761	489706
2064/065	626	1007	391876	1014049	630382
2065/066	684	934	467856	872356	638856
	$\phi x=3286$	$\phi y=5656$	$\phi x^2=1840282$	$\phi y^2=5337836$	$\phi xy=3106362$

$$r = \frac{N \; xy - x. \; y}{\sqrt{[N \; x^2 - (x)^2][N \; y^2 - (y)^2]}}$$

$$= \frac{6 \times 3106362 - 3286 \times 5656}{\sqrt{[6 \times 1840282 - (3286)^2][6 \times 5337836 - (5656)^2]}}$$

$$= 0.5557$$

$$\text{Probable Error (PE)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.5557)^2}{\sqrt{6}}$$

$$= 0.19033$$

$$6PE \times 6 \times 0.19033$$

$$= 1.14198$$

Correlation Coefficient between Current Assets and Current Liabilities of ULL

Rs. in Million

Year	CA(x)	CL(y)	x^2	y^2	xy
2060/061	724	544	524176	295936	393856
2061/062	891	882	793881	777924	785862
2062/063	742	742	550564	550564	550564
2063/064	640	768	409600	589824	491520
2064/065	761	815	579121	664225	620215
2065/066	792	509	627264	259081	403128
	$\phi x=4550$	$\phi y=4260$	$\phi x^2=3484606$	$\phi y^2=3137554$	$\phi xy=3245145$

$$r = \frac{N \; xy - x. \; y}{\sqrt{[N \; x^2 - (x)^2][N \; y^2 - (y)^2]}}$$

$$= \frac{6 \times 3245145 - 4550 \times 4260}{\sqrt{[6 \times 3484606 - (4550)^2][6 \times 3137554 - (4260)^2]}}$$

$$= 0.235529$$

$$\text{Probable Error (PE)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.235529)^2}{\sqrt{6}}$$

$$= 0.26$$

$$6PE > 6 \times 0.26$$

$$= 1.56$$

Appendix-II

Correlation Coefficient between Current Assets and Gross Profit of HCIL

Rs. in Million

Year	CA(x)	GP (y)	x^2	y^2	xy
2060/061	452	148	204304	21904	66896
2061/062	471	187	221841	34969	88077
2062/063	527	154	277729	23716	81158
2063/064	526	211	276676	44521	110986
2064/065	626	275	391876	75625	172150
2065/066	684	293	467856	85849	200412
	$\phi x=3286$	$\phi y=1268$	$\phi x^2=1840282$	$\phi y^2=286584$	$\phi xy=719679$

$$r = \frac{N \; xy - x. \; y}{\sqrt{[N \; x^2 - (x)^2][N \; y^2 - (y)^2]}}$$

$$= \frac{6 \times 719679 - 3286 \times 1286}{\sqrt{[6 \times 1840282 - (3286)^2][6 \times 286564 - (1286)^2]}}$$

$$= 0.91759$$

$$\text{Probable Error (PE)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.91759)^2}{\sqrt{6}}$$

$$= 0.043556$$

$$6PE = 6 \times 0.043556$$

$$= 0.261337$$

Correlation Coefficient between Current Assets and Gross Profit of ULL

Rs. in Million

Year	CA(x)	GP (y)	x^2	y^2	xy
2060/061	724	556	524176	309136	402544
2061/062	891	547	793881	299209	487377
2062/063	742	529	550564	279841	392518
2063/064	640	537	409600	288369	343680
2064/065	761	774	579121	599076	589014
2065/066	792	929	627264	863041	735768
	$\phi x=4550$	$\phi y=3872$	$\phi x^2=3484606$	$\phi y^2=2638672$	$\phi xy=2950901$

$$r = \frac{N \sum xy - \sum x . \sum y}{\sqrt{\left[N \sum x^2 - (\sum x)^2\right]\left[N \sum y^2 - (\sum y)^2\right]}}$$

$$= \frac{6 \times 2950901 - 4550 \times 3872}{\sqrt{\left[6 \times 3484606 - (4550)^2\right]\left[6 \times 2638872 - (3872)^2\right]}}$$

$$= 0.21157$$

$$\text{Probable Error (PE)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.21157)^2}{\sqrt{6}}$$

