CHAPTER –I
INTRODUCTION

1.1 Background of the study

The development of manufacturing sector of Nepal is growing in snail's pace. The contribution of industrial sector towards national economy is about 10% of gross national production (GDP). About 6% of the economically active manpower is employed in industrial sector. Owing to the political instability and fluctuations in the guiding policy formulation, the Nepalese manufacturing sector is unable to operate at its full capacity level. It is hardly able to run about 50-55% of its installed capacity.

It is widely accepted fact that the development of the country is impossible until and unless the country once pass through industrial development phase. The burning social issues of the country such as unemployment, wastage of natural resources, migration, deforestation, brain drain, criminalization in politics etc can be addressed only if people are kept engaged and the industries are the ultimate places to keep people in large number by creating jobs for them.

Manufacturing enterprises are the dominant factor of country's economy. The developing nations will remain associated with various forms of backwardness, unless they tackle the problem of economic misery through industrialization. In other word, industrialization helps to create a country's economic infrastructure, and gives a path for diversification into a new area of activity. One of the merits of industrialization is that it makes it possible for countries to address their own requirement to a greater degree.

Development of industrial sector is given top priority in almost all five years development plans. Many manufacturing companies have been established in investment and management of government of Nepal. The reason for emphasizing industrialization is that industrial development would absorb rural under employed persons to these fields of production where higher productivity is possible without reducing total agricultural output. Industrialization helps the unemployed and pseudo employed persons especially from the agriculture sector to find alternative modes of productive economic activities thereby reducing the pressure on land. That is why in

every development plans of Nepal the word industrialization has been mentioned too frequently.

Manufacturing public enterprises are playing dominant role in the Nepalese economy. The economic as well as other social development goals can be materialized only through the successful management of industrial sector. Working capital management is one of the crucial aspects of efficiency measurement. So the present study will be focused on the relationship of working capital with efficiency in terms of profitability liquidity and solvency of the public sector manufacturing company.

1.2 Statement of the Problem

Industrialization has become the wheel of modern development. It is the realized fact that expected development without industrialization is distant dream. It is also open fact that industrialization in Nepal is not satisfactory. The problem is more serious in regards of manufacturing companies. Only few companies are working under manufacturing sector and they too are failing to prove their efficiency.

Working capital management can be one of the determinant of success or failure of the business. Both excessive and inadequate management of working capital is harmful from the viewpoint of profitability and liquidity management. Excessive working capital means company is inefficient to mobilize its valuable funds. It results in blocking of or tied up of capital and ultimately affects profitability. Similarly inadequate working capital leads production bottleneck. It brings interruption in the production process and negatively affects on company's profitability, goodwill or credibility. Thus, the main problem for the management is to maintain the optimum level of working capital for expected profitability and liquidity.

Though widely accepted as the standard to measure business success, profit does not always indicate the proper mobilization of funds in the organization. Similarly, the success or efficiency cannot be measured in absolute terms. So the need of the present study will be to observe and evaluate the sources and application of funds and to compare the position of the manufacturing company in subsequent years taken for this study.

a. What is the position of working capital management of GRUL in terms of profitability, efficiency and liquidity?

b. What is the comparative position of utilization of current assets and current liabilities in the six years taken for this study?
c. How does current asset behave with current liabilities in the study period?
d. Does the working capital affect the sales and growth of the organisation?

1.3 Objectives of the Study

The main objective of this study is to examine and analyze working capital management of Gorakhkali Rubber Udyog Ltd, Nepal. The specific objectives are as follows:

a. To examine and appraise various aspects of working capital management of Gorakhkali Rubber Udyog Ltd, Nepal in terms of profitability, liquidity, efficiency and size.
b. To examine the efficiency of utilizing current assets by the manufacturing public company.
c. To show the relationship of various items of current assets and current liabilities with sales, profit and net worth.

1.4 Need and Significance of the Study

Working capital is essential for managing daily financial affairs of an enterprise. It forms the part of risk management in future. A business firm failing to manage working capital may face serious problems and even some times there is question to its survival and existence. It is indicated from various surveys and study that the largest portion of financial manger's time and effort is to be devoted for current asset management.

Only few studies have been conducted in these issues. Further, continuous review of policies and practices of different firms is necessary to address the recent changes and practices. Different researchers have prepared their reports and dissertations on working capital management however no studies of Gorkkhkali Rubber Udyog Limited, Nepal have been done so far in this regard.

It is therefore clear that there is a gap in the study of working capital management of the manufacturing limited. This study is aimed to fill the gap in the field of research of working capital management. It is not the final conclusion of the study. There

needs continuity of similar studies; however, this study will be an important step in finding and solving comparative problems of working capital management in similar manufacturing companies.

1.5 Limitation of the Study

The industrial culture of Nepal is still not open enough to provide the related data. A thorough investigation and a continuous study of the relevant change are necessary to make such report useful. The following are the limitations of the proposed study.

a. The study is limited to assess the comparative position of working capital management of Gorakhkali Rubber Udyog, Limited Nepal that is only representative of manufacturing enterprises.
b. The study has covered the analysis of the comparative working capital position of the manufacturing company only for six years i.e. fiscal year 2062/063 to 067/068
c. The study is solely dependent on the secondary data provided by the management of related manufacturing public company and other published materials.
d. The accuracy of the study is determined by the authenticity and reliability of data provided by the concerned company.
e. The study may not be comprehensive in true sense due to resources and time constraint.
f. The findings of the study may or may not be equally applicable to other manufacturing enterprises.

1.6 Organization of the Study

The plan of study has organized in five chapters as introduction, review of literature, research methodology, presentation and analysis of data, interpretation with major findings and summary of the study, conclusions and recommendations.

Chapter I: Introduction

The introduction chapter encompasses the general background of industrial development in Nepal, objective of the study, statement of the problem, need and significance of the study, and limitation of the study.

Chapter II: Review of Literature

This chapter has dealt with the review of concept and important works done in the relevant field of study. It analyses the problems and findings of studies done by different scholars and experts. This chapter helps to locate the problem yet to be solved and new dimension of the study.

Chapter III: Research Methodology

This chapter is comprised of research design, period covered by the study, types and sources of data, tools used for analysis and reporting, research variables and research procedures.

Chapter IV: Presentation and Analysis of Data

This is the main part of the study dealing with the various presentation and analysis through different tools. A major finding also has been included in the chapter.

Chapter V: Summary, Conclusion and Recommendation

The summary of the study, conclusion from the analysis and recommendations for improvement of performances and correction of weaknesses has been stated in this chapter.

CHAPTER - II
REVIEW OF LITERATURE

2.1 Introduction

The review of literature is a crucial aspect of planning of the study. The purpose of reviewing literature is to develop some expertise in certain area of the study conducted earlier. Is focuses on the issues such as what has been done in the related field of study, what ideas can be obtained from the previous studies and what was the research gap which the current study aims to fulfill.

It is needless to say that the study of the working capital is important financial function. But it will be injustice as well as immature effort to conclude the matters of the study without reviewing the previously done works. As such, this chapter is broadly discussed under three sections.

Theoretical framework

Review of journals and research works

Review of dissertation

2.2 Theoretical Framework

The term working capital management is concerned with the management of current assets and current liabilities of the business that is necessary for day-to-day operation. Working capital is a controlling nerve centre of business because without the proper control upon it no business can run smoothly. Thus, the success and failure of any enterprise largely depends upon its efficient management of working capital.

2.2.1 Working Capital: Concept and Practices

Every business needs capital for two purposes. The first requirement is for long- term purpose to create production facility that is called fixed capital. A firm also needs capital to manage its day- to- day needs which is called short-term or working capital.

Generally, the capital required for running day- to- day operation of a business is called working capital. It is concerned with current assets and current liabilities. Asset of an essentially short- term nature is known as current asset. It is a short- term investment. The funds required for purchase of raw materials, payment of wages,

stocking of work in progress, raw materials, and finished goods, payment of other daily expenses etc come under working capital.

John J. Hampton defines working capital as all the short-term assets used in daily operation. It consists primarily of cash, marketable securities, account receivable and inventories. Likewise in the opinion of J.S.Mill the sum of current assets is the working capital of the business.

By analyzing different definitions and practices, there are two concepts of working capital. They are gross concept and net concept. According to gross concept, working capital refers to that part of capital that is required for financing current assets. But under the net concept, working capital is the difference of current assets and current liabilities. In other word, it is the excess of current assets over current liabilities. In whatever concept working capital is defined, it is an important aspect of manufacturing as well as trading enterprises. The success or failure of any organization heavily depends upon its efficiency of managing working capital.

The primary responsibility of the management towards its investors is to maximize wealth. This goal or the responsibility can be better fulfilled through suitable investment decisions. Determination of appropriate current asset investment is important part of fund mobilization.

Working capital is the lifeblood of an organization. It is very important for efficient and smooth operation of a business. It is particularly necessary for strong solvency, creation of goodwill, arrangement of loan, getting benefit of discount, regular supply of materials, increasing morale of management, to face crisis and to provide regular return to investors. Both excessive and inadequate working capital is harmful for the financial health of an organization. Excessive investment in current asset may cause the loss of profitability. It causes the blocking of blood in the total circulatory system of an organization. Similarly inadequate working capital may cause negative impact to firm's efficiency in managing liquidity. It also threatens the solvency of the company.

The working capital needs of a firm depend upon various factors. These factors may vary from firm to firm and from time to time. Some main factors affecting the requirement of working capital are nature of business, size of business, manufacturing process, length of production cycle, growth and expansion of business, rapidity of

turn over, terms and conditions of purchase or sale, seasonal nature, dividend policy, operating efficiency etc. The level and quality of working capital is also guided by the policy and attitude of management.

According to Weston, J. Fred and Eugene, F. Brigham, "working capital refers to a firm's investment in short-term assets: cash, short-term securities, account receivables and inventories. Gross working capital is defined as the firm's total current assets. Net working capital is defined as the firm's current assets minus current liabilities. If the term working capital is used without further qualification, it generally refers to gross working capital." (*Weston J.F., Scott Besley and. Brigham E.F-1996 Essentials of managerial finance*). They further state that "The term working capital originated at a time when most industries were closely related to agriculture, producers would buy the crops in fall, process them, sell the finished products and end up just before the next harvest with relatively low inventories. Bank loan with maximum maturity of one year were used to finance both the purchase and the processing costs and these loans were retired with the process from the sale of the finished products."

Business firms need various types of assets for regular operation. Some assets are required for long term and some others are required specially to meet daily needs and short-term obligations. The assets such as cash, marketable securities, accounts receivables and inventories are required in order to meet daily operating needs. These assets are short-term assets, termed as current assets and they are liquid assets in the sense that they can be liquidated within a period of less than a year. Cash and marketable securities are respectively considered as purely liquid assets and near liquid assets whereas the accounts receivables and inventories are comparatively less liquid. The capital invested in these assets is known as working capital (S.Pradhan, *Basic of Financial Management*, 2000)

Working capital has to be regarded as one of the conditioning factors in the long run operations of the firm which is often inclined to treat it as an issue of short run analysis and decision making. Working capital management involves deciding upon the amount and composition of current assets and how to finance these assets.

Working capital represents portion that circulates from one form to another in the ordinary conduct of business. This idea embraces the recurring transition from cash to

inventories to receivables to cash that form the conventional chain of business operations *(J.L. Brown and L.R. Howard, 1982).*

Working capital refers to the funds that are used during an accounting period to generate a current income of a type that is consistent with the major purpose of a company's existence (P.V. Kulkarni, *Financial Management,* 1993). The term working capital is often used to refer the firm's current assets (primarily cash, marketable securities, account receivables and inventories). It refers to the fact that most of its components very closely relate with the level of production and sales. Most decisions with respect to working capital and its components have their impact over weeks and months rather than years. For this reason, working capital management is often referred to as short-term finance (*E. Soloman & J.J. Pingle, 1987*).

There are two concepts of working capital: gross concept and net concept. Gross concept refers to the firm's investment in current assets. Current assets are the assets which can be converted into cash within a year (accounting year or operating cycle) and include cash, short-term securities, debtors (accounts receivable or book debts), bills receivables and stock (inventory). Net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders which are expected to mature for payment within an accounting year and include creditors, bills payable and outstanding expenses. Net working capital may be positive or negative. A positive net working capital arises when current assets exceed current liabilities and it is negative when current liability is excess of current assets (*I.M. Pandey, 1999)*

The two concepts of working capital are equally important for the efficient management of it. The gross working capital concept focuses on attention on two aspects of current asset management: a. how to optimize investment in current assets? And b. how should current assets be financed? The consideration of the level of investment in current assets should avoid two danger points excessive and inadequate investment in current assets. Investment in current assets should be just adequate, not more or less, to the needs of business firm. Another aspect of the gross working capital concept points to the need of arranging funds to finance current assets.

Whenever a need for working capital fund arises due to the increasing level of business activity or for any other reasons, financing arrangement should be made quickly. Similarly if suddenly, some surplus funds arise, it should not be allowed to remain idle, but should be invested on short-term securities. Net working capital concept is a qualitative concept. It indicates the liquidity position of the firm and suggests the extent to which working capital needs may be financed by permanent sources of funds. Current assets should be sufficiently in excess of current liabilities to constitute a margin or buffer or maturing obligations within the ordinary operating cycle of a business. Net working capital concept also covers the question of judicious mix of long term and short-term funds for financing current assets. In every firm, management must decide the extent to which current assets should be financed with equity capital and/or borrowed capital *(I.M. Pandey, 1999)*

Working capital management is concerned with the problems that arise in attempting to manage the current assets, the current liabilities and inter relationship that exist between them. The term current assets refer to those assets, which in the ordinary course of business can be or will be, turned into cash within one year without under going a diminution in value and without disrupting the operations of the firm. Current liabilities are those liabilities, which are intended at their inception to be paid in the ordinary course of business, within a year, out of the current assets or earnings of the concern. The goal of working capital management is to manage the firm's current assets and current liabilities in such a way that a satisfactory level of working capital is maintained. This is so because if the firm cannot maintain a satisfactory level of working capital, it is likely to become insolvent and may even be forced into bankruptcy. Each of the current assets must be managed efficiently in order to maintain the liquidity of the firm while not keeping too high level of any one of them. Each of the short-term sources of financing must be continuously managed to ensure that they are obtained and used in the best possible way. The interaction between current assets and current liabilities is, therefore, the main theme of the theory of working capital management (*M.Y. Khan & P. K. Jain, 1993)*

The main objective of working capital management is to minimize the cost of maintaining current assets. The cost of maintaining necessary current assets depends upon the size of such assets held. It tries to answer how much working capital is needed for a firm to run its regular activities, what types of financing are appropriate

to use for working capital, does the size of need to be changed when the sales or volume of business change. In particular, management of working capital deals with the following aspects (*S. Pradhan, 2000).*

- Size of permanent and seasonal working capital.
- Sources of financing – short and/or long term and debt and/or equity financing.
- Cost of financing – cost of short-term Vs long- term financing.
- Risk associated with types of financing
- Maintenance of current ratio minimizing the risk of cash flow problem.

The definitions described above convey in same way or other, the same meaning. They virtually represent the characteristics of the working capital. It seems that there is consensus on the following special characteristics of the working capital (*Pradhan, 2000).*

1. **Short Life:** Working capital is characterized by assets with a life span of less than a year. The short life span leads to high volatility of the investments as required financing working capital.
2. **Nearness to Cash or liquidity:** This basic characteristic constitutes the first line of defense against technical insolvency. Cash is the most liquid assets having zero conversion time and 100% conversion rate. But for inventory and marketable securities, two factors i.e. nearness to cash or amount of time required to convert assets into cash and price realized on conversion must be considered.
3. **Lack of synchronization:** since the enterprise cannot produce on order only and cannot insist on cash payments, there is always the problem of synchronization in cash receipts and disbursements. It is also due to the level of investments in working capital that is affected by the sales volume, production policies and collection policies.

   The basic characteristics of working capital as mentioned above indicate that it is a term of capital intended to be kept moving or circulating and its potential for earning comes from movements. Though the expenditures cannot be controlled and planned its income is usually subject to random variation and is not controllable.

2.2.2 Determinants of Working Capital

The requirement of working capital is determined by various factors. Each factor has different significance. The significance of these factors differs situation to situation. The following are some of the important factors which are involved in a proper assessment of the quantum of working capital requirement.

i. **Nature of business**: Nature and size of business greatly affect the need of working capital. Greater the size of firm, greater will be the requirement of working capital. Similarly the trading business needs more working capital than that of service type of business.

ii. **Manufacturing cycle**: The firms with longer manufacturing cycle need greater amount of working capital.

iii. **Business fluctuation**: Business in boom stage needs small amount of investment in current assets than the business in recession.

iv. **Credit policy and availability of credit**: firm with liberal credit policy has to invest more on current assets. Similarly if the firm has better arrangement of credit from suppliers, small investment will be enough.

v. **Growth and expansion activities:** The higher the volume and expansion activities, the higher the needs of working capital. It is because of the cost of expansion.

vi. **Turnover of circulating capital**: How frequently and with rapidity, the working capital is converted into cash also determines the need of working capital. The turnover of the business is determined by the demand and sales policy of the particular enterprise.

vii. **Price level change**: Rising price level will require a firm to maintain higher level of working capital to meet the need of investing more in current assets in term of time value due to inflation.

viii. **Operating efficiency**: The lower wastage and higher efficiency will facilitate the firm to manage its short-term financial needs with small investment in working capital.

ix. **Others:** factors such as co ordination between production and distribution activities, conservative dividend policy, liberal depreciation policy etc. strengthen the working capital position of the firm.

2.2.3. Sources of Working Capital

The working capital is needed to maintain various types of current assets. The magnitude of current assets needed is not always the same; it increases and decreases over time. However, there is always a minimum level of current assets, which is continuously required by the firm to carry on its business operations. This minimum level of current assets is referred to as permanent or fixed working capital. Any amount over and above the permanent level of working capital is temporary. This portion of working capital is needed to meet the fluctuations in demand consequent upon changes in production and sales as a result of seasonal changes; temporary working capital is created to meet liquidity requirements that are of a purely transient nature.

A source or a combination of various sources of financing to be used depends upon the type of current assets (permanent or temporary) to be maintained. The following is the list of sources of short-term and long-term finance for working capital (*S. Pradhan, 2000).*

Short-term sources: Short-term sources are used to finance the temporary working capital. The short-term sources are operating sources i.e. account payable or trade creditors. And banking sources i.e. account receivable loan, inventory loan, short-term loan and notes payable, line of credit and overdraft provision.

Long-term sources: Long-term sources are used to finance the permanent assets. Such sources are long tem debt i.e. term loans and bonds, stock issues i.e. common stock and preferred stocks and retained earnings.

2.2.4. Working Capital Policies

Working capital policy involves the adequate level of current asset financing depending upon the policy of the firm. Policy refers to the firm's appropriate level of current assets and similarly working capital policy involves the adequate financing depending upon policy followed by the firm. Working capital involves two basic questions.

1. What is the appropriate level of current assets (both in total and in specific amount)?

2. How should current assets be financed? How current liability will be used to finance current assets?

The working capital policy guides to solve the above questions in the firm. There are two alternate policies as mentioned below:

a. Current asset investment policies
b. Current asset financing policies.

(a) Current asset investment policy

Current asset investment policy involves the three alternative policies regarding the total amount of current asset held. Essentially these policies fifer in the amount of current asset as carried to support any given level of sales. The three alternative policies are

- Relaxed current asset investment policy (or fat cut policy)
- Restricted current asset investment policy (or lean and mean policy)
- Moderate current asset investment policy.

Relaxed current asset investment policy

According to this policy, the firm holds relatively larger amount of cash, marketable securities, inventories and receivables to support a given level of sales. This policy creates longer inventory and cash conversion cycle.

It also creates the longer receivable collection period due to liberal credit policy. Thus this policy provides the lowest expected return on investment with lower risks.

Restricted current asset investment policy

In this policy, the firm holds the minimum level of cash, marketable securities, inventories and receivables to support the given level of sales. This policy is supposed to be riskier than other policies. This policy always tries to reduce the cash conversion cycle. In this policy, the firm follows tight credit policy. The tight credit policy reduces the level of sales. Although the sales decrease in this policy, the financial manager intends to maximize profit by low requirement in investment (low cost and low opportunity cost).

Moderate current asset investment policy

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

a moderate level of current assets to sales. It uses the mid range of short-term and long-term debt of the two policies above.

(b) Current asset financing policy

Deciding how current liabilities should be used to finance current assets is one of the most important decisions concerning working capital management (RS Pradhan, Management of working capital, National book organization, New Delhi,1986) Determining an appropriate financing mix is a matter of risk return trade off. A number of financing mixes are available to financial manager ranging from low liquidity high profitability to high liquidity low profitability policies and his job is to pickup the one that properly balances profitability and liquidity (Glitmann, principals of finance, New York, 1088)

There are three variants aggressive, conservative and matching policies of current asset financing *(IM Pandey, financial management New Delhi,1999)*

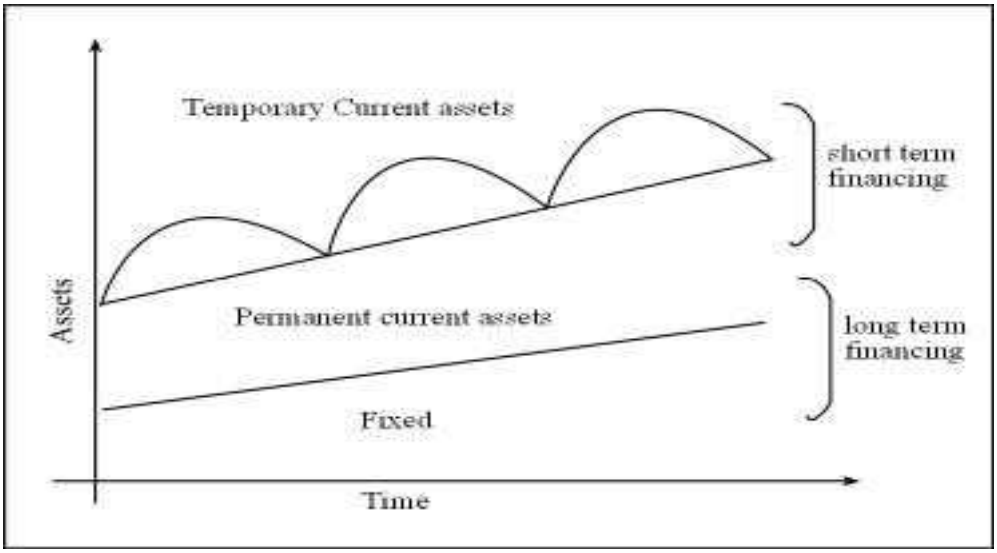
1. Aggressive Approach

Under the aggressive policy, the firm finances a part of its permanent current assets with short-term financing. Some extremely aggressive firms may even finance a part of their fixed assets with short-term financing. *(IM Pandey financial management, New Delhi,1999)* The manager is said to follow this policy if he depends more on short-term credit to finance the whole of current assets and part of the fixed assets. Although the short-term financing involves less cost, it is more risky than long term financing. Thus the aggressive financing mix is quite risky leading to high profitability and low liquidity.

