

**A STUDY ON WORKING CAPITAL MANAGEMENT  
OF  
KUMAR PLASTIC UDHYOG PRIVATE LIMITED**



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*In partial fulfillment of the requirement for the  
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**(September, 2011)**

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## **RECOMMENDATION**

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*has been prepared as approved by this Department in the prescribed format of the Faculty of management. This thesis is forwarded for examination.*

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## DECLARATION

I hereby declare that the work reported in this thesis entitled " **A STUDY ON WORKING CAPITAL MANAGEMENT OF KUMAR PLASTIC UDHYOG PRIVATE LIMITED, BIRATNAGAR**" submitted to office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Master's Degree in Business Studies (M.B.S.) under the supervision of **Ruchila Panday**.

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Kathmandu

September, 2011

.....  
Rekha Baral

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## LIST OF ABBREVIATION AND SYMBOLS

Ave	=	Average
B.S.	=	Bikram Sambat
B/S	=	Balance sheet
C/A	=	Current Assets
C/B	=	Cash & Bank
C/L	=	Current liabilities
F/Y	=	Fiscal Year
G/P	=	Gross profit
i.e.	=	That is
KPUPL	=	Kumar Plastic Udhog Private Limited
Ltd.	=	Limited
N	=	Number of items
NPAT	=	Net profit after tax
NWC	=	Net working capital
P.E.	=	Probable error
P/L	=	Profit & loss
r	=	Correlation
T/A	=	Total Assets
W/C	=	Working capital
X	=	Value of 1st item
Y	=	Value of 2nd item
$\sigma$	=	Standard Deviation

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# CHAPTER I

## INTRODUCTION

### 1.1 Background of the study

The term business denotes activities related to trade, commerce, profession, occupation, and industry carried out to make profit. A business is an organization, It is engaged in the production and marketing of products to make through customer satisfaction. The primary beneficiaries of a business are its owners. Products are the focus of all business activities. A product is anything that satisfies the needs of customers. Products can be of Goods, services, ideas, and event information, properties, places and person etc.

Manufacturing sector is critical to the pursuit of sustained growth due to its potential to promote technological capacities, advance the diversification of production and exports. So, the study is related to manufacturing companies. In manufacturing companies, working capital management's plays a vital role in the success or failure of these companies. Working capital management is an important aspect of the manufacturing companies. Every business firms needs various types of assets to carry out their operation. Some assets are required to meet long terms needs which are fixed assets and some are needed to meet day to day expenses and to pay current obligation which are termed as current assets. Working capital management is related to management of current assets.

Amount invested in the form of raw material, cash, and semi- finished goods etc. put together is called working capital. There are two concept of working capital; net concept and gross concept. Net concept of working capital is excess of current assets over current liabilities. Gross concept is the total current assets.

Working capital is a financial metric which represents operating liquidity available to a business, organization, or other entity, including governmental entity. Along with fixed assets such as plant and equipment, working capital is considered a part of operating capital. Net working capital is calculated as current assets minus current liabilities. It is a derivation of working capital, which is commonly used in valuation techniques such as DCFs (Discounted cash flows).

Decisions relating to working capital and short term financing are referred to as working capital management. These involve managing the relationship between a firm's short-term assets and its short-term liabilities. The goal of working capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow to satisfy both maturing short-term debt and upcoming operational expenses.

If current assets are less than current liabilities, an entity has a working capital deficiency, also called a working capital deficit. It is particularly useful for business in deciding the size of the investment in each type of current assets. Inadequate investment in working capital threatens the solvency of the companies whereas excessive investment affects firm's profitability. The Working capital is the blood-life and controlling nerve center of the business. The excess working capital as well as short working capital is helpful for business. Therefore, proper use of working capital is necessary for these organizations.

“Nepalese economy is heavily characterized by pre dominant agriculture. People are engaged in and 82% of population are employing in this sector. Nowadays, the overall performance of this sector has been declining.” (Economic survey, *Nepal Rastra Bank* 2006-2007)

Agriculture alone is not sufficient for poverty reduction and overall development of the country. Industrialization is one of the major basic ingredients for progress, modernization and economic development of Nepal.

Expansion of industry offers prospects of increased employment; improve balance of payment and more efficient use of resources. In present situation, industrialization has proved itself a most powerful instrument in speeding up the economic development through establishment of different companies in different sector.