$$= 0.263$$

$$6PE = 6 \times 0.263$$

$$= 1.578$$

Appendix-III

Correlation Coefficient between Current Assets and Sales of HCIL

Rs. in Million

Year	CA(x)	Sales (y)	x^2	y^2	xy
2060/061	452	655	204304	429025	296060
2061/062	471	659	221841	434281	310389
2062/063	527	656	277729	430336	345712
2063/064	526	706	276676	498436	371356
2064/065	626	990	391876	980100	619740
2065/066	684	998	467856	996004	682632
	$\phi x=3286$	$\phi y=4664$	$\phi x^2=1840282$	$\phi y^2=3768182$	$\phi xy=2625889$

$$r = \frac{N \sum xy - \sum x . \sum y}{\sqrt{[N \sum x^2 - (\sum x)^2][N \sum y^2 - (\sum y)^2]}}$$

$$= \frac{6 \times 2625889 - 3286 \times 4664}{\sqrt{[6 \times 1840282 - (3286)^2][6 \times 3768182 - (4664)^2]}}$$

$$= 0.93973$$

$$\text{Probable Error (PE)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.93973)^2}{\sqrt{6}}$$

$$= 0.03219$$

$$6PE = 6 \times 0.03219$$

$$= 0.193132$$

Correlation Coefficient between Current Assets and Sales of ULL

Rs. in Million

Year	CA(x)	Sales(y)	x^2	y^2	xy
2060/061	724	1525	524176	2325625	1104100
2061/062	891	1485	793881	2205225	1323135
2062/063	742	1470	550564	2160900	1090740
2063/064	640	1819	409600	3308761	1164160
2064/065	761	2145	579121	4601025	1632345
2065/066	792	2626	627264	6895876	2079792
	$\phi x=4550$	$\phi y=11070$	$\phi x^2=3484606$	$\phi y^2=21497412$	$\phi xy=8394272$

$$r = \frac{N\ xy - x.\ y}{\sqrt{[N\ x^2 - (x)^2][N\ y^2 - (y)^2]}}$$

$$= \frac{6 \times 8394272 - 4550 \times 11070}{\sqrt{[6 \times 3484606 - (4550)^2][6 \times 21497412 - (11070)^2]}}$$

$$= 0.0025$$

$$\text{Probable Error (PE)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.0025)^2}{\sqrt{6}}$$

$$= 0.27536$$

$$6PE > 6 \times 0.27536$$

$$= 1.65217$$

Appendix-IV

Correlation Coefficient between Current Assets and Fixed Assets of HCIL

Rs. in Million

Year	CA (x)	FA (y)	x^2	y^2	xy
2060/061	452	311	204304	96721	140572
2061/062	471	287	221841	82369	135177
2062/063	527	266	277729	70756	140182
2063/064	526	255	276676	65025	134130
2064/065	626	249	391876	62001	155874
2065/066	684	263	467856	69169	179892
	$\phi x=3286$	$\phi y=4664$	$\phi x^2=1840282$	$\phi y^2=446041$	$\phi xy=885827$

$$r = \frac{N \quad xy \, Z \quad x. \quad y}{\sqrt{\int N \quad x^2 \, Z(\quad x)^2 \, A \int N \quad y^2 \, Z(\quad y)^2 \, A}}$$

$$= \frac{6 \mid 885827 \, Z 3286 \mid 1631}{\sqrt{\int 6 \mid 1840282 \, Z(3286)^2 \, A \int 6 \mid 446041 \, Z(1631)^2 \, A}}$$

$$= - 0.7105$$

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

$$= 0.6745 \mid \frac{1 \, Z(Z 0.7105)^2}{\sqrt{6}}$$

$$= 0.136357$$

$$6PE \; X6 \mid 0.136357$$

$$= 0.818143$$

Correlation Coefficient between Current Assets and Fixed Assets of ULL

Rs. in Million

Year	CA(x)	FA(y)	x^2	y^2	xy
2060/061	724	136	524176	18496	98464
2061/062	891	128	793881	16384	114048
2062/063	742	146	550564	21316	108332
2063/064	640	149	409600	22201	95360
2064/065	761	140	579121	19600	106540
2065/066	792	144	627264	20736	114048
	$\phi x=4550$	$\phi y=843$	$\phi x^2=3484606$	$\phi y^2=118733$	$\phi xy=636792$