This approach relies heavily on long term financing. Therefore, it implies greater liquidity and lower risk of technical solvency, all other things held constant.

Figure no. 2.1

Current Assets Financing Policies Under Aggressive approach



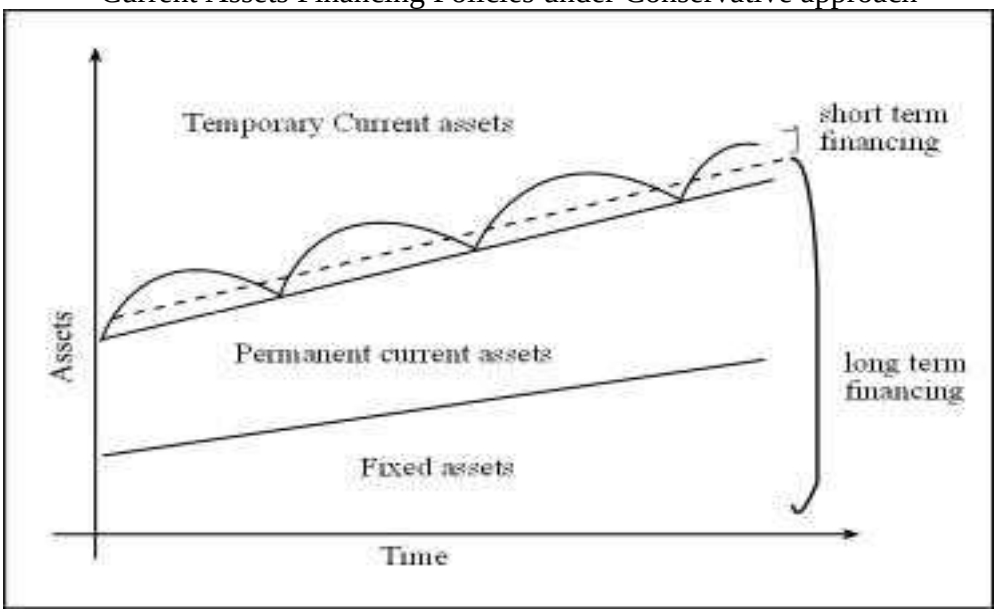
Source: I.M.Pandey, Financial Management, New Delhi, Vikas Publishing House, Pvt. Ltd

2. Conservative Approach

The financing policy of a firm is said to be conservative when it depends more on long term funds for financing needs. Under this approach, the firm finances its permanent assets and a part of temporary assets with long term financing. This approach restricts the use of short-term funds to only emergency situation or when there is an unexpected outflow of funds *(M.Y. Khan & P. K. Jain," Financial Management Text and Problems" -1993).* This approach relies heavily on long term financing. Therefore, it implies greater liquidity and lower risk of technical solvency, all other things held constant

Figure no. 2.2

Current Assets Financing Policies under Conservative approach



Source: I.M.Pandey, Financial Management, New Delhi, Vikas Publishing House, Pvt. Ltd

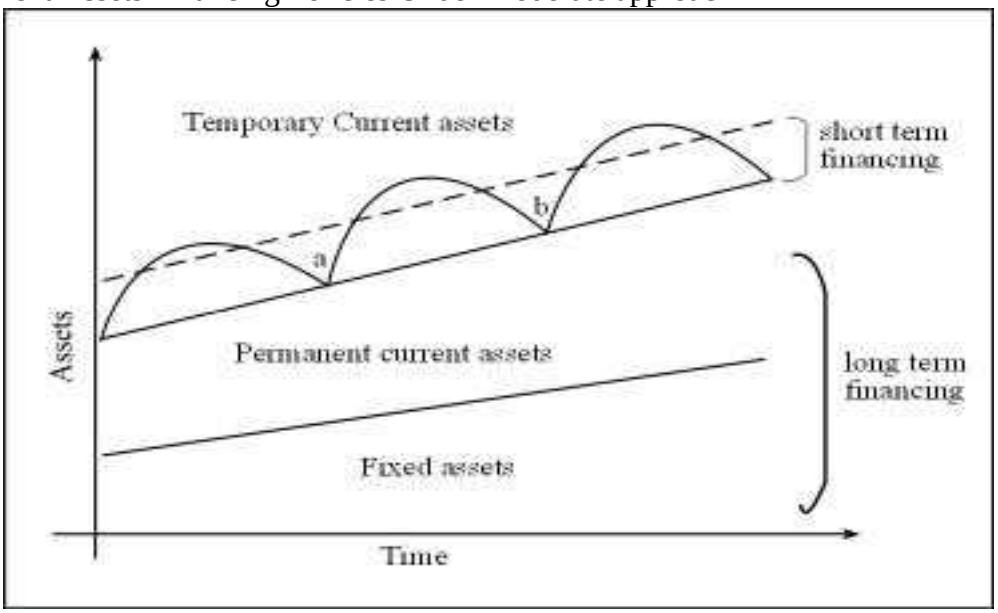
3. Moderate Approach

A moderate approach of current asset financing involves making, to extent possible, the maturities of assets and liabilities, so that temporary current assets are financed with short-term non spontaneous debt, and permanent current assets are financed with long term debt or equity plus spontaneous debt.

This approach therefore divides the requirements of total funds into permanent and seasonal components, each being financed by different sources. Moderate working capital policy follows the medium way between aforementioned two extreme policies. This policy helps a firm to consider both profitability and risk with adequate liquidity position.

Figure no.2.3

Current Assets Financing Policies Under Moderate approach



Source: I.M.Pandey, Financial Management, New Delhi, Vikas Publishing House, Pvt. Ltd

2.2.5 Goals or Objectives of Working Capital

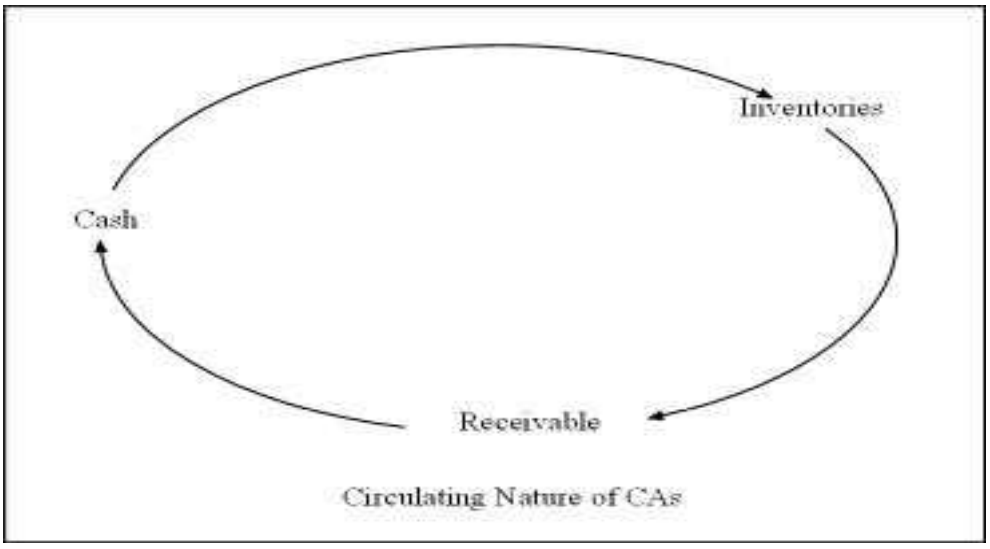
Every firm has the primary aim of maximizing the wealth of shareholders. The firm's policies for managing its working capital should be designed to achieve three goals.

i. Adequate Liquidity

If a firm lacks sufficient cash to pay its liabilities or bills when due, it will experience continuing problems. So the most important goal is to achieve adequate liquidity to conduct day-to-day operations smoothly.

Figure no. 2.4

Working Capital Cycle



Source: I.M.Pandey, Financial Management, New Delhi, Vikas Publishing House, Pvt. Ltd

ii. Minimization of Risk

In selecting its source of financing, payables and other short-term liabilities may involve relatively low costs. The firm must ensure that these near term obligations do not become excessive compared to the current assets on hand to pay them. The matching of assets and liabilities among current accounts is a task of minimizing the risk of being unable to pay bills and other obligations.

iii. Contribute to Maximizing Firm's Value

The firm holds working capital for the same purpose as it holds any other assets i.e. to maximize present value of common stock and value of the firm. It should not hold idle current assets any more than it should have idle fixed assets. The investment of excess cash, minimizing inventories, speedy collection of receivables, and elimination of unnecessary and costly short-term financing all contribute to maximizing the value of the firm. In other terms the goals or objectives of holding working capital cane be listed as below:

i. Transaction motive

This motive requires a firm to hold cash and inventories to facilitate smooth production and regular operations. So business organizations need working capital of transaction motive.

ii. Precautionary motive

This motive is the need to hold cash and inventories to guard against the risk of unpredictable change in demand and supply force, and other factors such as strike, failure of important customer, unexpected slow down of collection of account receivable etc. Thus, business organizations need the working capital to meet any contingencies in future.

iii. Speculative motive

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

a. An opportunity to purchase raw materials at a required price.
b. To make purchase at favorable price etc.

Thus the firm needs the working capital to meet the speculative motives.

2.6 The Cost Trade Off

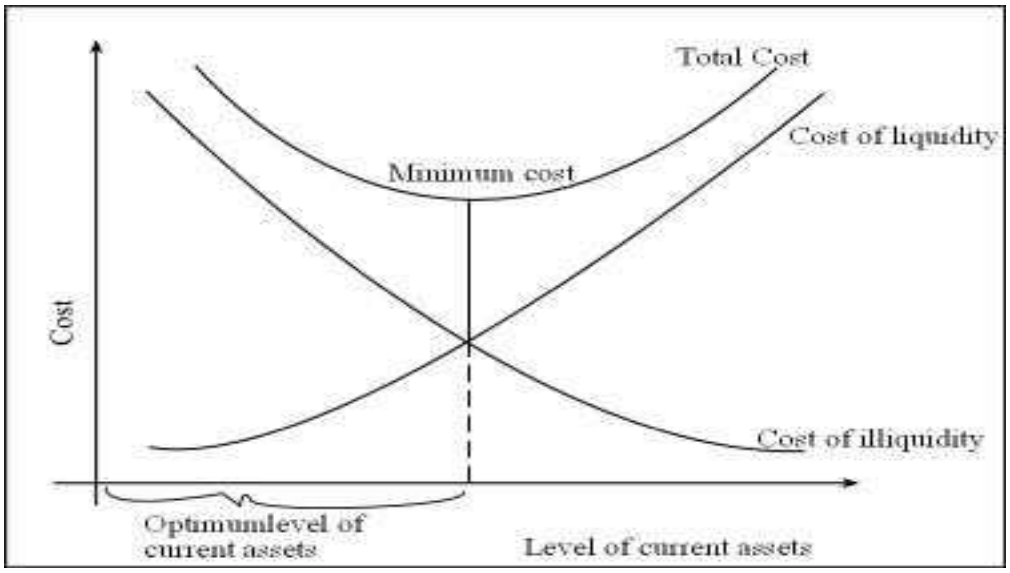
The firm's decision about the level of investment in current assets involves a trade off between risk and return. When the firm invests more in current assets it reduces the risk of liquidity but loses the terms of profitability since the opportunity of earning from the excess investment in current assets is lost. Thus the cost of liquidity (through low rate of return) increases with the level of current assets.

Similarly the cost of illliquidity is the cost of holding insufficient current assets. The firm will not be in a position to honour its obligations if it carries too little cash. This may force the firm to borrow at higher rate of interest, which adversely affects firm's credit worthiness and threatens solvency of the firm.

In determining the optimum level of current assets, the firm should balance the profitability- solvency tangle by minimizing total costs—the cost of liquidity and cost of illiquidity. The firm should maintain its current assets at that level where the sum of these two costs is minimized. This is illustrated in the following figure:

Cost Trade- Off

Figure no. 5



Source : I.M.Pandey, Financial Management, New Delhi, Vikas Publishing House, Pvt. Ltd

2.2.7 Adequacy of Working Capital

The proper functioning of business operation will be ensured only when the management would maintain the right amount of working capital on continuous basis. Both excessive as well as inadequate working capital positions are dangerous from the firm's point of view which is reflected below

- It results in unnecessary accumulation of inventories. Thus, chances of inventory mishandling, waste, theft and losses increase.
- It is an indication of defective credit policy and stock conversion period. Consequently, higher incidence of bad debts results, which adversely affects profit.
- Excessive working capital makes management complacent, which degenerates into managerial inefficiency.
- Tendencies of accumulating inventories tend to make speculative profits grow. This may tend to make dividend policy liberal and difficult to cope with in future when the firm is unable to make speculative profits.

The dangers of inadequate working capital are:

- Inadequacy of working capital stagnates growth. It becomes difficult for the firm to undertake profitable projects for non-availability of working capital funds.
- It becomes difficult to implement plans and achieve the firm's profit target.
- Operating inefficiencies creep in when it becomes difficult even to meet day-to-day commitments.
- Fixed assets are not efficiently utilized for the lack of working capital funds. Thus, the firm's profitability would deteriorate.
- Paucity of working capital funds render the firm unable to avail attractive credit opportunities etc.
- The firm loses its reputation when it is not in a position to honor its short-term obligations.

2.2.8 Need for Working Capital

The need for working capital to run the day-to-day business activities cannot be overemphasized. The objective of financial decision-making is to maximize the shareholder's wealth. To achieve this, it is necessary to generate sufficient profits. The extent to which profits can be earned will naturally depend upon the magnitude of the sales, among other things. However, sales do not convert into cash instantly. There is invariably a time lag between the sale of goods and the receipt of cash, which is referred to as the operating or cash cycle. Therefore, sufficient working capital is necessary to sustain sales activity.

Operating cycle can be said to be at the heart of the need for working capital. "The continuing flow from cash to suppliers, to inventories, to account receivables and back into cash is what is called the operating cycle." "Operating cycle is the time duration required to convert sales, after the conversion of resources into inventories, into cash." Thus the term cash cycle refers to the length of time necessary to complete the following cycle of events (*M.Y. Khan & P. K. Jain, 1993)*

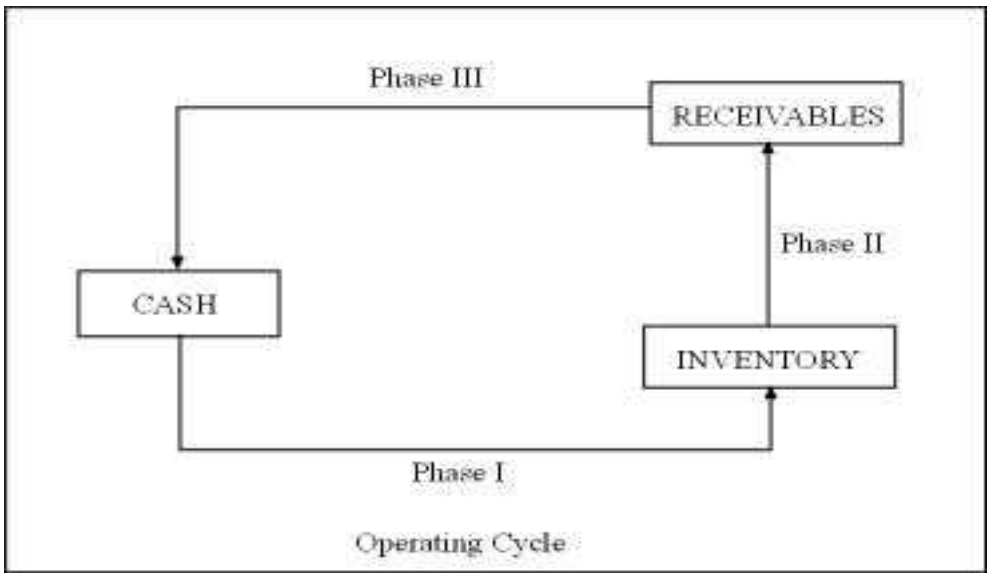
Conversion of cash into inventory

a) Conversion of inventory into receivables
b) Conversion of receivables into cash.

This is presented in the following figure:

Figure no. 6

Operating Cycle



M.Y. Khan & P. K. Jain, Financial Management Text and Problems. Second Edition (New Delhi: Tata MC Graw Hill Publishing co. 1993): pg. 621

2.3 Review of Journal (Articles) and Research Works

This part is mainly concerned with the review of journals/ articles published by different management experts in working capital management.

a) Dr. Pradhan has published a book entitled "management of working capital in Nepalese public enterprises". The major objective of this study is to examine the behaviour and management of working capital in manufacturing public enterprises of Nepal. (*Pradhan, R.S.1986 Management of Working Capital*)The specific objectives undertaken in this study are

- To conduct risk return analysis of working capital position.
- To assess the financial liquidity position of the enterprises.
- To determine the structure and utilization of working capital and
- To estimate transactions demand functions of working capital and it's various components.

His study has mentioned the following findings:

- It reveals that most of the selected enterprises achieved a trade off between risk and return thereby following neither an aggressive nor a conservative approach.

- The liquidity measures showed a poor liquidity position in majority of manufacturing public enterprises. It has been noticed as the enterprises have their negative cash-flows or negative earnings before tax or they have excessive net current debts, which can not paid within a year.
- The Nepalese manufacturing public enterprises have on an average half of their total assets in the form of current assets. Of all the different components of current assets, the share of inventories in total assets, on an average, is largest followed by receivable and cash in most of the selected enterprises?
- It has also been noticed that the adjustment speed of actual to desired balance has been observed as the highest for cash followed by inventories, net working capital receivable and gross working capital. However, the speed of adjustment was much slower in all these cases.
- The regression results suggest strongly that the demand for working capital and its components is a function of both sales and their capital costs. The effect of capital cost has been observed for receivables, gross and net working capital.

His study is concerned with interrelationships that exist between managing current assets and current liabilities. The study has employed ratio analysis, discriminate analysis and econometric models for its analysis. In short, the study provides an extensive and comprehensive survey on the overall liquidity position, working capital policy, and working capital utilization and demand functions of the current assets.

b) Mr. Pradhan and Mr. Koirala jointly prepared a research study on the "Aspect of working capital management in Nepalese corporations" (*R. S. Pradhan & K.D. Koirala Aspects of Working Capital Management in Nepalese Corporations* 1986). In a research study, they focus on evaluating working capital position of selected manufacturing and non-manufacturing corporations of Nepal. Altogether eleven enterprises, five manufacturing and six non-manufacturing corporations had been considered and comparison had been made for the fiscal year 2031/32 and 2035/36. The problems dealt in this study were size of investment, trend of investment and need to control investment in current assets management and it also dealt with the motive for holding cash and inventory and the major factors affecting the size of investment. The study concluded that investment in current assets had declined over the period of time in both types of corporations. However, the non-manufacturing corporations had

consistently more investment in cash and receivables as compared to manufacturing public enterprises due to more liberal and less consistent credit policies. Thus, inventory management is of great significance to manufacturing corporations and the management of cash and receivables is of great significance to non-manufacturing corporations. They found that the major motive for holding cash in Nepalese manufacturing corporations was to provide a resource for routine net cash out flows and for holding inventories was to facilitate smooth operation of production and sales. Moreover, they concluded that working capital was more difficult to manage than fixed capital as it takes more time to manage.

c) Working capital management in PEs: a case study on financial results and constraints (*Manohar Krishna Shrestha" Working Capital Management in PEs"A study on Financial Results and constraints, ISDOL vol. No. 8)* Shrestha has ten selected PEs and studied their working capital management. He states that managers often lack basic knowledge of WC and its overall impact on the operate efficiency and financial viability of public enterprises. He has focused on the liquidity, turnover and profitability position of sampled enterprises. Based on these factors, he has brought certain policy issues of Nepalese PEs such as lack of suitable financial planning, negligence towards working capital management, deviation of liquidity and turnover of assets, and inability to show positive relationship between turnover and return on net WC. He has also suggested the measures to overcome such policy issues like identification of needed funds, regular checks, development of management information system, positive attitude towards risk and profit, and determination of right combination of short-term and long term sources to finance WC requirements.

Pro. Manohar Krishna Shrestha in his further study," Accounts receivables management" states that account receivables constitutes a PEs of credit policies dominant liquid asset covering significant percentage of investment in current assets. The study clears out that account receivable is connoted with act of waiting assets, payment delaying assets, business creating assets, operationalizing assets etc. To provide the conceptual glimpse of account receivable, he has introduced the four conceptual paradigmatic sketch of account receivable i.e. operation concept, payment postponement concept, collection cycle concept, and viability concept. The study points out that the objective focused receivable management is directed towards the

maximization of sales to achieve accelerated increase in profit through defensive measure of overcoming competition. In order to achieve these objectives he has also focused on the determinants of accounts receivables, which serve as the legato of operational funds flow cycle. They are: establishment of credit granting decisions and collection implications. The study suggests the methods of collection and types of credit policies that can be adopted by Public Entreprizes.

d) Another article relating to Working Capital Management by Acharya K which is concerned on the findings and conclusion. In his Ph.D thesis Acharya K. has focused on the working capital management of Nepal Tea Development Corporation (NTDC) and also made comparison with other five selected PEs (*Acharya,K. Problems and Implement in the Management of Working Capital in Nepalese Enterprises, 1985).* In the study, he found that the net working capital of NTDC was negative due to increase in current liabilities. Of the current assets, inventory held the largest portion and it was accumulating in the corporation. It had inventories up to 26 months sales. The size of aggregate receivable was increasing and it exceeded by 16 times during the study period. Cash balance held was insufficient to meet the routine work. While comparing with other firms, he found that the turnover of inventory, receivable and the current asset were below the average, thereby reflecting high investment in each of them irrespective of the sales achieved.

He has described two basic problems regarding working capital- operational problems and organizational problems. The operational problems listed in the first part are increase of current liabilities more than current assets, low rate of inventory turnover, very low impact of change of working capital to profitability, thin transmutation of capital employed to sales, absence of apathetic management information system, and ineffective use of performance evaluation tools and techniques. Similarly, monitoring of proper functioning of WC management has never been considered a managerial job.

In the second part, he has listed the organizational problems such as lack of regular internal and external audit system as well as evaluation of financial results in most of the PEs. Similarly, very few PEs are able to present their capital requirement, functioning of finance department is not satisfactory and some PEs are even facing the under utilization of capacity.