Industrialization is the pre-requisite for economic development as the history of advanced country now. For the development, the share of industrial sector rise and then an economy moves towards prosperity. Manufacturing is physical or chemical transformation of material or component into new product by power driven bands and machines manufacturing industries plays vital role in economy. The development of industrialization in Nepal is very slow. It is completely new phenomenon. Biratnagar Jute Mill in 1936 marked up beginning of organized manufacture industry in Nepal. By then Morang Cotton Mills, Raghupati Jute Mills and Juddha Match Factory were established till 1946 in Biratnagar. On the period of Second World War, the promoters of industries were able to reap wind full profit within a very short period because of extreme shortage of essential customer goods in the world market. This made the automation attraction for establishment of new industries. In Nepalese planned development govt. made direct investment in many industries. After emergence of democracy in 2047 Nepalese government have put step in economic liberalization and foreign investment policy to attract foreign investment in Nepal. Many establishments are made through direct and indirect (partial) foreign investment. Many banks, insurance companies, hotels, casinos construction companies etc. are established in Nepal Government is trying to support



many establishment through one umbrella policy. (Source: Ganga Lal Dahal, *Business Economic policy Analysis*)

### 1.1.1 Manufacturing and Trading Views

Manufacturing means any industries that make products from raw materials by the use of manual labor or machinery and that is usually carried out systematically with a division of labor. On a more limited sense manufacturing denotes the fabrication or assembly of components into finished productive enterprises or organization that produces or supplies goods, services or source of income.

“The research sector is manufacturing and trading companies, trading signifies a market and a means by which the exchange of goods and services take place as a result of buyers and sellers being contact with each other, either directly or through mediating agents or institutions. Thus, the trading means the flow of goods services from producer to consumers. The role of manufacturing industries and trading companies is marginal for the economic growth of the nation. The developing nation will remain associated with various forms of backwardness, unless they tackle the problems of economic backwardness through industrialization” Eckstein Alexander, *China's Economic Development*. In other words, “industrialization helps to create a country's economic infrastructure, and gives a path of diversification into a new area of activity. One of the merits of industrialization is that it makes it possible for countries to satisfy their own requirement to a greater degree. (United Nations, *Industrialization for New Development Needs*). It is the major instrument of progress, modernization and social changes in developing countries (*Ibid*). Maximum utilization of human resource, capital and other natural resources of the country could take benefit from the formation of industries. Increasing the job opportunities, it will increase the income of the people. It also facilitates the industrial development by reducing the presser on land and creating demand for agricultural raw materials. The reason for emphasizing industrialization is that industrial development would absorb rural under employed persons to these field of production where higher productivity is possible without reducing agricultural outputs.

Trading companies play a vital role for the development of the manufacturing industries. It supplies the necessary items like raw materials, human resources. Advance technology and many more things to industries. And distribute product items to the required consumers in the appropriate markets.

Recently, Nepal has also been affected indirectly by economic crisis. Nepal prepares its budget consulting with the IMF (International Monetary Fund), World Bank, Asian

Development Bank and many other donor countries for the necessary loans, grants and assistance, this reflects Nepal's economy is not satisfactory due to the lack of public based business sectors.

Trade policy, 1992 is established to enhance the contributions of trade sector to national economy by promoting internal and international trade with the increased participation of private sector through the creation of an open and liberal atmosphere. Emphasis will be given on modernizing management and technology, on promoting market, and attracting direct foreign investment in order to identify and develop new products, as well as to raise the production and quality of the traditional products.

Taxation system will be simplified by introducing necessary change in order to foster competition in trade. For the economic development, there should be smooth transparency and increase in the revenue collection on the Services, Sales, Export and import business. In such a process, value Added tax (VAT) Act 2052, was introduced. This act includes Sales Tax Act 2023, Hotel Tax Act 2018, Contract Tax Act 2023 and Entertainment Tax Act 2017. This Act is good for the entire straight and fair businessmen who have maintained all types or records. Usually VAT Act 2052 affects more on trading business than on the manufacturing company.

### **1.1.2 Historical Background of “Kumar Plastic Udhyog Pvt. Ltd.”**

Kumar Plastic Udhyog is the Pvt. Organization which was established in 1992 A.D. (2048 B.S.) under the Nepal Company Act with the efforts of private sector to ensure proper manufacturing, supplying and distributing of essential consumer items throughout the company. It is one of the manufacturing and trading organizations occupying 18 years of history working in multiple capacities of rendering better services and providing quality goods to the public. Its first task was to make edible plastic items available. But the distribution system during the passage of time disordered and became unreliable. However, attempts were made to reduce irregularity through the organized supply and delivery systems. The company gradually improved its ability not only meet the demand but also to maintain quality.