$$r = \frac{N\ xy - x.\ y}{\sqrt{[N\ x^2 - (x)^2][N\ y^2 - (y)^2]}}$$

$$= \frac{6 \times 636792 - 4550 \times 843}{\sqrt{[6 \times 3484604 - (4550)^2][6 \times 118733 - (843)^2]}}$$

$$= 0.7865$$

$$\text{Probable Error (PE)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.7865)^2}{\sqrt{6}}$$

$$= 0.105028$$

$$6PE = 6 \times 0.105028$$

$$= 0.63017$$

Appendix-V

Correlation Coefficient between Current Assets and Net Profit of HCIL

Rs. in Million

Year	CA(x)	NP(y)	x^2	y^2	xy
2060/061	452	21	204304	441	9492
2061/062	471	66	221841	4356	31086
2062/063	527	40	277729	1600	21080
2063/064	526	78	276676	6084	41028
2064/065	626	95	391876	9025	59470
2065/066	684	106	467856	11236	72504
	$\phi x=3286$	$\phi y=406$	$\phi x^2=1840282$	$\phi y^2=32742$	$\phi xy=234660$

$$r = \frac{N \sum xy - \sum x . \sum y}{\sqrt{\left[N \sum x^2 - (\sum x)^2\right]\left[N \sum y^2 - (\sum y)^2\right]}}$$

$$= \frac{6 \times 234660 - 3286 \times 406}{\sqrt{\left[6 \times 1840282 - (3286)^2\right]\left[6 \times 32742 - (406)^2\right]}}$$

$$= 0.840929$$

$$\text{Probable Error (PE)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.840929)^2}{\sqrt{6}}$$

$$= 0.080637$$

$$6PE = 6 \times 0.080637$$

$$= 0.4838$$

Correlation Coefficient between Current Assets and Net Profit of ULL

Rs. in Million

Year	CA(x)	NP(y)	x^2	y^2	xy
2060/061	724	141	524176	19881	102084
2061/062	891	189	793881	35721	168399
2062/063	742	238	550564	56644	176596
2063/064	640	263	409600	69169	168320
2064/065	761	335	579121	112225	254935
2065/066	792	444	627264	197136	351648
	$\phi x=4550$	$\phi y=1610$	$\phi x^2=3484606$	$\phi y^2=490776$	$\phi xy=1221982$

$$r = \frac{N\ xy - x.\ y}{\sqrt{[N\ x^2 - (x)^2][N\ y^2 - (y)^2]}}$$

$$= \frac{6 \times 1221982 - 4550 \times 1610}{\sqrt{[6 \times 3484604 - (4550)^2][6 \times 490776 - (1610)^2]}}$$

$$= 0.0237685$$

$$\text{Probable Error (PE)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.027685)^2}{\sqrt{6}}$$

$$= 0.2752$$

$$6PE = 6 \times 0.2752$$

$$= 1.65123$$

Appendix-VI

Calculation of Inventory Conversion Period (ICP)

$$\textbf{ICP} = \frac{Inventory}{COGs} \times 360$$

Rs. in Lakhs

FY	HCIL			ULL		
	Inventory	**COGs**	**ICP (in Days)**	**Inventory**	**COGs**	**ICP (in Days)**
2060/061	2545.25	5076.15	160	1842.16	9691.09	69
2061/062	2396.37	4715.49	183	2297.65	3978.18	208
2062/063	2299.31	5020.41	165	2561.68	9402.36	98
2063/064	2625.92	4948.63	191	3216.25	12816.20	90
2064/065	2834.26	7144.32	143	4101.17	13702.12	108
2065/066	3044.06	7968.36	138	2473.17	16965.57	55

Appendix-VII

Calculation of Payables Deferral Period (PDP)

$$\textbf{PDP} = \frac{A/P}{COGs} \mid 360$$

Rs. in Lakhs

FY	HCIL			ULL		
	A/P	**COGs**	**PDP (in Days)**	A/P	**COGs**	**PDP (in Days)**
2060/061	3734.91	5076.15	265	3357.16	9691.09	123
2061/062	4003.30	4715.49	306	3702.37	3978.18	142
2062/063	3974.05	5020.41	285	3533.09	9402.36	135
2063/064	3860.95	4948.63	281	3557.82	12816.20	108
2064/065	1617.74	7144.32	82	3841.11	13702.12	101
2065/066	1086.92	7968.36	49	2667.01	16965.57	57