He has made some suggestions to minimize the risk of loss and to attain the objective of profit. They are: the PEs should avoid the system of crisis decision which prevailed frequently in their operation, avoid fictitious holding of assets, the finance staff should be acquainted with the modern scientific tools used for the presentation and analysis of data. He has also given emphasis to optimize its level of investment at a point of time.

e) “There are two concepts of working capital i.e. gross concept and net concept. Gross working capital concept refers to the firm’s investment in current assets whereas net working capital concept refers to the differences between current assets and current liabilities.” *(I.M. Pandey,Financial management, 1993)*

The assets which can be converted into cash within an operating cycle (i.e. one year) are called current assets, whereas current liabilities refer to that part of payables, which should be paid within the any period (i.e. an accounting year). Cash, marketable securities, receivables and inventory constitute the current assets.

To decide the optimum level of the current assets and the extent to which those current assets should be financed with equity capital and or borrowed capital is the main task of working capital management. Working capital is of two types in every business organization i.e. permanent and variable working capital.

f) According to them "In considering the control of the funds of a business we are led inevitably to question the management of the groups of balance sheet items to which the unfortunate term working capital is often applied. Working capital is defined customarily as current assets (stock, debtors, cash and short-term investment) less current liabilities (creditors and short-term funding)." (*I.M. Pandey Financial Management, publishing house Pvt. Ltd. New Delhi, pg 807)*

They further add "The unfortunate aspect of the term working capital is that there is a literal implication that other items of capital usually referred to a fixed do not work and thus by deduction do not pay their way. In a successful firm such an interpretation would be patently erroneous and it is perhaps for this reason that some suggest that a more suitable term for current assets less current liabilities is 'circulating capital' or more rarely 'Fluctuating Capital', accountants usually refer to net current assets."

g) There are two concepts or thoughts of working capital. One school of thought says that working capital is meant for the current assets only. Another school of thought argues that working capital is the excess of current assets over current liabilities. The first school of thought under the sponsorship of Mead, Baker Millets and Field relates with gross working capital (*S. C .Kuchhal,," Financial Management, 1993*) and the second school of thought under the leadership of Lincoln, Doris, Stevens and Sailors relates with net working capital. (*I.M. Pandey "Financial management",1993*)

"The synthesized report on performance of public enterprises in Nepal." stated that," The management of working capital has been regarded as one of the contributing factors in decision making issues. It is no doubt, very difficult to point out as how much working capital is needed by a particular company, but it is very essential to analyse and find out the solution to make an efficient use of funds to maximize risk of loss and to attain profit objective."

The basic goal of working capital management is to manage the firm's current assets and current liabilities in such a way that a satisfactory level of working capital is desired by the management of an enterprise because both of these situations will erode the efficiency of the concern.

h) In another book, financial management and policy "James C. Van Horne says," working capital is usually described as involving the administration of these assets namely cash, marketable securities, receivables, inventories and the administration of current liabilities. It means the working capital management is concerned with the problem that arises in attempting to manage current assets, the current liabilities and the inter relationship that exists between them." *(James C. Van Horne, Financial management and policy).)*

2.4 Review of Dissertations

a) Yam Prasad Sharma carried out his study entitled, "A study on working capital management of selected manufacturing companies"*(Yam Prasad Sharma," A study on Working Capital Management of Selected Manufacturing Companies" Unpublished Thesis.1999 TU. Kathmandu.)*

His study focused on the analysis of variables affecting working capital such as current assets, current liabilities, sales, net profit, total assets etc. He found that many companies followed conservative policy. He suggested for following Quarterly working capital plan, to improve liquidity position and to minimize operating costs.

b) This study entitled," working capital management: a case study of Balaju textile industries limited", *(Gir, R., Unpublished Thesis,1986 TU Kathmandu.)* Rajendra Giri has found the problems such as low utilization of plant capacity, poor utilization of owner's fund and inefficient as well as unproductive use of working capital. He has suggested the following problems to solve these problems:

1. Regular checks to identify shortage or excess of current assets.
2. Arrangement of financing sources for current assets from the appropriate combination of short-term and long- term sources.
3. Formulate marketing strategies and provide incentive schemes to workers to strengthen production capacity.
4. Take actions for disposing of huge inventory, which tie up working capital and involved huge carrying cost and risk of losses.

c) Gadtaula analysed the financial statement of tea development corporation on his study entitled," Study on working capital management in Nepal tea corporation". The major findings of his study are as follows; *(Keshab Gadtaula, Unpublished Thesis, 1994, TU. Kathmandu)*

1. Greater liquidity position due to higher percentage of current assets in total assets.
2. Inconsistent current assets in comparison to sales.
1. Increasing position of debtors with accumulating inventories.
2. Inventory being the largest component of working capital.
3. Lower working capital turn over ratio indicating its inefficient utilization.

He recommended that inventory should be well managed and inventory budget should be fixed on the basis of actual requirement, inventory norms and demand. Liquidity position should be maintained to lead the firm from minimum current liabilities to maximum sales. He also suggested for effective sales promotion, sound labor or personnel policy and to determine cash holding structure to the operational needs.

d) Prem Kumar Shrestha has collected the following findings on the basis of his study entitled, "A study on working capital management in Bhrikuti paper mills Ltd." *(Prem Kumar Shrestha Unpublished Thesis, 1994, TU Kathmandu)*

1. Cash, bank balances, inventories and receivables are the major components of working capital.
2. The trend of current assets with total assets is increasing.
3. Large amount of idle cash balance is the cause of signal of poor management of company.
4. The receivable of the company is increasing due to the lack of definite credit and collection policy.
5. The fluctuating trend of turnover ratios show improper utilization if current assets.

e) On his study entitled, "study on working capital management in national trading limited", (*Manik Ratna Tamrakar, Unpublished Thesis, 1978, TU Kathmandu)* Tamrakar has found that the firm has very low inventory and high collection period of outstanding debts. He also found that the improper financing of current assets was responsible for low earning capacity. He has concluded from his study that the working capital management of national trading limited, in general, was poor.

f) Pradhan, S. sought to sort out the problems of low economic performance and poor financial management in MPEs and examine whether or not there was any association between the various aspects of working capital policy in his study. Hence, his study deals deals with liquidity position, utilization of working capital, profitability position, and source of finance for current assets and determinants of working capital. (*Suresh Pradhan, An Published Master's Degree Dissertation. TU. Kathamandu)* The major findings of the study are:

1. All the selected MPEs had followed a moderate working capital approach.
2. The liquidity was sufficient
3. The holding of cash and receivables was decreasing whereas that of inventory was increasing.
4. Almost all firms were unable even to meet operating expenses with sales revenue.
5. Long-term bank loans were heavily used to finance current assets.

Pradhan has suggested the following for improvement of working capital management.

1. Aggressive sales promotion policy.
2. Adoption of standard costing as well as marginal costing techniques.
3. Formulation of sound working capital policy and training to financial employees to acquaint about latest development in the area of working capital management.

g) The major findings the study on Working Capital Management on Bottlers Nepal Terai Limited carried out by Tek Bahadur Shrestha in 2064 are:

1) The proportion of current assets with respect to total assets and net fixed assets shows that the investment in current assets is high. As the higher ratio indicates the greater amount of working capital, the risk and profitability also decrease.
2) There is great fluctuation in the current asset investment policy. It is in decreasing trend in case of BNTL. It is relatively constant in case of BNBL. There is lack of consistency about financing of current assets.
3) The liquidity position of BNTL is better from the point of view of current ratio but it is reversed from the point of view of liquid ratio. The average current ratios are 1.53 and 1.85 and liquid ratios are 0.70 and 0.63 for BNBL and BNTL respectively. However, from the standpoint of industrial standard, both ratios are below standard in both enterprises.
4) The turnover position measures efficiency. The current assets turnover is 1.24 and 1.02 in BNBL & BNTL respectively. It proves improvement of BNBL. The trend of net working capital turnover is consistent up-to 4 years of study period. It is drastically changing in year 2005/06 & 2006/07. BNBL is in better position. The inventory turnover ratio is constantly increasing indicating better position of both companies.

2.5 Research Gap

From this chapter, it is revealed that many studies have been conducted in the field of working capital management of manufacturing enterprises. These studies focused on the situation of utilization of working capital. But no research has been done yet on

working capital management of GRUL. The present study attempts to fill up the following research gaps:

(i) Comparison of working capital position of GRUL in terms of efficiency, liquidity and profitability in six fiscal years 2062/063-2067068

(ii) Examine the direction and degree of relationship of working capital with sales, profitability and shareholders equity.

(iii) Suggesting the possibility of adopting appropriates working capital policy.

CHAPTER - III
RESEARCH METHODOLOGY

3.1 Introduction

A systematic study needs to follow a proper methodology to achieve the pre stated objectives. Research methodology is a sequential procedure and methods to be adopted in a systematic study. (*Kothari, 2000)* Research is a careful investigation or inquiry especially through search for new facts in any branch of knowledge. Encyclopedia of social science defines research as the manipulation of things, concepts, or symbols for the purpose of generalizing to extend correct knowledge, whether that knowledge aids in construction of theory or in the practice of an art. The above- mentioned objectives would be fulfilled by well- settled research methodology. The study is about selected manufacturing company Gorakhkali rubber Udyog Limited (GRUL) Nepal.

A brief detail about the selected companies and the methodology for study has been mentioned to some extent in the previous chapter. This chapter focuses on the explanation of different research methodology used and followed in this study or the achievement of desired objectives. The selected research methodology in this study includes research design, nature and sources of data, population and sample, and tools used for analysis of data.

3.2 Research Design

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. *(Charls Selltiz and others research, 1962)* Research design also can be defined as the plan, structure and strategy of investigation concerned so as to answer the research questions and to control variance. It is the logical and systematic planning and direction of a piece of research. Decisions regarding what, where, when, how much and by what means concerning an inquiry or a research study constitute a research design.(Kothari, 2000) A proper research design is needed because it

facilitates the smooth sailing of the various research operations, thereby making research as efficient as possible yielding maximum information and minimum expenditure of effort, time and money.

The main objective of this study is to examine comparative position of working capital 8management of GRUL in six fiscal years taken for the study (2062/063-067/067). The researcher has collected necessary data and information relating to performance GURL. This study attempts to establish the relationship between two or more variables. The study is not only designed to provide a clear picture of GRUL with its working capital management but also knowledge about industrial development in Nepal and other relevant matters. This study follows analytical and descriptive research design.

3.3 Population and Sample

The total number of listed manufacturing companies in Nepal is about 28. Out of these companies, the researcher selects only one manufacturing company that products tyre and tube facilities solely in Nepal.

The cause behind selecting the Limited company is the company is in continuous loss for years. Utilization of installed capacity has been nominal till the date despite of supports made as soft long term loan from Nepal government.

3.3.1 Brief Introduction of Gorakhkali Rubber Udyog Limited Nepal

Gorakhkali Rubber Udyog Limited (GURL), Nepal is only one tyres and tube manufacturing facility in Nepal designed to produce 88,000 large size tyres a year. It was established in 1984 AD with technical assistance of Peoples Republic of China (PRC). The head office is located in Deurali VDC, Majhuwa Gorkha. It is limited company with ownership of different national corporations, Nepal government and public. Board members representing from the institutional owners and individual public form Board of Director, the body to direct the company. The total paid up capital of Gorakhkali Rubber Udyog Limited is 43.58 million. Public individual holds 21.43% share of the total owner's equity.

The major products of Gorakhkali Rubber Udyog limited are tyre, tube and flap of heavy and light vehicles. The major raw materials are natural rubber and chemicals brought from foreign market. Products are sold mainly in Nepal. It also exports it's products to India, Shreelanka and Banglasesh. In big size tyres, it has 80 percent share of domestic market. The company has operated 17 sales centers established in the major cities of the country to run sales and distribution services.

The Company has currently employed total 343 persons ranging from skilled labor to high level managerial personnel. The company's average annual turnover has been Rs.479 million.

The company has given prime importance to quality products. Installation of advance environment friendly production facilities and responsive management towards local disadvantaged groups have added value to the company's social responsibility and contribution as well.

Poor management of working capital, no utilization of installed capacity, no availability of raw materials in national market and frequently changing management body are the major current issue faced by Gorakhkali Rubber Udyog which have affected severely on growth of the company.

3.4 Nature and Sources of Data

This study is based mainly on secondary sources of data and a little on primary data. The data for evaluating the performance and position of GRUL have been collected from the registered head office of the factory, Gorkha and other information and relevant data have been collected from official records, bulletins, various publications, magazines etc. Unpublished official records of company provided by financial, account and other departments of GRUL have been also used to pick up hidden information of company. All the collected data and information have been properly arranged, tabulated and calculated to arrive at the realistic analytical steps.

3.5 Data Collection and Processing Procedure

The annual reports are collected for the convenience of the study. Data are also collected from various articles, journals and published as well as unpublished reports from different libraries including T.U. central library Saptagandaki Multiple Campus,

Bharatpur Chitwan. The informal interview with associated personnel of GRUL to some extent is also the source of valuable data as well as information. Then raw data are taken out, processed and presented. Especially, this study is based on secondary data. In this study all the secondary data are arranged, synthesized, tabulated and calculated. The data contained in the condensed income statement and balance sheets have finally been arranged in different tables for the fulfillment of stated objectives.

3.6 Tools for Analysis of Data

For the study of the working capital management of specified manufacturing companies, the following financial and statistical tools are employed to achieve the prescribed results.

3.6.1 Financial Tools

Financial ratios are calculated to ascertain the financial condition of the firm. It is the relationship between financial variables contained in the financial statements (i.e. balance sheet, profit and loss account and income statement). It helps the related parties to spot out the financial strength and weakness of the firm. The related parties may be the trade creditors, long-term debt, suppliers, investors and the company management. It is the process of summarizing large quantity of financial data and making qualitative judgment about the firm's financial performance. Different financial ratios are calculated here in this study.

3.6.1.1 Composition of Working Capital

The composition of working capital has been studied by analyzing following ratios:

(a) Ratio of Current Assets to total assets (CATA)

The ratio of current assets to total assets indicates what percentage of the company's total assets is invested in the form of current assets. It is calculated as:

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

As the ratio increases, the risk and profitability of the company would decrease. The low ratio indicates the small amount of working capital.

(b) Ratio of Current assets to fixed assets (CAFA)

This ratios shows the relationship between the current assets and fixed assets and can be calculated as:

$$\text{CAFA} = \frac{Current\ Assets}{Fixed\ Assets}$$

If the ratios are large, it indicates the sound working capital.

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

It is calculated as:

$$\text{CBCA} = \frac{Cash\ \&\ Bank\ Balance}{Current\ Assets}$$

The small ratio indicates the sound management and vice versa. The working capital is directly affected by it.

(d) Ratio of Cash and Bank Balance to Total Assets (CBTA)

This ratio is calculated as under and indicates what percentage of total assets is invested in cash and bank balance.

$$\text{CBTA} = \frac{Cash\ \&\ Bank\ Balance}{Total\ \ Assets}$$

As the ratio increases the risk and profitability would decrease and if the ratio were greater the working capital would be great.

(e) Ratio of Inventories to Total Assets (ITA)

This ratio can be calculated as:

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

This ratio indicates the percentage of total assets invested in the form of inventories. An inventory is a part of working capital so, if the percentage increases the working capital automatically increases. The increase in the ratio also indicates liberal inventory policy or blocking of materials in stock.

(f) Ratio of Inventory to Current assets (ICA)

This ratio implies the percentage of current assets that in form of inventory. If the ratio increases or percentage increase, it means greater part of current assets is occupied by inventory. So the increase in the ratio is an indication of weak current assets management of the enterprises. It is derived as:

$$\text{ICA} = \frac{Inventory}{Current\ \ Assets}$$

(g) Ratio of Receivables to Total Assets (RTA)

This ratio indicates the percentage of total assets invested in the form of receivables. The increase in the ratio indicates the liberal credit policy followed by the company. As receivable is a part of working capital, if the ratio increases the working capital also increases. It is calculated as:

$$\text{RTA} = \frac{\text{Re}\,ceivables}{Total\ \ Assets}$$

(h) Ratio of Receivables to Current Assets (RCA)

This Ratio indicates the share of receivables on current assets. Higher ratio indicates the liability of company to collect receivables promptly. Thus, high percentage indicates the greater working capital. It is calculated as:

$$\text{RCA} = \frac{\text{Re}\,ceivables}{Current\ \ Assets}$$

(i) Financing of Current Assets

This is calculated to find out whether the current assets are all financed with short-term financing or the long term financing. This helps to find out the financing policy that is adopted by the companies.

Long term financing = Current Assets – Short term financing

3.6.1.2 Liquidity position and cash conversion cycle

It is the most important part for the company. It shows the ability of the company to pay its current obligations. The liquidity positions of GRUL are computed by analyzing current ratio and quick ratio or acid test ratio.

(a) **Current Ratio (CR)**

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

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

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

(b) Quick Ratio or Acid Test Ratio (QR)

It is computed by dividing the quick assets by current liabilities.

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

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

(c) Cash conversion cycle (CCC)

Cash conversion cycle model, which focuses on the length of time between when the company makes payments or invests cash inflows, or realizes a cash return from its investment in production. This cycle is quick and convenient way to analyze the ongoing liquidity of the firm over time. It can be shown in following equation.

Cash conversion cycle = Inventory Conversion Period + Receivables Collection Period – Payables Differed Period.

CCC = ICP + RCP – PDP.

(i) Inventory Conversion Period (ICP)

The inventory conversion period is calculated by dividing inventory by the cost of goods sold per day. It is computed as:

$$\text{Inventory Turnover} = \frac{COGS}{Inventory}$$

$$\text{ICP} = \frac{360\,days}{Inventory\,Turnover}$$

The inventory conversion period is the average length of time required to convert materials into finished good and then to sell these goods; it is the amount of time the product remains in inventory in various stages of completion.

(ii) Receivables Collection Period (RCP)

It is calculated by dividing account receivables by the average credit sales per day.

$$\text{Receivable Turnover} = \frac{COGS}{\text{Re}\,ceivables}$$

$$RCP = \frac{360\,days}{\text{Re}\,ceivable\,Turnover}$$

The receivables collection period is the average length of time required to convert the firm's receivables into cash that is to collect cash following a sale.

(iii) Payables Deferral Period (PDP)

The payable deferral period is the average length of time between the purchase of materials and labor and the payment of cash for them. This period is calculated as:

$$\text{Payables Deferrals Period (PDP)} = \frac{Account\ Payable}{Cost\ of\ \ goods\ sold\ /\ 360}$$

$$= \frac{Account\ Payable}{Daily\,Cost\,ofproduction}$$

3.6.1.3 Turnover Position

These ratios are important to judge how well facilities at the disposal of the concern are being used or to measure the effectiveness with which a concern uses its resources at its disposal. Higher the ratio, the better the profitability and use of capital or resources will be. The following are the important turnover ratios that are calculated to analyze the company's turnover position:

(I) Current Assets Turnover Ratio (CAT)

This ratio indicates the number of times the current assets are turned over during the year. The increase in ratio shows the good utilization of current assets. Low ratio indicates greater working capital and high ratio indicates lower working capital. It is computed by dividing sales by current assets, i.e. Gross working capital.

$$\text{Current Assets Turnover Ratio (CAT)} = \frac{Sales}{Current\ Assets}$$

(ii) Net Working Capital Turnover Ratio (NWCT)

Here, the higher ratio shows the utilization of net working capital and lower ratio vice versa. It is computed by dividing sales by net working capital, i.e. difference of current assets and current liabilities.

$$\text{Net Working Capital Turnover Ratio (NWCT):} = \frac{Sales}{Net\ Working\ Capital}$$

Where,

Net Working Capital = Current Assets – Current Liabilities

(iii) Cash Turnover Ratio (CT)

This ratio shows the number of times the average cash balance is turned over during the year. It is computed by dividing sales by cash balance and it measures the speed with which cash moves through an enterprise's operations.

$$\text{Cash Turnover Ratio (CT)} = \frac{Sales}{Cash\ Balance}$$

(iv) Receivable Turnover Ratio (RT)

The ratio indicates the number of times the receivables turned over during the year. It gives the general measure of the productivity of the receivable investment. The higher ratio indicates the higher amount of working capital and lower ratio vice versa. This ratio is computed by dividing sales by the total amount of receivables.

$$\text{Receivable Turnover Ratio (RT)} = \frac{Sales}{\text{Re}ceivables}$$

(iv) Average collection Period (ACP)

For the complimentary of this ratio, there is a ratio called average collection period (ACP), which indicates the number of days, it takes on an average collect amount receivables. It is computed by dividing days in a year by receivable turnover.

$$\text{Average collection Period (ACP)} = \frac{Days\ in\ a\ Year(360)}{\text{Re}ceivable\ turnover\ Ratio}$$

(v) Inventory Turnover Ratio (IT)

This ratio shows the number of times inventory is replaced during the year. Higher inventory turnover indicates the good inventory management and lower turnover suggest the management should manage its inventory properly. It is computed by dividing sales by inventory.

$$\text{Inventory Turnover Ratio (IT)} = \frac{Sales}{Inventory}$$

3.6.1.4 Profitability Position

Profitability ratios are calculated to enlighten the end results of business activities that are the sole criterion of the overall efficiency of a business concern. The following are the important profitability ratios.

(i) Gross Profit Margin Ratio (GPM)

The gross profit margin reflects the efficiency with which company produces each unit of product. The higher percentage indicates the better efficiency of the company. It assesses the relationship between Gross profit and losses with sales. Gross profit is obtained by deducting cost of goods sold from net sales.

$$\text{Gross Profit Margin Ratio (GPM)} = \frac{Gross\ \text{Pr}ofit}{Sales}\ X\ 100$$

Where,

Gross Profit = Sales – cost of goods sold

(ii) Net profit Margin Ratio (NPM)

This ratio is the overall measurement of the company's ability to earn net profit. This ratio is very useful to the proprietors and prospective investors because it reveals the overall profitability of the concern. This is the ratio of net profit after taxes to net sales and is calculated as follows:

$$\text{Net profit Margin Ratio (NPM)} = \frac{Net\ \text{Pr}ofit}{Net\ Sales}\ X\ 100$$

(iii) Return on Total Assets (ROT)

It is useful measure of the profitability of all financial resources invested in the company's assets. The increase in the ratio indicates the good utilization of total assets or efficiency of the enterprises. It is derived as:

$$\text{Return on Total Assets (ROT)} = \frac{Net\ \text{Pr}ofit\ After\ Tax}{Total\ Assets}\ X\ 100$$

(iv) Return on Working Capital (RWC)

It is computed by dividing net profit after tax by current assets or working capital. It means the profit with respect to current assets.

$$\text{Return on Working Capital (RWC)} = \frac{Net\ \text{Pr}ofit\ After\ Tax}{Current\ Assets}\ X\ 100$$

Higher the ratio higher will be the utilization of current assets to earn profit and vice versa.