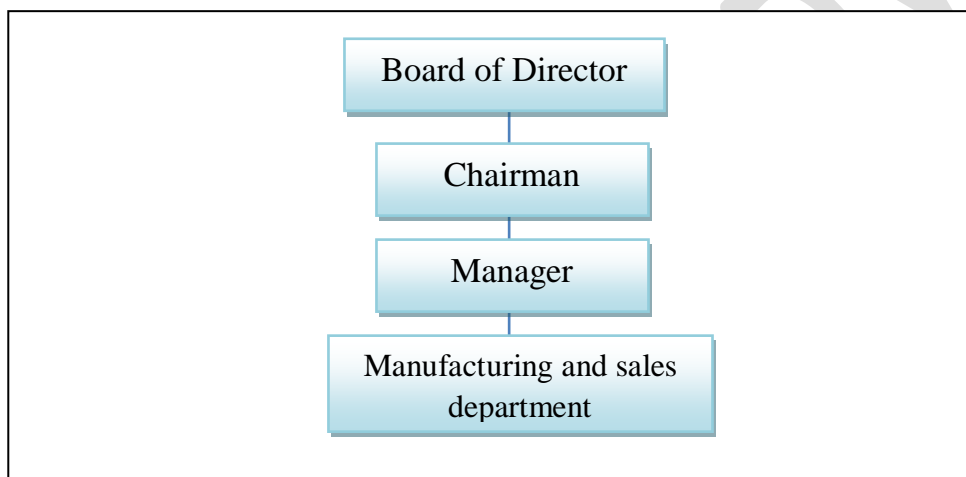
#### Major items of current Manufacturing Trade of KPUPL (Kumar Plastic Udhyog Private Limited)

- a. Jurkins (1 liter to 35 liters)
- b. Containers / Drums (1 liter to 100 liters) and
- c. Miscellaneous (Jug, bottles, buckets etc.)

The performance of any corporation fully depends upon the objectives of that company. The main objective of the company is to manufacture plastic items and distribute those goods within the kingdom of Nepal and external countries where as possible importing raw materials. The corporation is committed to boosting exports to bring about a more favorable change in the balance of trade. The organization also conducts triangular trade indicated to the task of promoting more exports in various item including Steel items. Other items are for the benefit of exports and import alike.

### **Kumar Plastic Udhog Organization Chart**

**Figure 1.1:  
Kumar Plastic Udyog Organization Chart**



### **1.2 Statement of Problem**

Generally working capital refers the current assets of the organization, but it is also defined as the difference between current assets and current liabilities. Many organizations are keeping more current assets in their organization. From the various studies it is found that organization is not able to manage the proper level of working capital and efficient utilization of it. They are not able to find out what level of working capital is suitable for their company. There is not a standard level of working capital for organization. Some organization needs high level of working capital and some may run with low level of working capital. The firm doesn't know which level of current assets and current liabilities composition is appropriate. Investment in current assets should be just adequate. Excessive investment in current assets should be avoided because it impairs the firm's profitability, as idle investment earns nothing. On the other hand inadequate amount of working capital can threaten solvency of the firm because of its inability to meet its current obligation. The investment decision should be made on any type of current assets by considering their role in corporation and determining. This is more beneficial to the corporation. The problem toward which this study is directed is to

assets the size, efficiency, liquidity and profitability of working capital in KPUGL. In the management of working capital, the most posing questions are:

- ❖ How much working capital is to be maintained?
- ❖ What type of financing to use?

Following are research problems of this study:

- Is there a proper investment in each type of working capital?
- Is there sound liquidity position of KPUGL?
- Is the overall profitability of firm satisfactory?
- What is the relationship between current assets and total assets?
- Is the manufacturing company following appropriate working capital policy?

### **1.3 Objective of the Study**

Working capital generally refers current assets and working capital refers the difference between current assets and current liabilities. The balanced working capital is most important for every organization. The excess and inadequate working capital is most important for every organization. The excess and inadequate working capital is very harmful. The success and failure of organization depends upon the amount of working capital. The working capital management refers to maintaining a balanced working capital. The main objective of this study is to examine the overall working capital management of KPUGL. To achieve these basic objectives, the following specific objective has been considered in the study:

- To know the financial position of the company.
- To calculate the liquidity, profitability & turnover ratio of the company
- To analyze the inventory part on sales, cash and net working capital.
- To suggest and recommend for the improvement in working capital management of manufacturing company

### **1.4 Needs of the Study**

Working capital is regarded as the lifeblood for any enterprise because it is needed for sustaining in day-to-day operation. If the business can't maintain a satisfactory level of working capital, it is likely to become insolvent and may even push into bankruptcy so the goal of working capital management is to manage the firm's current liabilities in such

a way that satisfactory level of working capital is maintained. It is important for these reasons:

- A large proportion of the financial manager's time is allocated to working capital management.
- More than half of the total assets are typically invested in current assets.
- The relation between sales growth and the need to invest in current assets.
- The relation between sales growth and the need to invest in current assets is directly close.