(v) Return on Net Worth

It indicates the return on shareholders, how well the firm has used the resources of the owners. It judges whether the firm has earned satisfactory return for its shareholders

or not. Higher the ratio higher is the return on the shareholders and vice –versa. It is computed as:

$$\text{Return on Net Worth} = \frac{Net\ \text{Pr}ofit\ After\ Tax}{Net\ Worth} X\ 100$$

3.6.2 Statistical Analysis

Statistical tools are also used for the analysis of this study. Some of the statistical tools used are described below.

3.6.2.1 Mean

The most popular and widely used measure of representing the entire data by one value is what most laymen call an "average" and what the statisticians call the Arithmetic Mean. Its value is obtained by adding together all items and by dividing this total by the number of items. The mean value of ratios of study period of both the manufacturing companies has been calculated to compare their results. The formula used for calculating mean was as follows:

$$\overline{X} = \frac{X}{N}$$

Where,

X = sum of Total values

N = No. of observations.

$\overline{X}$ = Mean

3.6.2.2 Standard Deviation (S.D.)

The standard deviation measures the absolute dispersion (or variability) of distribution. The greater the amount of dispersion (or variability) the greater the standard deviation, and the greater will be magnitude of deviations of the values from their mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series; a large standard deviations means just the opposite. Standard deviation is extremely useful in judging the representatives of the mean. In this study standard deviation of ratios of both the public Enterprises has been calculated to analyze and compare the dispersion within three fiscal years taken for the study.

Standard deviation (S.D.) is defined as the positive square root of the mean of the square of the deviations taken from the arithmetic mean. It is denoted by ∃.

$$\text{S.D. } \exists = \sqrt{(X-\overline{X})^2}$$

Where,

X = Value of observation.

$\overline{X}$ = Mean of observations

N = No. of observations

3.6.2.3 Coefficient of Variation (C.V.)

The standard deviation as stated above is an absolute measure of dispersion; the corresponding relative measure is known as the coefficient of variation. It is used in such problems where we want to compare the variability of two or more two series. The series for which the coefficient of variation is greater is said to be more variable or conversely less consistent, less uniform, less stable or less homogeneous and vice versa. Since the present study is related with the two series of ratios of corresponding manufacturing public enterprises, coefficient of variation has been calculated to compare the variability of the series of ratios. The formula used for determining the coefficient of variation is as follows:

$$\text{Coefficient of Variation (C.V.)} = \frac{S.D.}{Mean} X\ 100$$

$$= \frac{\exists}{\overline{X}}$$

Where,

∃ = Standard deviation of the observations.

$\overline{X}$ = Mean of observations.

It is independent of unit. So, two distributions can bitterly be compared with the help of C.V., more will be uniformity, consistency etc and vice versa.

3.6.2.4 Correlation coefficient (r)

Correlation analysis is the statistical tools generally used to describe the degree to which one variable is linearly related to other variables. Correlation is an analysis of

the covariance between two or more variables and correlation analysis deals to determine the degree of relationship between two or more variables. It enables only to determine the degree and direction of relationship or association between the variables. It does not tell about causes and effects relationship between the variables.

The most widely used in practice for calculating correlation coefficient between two variables is Karl Pearson (product moment) correlation coefficient. It can be calculated as:

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

Where,

r = Correlation coefficient between x and y.

$x = (X - \overline{X})$ = Deviation of variable X with its Arithmetic Mean.

$y = (Y - \overline{Y})$ = Deviation of variable Y with its Arithmetic Mean.

Interpretation of Correlation Coefficient:

i. It lies always between +1 and –1.
ii. When r =+1, there is perfect positive correlation.
iii. When r =-1, there is perfect negative correlation.
iv. When r =0, there is no relationship between the variables.
v. When r lies between 0.7 to 0.9999(-0.7 to –0.9999) there is high degree of positive (or negative) correlation.
vi. When r lies between 0.5 to 0.699, there is a moderate degree of correlation.
vii. When r less than 0.5, there is low degree of correlation.

3.6.2.5 Probable Error (P.E.) of Correlation Coefficient

The probable error is the measure of ascertaining the reliability of the value of Pearsonian coefficient of correlation. P.E. is worked out as under for Karl Pearson's coefficient of correlation.

$$\text{Probable Error (P.E.)} = \frac{0.6745 \times (1 - r^2)}{\sqrt{N}}$$

Where,

r = Correlation Coefficient

N = Number of pairs of observations.

Standard Error of Correlation Coefficient (S.E.) = $\frac{1 - r^2}{\sqrt{N}}$

… Probable Error = 0.6745 x S.E.

The probable error is used to test whether the calculated value of sample correlation coefficient is significant or not. A few rules for the interpretation of the significance of correlation coefficient are as follows:

i. If r Φ P.E. (r), then the value of r is not significant. (i.e. there is no evidence of correlation between the variables.)
ii. If r Ψ 6 × P.E. (r), then r is definitely significant. i.e. correlation is significant.
iii. In other situations, nothing can be calculated with certainty.
iv. If r Ψ6 × P.E. (r) and greater than ≀ 0.5, than it is considered significant at all.

3.6.2.6 Regression Analysis

The regression Analysis is used to estimate the likely value of one variable from the known value of other variable. In regression analysis, a kind of average irreversible functional relationship is established between the two variables. The cause and effect relationship is clearly indicated through regression analysis than the correlation analysis. In other words regression analysis is mathematical measure of average relationship two or more variables in terms of original unit of data. There are two types of variables in regression analysis one dependent variable and other independent variable. The variable whose value is influenced or it is to be predicted is called dependent variable. This general process of predicting the value of one variable on the basis of known value of another variable is defined as regression analysis. The main objective of regression analysis is to predict or estimate value of dependent variable.

a. **The regression equation Y on X:**

Y= a+bX

It is the value which gives the best estimate for the value of Y for any specified value of X

Where,

Y = Dependent variable

X= Independent variable

a= Intercept of the line

b= Slope of the line (It measures the average change in value of Y as result of one unit change in value of X. Also called regression coefficient of Y on X. It's rate of regression)

The value of constants 'a' and ' b' can be determined by solving following two equations.

$y = na + b\sum x$ ..... [i]

$xy = a\sum x + b\sum x^2$ ..... [ii]

b. Regression Equation of X on Y

It is the line which gives the best estimate of value of X for any specified value of Y.

It is given by:

X= a'+b'y

Where,

X=Dependent variable

Y= Independent variable

a'= Intercept of the lines

b'= Regression coefficient of X on Y

The values of constant a' and b' are determined from the normal equation as below.

$x = na' + b\sum y$

$xy = a'\sum y + b'\sum y^2$

Properties of Regression line and coefficients:

- The two regression lines pass through mean points $(\bar{X}, \bar{Y})$.
- The two regression lines coincide when the variables X and Y are perfectly correlates (i.e. $r = \pm 1$)
- The two regression lines at right angles when X and Y are independent of each other. (i.e. r=0)
- The regression line must have the same sign. Also, the correlation coefficient and regression coefficient must have the same sign.

- The product of two regression coefficient must be less than or equal to 1.

3.7 Key Terms used in this chapter

To avoid ambiguity, confusion and misunderstanding, the key terms used in this study have been defined as follows:

(I) Current Assets

It includes the cash and bank balance and those other assets which can be converted into cash within a year such as: inventory, debtors or receivables, advances to employees, deposits, prepaid rent and insurance, interest receivable on bonds and other miscellaneous current assets.

(II) Current Liabilities

All the payment has to be made by the company within an accounting period are included in current liabilities. It includes sundry creditors, provisions for taxation, unclaimed dividend, provisions for bonus, housing, income tax etc.

(III) Working Capital

The term Working capital refers to the gross working capital. In other words, it includes total volume of current assets of the company.

(IV) Net Working Capital

Net Working Capital refers to the difference between Current Assets and Current Liabilities.

(V) Fixed Assets

It consists of the assets of the company like land and buildings, plant and machinery, furniture and fixtures, long term investments, office equipments, computers and miscellaneous assets related to administration and construction works in progress.

(VI) Total Assets

It includes the total of current assets, net fixed assets and miscellaneous assets,which includes the capital expenditure in progress.

(VII) Cash and Bank Balance

It includes the cash in hand and cash at bank.

(VIII) Receivables

It includes secured debtors and unsecured debtors.

(IX) Inventory

It includes the raw materials at cost, scrap raw materials at direct standard cost, work in progress at direct standard cost, stores and spares at cost and finished goods at direct standard cost.

(X) Net Worth

It includes the paid up capital, general reserve, housing reserve and other reserve of the company.

(XI) Sales

Revenue from sale of goods is recognized when the significant risks and rewards of ownership of the goods have passed to the buyer, with the company retaining neither continuing managerial involvement to the degree usually associated with ownership, nor effective control over the goods sold.

(XII) Quick Assets

Quick Assets refers to that part of current assets that can be converted in cash immediately.. It includes the assets such as cash and bank balances, marketable securities, investment in commercial papers etc that can be converted into cash without any risk of loss. In other words, it represents current assets other than inventories and prepaid expenses.

(XIII) Loan and advance

Loans and advances are the short-term investments.

(XIV) Cost of goods sold

It represents the cost incurred for the products or services before it is disposed off. It includes the costs such as direct materials, direct labour, and manufacturing overheads.

(XV) Gross Profit

It is the difference of sales revenue and the cost of goods sols (COGS).

(XVI) Net Profit After Tax

It is the excess of income over expenditure that is arrived at after deducting all expenses such as factory overheads, office overheads, selling & distribution overheads and tax.

(XVII) Operating Expenses

It represents other expenses except materials, labour and overheads. For the present context, it refers to the distribution expenses and administrative expenses**.**

(XVIII) Account Payable

It is the due amount to be paid on account of credit purchase. It is also defined as creditors.

(XIX) Short Term Financing

It is the source of working capital and financing for current assets from current liabilities. In other words, it is the deferred payment to finance current asset investment.

(XX) Long Term Financing

It refers to the long-term sources for financing working capital needs such as issue of shares, debentures or long term borrowing from banks.

(XXI) Investment

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

CHAPTER -IV

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

The previous chapter provides the bases and plan for the analysis and interpretation. This is the heart of the study. The main objective of this chapter is to present and analyze the types of data's, which throw lights on working capital position of Gorakhkali Rubber Udyog Limited, Nepal. For the accomplishment of this objective a definite course of research methodology has been followed. Here the presentation and analysis of data has been made using financial as well as statistical tools. Under the financial analysis efforts have been made to analyze the working capital management in terms of the composition of current assets, turnover position, profitability position, liquidity position, relation between current assets and total as well as fixed assets, sources and application of fund and sectoral management of current assets of Gorakhkali Rubber Udyog Limited,Nepal. The turnover position is analyzed with the help of gross working capital turnover, Networking capital turnover and inventory turnover. Moreover the profitability position is analyzed with the help of gross profit margin, net profit margins, operating ratio, return on total assets and return on net worth and return on working capital. For this the data collected are shown in tabular and graphic form and they are analyzed with the help of financial and statistical tools like mean, standard deviation and coefficient of variation. The next statistical tools used are correlation and regression analysis. Correlation coefficients have been analyzed between current assets and sales, gross profit, net profit and net worth of the company. The regression analysis has been carried out for studying behabiour of sales, gross profit and net worth on net working capital.

4.2 Composition of working capital

Working capital is the portion of an enterprises total capital, which is employed in short term operation. Every type of business organization needs to invest its funds on short- term assets like cash, inventories, marketable securities, and receivables to run day-to-day business activities efficiently and effectively.

The efficient management of current assets is an integral part of overall financial management and has the greater impact on maximization of owner's capital. Thus, it is necessary to have proper analysis for current assets management. The proper analysis of current assets of industrial concern reflects the nature of performance and operation of its management. So the overall current assets are firstly analyzed with the help of following calculations:

4.2.1 Composition of Current Assets

As current assets are the main parts which are required to run day to day business activities and total of which is known as working capital as the gross concept, it's position has become needful to study. Most of the business organization require some amount of working capital and it's requirement differ according to the size of the organization.

A firm needs cash to purchase raw materials, pay expenses etc. It is because of not perfect matching between cash inflow and outflow cash should also be held to meet the future expenses. The stock of raw materials is kept in order to ensure smooth production and to protect the risk of non-availability of raw materials. To meet this obligation cash is also needed.

Any business organization aim is to maximize return on shareholders investment. In order to accomplish this objective the business organization should earn sufficient return from its operations. Earning a steady amount of profit requires successful sales. So the firm has to invest enough funds to current assets for the success of sale.

As the sales do not converted into cash instantly the extra amount of working capital is needed. The efficient management of current assets has an integral impact on maximization of owner's capital in this context. The proper analysis for current assets of industrial concern reflects the nature and operation of its management. So the overall current assets are firstly analyzed.

Table No. 4.1 (a)

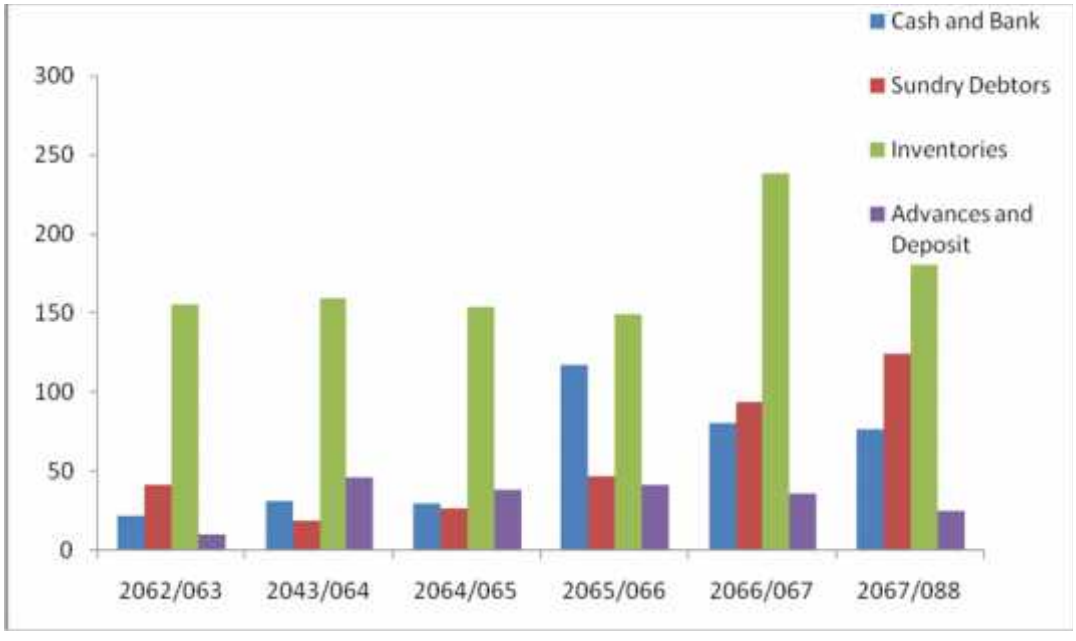
Composition of Current Assets
Gorakhkali Rubber Udyog Limited, Nepal

(Rs. in million)

Fiscal Year	Cash and Bank		Sundry Debtors		Inventories		Advances and Deposit		Total CA
	Amt	%	Amt	%		Amt	%	Amt	%
2062/063	21.35	9.42	40.85	18.02	226.75	155.364	68.52	9.19	4.05
2043/064	30.31	12.01	17.78	7.05	252.32	159.01	63.02	45.22	17.92
2064/065	28.87	11.73	25.77	10.47	246.2	153.57	62.38	37.98s	15.43
2065/066	117.07	47.07	45.97	18.48	248.73	148.83	59.84	40.51	16.29
2066/067	79.9	18.08	93.2	21.09	441.97	238.43	53.95	35.23	6.89
2067/088	75.91	18.76	123.53	30.53	404.58	180.52	44.62	24.61	6.08
Total	332.06	18.23	347.1	19.07	1,820.55	1035.72	56.89	192.74	10.33
Mean	55.34	18.23	57.85	19.07	303.42	172.62	56.89	32.12	10.33
S.D	37.09	-	41.54	-	-	31.1	-	12.02	-
C.V	48.02	-	71.80	-	-	18.019	-	37.45	-

Sources: i) Annual Audit Report, GRUL, 2062/063-2067/068 ii) SPSS: Descriptive (mean, SD and CV)

Figure 4.1 Composition of Current assets



Source: Table No. 4.1

The above table no. 4.1(a) represents the composition of current assets position of Gorakhkali rubber Udyog, Limited Nepal. Here current assets include inventory, sundry debtors, cash and bank balance and advance and deposits. In this table, percentage indicates the proportion of individual current assets in total current assets. The above table presents the investment pattern of current assets and their fluctuations in different periods taken for the study.

The table reveals that GRUL, Nepal has not maintained consistency in cash holding. The average cash and Bank Balance to CAs ratio of GRUL, Nepal is 18.23 %. In the Fiscal Year 2065/066, the proportion of cash and bank balance is notably high i.e. 117.07 million and it got increased by 305%s. The C.V. shows that there is high fluctuation in yearly cash balance holding than that of other components of current assets except Sundry Debtors.

The receivables ratio (%) is important because receivables stand next to cash so far liquidity is concerned. The average receivables ratio varies widely within the enterprises also. The average ratio of receivables to current assets is 19.07 percent amounting to Rs.57.85 million. There has been increasing trend of holding sundry Debtors during the period. The CV 71.8 percent shows that GRUL has higher variability in holding sundry Debtors than that of other components of Current Assets.

The average ratio of inventories to CAs is 56.19%. Thus, it indicates that inventory constitutes a dominant share on current assets. The table shows that GRUL's average investment in inventory is more than 50 % of total current assets. The variability shown by CV of inventories is less than that of rest of the components of current assets. Company has maintained good consistency in levels of inventories during the study period.

Advance and Deposits are other major components of current assets. It includes the amount of prepaid expenses, advances to employees, deposits, investment bonds and other current assets.. The average percentage of advance and deposits is 10.33%.

In overall observations, Working Capital Management requires better balancing of cash management, optimum investment in inventory and good collection policy to avoid fluctuations in the management of CAs so as to make Working Capital Management effective. More about this will be discussed in concluding chapter.

A composition of ratios of cash, receivables and inventories and advances shows that the ratio of inventories to current assets is the largest followed by the ratio of cash and bank to current assets and the ratio of receivables to current assets is next followed by advances and deposit.

ACA<RCA <CCA < ICA

Where,

AVC=The average ratio of Advances to Current Assets

RCA= The average ratio of Receivables to Current Assets.

CCA= The average ratio of Cash and Bank Balance to Current Assets.

ICA= The average ratio of Inventories to Current Assets.

From above, it is clear that the average size of inventories is the largest compared to the average size of either cash or receivables. Thus, Nepalese public enterprises should give considerable importance to its inventory management.

4.2.2 Percentage of Current Assets to Total Assets

As the requirement of the current Assets depends upon the nature of the business, it is required to meet the working capital, which is required to run the day to day activities. The size of investment in current assets can be seen by computing the ratio of current assets to total assets. Higher percentage of current assets in Total Assets says the greater the liquidity of a firm, the lower the risk of technical insolvency, and vice versa for lower percentage. Although high level of Current Assets to Total Assets indicates good liquidity position, it adversely affects the profitability of the factory because idle money can earn nothing. Thus companies should take care of Current Assets to Total Assets proportion carefully. The table given below represents the percentage of current assets to total assets.

Table no. 4.2

Current Assets to Total Assets

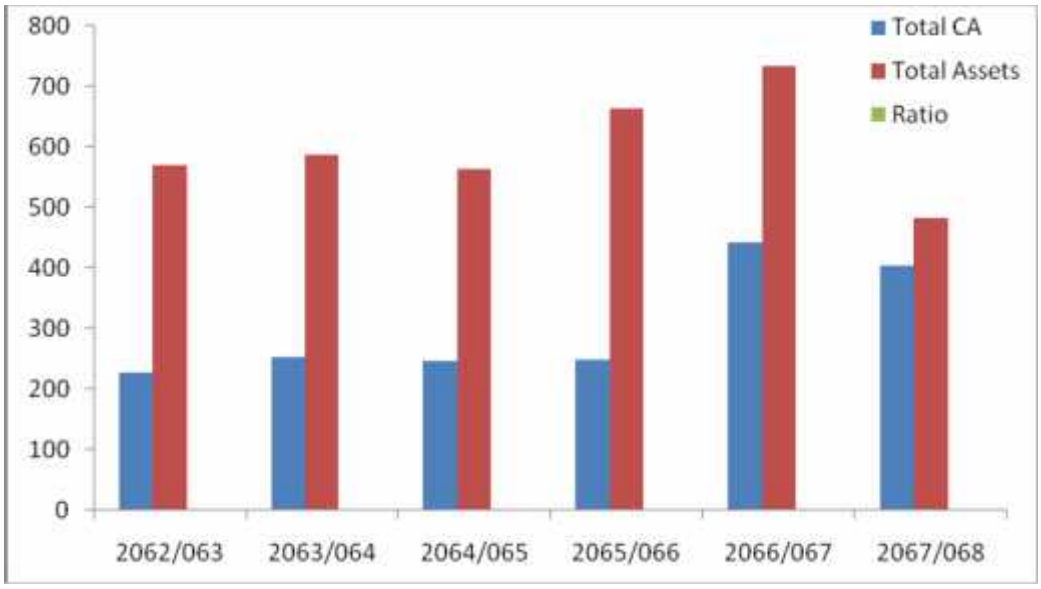
Fiscal Year	Total CA	Total Assets	Ratio
2062/063	226.75	569.59	0.398093
2063/064	252.32	586.48	0.430228
2064/065	246.20	563.5	0.436912
2065/066	248.72	664.22	0.374454
2066/067	441.97	734.19	0.601983
2067/068	404.57	482.14	0.839113
Total	1820.53	3600.12	0.505686
Mean	320.71	600.02	0.534499
SD	91.4	74.75	-
CV	28.5	12.45	-

Sources: i) Annual Audit Report, GRUL, 2062/063-2067/068

ii) SPSS:ii) Descriptive (mean, SD and CV)

Figure no. 4.2

Current Assets to Total Assets



Source: Table No. 4.2

The table and figure 4.2 represents the proportion of current assets investment to total assets investment of Gorakhkali Rubber Udyog, Limited Nepal over the study period. The average ratio of investment in current assets is 50 percent of total assets which can be considered a high proportion of current assets.

4.2.3 Proportion of components of Current Assets to Total Assets

Every company must hold cash to meet its requirement. The reasons for holding cash are for transactional motive, precautionary motive and speculative motive. The main purpose of holding cash is to meet daily business requirement. Cash is necessary to pay bills purchase raw material, to pay sundry creditors and other payable obligation. The optimum cash and bank balance has to maintain for the purpose of the above three motives and other daily requirements. The table No. 4.4 shows the proportion of cash to current assets.

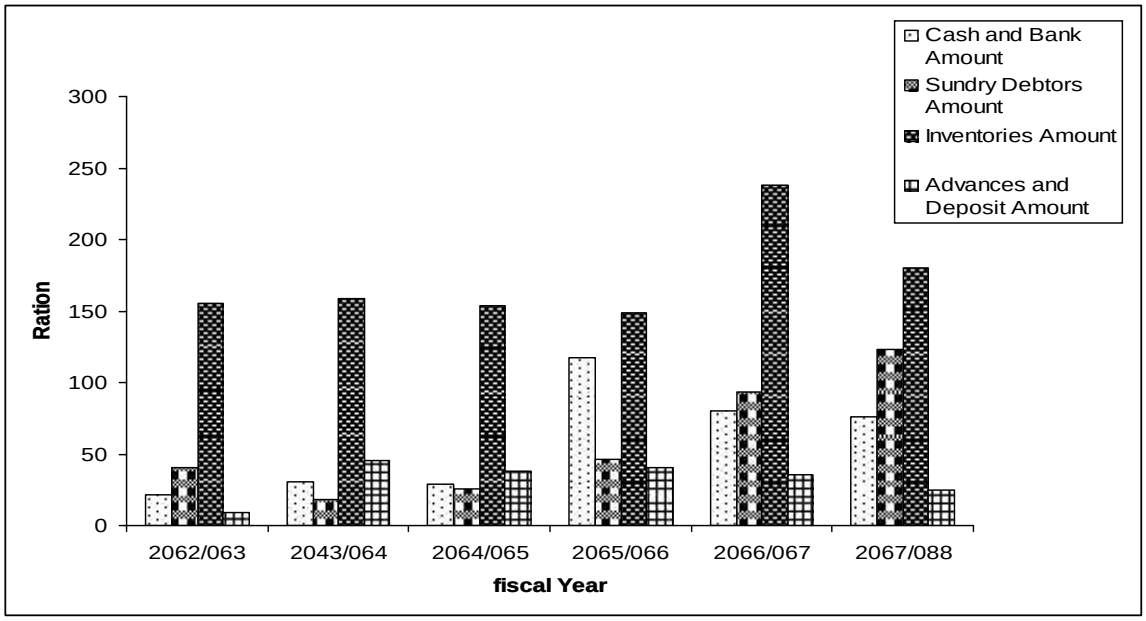
Table no. 4.3
Proportion of Components of Current Assets to Total Fixed Assets
(Rs. in million)

Fiscal year	**Cash and Bank**		**Sundry Debtors**		**Inventories**		**Advances and Deposit**		**Total Assets**
	Amt	%	Amt	%	Amt	%	Amt	%	
2062/063	21.35	0.032	40.85	0.062	155.36	0.236	9.19	0.014	659.59
2043/064	30.31	0.052	17.78	0.030	159.01	0.271	45.22	0.077	586.49
2064/065	28.87	0.051	25.77	0.046	153.57	0.273	37.98	0.067	563.50
2065/066	117.07	0.176	45.97	0.069	148.83	0.224	40.51	0.061	664.22
2066/067	79.90	0.109	93.20	0.127	238.42	0.325	35.23	0.048	734.19
2067/088	75.91	0.111	123.53	0.181	180.52	0.265	24.61	0.036	682.14
Total	353.41	0.09	347.10	0.089	1035.71	0.266	192.74	0.05	3890.13
Mean	55.34	0.09	57.85	0.089	172.62	0.266	32.12	0.05	648.35
S.D	37.09	-	41.54	-	31.1	-	32.12	-	320.71
C.V	48.02	-	71.80	-	18.019	-	12.02	-	76.72

Sources: i) Annual Audit Report, GRUL, 2062/063-2067/068

ii) SPSS: Descriptives (mean, SD and CV)

Figure no. 4.3
Proportion of Components of Current Assets to Total Fixed Assets



Source: Table No. 4.3

i) Proportion of Cash and Bank Balance to Total Assets

The proportion of liquid cash in comparison to the total assets shows the investment in cash out of total assets. The higher ratios of cash to total assets decrease the risk and provide more working capital but the excess cash earns nothing. GRUL holds average 9 percent cash to total assets.

ii) Proportion of Inventory to Total Assets

Inventory are the stock of the product a company is manufacturing for the sale and the components that mix up product and inventory is most important of the current assets. The storage of required inventory result irregular production and hamper of production process and in the other hand excess inventory causes in necessary holding of capital. It results in increase the cost. Therefore the inventory must be optimum in position. So that neither it arises the problem of excess inventory nor it is shortage.

The above table and the graphs indicate that GRUL has significant investment in inventories. The average ratio of inventory to total assets is 26.6% with no heavy variability over the period.

iii) Proportion of Receivable to Current Assets and to Total Assets

Receivable is one of the major components of current. To increase the sale volume the company should give its product in credit to customers which increases receivable. Higher degree of receivables results unnecessary held up of working capital and lower degree of receivables may cause negative results in sales level. GRUL holds in average about 9 percent of receivables to total assets over the study period

iv) Proportion of Advances and Deposit to Total Assets

Advances and deposits are another element of current assets. In the figure presented above, the proportion of advances and deposit to total assets is 5%.

4.2.4 Percentage of Current Assets to Fixed Assets

For the purpose of success of any manufacturing concerns, firm should invest in both current assets and fixed assets to support a particular level of output. The level of current assets can be measured by relationship between current assets to fixed assets, which helps to find out the current assets investment policy. Assuming the constant level of fixed assets, a higher CA to FA ratio indicate an aggressive current assets policy, conversely lower ratio indicates conservative policy.n and risk and higher liquidity.

Table no. 4.4

Current Assets to Fixed Assets

(Rs. in million)

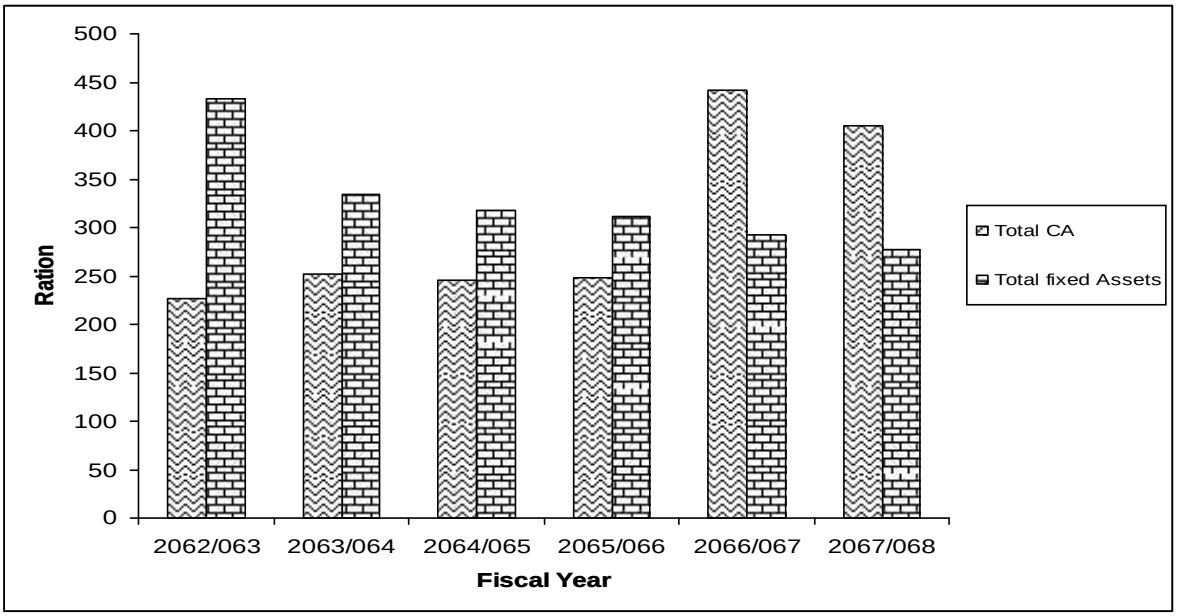
Fiscal Year	Total CA	Total Fixed Assets	Ratio
2062/063	226.75	432.83	0.52
2063/064	252.32	334.144	0.76
2064/065	246.20	317.29	0.78
2065/066	248.72	311.82	0.80
2066/067	441.97	292.21	1.51
2067/068	404.57	277.55	1.46
Total	1820.53	1965.844	0.93
Mean	320.71	327.64	0.93
SD	91.4	55.187	-
CV	28.5	16.84	-

Sources: i) Annual Audit Report, GRUL, 2062/063-2067/068

ii) SPSS: Descriptive (Mean SD and CV)

Figure no. 4.3

Current Assets to Fixed Assets



Source: Table No. 4.4

The table and figure 4.4 shows the position of current assets with fixed assets of GRUL. The average proportion of current assets to fixed assets is 93%It shows interestingly that proportion of Current Assets in fiscal year 2066/067 is almost equal to value of fixed assets. The ratio varies largely and as a current asset occupies large proportion of fixed assets. This indicates the company is adopting aggressive current assets financing policy.

4.3 Liquidity Position & Cash Conversion Cycle

Liquidity position of the firm depends on its working capital policy. If the firm follows aggressive policy, it has low liquidity position, while conservative policy has high liquidity position. The liquidity position can be analyzed with the help of these ratios which are current ratio, acid test ratio and cash conversion cycle. Cash conversion cycle also analyzes the liquidity position of the firm. The liquidity ratio is very closely related to the size of Net Working capital. In cash conversion cycle the cash outflow from the business to purpose the paying its short-term obligation and other paying purchasing having activity and it return by inflow sales in business this period is called cash conversion period.

4.3.1 Size of Net Working Capital

The difference between current assets and current liabilities are known, as net working capital can be positive or negative. Positive net working capital indicates that firm's ability to pay its current obligation and negative working capital indicates that it's inability to pay it's current obligation.

Table no. 4.5
Size of Net Working Capital

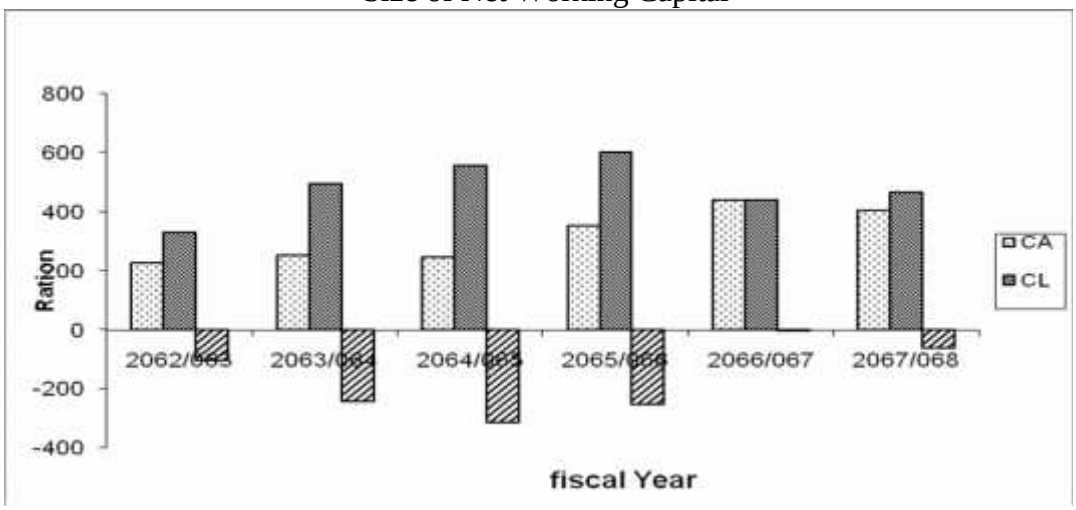
(Rs. in million)

Fiscal Year	CA	CL	NWC
2062/063	226.75	329.770	-103.021
2063/064	252.32	494.835	-242.515
2064/065	246.20	557.385	-311.185
2065/066	352.38	603.008	-250.628
2066/067	441.97	442.305	-0.335
2067/068	404.57	466.252	-61.682
Total	1924.19	2893.55	-969.366
Average	320.698	482.25	-161.56
S.D	91.42	95.38	119.37
C.V	28.50	23.57	73.88

Sources: i) Annual Audit Report, GRUL, 2062/063-2067/068

ii) SPSS: Descriptives (mean, SD and CV)

Figure no. 4.5
Size of Net Working Capital



Source: Table No. 4.5

The table and figure no 4.5 shows that average amount of net working capital GRUL has maintained is -161.56 Rupees. The negative figure indicates that the firm has current liabilities excess over current assets. The maintained amount level of working capital is not enough to satisfy current liabilities. It also indicates poor liquidity and the firm is adopting aggressive policy. The company should pay quick attention to managing liquidity.

4.3.2 Current Ratio

Current ratio measures the short-term solvency of the firm. It is the simple relationship of current assets to current liabilities. Current assets include cash and bank balance, inventory receivables and other miscellaneous current assets. The current liabilities include creditors, cash credit taken and provision for taxation, unclaimed dividend and miscellaneous current liabilities. The current ratio of selected enterprises for the period of study is calculated in the table No. 4.9 presented below.

Table no. 4.6
Current Ratio of GRUL

(Rs. in million)

Fiscal Year	Current Assets	Current Liabilities	Current Ratio
2062/063	226.75	329.770	0.688
2043/064	252.32	494.835	0.510
2064/065	246.20	557.385	0.442
2065/066	352.38	603.008	0.584
2066/067	441.97	442.305	0.999
2067/088	404.57	466.252	0.868
Total	1924.19	2893.55	0.664
Average	320.698	482.25	0.66
S.D	91.42	95.38	-
C.V	28.50	23.57	-
Average	320.698	482.25	-

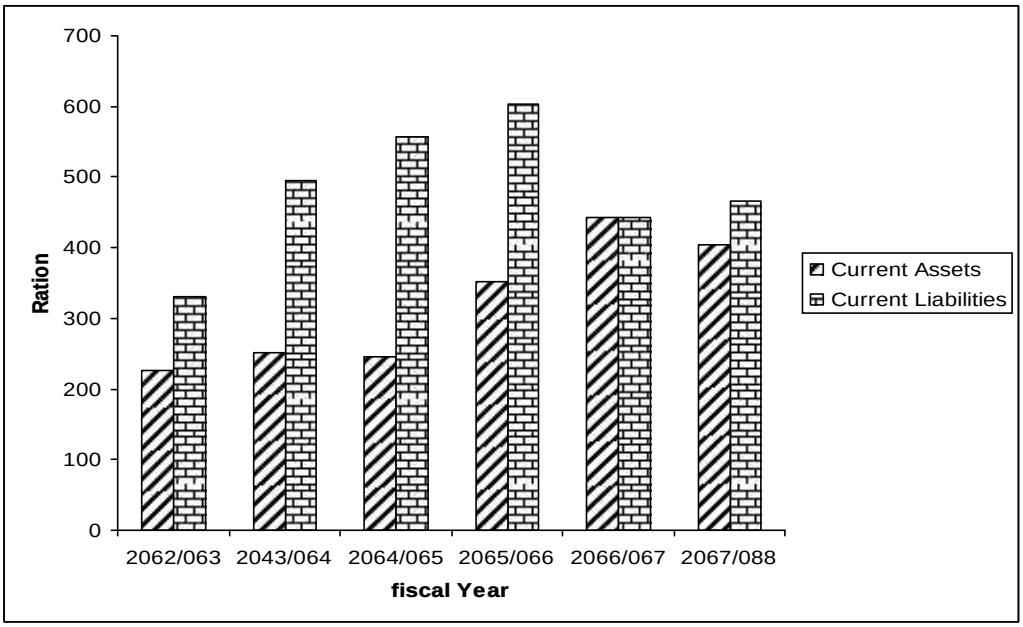
Sources:

i) Annual Audit Report, GRUL, 2062/063-2067/068

ii) SPSS: Descriptive (mean, SD and CV)

Figure no. 4.6

Current Ratio of GRUL



Source: Table No. 4.6

The table no. 4.6 shows that average current ratio of GRUL is 0.793 which is below the standard current ratio 2:1. The figure less than 1 indicates the insolvency to meet the current obligations of a firm. In other words current assets inadequate to meet the current liabilities is poor management of working capital

4.3.3 Acid Test Ratio (Quick Ratio)

Quick ratio or acid test ratio is the relationship in between quick assets and current liabilities. It is the measurement of company's ability to convert its current assets quickly into cash in order to meet its current liabilities. Though current ratio is high, if more amount is hold by inventory then the company may suffer of paying current obligations. So the study of quick ratio is reliable. It can be computed by dividing quick assets by current liabilities. While calculating quick assets, inventories and prepaid are excluded from total current assets.

The table and figure no 4.7 presented below depicts that on average GRUL has maintained low liquidity position i.e. 0.34. It's poor in comparison to the traditional standard of 1:1. It can be said that GRUL has no good and standard position of quick ratio over the period which indicates that company is not capable of meeting short term obligations on time.

Table no. 4.7
Acid Test (Quick) Ratio

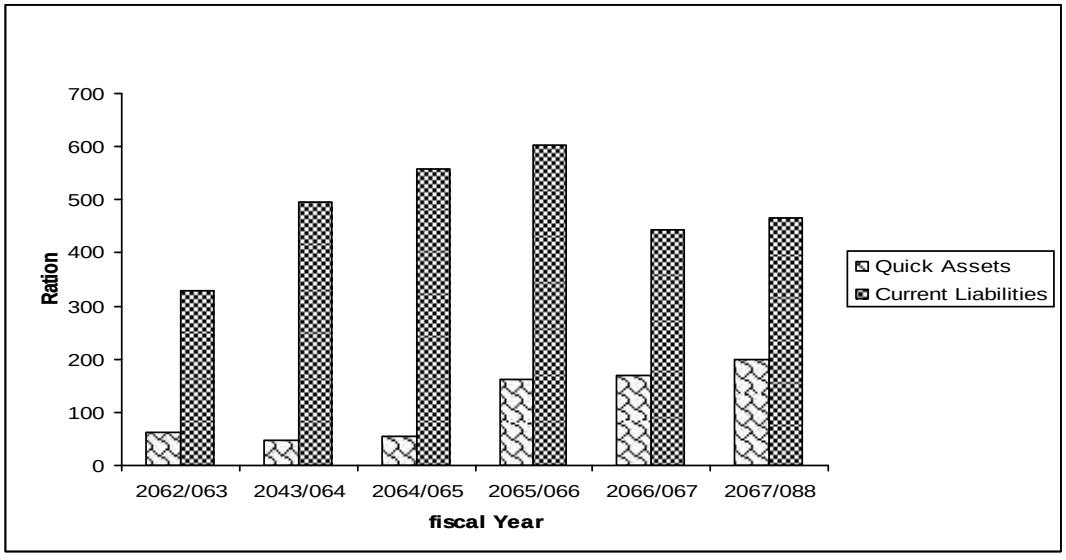
(Rs. in million)

Fiscal Year	Total CA	Inventory	Prepaid	Quick Assets (CA-Inv.-Prepaid)	Current Liabilities	Ratio
2062/063	226.75	155.36	9.19	62.20	329.770	0.18
2043/064	252.32	159.01	45.22	48.09	494.835	0.097
2064/065	246.20	153.57	37.98	54.65	557.385	0.098
2065/066	352.38	148.83	40.51	163.04	603.008	0.27
2066/067	441.97	238.42	35.23	168.32	442.305	0.38
2067/088	404.57	180.52	24.61	199.44	466.252	0.42
Total	1924.19	1035.71	192.74	695.74	2893.55	0.24
Average	320.698	172.62	192.74	115.96	482.25	0.24
S.D	91.42	31.1	32.12	60.86	95.38	-
C.V.	28.50	18.019	32.12	52.48	23.57	-

Sources: i) Annual Audit Report, GRUL, 2062/063-2067/068

ii) SPSS: Descriptive (mean, SD and CV)

Figure no. 4.7
Acid Test (Quick) Ratio



Source: Table No. 4.7

4.3.4 Inventory Conversion Period

The inventory conversion period measure the length of time required to cover raw materials into finished goods and then to sell these goods to the market. It is the amount of time, the product remains in inventory in various stages of production. The following table shows the inventory conversion period of GRUL for the study period.

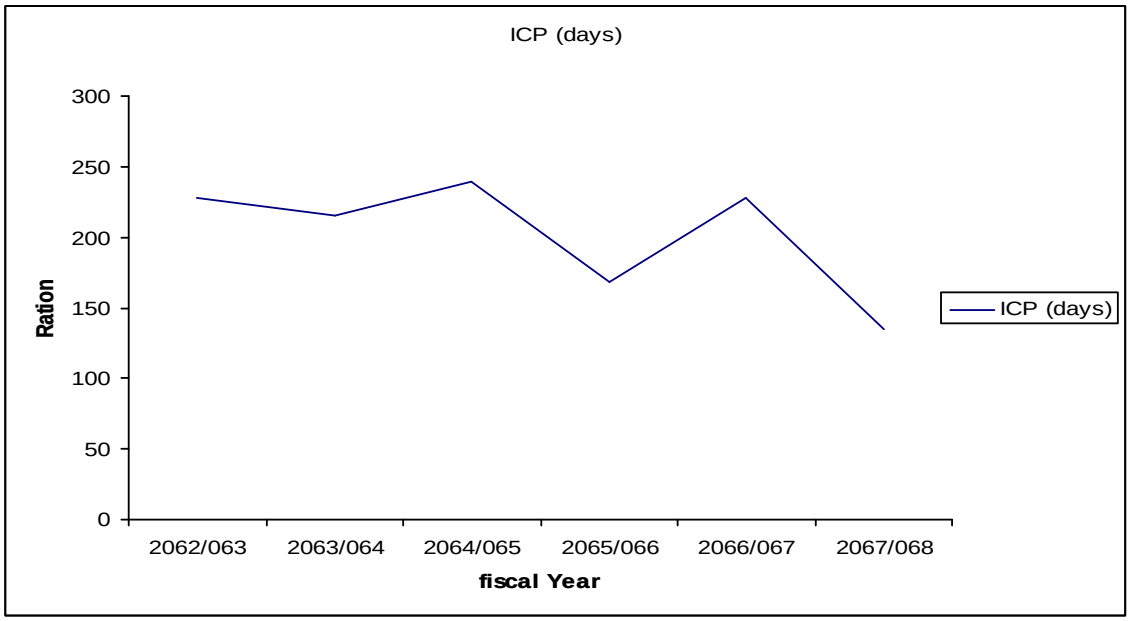
Table No. 4.8
Inventory Conversion Period (ICP)

(Rs. in million)

Fiscal Year	Inventory	COGS	Days in a Year	Inventory turnover	ICP (days)
2062/063	155.36	245.14	360	1.578	228.154
2063/064	159.01	265.32	360	1.669	215.753
2064/065	153.57	231.18	360	1.505	239.144
2065/066	148.83	317.98	360	2.137	168.497
2066/067	238.42	377.48	360	1.583	227.379
2067/068	180.52	482.98	360	2.676	134.554
Total	1035.71	1920.08	2160.00	1.85	1165.12
Average	172.62	320.01	360.00	1.85	194.19

Sources: Annex XV

Figure no. 4.8
Inventory Conversion Period (ICP)



Source: Table No. 4.8

The above stable and figure 4.8 show that, by taking 360 days as standard, average inventory conversion period of the firm is 194 days. Comparatively position of inventory conversion period of 134 days in fiscal year 2066/067 is better than that of rest of the years. It might be because of the nature of the product, however the conversion period can be considered too long more half a year, which directly affects cash conversion cycle adversely. And shorter inventory conversion period is preferable for effective working policy.