This study will diagnosis the relationship of working capital management to the efficiency of the KPUPL enterprise as a whole. It will also be helpful for new management of the efficiency as well as profitability with proper management of working capital and its components like cash, Inventory and receivables.

## **1.5 Limitation of the Study**

The study attempts to compare the working capital management of KPUPL. There are some limitations, which weaken the generalization e.g. in adequate coverage of industries, time period taken, reliability of statistical tools used and other variation. This study will be limited by following factors:

- This study is limited to working capital management of KPUPL.
- Due to limited time all the concern areas might not be covered in the study.
- Basically, the data and financial statement provided is secondary in nature.
- The study period is limited to 5 fiscal years from 2062/63 to 2067/68.
- The data could be available up to 2068 only, thus there may be a chance of failing to address the current situation of KPUKL.

## **1.6 Organization of the Study**

The whole study is divided into five main chapters:

### Chapter I – Introduction

The first chapter presents a brief introduction of the study. Firstly, the background information given and then it is narrowed in the form of focus of the study. A statement of problem is presented shortly and the objectives of the study are set up. The need and importance of the study is presented in the heading of significance of the study.

## Chapter II - Review of Literature

The second chapter deals with the review of different books, reports, and dissertation and journal articles related to the topic of the study.

## Chapter III - Research Methodology

The third chapter is about research methodology. The chapter presets the whole procedure of this research work i.e. research design, source of data, population and sample, method of data analysis (financial tools and statistical tools).

## Chapter IV- Presentation and Analysis of Data

In the fourth chapter, the available data are presented and analyzed on the basis of document perceived from related companies. The study analysis is using financing as well as statistical tools and techniques in order to fulfill the need of the study. The findings of the study are presented in the last of this chapter.

## Chapter V - Summary, Conclusion and Recommendation

The last fifth chapter presents the brief summary of whole research report and its conclusion. The chapter also supplies some useful suggestions to the concerned parties as recommendation.

## CHAPTER-II

### REVIEW OF LITERATURE

#### 2.1 Conceptual Framework

Working capital management refers to the administration of all aspects of current assets namely cash marketable securities, stock and current liabilities. Working capital is the lifeblood of the organization. To sustain the belief of the people and customer, the organization should always get ready to meet the obligations. Need of working capital is directly related to firm's growth. The level of CA can be measured by relating current assets to a higher CA/FA ratio means an aggressive current assets policy assuming other factors to be constant. A conservative policy implies greater liquidity or lower risk, while an aggressive policy indicates higher risk and poor liquidity. Higher risk gives higher return, while lower risk gives lower return. If the firm's level of CA is very high it has excessive liquidity, its return on assets will be low as funds tied up in idle cash and stock earn nothing and higher level of debtors reduces profitability. Thus, the cost of liquidity increases with the level of CA.

Working capital management practices in Nepalese manufacturing enterprises provide totally a different picture. The past trend of many manufacturing & trading companies had given emphasis in fixed assets. So they are facing financial problems all the time. The government policy to concentrate more in fixed assets has overlooked the financing of working capital. So in order to create the culture of risk bearing ability through commercial prudence and professionalism, the aspect of working capital should be treated in the same way as fixed capital, while deciding the structure of the manufacturing & trading companies, recently short term financial decision has never received much attention in the literature of finance. Because of earlier emphasis of financial management was more long-term financial decision, which to growth and development of many useful theories concerning these decisions as compared to short-term financial decision (Radhe Shyam Pradhan, *Management of Working Capital*).

In most Nepalese enterprises, the management of working capital has been understood as the "Management of Money" and the managers are found over-conscious about the working of money rather than its efficient utilization" (Dr K. Acharya, *The management of working capital in PES of Nepal*). At the same time, they never think of the source of working capital and usually depend on HMG for some of PES have used depreciation

fund and utilize surpluses to overcome the scarcity of working capital. Thus the existing problems are in the management of working capital rather than in any other area.