4.3.5 Receivable Collection Period (RCP)

Receivable Collection Period is the average length of time required to convert the receivable into cash. It is also called the days sales outstanding. Higher the ratio indicates the cash conversion period is higher and it also affects the liquidity position of the company. The following table shows the receivable collection period of GRUL in the period of study.

The table and figure no 4.9 presented below show that the company has average 43.47 days of collection period The figure shows that the firm is inconsistence in period of collection over the time. The range of collection period, the shortest period is 17 days whereas the longest period is 72 days which high variability in collection period and lack of proper collection policy.

Table no. 4.9
Receivable Collection Period of GRUL

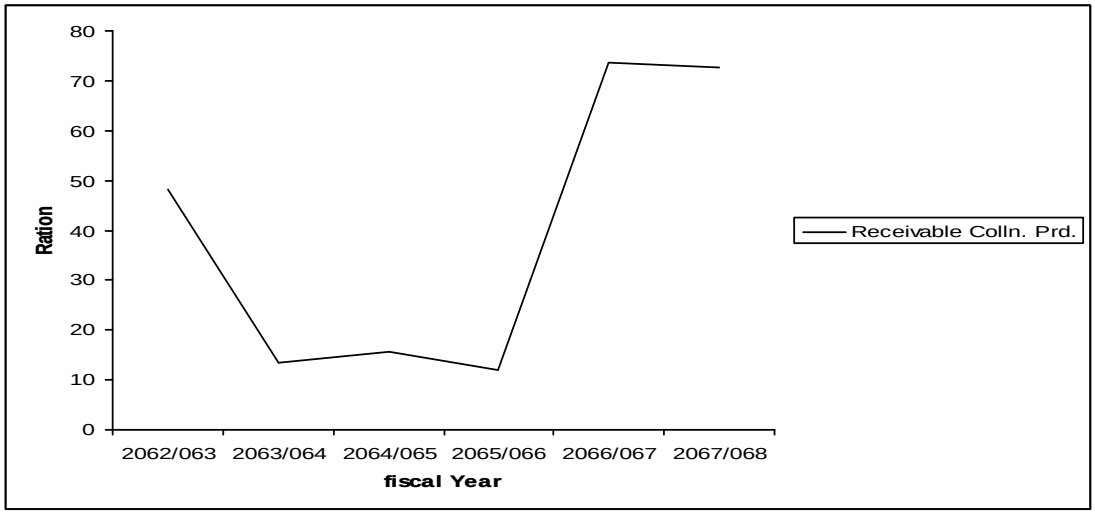
(Rs. in million)

Fiscal Year	Receivables	Sales	Days in a Year	Rec. Turnover	RCP
2062/063	40.85	531.62	360	13.02	27.66
2063/064	17.78	363.99	360	20.47	17.58
2064/065	25.77	305.36	360	11.84	30.38
2065/066	45.97	473.46	360	10.29	34.95
2066/067	93.2	588.53	360	6.31	57.01
2067/068	123.53	611.34	360	4.94	72.74
Total	347.1	2874.3	2160	8.28	260.84
Average	57.85	479.05	360	8.28	43.47

Sources: Annex XVI

Figure no. 4.9

Receivable Collection Period



Source: Table no 4.9

4.3.6 Payable Deferral Period (PDP)

The payable deferral period shows the length of time between the purchase of raw materials and labor and the payment of cash for them. The following table shows that the payable deferral period during the study.

Table no. 4.10

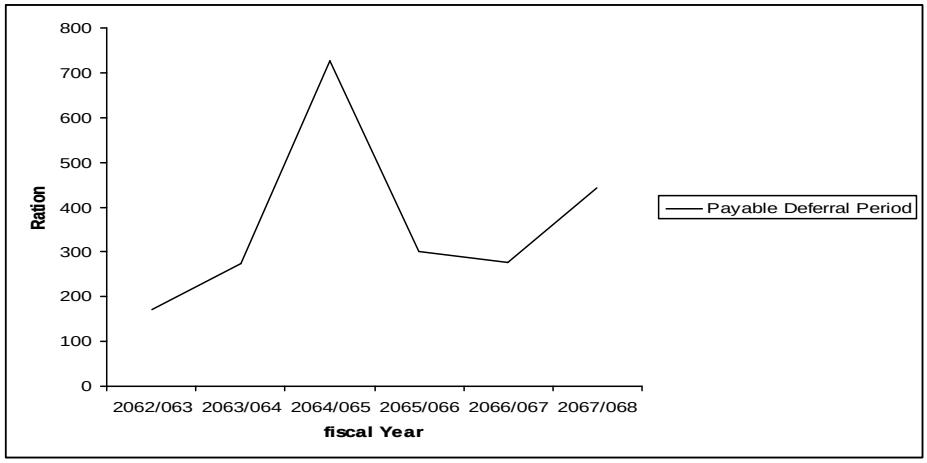
Payable Deferral Period (PDF) of GRUL

(Rs. in million)

Fiscal Year	Account Payable	COGS	Days in a Year	Daily COGS	PDP
2062/063	193.27	406.38	360.00	1.13	171.21
2063/064	354.81	466.50	360.00	1.30	273.81
2064/065	466.39	231.18	360.00	0.64	726.28
2065/066	266.14	317.98	360.00	0.88	301.31
2066/067	289.75	377.48	360.00	1.05	276.33
2067/068	1139.05	926.64	360.00	2.57	442.52
Total	2709.41	2726.16	2160.00	1.26	2191.46
Average	451.57	454.36	360.00	1.26	365.24

Sources:Annex VII

Figure no. 4.10
Payable Deferral Period (PDP) of GRUL



Source: Table No. 4.11

The longer the payable deferral period the better is cash management. The firm being able to postpone its payments shows its efficiency. The average deferral period of GRUL is 365 days which can be considered too long equal to a year. The varying PDF and too long period of PDP indicates the firm is inefficient about managing the obligations.

4.3.7 Cash conversion cycle (CCC)

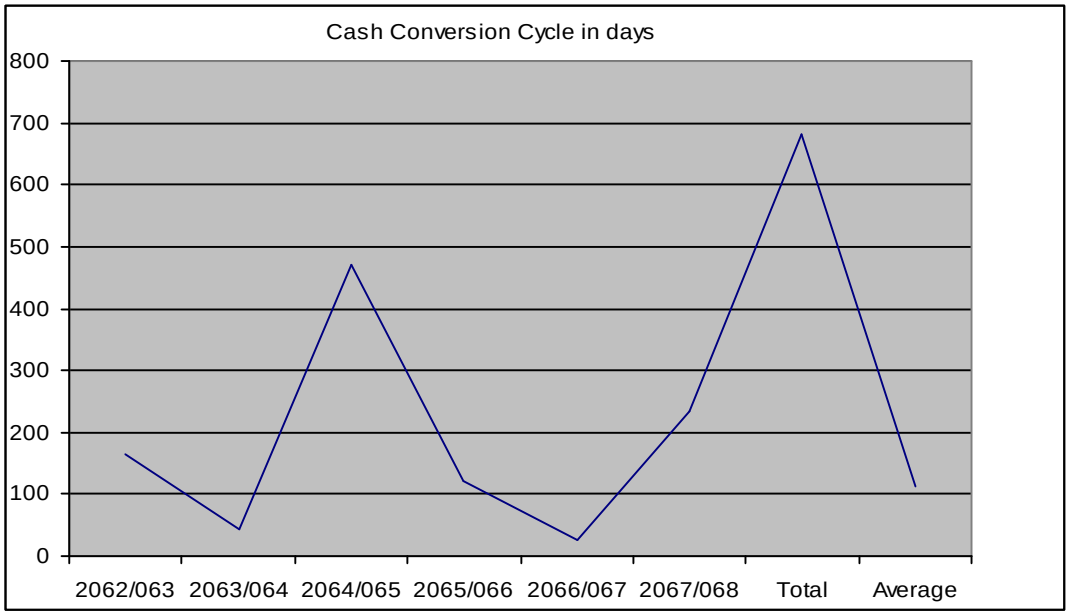
A helpful way to look at the cash flow of the firm is to analyze the firm's cash conversion cycle. A cash conversion cycle reflects the net time interval in days between actual cash expenditures of the firm on productive resources and ultimate recovery of cash. The cash conversion cycle is a quick and convenient way to analyze the ongoing liquidity of the firm over the time.

Table no. 4.11
Cash Conversion Cycle of GRUL

Fiscal Year/Details	**2062/063**	**2063/064**	**2064/065**	**2065/066**	**2066/067**	**2067/068**	**Total**	**Average**
Inventory Conversion Period in days (a)	288.15	215.75	239.14	168.49	227.33	134.54	1273.40	212.23
Collection Period in days (b)	27.66	17.58	30.38	34.95	57	72.74	240.31	40.05
Operating Cycle in days c =(a+b)	336.31	229.27	254.9	180.59	300.94	207.26	1509.27	251.54
Payable Deferral Period in days (c-d)	171.21	273.81	726.28	301.31	276.33	442.52	2191.46	365.24
Cash Conversion Cycle in days	165.10	44.54	471.38	120.72	24.61	235.26	1061.61	176.93

Sources: Annual Audit Report, GRUL, 2062/063-2067/068

Figure no. 4.11
Cash Conversion Cycle of GRUL



Source: Table No. 4.11

The above table and figure show that the average operating time lag required to GRUL is 251.55 days whereas it's been able to pay it's short creditors in average 365.24 days a year (Negative sign for the unit day in cash conversion cycle has been ignored). Generally high positive cash turnover and low cash conversion cycle is preferable but GRUL's figure in relation to cash conversion cycle shows it's poor performance over the period.

4.4 Turnover Position

Turnover ratios reflect the speed and rapidity with which assets are converted into sales thereby resulting in the efficiency of the enterprise. Though there is no Standard or ideal measurement, a great turnover is regarded as efficient utilization of the assets. Manufacturing companies with higher turnover of assets need lesser working capital as compared to manufacturing companies having lower turnover. Thus, following turnover ratios are calculated to examine whether the working capital has been efficiently utilized in the enterprise or not.

4.4.1 Current Assets Turnover Ratio

The ratio indicates the number of times the total current assets is turned over during the year in relation to its sales. When this ratio increases over time, one can see the improvement in current assets utilization.

Table no. 4.12
Current Assets Turn Over of GRUL

(Rs. in million)

Fiscal Year	**Sales**	**CA**	**Ratio**
2062/063	531.62	226.75	2.345
2063/064	363.99	252.32	1.443
2064/065	305.36	246.20	1.240
2065/066	473.46	352.38	1.344
2066/067	588.53	441.97	1.332
2067/068	611.34	404.57	1.511
Total	2874.3	1924.19	1.494
Average	479.05	320.70	1.494
S.D.	129.43	91.42	-
C.V.	27.01	28.50	-

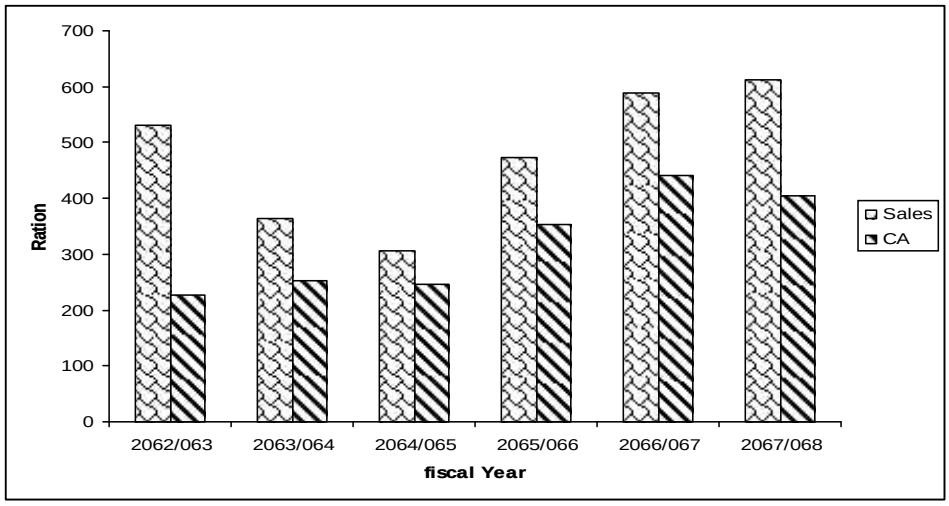
Sources:

i) Annual Audit Report, GRUL, 2062/063-2067/068

ii) SPSS: Descriptive (mean, SD and CV)

Figure no. 4.12

Current Assets Turn Over



Source: Table No. 4.12

Higher current asset turnover is the indicator of better asset utilization or profitability. The table and figure no 4.12 show the asverage turnover of GRUL is 01.49 times. The small turnover shows holding of huge amount of current assets. Holding of idle cash or investment in current assets blockades the investment in long term capital which

affects adversely in operating profit. The data shows GURL is not able enforcing good working capital policy over the study period.

4.4.2 Net Working Capital Turnover Ratio

The improvement in Net Working Capital utilization has been assessed by examining the behavior of Net Working Capital turnover over a period. The negative turnover of net working capital shows that the manufacturing companies have to meet Working Capital needs by raising capital from suitable sources. Net Working Capital i.e. excess amount of current assets over current liabilities, is the margin of safety maintained by the company.

Table no. 4.13
Net Working Capital Turnover Ratio

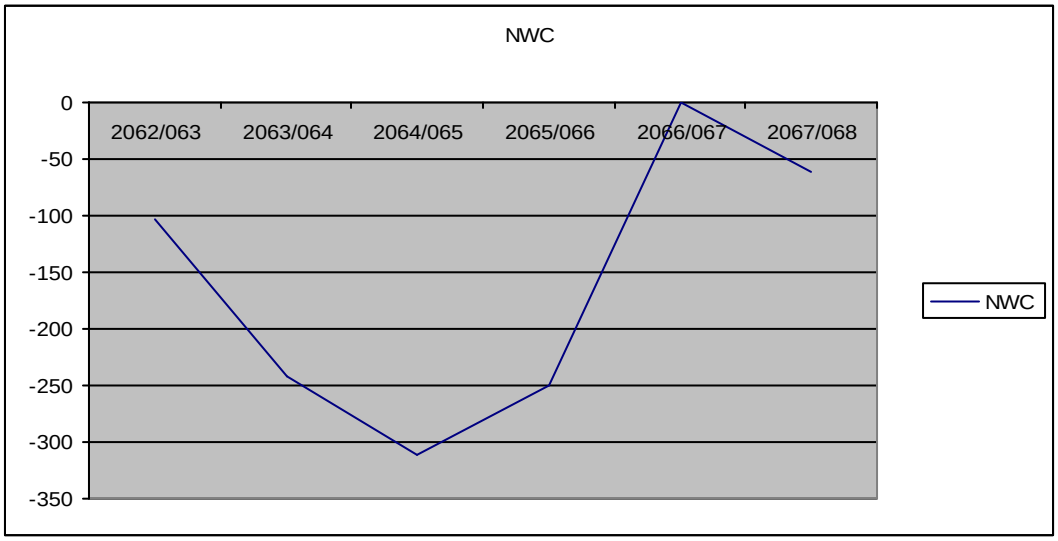
(Rs. in million)

Fiscal Year	Sales	CA	CL	NWC (CA-CL)	Ratio
2062/063	531.62	226.75	329.77	-103.02	-5.16
2063/064	363.99	252.32	494.83	-242.51	-1.50
2064/065	305.36	246.20	557.38	-311.18	-0.98
2065/066	473.46	352.38	603.01	-250.62	-1.88
2066/067	588.53	441.97	442.30	-0.33	-1755.19
2067/068	611.34	404.57	466.25	-61.68	-9.911
Total	2874.30	1924.19	2893.55	-969.36	-7.251
Average	479.05	320.69	482.25	-161.56	-7.251
S.D.	129.43	91.42	95.38	119.37	-
C.V	27.01	28.50	23.57	73.88	-

Sources: i) Annual Audit Report, GRUL, 2062/063-2067/068
ii) SPSS: Descriptive (mean, SD and CV)

The table no 4.13 (presented above) and the figure no 4.13 (present below) show that GRUL has negative figure of net working capital. The average ratio of working capital turnover is -7.251. The negative net working capital indicates the firm's inadequacy to meet short term obligations and inefficiency to invest and finance in current assets. Also the ratio varies largely by 73.88% over the period.

Figure no. 4.13
Net Working Capital Turn over Ratio



Source: Table No. 4.13

4.4.3 Cash, Inventory and Receivable Turnover Ratios

Cash, inventory and receivables are the major elements of current assets and working capital as well. Optimum investment in cash, inventory and debtors largely determines profit and growth of a firm. Management of such capitals falls under working capital policy. Maintaining optimum turnover helps in short term as well as long term goal of a firm.

Cash have greatest value to meet the current obligations that occurs in the business. It should be just adequate to run the business and excess cash has no meaning, as it earns nothing. Thus this ratio is calculated as it suggests the cash balance to be held. Once the sales forecasts for various periods have been made, the required cash balance can be calculated by using the historical cash turnover figures. A low turnover of cash implies a larger cash balance required and a high turnover of cash implies a lower cash balance is required. The higher rate of cash turnover will enable the enterprise to expand its sales volume without adding extra cash and also to reduce the investment in cash if sales are not growing.

Receivable is another major component of working capital. In order to increase the business activities the company has to increase the sales volume. Giving products in credit in the markets can increase the sales volume. In such a case the level of

receivables goes up. The shorter time lag between credit sales and collection of receivables results in availability of adequate funds to a firms.

Inventory occupies a dominant share on current assets that should be maintained effectively and efficiently. The utilization of inventory investment can be determined by computing the inventory turnover ratio. The inventory turnover ratio measures rate of speed with which inventories move through and out of the enterprise. In other words, it indicates the number of times the average stock is turned over during the year. Thus, the increase in inventory turnover ratios indicates improvement in the utilization of inventory investment.

The compiled turnover position of cash, inventory and receivables has been shown as follows.

Table no. 4.14

Composition of Cash, Inventory and Receivables Turnover Ratio

(Rs. in million)

Fiscal Year	**Sales**	**Cash**	**Ratio**	**Inventory**	**Ratio**	**Receivables**	**Ratio**
2062/063	531.620	21.349	24.901	155.360	3.422	40.850	13.014
2063/064	363.990	30.310	12.009	159.010	2.289	17.780	20.472
2064/065	305.360	28.870	10.577	153.570	1.988	25.770	11.849
2065/066	473.460	117.070	4.044	148.830	3.181	45.970	10.299
2066/067	588.530	79.900	7.366	238.420	2.468	93.200	6.315
2067/068	611.340	75.910	8.053	180.520	3.387	123.530	4.949
Total	2874.3	353.409	8.133	1035.710	3.522	347.100	10.510
Average	479.05	58.902	8.133	172.618	3.522	57.850	10.510

Sources:

i) Annual Audit Report, GRUL, 2062/063-2067/068

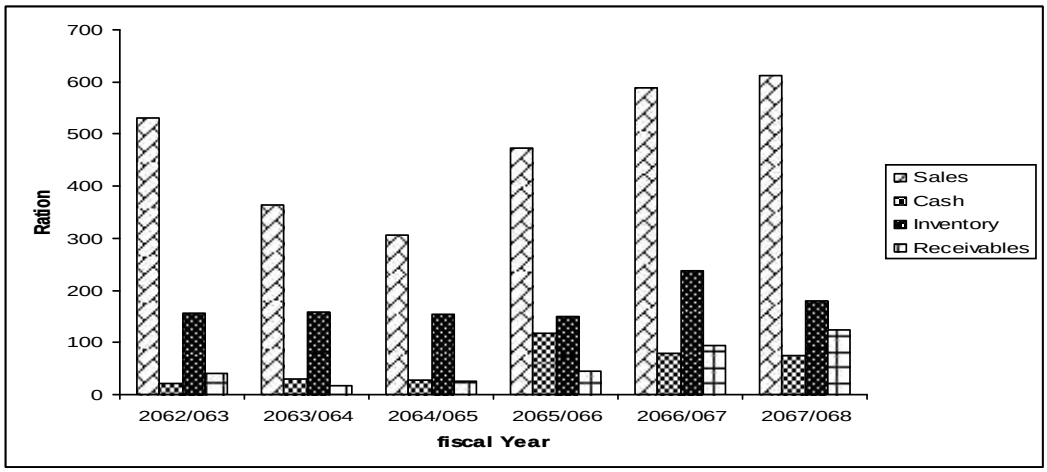
ii) SPSS: Descriptive (mean, SD and CV).

The table no 4.14 (presented above) and the figure no 4.14 (presented below) show that GURL has maintained comparatively stable turnover of inventory, which is considered good. However the low rate of average turnover indicates the firm holds large volume of inventory.

There has been a large fluctuation in cash turnover over the period. Large no of cash turnover indicates small amount of holding which makes firm availability of funds. On an average 58 times turnover of cash to sales can be considered good in sense of holding cash on hand.

The fluctuation in receivable turnover ratio indicates that the company's collection policy has not been effective or enforced. The higher the receivable turnover the collection period is short. On an average GRUL has 10 times of collection turnover.

Figure no. 4.14
Composition of Cash, inventory and receivables Turnover Ratio



Source: Table No. 4.14

4.5 Profitability Position

The objective behind the establishment of a manufacturing company is to earn profit or get maximum return on investment. An ability to earn maximum from the maximum use of available resources by the business organization is known as profitability. It is the measure of efficiency and the search for it provides an incentive to achieve efficiency.

4.5.1 Gross Profit and Net Profit margin

This ratio is the relationship between gross profits to net sales that explain the percentage return of gross profit out of total sales. Here, this ratio measures the efficiency of the company and soundness of the management. Higher percentage indicates the better efficiency.

Table no. 4.15
Gross Profit and NPAT Margin Ratio

(Rs. in million)

Fiscal Year	Sales	Gross Profit	Ratio	NPAT	Ratio
2062/063	531.62	106.47	0.20	-76.36	-0.14
2063/064	363.99	98.67	0.27	-74.82	-0.21
2064/065	305.36	74.18	0.24	-91.66	-0.30
2065/066	473.46	155.49	0.33	-10.89	-0.02
2066/067	588.53	211.05	0.36	13.03	0.02
2067/068	611.34	128.35	0.21	-70.99	-0.12
Total	2874.3	774.21	0.27	-311.68	-0.11
Average	479.05	129.04	0.27	-51.95	-0.11
S.D.	129.43	48.71	-	42.43	-
C.V.	27.01	37.55	-	81.51	-

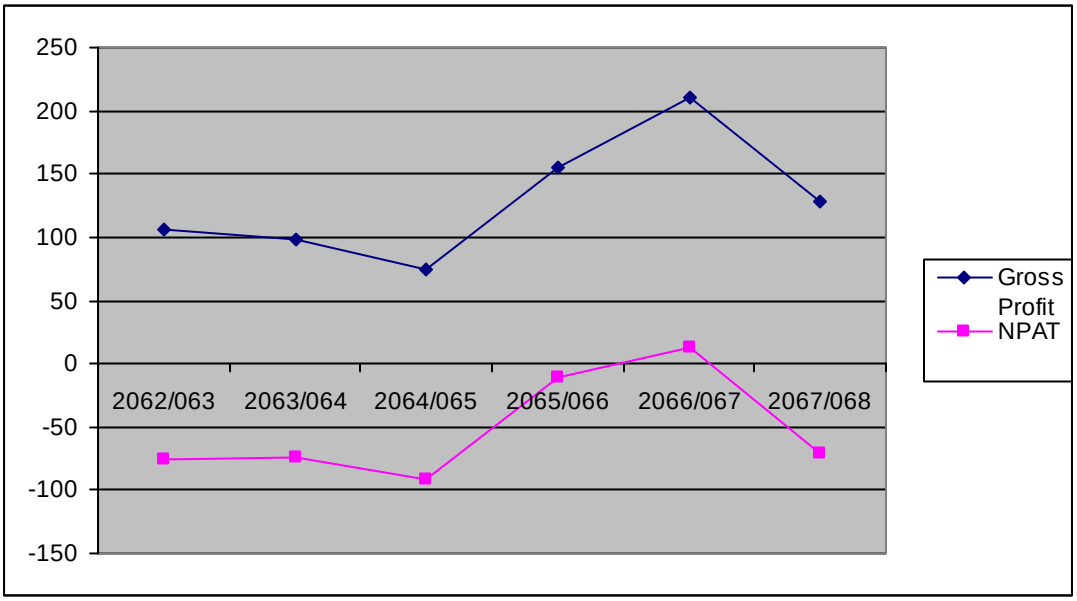
Sources:

i) Annual Audit Report, GRUL, 2062/063-2067/068

ii) SPSS: Descriptive (mean, SD and CV)

Figure no. 4.15

Gross Profit and Net Profit Margin



Source: Table No. 4.15

The following table shows that the average gross margin of GRUL has been in positive figure however generally it's considered as low gross margin. The net profit of the firm is in negative figure result of loss accrued over the period except in

2066/067. The gross and net profit ratios show the company's status of poor performance in terms of earning of profit.

4.5.3 Operating Ratio

To test on the expenditure of a firm with relation to sales is known as operating ratio. It is an important ratio that explains the change in the net profit margin. A higher operating ratio is unfavorable to any organization because it indicates how much percentage of sales has been consumed by the cost of goods sold and operating expenses. Similarly out of remaining part of profit, sales are left to cover interest, income tax, and dividend. Further, the firm is needed to retain profit for expansion. The table given below shows the operating ratio of GRUL during the period.

Table no. 4.16
Operating Ratio

(Rs. in million)

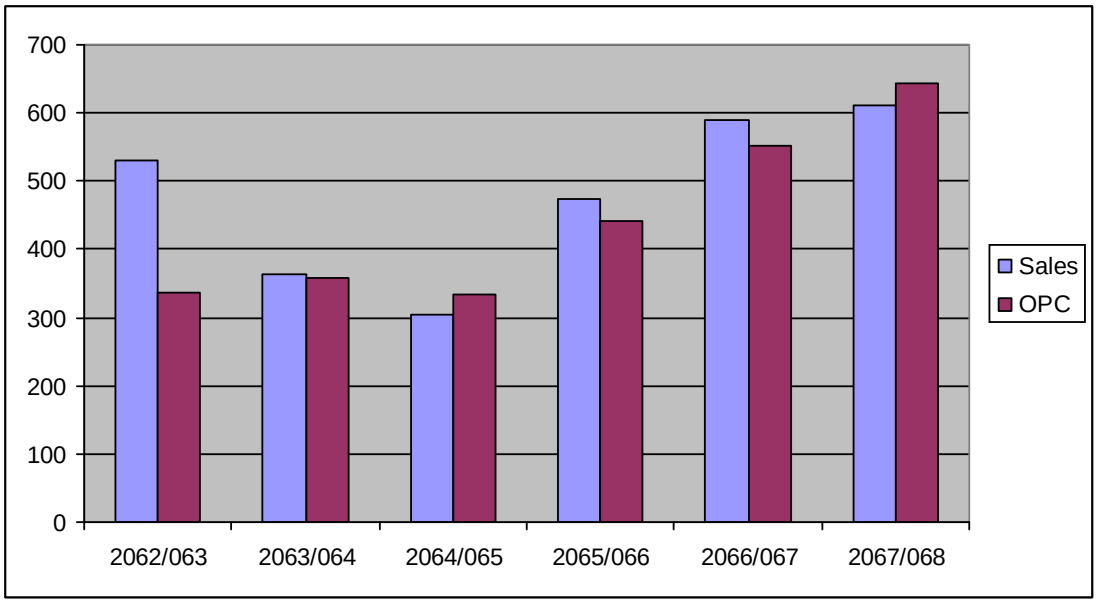
Fiscal Year	Sales	COGS+OPC	Ratio (%)
2062/063	531.62	336.27	0.63
2063/064	363.99	359.05	0.99
2064/065	305.36	332.99	1.09
2065/066	473.46	440.52	0.93
2066/067	588.53	551.93	0.94
2067/068	611.34	644.24	1.05
Total	2874.3	2665.00	0.93
Average	479.05	444.17	0.93
S.D.	129.03	122.48	-
C.V.	27.01	37.29	-

Sources:

i) Annual Audit Report, GRUL, 2062/063-2067/068

ii) SPSS: Descriptive (mean, SD and CV)

Figure no. 4.16
Operating Ratio



Source: Table No. 4.16

Higher ratio indicates poor efficiency and profitability i.e. consumption of more part of sales revenue by operating expenses. The above two presentation table no 4.16 and figure no 4.16 show a high average ratio i.e 93% operating cost to sales of GRUL which shows low profit margin and reflects the poor performance. The company has faced twice the situation of operating ratio more than one over the period of study.

4.5.4 Return on Total Assets

Return on total assets measures the firm's status of return in relation to investment. It's helpful to examine and take decisions about company's financial leverage. Simply it's profit per unit of investment amount which is needful to analyze because the above ratios only give return in terms of sales only. The table given below presents the status of earning on total assets.

Table no. 4.17

Return on Total Assets

(Rs. in million)

Fiscal Year	NPAT	Net Worth	Ratio
2062/063	-76.36	659.59	-0.12
2063/064	-74.82	586.49	-0.13
2064/065	-91.66	563.5	-0.16
2065/066	-10.89	664.22	-0.02
2066/067	13.03	734.19	0.02
2067/068	-70.99	682.14	-0.10
Total	-311.68	3890.13	-0.08
Average	-51.95	648.35	-0.08
S.D.	42.43	320.71	-
C.V.	81.51	76.72	-

Sources:

i) Annual Audit Report, GRUL, 2062/063-2067/068

ii) SPSS: Descriptive (mean, SD and CV)

The above presentation table no 4.17 and reveals that the average loss per million of total assets is 0.08 million, which indicates company's inefficiency to mobilize funds invested.

4.6 Statistical Analysis

In the previous section financial analysis by different financial tools was presented. This section presents the analysis of the working capital practices and performance of GRUL, Nepal. In this section the statistical analysis by using following statistical tools.

1. Karl Pearson's Correlation Coefficient.
2. Probable error (PE) of co-efficient of correlation.
3. Regression Analysis

4.6.1 Karl Pearson's Correlation Coefficient

Correlation analysis is the statistical tools generally used to describe the degree to which one variable is linearly related to other variables. Correlation is an analysis of the covariance between two or more variables and correlation analysis deals to determine the degree of relationship between two or more variables. It enables only to determine the degree and direction of relationship or association between the variables. It does not tell about causes and effects relationship between the variables.

4.6.2 Correlation Analysis between the Variables

The financial performance of the manufacturing company is directly related to their ability to manage working capital management efficiently and effectively. The use of the financial tools was already given adequate in showing the analysis of various variables to determine the working capital management. But to make the analysis more fruitful and weighty, certain statistical tools such as correlation analysis and probable error are used to show the relationship between the following:

4.6.2.1 Relation between Current Assets and Sales

To show the correlation between current assets and total sales Karl Pearson's coefficient of Correlation (r) has been determined.

The correlation coefficient (r) between current assets and sales is 0.963 (*Annex II, page no 98.)*, which shows that there is very high degree of positive correlation between Current Assets and sales of GRUL.A highly positive correlation indicates that increment in current assets is highly associated with increases in the sales volume of GRUL.

To test the statistical significance, probable error (P.E.) has been calculated. The calculated value of PE is 0.019 (Annex III)

Since, Correlation Coefficient of GRUL (r) > 6 x P.E., so correlation coefficient is significant between Current Assets and Sales during the period of study.

4.6.2.2 Relationship between Current Assets Gross Profit

Correlation Coefficient (r) between Current Assets and Gross Profit of GURL is 0.854 (*Annex II page no.98)*, which signifies high degree of positive correlation between current assets and gross profit. A high level of positive correlation between current

assets and gross profit indicates that investment in current assets highly leads increment in gross profit and vice versa.

To test the significance of Correlation Coefficient of probable error (PE) has been calculated. The value of PE is 0.181 (Annex IV)

Since, Correlation Coefficient (r) between current assets and inventory less than 6 x P.E., so the relationship is statistically insignificant.

4.6.2.3. Relationship between Current Assets and Net Worth

The correlation coefficient (r) between Current Assets and Receivable of GRUL is 0.097 (Annex II page no. 98*)* which shows that there is very low positive correlation between current assets and net worth or increment in current assets does not necessarily result in increment in net worth and vice versa.

To test the significance of Correlation Coefficient, probable error (P.E.) has been calculated. The value of PE is 0.27.

Since, Correlation Coefficient (r) less than 6 x P.E., so the value of 'r' is not significant.

4.6.2.4 Relationship between Net Working Capital and Sales

The correlation coefficient between net working capital and sales (r) of GRUL is 0.778 (*Annex II page no.98*) which shows that there is high degree of positive correlation between net working capital and sales. A high positive correlation between the variables indicates that the increment in net working capital leads increment in sales.

To test the significance of Correlation Coefficient of probable error (P.E.) has been calculated. The calculated value of PE is 0.108 (Annex VI)

Since, Correlation Coefficient (r) of GRUL <6 x P.E., so the value of 'r' is not significant. The relationship between net working capital and sales is not statistically significant.

4.6.2.5 Relationship between net working capital and gross profits

The correlation coefficient (r) between net working capital and gross profit of GRUL is 0.805 (*Annex II page no 98*) which shows that there is very high positive correlation between net working capital and gross profit. A very high degree of correlation between net working capital and gross profit indicates that increment in working capital is highly associated with increment in gross profit and vice versa.

To test the significance of Correlation Coefficient of probable error (PE) has been calculated. The calculated value of PE is 0.096 (Annex VIII)

Since, Correlation Coefficient between net working and gross profit (r)> 6 x P.E., so the value of 'r' is statistically significant.

4.6.2.6 Relationship between net working capital and NPAT

The correlation coefficient (r) between net working capital and NPAT is 0.728 (*Annex II page no.98*) which shows that there is high degree of positive correlation between the variables. A high degree of positive correlation indicates that increment in net working capital leads increment in NPAT in GRUL highly.

To test the significance of Correlation Coefficient of probable error (PE) has been calculated. The PE for the correlation coefficient is 0.12 (Annex IX)

Since, Correlation Coefficient between inventory and sales (r) < 6 x P.E., so the value of 'r' is not statistically significant.

4.6.2.7 Relationship between Net Working Capital and Net Worth

The correlation coefficient (r) between net working capital and net worth is 0.093 (*from appendix II page no.98*) which shows that there is no correlation between net working capital and net worth.

To test the significance of Correlation Coefficient of probable error (PE) has been calculated. The value of PE is 0.27 (*Annex X)*

Since, Correlation Coefficient between net working capital and net worth (r) < 6 x P.E., so the value of 'r' is not statistically significant.

4.6.3 Regression Analysis

The Regression Analysis is used to estimate the likely value of one variable from the known value of other variable. In regression analysis, a kind of average irreversible functional relationship is established between the two variables. The cause and effect relationship is clearly indicated through regression analysis than the correlation analysis. In other words regression analysis is mathematical measure of average relationship two or more variables in terms of original unit of data. The following three major component's analyses has been carried out under the Regression analysis

1) Regression Analysis of Sales on Net Working Capital
2) Regression analysis of gross profit on Net Working Capital
3) Regression analysis of Firm's net worth on Net Working capital

4.6.3.1 Regression Analysis of Sales on Net Working Capital

The regression was estimated for effect of working capital on volume of sales. The slope given by the regression line sales on net working capital has been as follows.

$$Y = a + bX$$

$$Y = 4.565 + 0.093X$$

Where,

Y= dependent variable (here volume of Sales)

a= Intercept of the line or change in Y when X remains Zero.

b= Slope of the line or effect on dependent variable Y by a unit change in independent variable X, here working capital.

X= Independent Variable

The regression coefficient given by the slope of sales on net working capital 0.093 indicates that effect of one rupee change in working capital has 0.093 rupees change in sales. The coefficient of determination ($R^{2)}$ value 0.020 indicates that the independent variable i.e. working capital explains the change in dependent variable sales by 2%. However the F-statistic suggests the model is not significant as the level of significance shown by the *SPSS* table is 79%.

4.6.3.2 Regression Analysis Gross of Profit on Net Working Capital

The regression was estimated for effect of working capital on volume of gross profit. The slope given by the regression line gross profit on net working capital has been as follows.

$$Y = a + bX$$

$$Y = 1.313 + 0.028X$$

Where,

Y= dependent variable (here volume of gross profit)

a= Intercept of the line or change in Y when X remains Zero.

b= Slope of the line or effect on dependent variable Y here gross profit, by one unit change in independent variable X, here working capital.

X= Independent Variable

The regression coefficient given by the regression line gross profit on net working capital was 0.028. The coefficient indicates that effect of one rupee change in working capital has 0.028 rupees change in gross profit. The calculated value of coefficient of determination ($R^{2)}$ of 0.013 indicates that the independent variable i.e. working capital explains the change in dependent variable gross profit by 1.3%. The F-statistic suggests the model is not significant as the value of level of significance given by the *SPSS* is 83%

4.6.3.2 Regression Analysis of Net Worth on Net Working Capital

The regression was estimated for effect of working capital on volume of gross profit. The slope given by the regression line gross profit on net working capital has been as follows.

$$Y = a + bX$$

$$Y = -3.540 + 0.152X$$

Where,

Y= dependent variable (here volume of net worth)

a= Intercept of the line or change in Y when X remains Zero.

b= Slope of the line or effect on dependent variable Y here net worth, by one unit change in independent variable X, here working capital.

X= Independent Variable

The regression coefficient given by the regression line net worth on net working capital 0.152 indicates that effect of one rupee change in working capital has 0.152 rupees change in net worth of the company. The coefficient of determination ($R^{2)}$ value of 0.068 indicates that the independent variable i.e. working capital explains the

change in dependent variable gross profit by 6.8%. However the F-statistic suggests the model is not significant as the value of level of significance given by *SPSS* is 61.7%s

4.7 Major Findings of the study

A. Major findings of Financial Tools and Working Capital Policy

The major findings of this study during the period of six years are summarized below.

i) The major components of current assets of GRUL, Nepal are cash and Bank balance, sundry debtors, Inventory and Advance & deposits. Here, it is found that out of the total current assets, Inventory holds the largest portion followed by sundry debtors, cash and bank balance & and advances and deposits respectively. The proportion of cash and bank balance, sundry debtors, Inventories and advance & deposits fluctuate by 48 %, 71 %, 18 % and 37 % respectively. As all the components of current assets are highly fluctuating during the study period especially, cash & bank balance and sundry debtors' needs proper balancing introducing appropriate working capital policy.

ii) The average proportion of current assets to total assets and fixed assets during the study period 53 % and 93% respectively. This indicates aggressive working capital financing policy.

The proportion of current assets with respect to total assets and net fixed assets shows that the investment in current assets is high. As the higher ratio indicates the greater amount of working capital invested through short term financing that directs low liquidity and high risk.

iii) The average proportion of Cash and Bank, Receivables, Inventory, Receivables and Advances to Total Assets are 9% 26.6 %, 9% and 5% respectively.

iii) The average proportion of cash & bank balance, receivables, inventories and Advances to fixed assets during the period is 9 % and 8.9, 26% and 5% respectively.

iv) The liquidity position of GRUL is worse. The average current ratio is 0.66. Likewise liquid ratio is 0.24. Both are below the standard of 1:2 for current ratio

and 1:1 for liquid ratio respectively. As thee company has adopting aggressive policy and the liquidity is quite worse, there is need of maintaining the cost trade off between cost of liquidity and cost of illiquidity by balancing solvency and profitability tangle.

v) The speed of inventory conversion (194 days) ,the speed is very low, might be because of nature of the production process, and requires large volume of working capital. The average receivable collection period is 43.47 days.The averages payable deferral period is very long, exceeds the average days of operating cycle. Excess of PDP over operating cycle indicates company is not being capable of paying it's creditors on time.

vi) The turnover position measures efficiency. Turnover ratios, current assets and net working capital are 1.49 and -7.25 because of negative figure of net working capital the turnover of net working capital to sales is also negative. The turnover rations of cash and inventory and receivable are 8.13, 3.52 and 10.51 respectively. There are opportunities of managing turnover that reduces cost of working capital.

vii) The gross profit and net profit margin of GRUL 0.27 million and -0.11 per million of sales respectively .The rate of return on total assets is -0.08 per million total assets. The operating ratio of GRUL in average is average 93%.

viii) The correlation between current assets and sales is high and statistically significant. It shows increase incurrent assets highly leads increase in sales.

ix) The correlation between current assets and gross profit is high however is not statistically significant. An increase in current assets doesn't necessarily lead increase in gross profit.

x) The correlation between current assets and NPAT is high and statistically significant. It shows increase incurrent assets highly leads increase in NPAT.

xi) There is no correlation between current assets and net worth.

xii) The correlation between net working capital and sales, gross profit is high and statistically significant. However the results show there is no correlation between net working capital and NPAT and net worth of the company.

xiii) Sales is expected to be changed by Rs. 0.093 by one Rupees change in working capital. TheR2 value 0.02 indicates the independent variable net working capital explains change in sales by 2%.The F-Statistics suggests that the model is not significant as the calculated value of level of significance given by *SPSS* shows there is 79% chances of error which is unacceptable.

xiv) Gross profit is expected to be changed by Rs. 0.028 by one Rupees change in working capital. The R2 value 0.013 indicates the independent variable net working capital explains change in gross profit by 1.3%.The F-Statistics suggests that the model is not significant as the level of significance given by the *SPSS* is 83.1%.

xv) Net worth is expected to be changed by Rs. 0.152 by one Rupees change in working capital. The R2 value 0.068 indicates the independent variable net working capital explains change in net worth by 6.8%.The F-Statistics suggests that the model is not significant as the level of significance given by the SPSS is 61.7%

CHAPTER- V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

The basic objective of this study is to examine working capital management of Gorakhkali Rubber Udyog Limited (GRUL), Nepal. On the basis of analysis of past six years and findings there from, the summary has been drawn.

The study focused on the past six year's performance of GRUL. The audit reports were used as data source. The financial as well as statistical tools were used to analyze the data. The specific objectives of the study were to know about the existing composition of working capital and policy of working capital financing adopted the company and to examine liquidity, efficiency and profitability of the company in relation to working capital behavior.

The data relevant to working capital analysis were collected from secondary sources. The annual financial reports collected from the finance and administration section of the company were used as sources of data. The data have been presented systematically and commonly acceptable forms and formats.

To meet the objectives of the study, relevant data have been analyzed by using both accounting and financial tools. To examine liquidity position, current ratio and liquidity ratio have been measured. Likewise various components of current assets like cash, receivable, inventory, advances turnover ratio, cash conversion cycle, current assets turnover ratio have been calculated to look over efficiency of the company.

The tools viz. correlation analysis, probable error and regression analysis have been used to examine degree and direction between the variables and trend of dependency of sales, profit and company's net worth on the key variable net working capital.

While analyzing the data and examining the working capital behavior, it's found that GRUL have been investing big proportion of current assets in inventories followed by debtors, cash and bank and advances and deposits. The variation in investment in these sorts of current assets varies highly over the period. That shows lack of current assets investment policy in the company.

The high proportion of current assets to total assets indicates companies conservative policy of financing working capital, however because of huge amount of accrued payables, the size of net working capital is amazingly negative hence the solvency ratios of the company are poor than the standard ratio.

The turnover position of components of currents assets cash and bank, inventories, receivables is very low, which indicates holding of the stock of respective elements in big amounts can affect adversely in amount of sales. It also shows poor utilization of available resources by the company. And inconsistency in inventory conversion and receivable collection period indicates lack of proper working capital management policies adopted by the company.

The company has been facing continuous loss over the study period except in fiscal year 2066/067 hence the profitability ratios and return on investment is negligible.

Statistically it's shown that the correlation of investment in working capital between gross profit and net worth of the company significantly associates one another. Likewise regression coefficients explain largely dependency of company's sales, profit and net worth on proper management of working capital.

5.2 Conclusion

The present study concludes that working capital management is the most important part of financial management for manufacturing companies like GRUL, Nepal. The proper management of current assets is the basic need of any organization to achieve the primary objective of profit maximization as well as wealth maximization of shareholders. The company selected as sample in this study has not followed any concrete policy or system regarding current assets management. The fluctuation of results over study period proves uncertainty of policies.

The position of current assets investment compared to total assets shows adequacy of working capital, however the large proportion of inventory indicates poor liquidity. On the other hand because of current liabilities excess over current assets shows insolvency of the company to meet short term obligations.

Investment in current assets is not so poor. However because of poor management of current assets, it has hindered the company's overall growth. Management has been paying less attention towards improving current assets to get economies of scale. There is changing level of consumption of working capital. This may also be the cause of fluctuation in the policy of current asset financing. But also can be said as uncertainty about its size, sources, uses and components. This may be due to changing

demand of working capital. It lacks clear policy towards working capital management in GRUL.

The liquidity, efficiency and profitability ratios of the company have been largely affected by uncertainty of working capital management practices applied the company.

In conclusion, it is drawn that working capital management should be the matter of major concern for manufacturing companies. It should be realized that the success of organization largely depends upon effective management of working capital.

5.3 Recommendations and suggestions

On the basis of findings, research gap and conclusions the following suggestions and recommendations can be put forward to improve working capital management of GRUL.

I. Effective Working Capital Management

The fluctuation in the size of components of current assets indicates that the company should take a step to check regularly to identify both over and under investment on the components (i.e. inventory, receivable, cash, advance & deposits) of the current assets. In short, certain proportion of the components of current assets must be determined in order to improve the working capital management in future. Thus, for effective working capital management, companies must understand the various factors that lead to effective management of cash, inventories and receivables.

- The motive behind the investment in money assets i.e. cash is to meet operational requirements in day to day business; to provide a reserve of liquidity for major schedule outflows of cash; to exploits the opportunities; to avoid unexpected drains of cash and so on. So, the management of cash should be proper. Therefore to avoid the deficit or idle cash balance, companies must consider the ways of effective cash management.

- Both lower and above investment in receivable leads to ineffective management of working capital. Policies concerning receivable management involve a trade off between risk and return. The main determinants of the size of investment in receivables are terms of sale, type of customers to be given credit, efficiency in

collecting receivables etc. The most important ways to control investment on receivables are determining the receivables as percentage of sales, preparing aging schedule of receivables, analyzing credit worthiness of customers, minimizing float etc. Besides these, the most effective way is to adopt a definite credit and collection policies, as it involves trade-off between cost and profit because the credit sales increase the total sales volume and profit but it also increases collection cost, bad debts losses, administrative cost etc.

- The management of working capital highly depends upon the effective inventory management, as inventory absorbs the largest portion of current assets. For this, company should make effective sales plan, which help for immediate marketability and certainly decreases the problem of overstocking. Thus, an effective inventory control techniques must be introduced in order to control inventory in accordance with their value and importance.

II. Improving Liquidity Position

Liquidity position determines the working capital requirements. The higher the liquidity position, the lesser the needs for additional working capital since it will be better for them to have the best use of existing liquidity position and vice versa for lower liquidity position. Thus, the manufacturing enterprises should try to maintain current assets ratio and quick assets ratio in its standard norms of 2: 1 and 1 : 1 respectively.

The rule for effective and efficient management of liquidity position is that "Increase the working capital when there is indication of low current ratio and decrease the working capital when there is higher current ratio over and above the standard ratio".

III. Speed up the Cash Conversion Cycle

The firm's goal should be to shorten cash conversion cycle as much as possible without hurting operation. The cash conversion cycle can be shortened (i) if the firm can reduce the inventory conversion period by processing and selling goods more quickly, (ii) if it can reduce the receivable collection period by speeding up collection, or (iii) if it lengthens the payable deferral period by slowing down its own payments.

These actions can be taken to that extend where it don't increase cost or depress the sales.

This would improve profits because the longer the cash conversion cycle, the greater the need for external financing, and such financing has a cost. Thus, by speeding up cash conversion cycle, it can reduce the need for extra working capital and results in operating efficiency in working capital management.

IV. Adopting Moderate Working Capital Policy

By adopting matching working capital policy instead of adopting conservative working capital policy, the company can improve in its profitability in the short-run as well as in the long run.

Moderate working capital policy creates better impact on firm's profitability and liquidity although it causes higher risk than conservative policy. Thus to move from the existing conservative policy to moderate policy, company needs to bring positive attitude of management towards risk. Since risk is the opportunity for the business to make profit, the management should not consider it as dangerous. Sometimes public enterprises have to change its board of directors and management to improve the policy of company and to bring effectiveness in management of working capital policy.

V. Managing Inventory Turnover

The increase in inventory turnover ratios indicates improvements in the utilization of inventory investment. As a result, investment in inventories and the total cost of holding inventory also decreases.

Thus, achievement of efficiency in inventory turnover leads to continuity in production and operation and brings economy of scale within the companies. The better coordination between seasonal demand forecast and checking the blockage of inventory; and between proper order placement and reorder of inventory also leads to continuity in business and economies of scale respectively, which ultimately creates favorable impact on working capital through the improvement in inventory turnover.

VI. Proper Financing Policy

Manufacturing Public enterprises of Nepal don't have proper financing policy. They raise funds from whatever source they get. This leads to higher financing cost. Thus, these companies must prepare the work plan and determine the appropriate combination of short- term and long-term sources to finance the working capital. It is significant enough for manufacturing enterprises to finance variables needs of current assets from short–term sources while the permanent working capital plus all the fixed assets should be financed from long-term sources. This helps to lower costs on one hand and reduce risks on the other hand. In short, proper financing policy enables the public enterprises to improve their liquidity position, to pay credit obligations on time and increase their credit worthiness.

VII. Strong Supervision and Control

Supervision and control in time reduces the mistake to be happen. GRUL should play a regulatory and promoting role for the better control of management. GRUL has to keep strict watch over their activities done. For this, regular flow of correct information, evaluation and monitoring as well as minimize of regulators must be done.

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nnex – I

Key variables related to Working capital management of GRUL, Nepal

N	Year & Variables	2062/063	2063/064	2064/065	2065/066	2066/067	2067/068
1	Sales	351,620,808.0	363,993,566.00	305,360,182.00	473,468,981.00	588,534,277.00	611,340,481.00
2	Gross Profit	106,470,832.0	98,672,049.00	74,178,301.00	155491115	211,054,057.00	128,356,937.00
3	Net Profit After Tax	(76,355,980.00)	(74,815,972.00)	(91,659,068.00)	(10,896,205.00)	13,033,092.00	(70,993,371.00)
4	Cost of Goods Sold	245,149,976.00	265,321,517.00	231,181,881.00	317,977,866.00	377,480,221.00	482,983,544.00
5	Operating Expenses	91,119,461.00	93,727,583.00	91,806,683.00	122,543,619.00	174,446,558.00	161,260,470.00
6	Current Assets	226,764,566.00	252,341,849.00	246,205,254.00	352,391,829.00	441,972,615.00	404,592,981.00
7	Current Liabilities	329,770,237.00	494,834,784.00	557,384,935.00	603,008,115.00	442,305,308.00	466,252,495.00
8	Net Working Capital	(103,005,671.00)	(242,492,935.00)	(311,179,681.00)	(250,616,286.00)	(332,693.00)	(61,659,514.00)
9	Total Assets	659,599,403.00	586,486,003.00	563,504,777.00	664,220,640.00	734,192,484.00	682,146,299.00
10	Total Fixed Assets	432,834,837.00	334,144,154.00	317,299,523.00	311,828,811.00	292,219,869.00	277,553,318.00
11	Net Worth	(197,268,199.00)	(424,698,322.00)	(516,357,390.00)	(527,253,596.00)	(280,470,625.00)	(351,463,996.00)
12	Cash and Bank	21,349,276.00	30,310,527.00	28,874,482.00	117,068,863.00	40,518,093.00	75,917,745.00
13	Debtors/Receivables	40,851,849.00	17,785,363.00	25,769,424.00	45,973,759.00	93,201,886.00	123,533,532.00
14	Inventories	155,364,115.00	159,018,731.00	153,574,280.00	148,831,114.00	238,428,150.00	180,526,056.00
15	Prepaid and Deposit	9,199,326.00	45,227,228.00	37,987,059.00	40,518,093.00	35,239,629.00	24,615,649.00
16	Quick Assets	62,201,125.00	48,095,890.00	54,643,915.00	163,042,622.00	168,304,836.00	199,451,276.00
17	Payable	193,270,237.00	354,810,784.00	406,388,935.00	466,508,115.00	266,148,308.00	289,752,492.00

ource: Audit Reports of GURL 2062/063-2067/068

nnex – II

Variable		Sales	Gross Profit	Net Profit After Tax	Cost of Goods sold	Operating Expenses	Current Assets	Current Liabilities	Net Working Capital	Total Assets	Total Capital Employed	Total Fixed assets	Net Worth	Cash	Receivables	Inventories	Prepaid	Quick Assets	Payable
Sales	Pearson Correlation	1	.781	.620	.949**	.972**	.963**	-.036	.778	.837*	.426	-.638	.241	.501	.929**	.701	-.035	.927**	-.184
	Sig. (2-tailed)		.066	.189	.004	.001	.002	.946	.068	.037	.399	.173	.645	.312	.007	.121	.947	.008	.727
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Gross Profit	Pearson Correlation	.781	1	.955**	.545	.826*	.854*	-.049	.805	.892*	.462	-.394	.280	.374	.583	.796	.087	.813*	-.143
	Sig. (2-tailed)	.066		.003	.264	.043	.031	.927	.053	.017	.357	.440	.591	.465	.224	.058	.869	.049	.787
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Net Profit After Tax	Pearson Correlation	.620	.955**	1	.351	.669	.744	.154	.728	.755	.250	-.368	.067	.462	.360	.643	.257	.742	.093
	Sig. (2-tailed)	.189	.003		.495	.146	.090	.770	.101	.082	.633	.473	.900	.356	.484	.169	.623	.091	.861
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Cost of Goods Sold	Pearson Correlation	.949**	.545	.351	1	.888*	.863*	-.024	.639	.674	.339	-.658	.183	.484	.954**	.539	-.092	.834*	-.176
	Sig. (2-tailed)	.004	.264	.495		.018	.027	.964	.172	.142	.510	.156	.729	.331	.003	.269	.863	.039	.739
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Variable		Sales	Gross Profit	Net Profit After Tax	Cost of Goods sold	Operating Expenses	Current Assets	Current Liabilities	Net Working Capital	Total Assets	Total Capital Employed	Total Fixed assets	Net Worth	Cash	Receivables	Inventories	Prepaid	Quick Assets	Payable

Operating Expenses	Pearson Correlation	.972**	.826*	.669	.888*	1	.983**	-.032	.702	.833*	.421	-.676	.245	.380	.910*	.825*	.014	.898*	-.196
	Sig. (2-tailed)	.001	.043	.146	.018		.000	.952	.120	.040	.406	.141	.640	.457	.012	.043	.979	.015	.710
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Current Assets	Pearson Correlation	.963**	.854*	.744	.863*	.983**	1	.126	.723	.806	.294	-.735	.097	.517	.850*	.761	.139	.945**	-.029
	Sig. (2-tailed)	.002	.031	.090	.027	.000		.812	.105	.053	.572	.096	.854	.294	.032	.079	.793	.004	.956
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Current Liabilities	Pearson Correlation	-.036	-.049	.154	-.024	-.032	.126	1	-.201	-.363	-.895*	-.624	-.972**	.599	-.213	-.283	.813*	.188	.982**
	Sig. (2-tailed)	.946	.927	.770	.964	.952	.812		.703	.480	.016	.185	.001	.209	.685	.587	.049	.721	.000
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Net Working Capitals	Pearson Correlation	.778	.805	.728	.639	.702	.723	-.201	1	.927**	.588	-.137	.393	.594	.666	.439	-.316	.844*	-.251
	Sig. (2-tailed)	.068	.053	.101	.172	.120	.105	.703		.008	.220	.795	.441	.214	.148	.384	.542	.034	.631
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Variable		Sales	Gross Profit	Net Profit After Tax	Cost of Goods sold	Operating Expenses	Current Assets	Current Liabilities	Net Working Capital	Total Assets	Total Capital Employed	Total Fixed assets	Net Worth	Cash	Receivables	Inventories	Prepaid	Quick Assets	Payable
Total Assets	Pearson Correlation	.837*	.892*	.755	.674	.833*	.806	-.363	.927**	1	.740	-.191	.568	.326	.769	.726	-.341	.817*	-.453

	Sig. (2-tailed)	.037	.017	.082	.142	.040	.053	.480	.008		.093	.717	.239	.529	.074	.103	.508	.047	.367
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Total Capital employed	Pearson Correlation	.426	.462	.250	.339	.421	.294	-.895*	.588	.740	1	.359	.973**	-.277	.521	.551	-.750	.255	-.926**
	Sig. (2-tailed)	.399	.357	.633	.510	.406	.572	.016	.220	.093		.484	.001	.595	.289	.257	.086	.626	.008
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Total Fixed Assets	Pearson Correlation	-.638	-.394	-.368	-.658	-.676	-.735	-.624	-.137	-.191	.359	1	.489	-.483	-.530	-.432	-.620	-.632	-.470
	Sig. (2-tailed)	.173	.440	.473	.156	.141	.096	.185	.795	.717	.484		.325	.332	.280	.393	.189	.179	.347
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Net Worth	Pearson Correlation	.241	.280	.067	.183	.245	.097	-.972**	.393	.568	.973**	.489	1	-.472	.374	.461	-.776	.031	-.981**
	Sig. (2-tailed)	.645	.591	.900	.729	.640	.854	.001	.441	.239	.001	.325		.344	.465	.357	.070	.953	.001
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Cash	Pearson Correlation	.501	.374	.462	.484	.380	.517	.599	.594	.326	-.277	-.483	-.472	1	.328	-.134	.251	.727	.571
	Sig. (2-tailed)	.312	.465	.356	.331	.457	.294	.209	.214	.529	.595	.332	.344		.526	.799	.631	.102	.236
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Variable		Sales	Gross Profit	Net Profit After Tax	Cost of Goods sold	Operating Expenses	Current Assets	Current Liabilities	Net Working Capital	Total Assets	Total Capital Employed	Total Fixed assets	Net Worth	Cash	Receivables	Inventories	Prepaid	Quick Assets	Payable
Receivables	Pearson Correlation	.929**	.583	.360	.954**	.910*	.850*	-.213	.666	.769	.521	-.530	.374	.328	1	.647	-.295	.811	-.370

	Sig. (2-tailed)	.007	.224	.484	.003	.012	.032	.685	.148	.074	.289	.280	.465	.526		.165	.571	.050	.470
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Inventories	Pearson Correlation	.701	.796	.643	.539	.825*	.761	-.283	.439	.726	.551	-.432	.461	-.134	.647	1	.023	.551	-.425
	Sig. (2-tailed)	.121	.058	.169	.269	.043	.079	.587	.384	.103	.257	.393	.357	.799	.165		.965	.257	.401
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Prepaid	Pearson Correlation	-.035	.087	.257	-.092	.014	.139	.813*	-.316	-.341	-.750	-.620	-.776	.251	-.295	.023	1	.037	.787
	Sig. (2-tailed)	.947	.869	.623	.863	.979	.793	.049	.542	.508	.086	.189	.070	.631	.571	.965		.945	.063
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Quick Assets	Pearson Correlation	.927**	.813*	.742	.834*	.898*	.945**	.188	.844*	.817*	.255	-.632	.031	.727	.811	.551	.037	1	.064
	Sig. (2-tailed)	.008	.049	.091	.039	.015	.004	.721	.034	.047	.626	.179	.953	.102	.050	.257	.945		.904
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Variable		Sales	Gross Profit	Net Profit After Tax	Cost of Goods sold	Operating Expenses	Current Assets	Current Liabilities	Net Working Capital	Total Assets	Total Capital Employed	Total Fixed assets	Net Worth	Cash	Receivables	Inventories	Prepaid	Quick Assets	Payable
Payable	Pearson Correlation	-.184	-.143	.093	-.176	-.196	-.029	.982**	-.251	-.453	-.926**	-.470	-.981**	.571	-.370	-.425	.787	.064	1
	Sig. (2-tailed)	.727	.787	.861	.739	.710	.956	.000	.631	.367	.008	.347	.001	.236	.470	.401	.063	.904	
	N	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Annex III

Calculation of P.E for correlation coefficient between Current Assets and Sales

Correlation Coefficient (r) = 0.963

Probable Error (P.E.) $= \frac{0.6745(1 - r^2)}{\sqrt{N}}$

$= \frac{0.6745(1 Z 0.963^2)}{\sqrt{6}}$

…P.E. = 0.019

6P.E = 0.119

Annex IV

Calculation of P.E. for correlation coefficient between current assets and Gross Profit

Correlation Coefficient (r) = 0.854

Probable Error (P.E.) $= \frac{0.6745(1 - r^2)}{\sqrt{N}}$

$= \frac{0.6745(1 Z 0.854^2)}{\sqrt{6}}$

…P.E. = 0.181

6P.E = 1.08

Annex V

Calculation of P.E. for Correlation coefficient between current assets and NPAT

Correlation Coefficient (r) = 0.744

Probable Error (P.E.) $= \frac{0.6745(1 - r^2)}{\sqrt{N}}$

$= \frac{0.6745(1 Z 0.744^2)}{\sqrt{6}}$

…P.E. = 0.122

6P.E = 0.73

Annex VI

Calculation of P.E for Correlation coefficient between current assets and Net worth

Correlation Coefficient (r) = 0.097

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

$$= \frac{0.6745(1 Z 0.97^2)}{\sqrt{6}}$$

…P.E. = 0.27

6P.E = 1.63

Annex VII

Calculation of P.E for Correlation coefficient between Net Working Capital and Sales

Correlation Coefficient (r) = 0.778

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

$$= \frac{0.6745(1 Z 0.778^2)}{\sqrt{6}}$$

…P.E. = 0.108

6P.E = 0.65

Annex VIII

Calculation of PE for Correlation coefficient between Net Working Capital and Gross Profit

Correlation Coefficient (r) = 0.805

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

$$= \frac{0.6745(1 Z 0.805^2)}{\sqrt{6}}$$

…P.E. = 0.096

6P.E = 0.58

Annex IX

Calculation of PE for Correlation coefficient between Net working Capital and NPAT

Correlation Coefficient (r) = 0.728

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

$$= \frac{0.6745(1 Z 0.728^2)}{\sqrt{6}}$$

…P.E. = 0.12

6P.E = 0.77

Annex X

Calculation of P.E. for Correlation Coefficient between Net Working Capital and Net Worth

Correlation Coefficient (r) = 0.093

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

$$= \frac{0.6745(1 Z 0.093^2)}{\sqrt{6}}$$

…P.E. = 0.27

6P.E = 1.63

Annex XI : Descriptive Statistics

Computation of Mean, Standard Deviation and Coefficient of Variation

SN	Variables	No of Observation	Mean	Std. Deviation	Coefficient of Variation
1	Sales	6	449053049.2	129432730.4	28.82348326
2	Net Profit After Tax	6	-51947917.33	42346619.46	-81.51745371
3	Cost of Goods Sold	6	320015834.2	96283560.18	30.08712379
4	Current Assets	6	320711515.7	91428245.52	28.50793971
5	Current Assets	6	482259312.3	95381060.78	19.77796143
6	Net Working Capital	6	-161547796.7	123507223.4	-76.45243448
7	Total Assets	6	418026606.8	320717460.8	76.72178172
8	Total Fixed Assets	6	327646752	55187748.7	16.84367337
9	Cash	6	52339831	37099451.32	70.88187066
10	Debtors	6	57852635.5	41541311.75	71.80539208
11	Inventories	6	148773681	73161674.93	49.17649038
12	Prepaid & Deposits	6	83728423.33	133300,503.3	159.2057966
13	Quick Assets	6	88,209,411.33	117,367,215.2	133.0552074
14	Payables	6	329479811.8	99474232.69	30.19129826
15	Net Worth	6	-382918687.8	131404031.7	-34.31643215
	Valid N (list wise)	6			

Source:
i) Annual Financial Reports of GRUL
ii) SPSS

Annex XII

XII .a Regression coefficient of Sales on Net Working Capital

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	nwc[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: sales

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.141[a]	.020	-.225	1.43266E8

a. Predictors: (Constant), net working capital

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.663E15	1	1.663E15	.081	.790[a]
	Residual	8.210E16	4	2.053E16		
	Total	8.376E16	5			

a. Predictors: (Constant), net working capital

b. Dependent Variable: sales

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.565E8	6.412E7		7.120	.002
	net working capital	.093	.325	.141	.285	.790

Annex XIII

XIII. a. Regression coefficient gross profit on Net Working Capital

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	nwc[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: gross profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.113[a]	.013	-.234	5.41211E7

a. Predictors: (Constant), net working capital

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.514E14	1	1.514E14	.052	.831[a]
	Residual	1.172E16	4	2.929E15		
	Total	1.187E16	5			

a. Predictors: (Constant), net working capital

b. Dependent Variable: gross profit

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.313E8	2.422E7		5.421	.006
	net working capital	.028	.123	.113	.227	.831

a. Dependent Variable: gross profit

Annex XIV

XIV. a. Regression coefficient of Net Worth on Net Working Capital

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	nwc[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: net worth

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.261[a]	.068	-.165	1.23811E8

a. Predictors: (Constant), net working capital

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.485E15	1	4.485E15	.293	.617[a]
	Residual	6.132E16	4	1.533E16		
	Total	6.580E16	5			

a. Predictors: (Constant), net working capital

b. Dependent Variable: net worth

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.540E8	5.541E7		-6.388	.003
	net working capital	.152	.281	.261	.541	.617

a. Dependent Variable: net worth

Annex XV) Calculation of Inventory Turnover and ICP Days

Inventory Turnover= COGS/ Inventory

ICP= Days in a year/ Inventory Turnover

Fiscal Year	Inventory	COGS	Days in a Year	Inventory turnover	ICP (days)
2062/063	155.36	245.14	360	1.578	228.154
2063/064	159.01	265.32	360	1.669	215.753
2064/065	153.57	231.18	360	1.505	239.144
2065/066	148.83	317.98	360	2.137	168.497
2066/067	238.42	377.48	360	1.583	227.379
2067/068	180.52	482.98	360	2.676	134.554
Total	1035.71	1920.08	2160.00	1.85	1165.12
Average	172.62	320.01	360.00	1.85	194.19

Annex XVI) Calculation of Receivable Turnover and RCP

Receivable Turnover = COGS/Receivable

RCP = Days in a year/ Receivable Turnovers

Fiscal Year	Receivables	Sales	Days in a Year	Rec. Turnover	RCP
2062/063	40.85	531.62	360	13.02	27.66
2063/064	17.78	363.99	360	20.47	17.58
2064/065	25.77	305.36	360	11.84	30.38
2065/066	45.97	473.46	360	10.29	34.95
2066/067	93.2	588.53	360	6.31	57.01
2067/068	123.53	611.34	360	4.94	72.74
Total	347.1	2874.3	2160	8.28	260.84
Average	57.85	479.05	360	8.28	43.47

Annex XVII) Calculation of Daily COGS and PDP

Daily COGS = COGS/ Days in a year

PDP = Payable/ Daily COGS

Fiscal Year	Account Payable	COGS	Days in a Year	Daily COGS	PDP
2062/063	193.27	406.38	360.00	1.13	171.21
2063/064	354.81	466.50	360.00	1.30	273.81
2064/065	466.39	231.18	360.00	0.64	726.28
2065/066	266.14	317.98	360.00	0.88	301.31
2066/067	289.75	377.48	360.00	1.05	276.33
2067/068	1139.05	926.64	360.00	2.57	442.52
Total	2709.41	2726.16	2160.00	1.26	2191.46
Average	451.57	454.36	360.00	1.26	365.24