Working capital is lifeblood of enterprises. The inefficient management of working capital will lead to less of profits in the short-run. But it will lead to down fall of the enterprises in the long run. A deeper understanding of the importance of working capital and its satisfactory provision can lead not only to material saving as well as economic use of capital but can also assert in furthering the ultimate aim of business.

So, maintaining the optimal level of working capital is crux problem as it's strongly related to the trade-off between risk and return. The aspect of determine appropriate proportion of working capital in the structure of total assets comes under the preview of working capital in the structure of total assets comes under the preview of working capital policy, the unnecessary blocking of working capital. Administrative negligence in day-to-day operation and serious liquidity problem are the main causes to failure of any companies of Nepal. Most of Nepalese companies are operating in loss through they are following aggressive approach of working capital management.

## **2.2 Review of Book**

For the purpose of study made easy, related review form some books on working capital management are studied. In the concern of working capital the well known professor james C. Van Horn have given the concept of working capital as. "Working capital management is usually described as involving the administration of these assets namely cash, marketable securities, receivable and inventories and the administration of current liabilities. It means the working capital management is concerned with problem that arises in attempting to manage the current asset, the current liabilities and the interrelationship that exists between them" (J. C. Van Horn *Financial management and policy*).

"The term working capital originated at a time when most industries were closely related to agriculture, processors would by crops in the fall process them, sell the finished product and end up just before the next harvest with relatively low inventories. Bank loan with maximum maturities 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" (J. Fred weston & F Eugene Brigham, *Managerial Finance*)

"Proper management of working capital must ensure, adequate amount of working capital as per need of business firms. It should be in good health and efficiency



circulated. To have adequate, healthy and efficient circulation of working capital it is necessary that working capital be properly determined and allocated to its various segments, effectively controlled and regularly reviewed".( N.K. Agrawal, *Management of Working Capital* )

### 2.2.1 Concept of Working Capital

A firm needs various types of assets in order to carry out its operation. Some assets are required to meet the needs of regular production and some others are required especially to meet day-to-day expenses and short-term obligation.

The assets such as cash; marketable securities, accounts receivables and inventories which are known as current assets are required to be minted at a certain level depending upon the volume of production and sales. The cash and marketable securities are respectively considered as purely liquid and near liquid assets where as the accounts receivable and inventories are not. However, they can be liquidated as and when necessary with a period of less than one year. The capital invested on these assets is known as working capital. In short, the working capital is the sources of financing current assets and it includes short as well as long term financing. "Working capital refers to a firm investment in short-term securities, Account receivable and inventories." (Parajuli K.P, *Accounts of financial analysis and planning*)

There are two major concepts of working capital net working capital and gross working capital when accountants use the term of working capital, they are generally referred to net working capital. When is the dollar difference between current assets and current liabilities? This is one measure of the extent to which is the firm protected from liquidity problems. From the management viewpoint, it however makes little sense to take about trying to actively manage a net difference between current assets and current liabilities, particularly when that difference is continuously changing.

Financial analysis, on the other hand, means current assets when they speak working capital. Therefore their focus is on gross working capital.

Since it makes sense for the financial manager to be involved with providing the current of current assets for the firm at all time, we will adopt the concept of gross working capital. As the discussion of working capital management unfolds, our will be to consider the administration of the firm's current assets- cash and marketable securities, receivables. And inventory and the financing (current liabilities) needed to support current assets.

### **2.2.1.1 Gross Concept of Working Capital**

The gross concept of working capital refers to total current assets. Current assets are those assets, which in ordinary course of business can be converted into cash within short period of morally one accounting year. Current assets include:-

- a) Cash in hand
- b) Cash at bank
- c) Bills receivable
- d) Sundry debtors (Less provision for bad debts)
- e) Inventories or stock as
  - a. Raw materials
  - b. Work in process
  - c. Stores and spares
  - d. Finished goods
- f) Temporary invest of surplus funds
- g) Prepaid Expenses
- h) Accrued income

Supporters of this concept argue that the real working operation of public enterprise solely rely on current assets. Moreover, there is a logical reasoning that explains if fixed assets imply fixed capital, than current assets imply on working capital. As working capital is evaluated in terms of utilization of current assets, it is naturally on current assets only. Current liabilities are not entered into picture while judging the turnover of current asset. But reformer of this concepts states that this is a concept incomplete in itself, the management of working capital gives erroneous result if public enterprises do not consider current liabilities. Again, if they rely on this concept, the true financial position of the enterprise does not disclose.

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### 2.2.1.2 Net Concept of Working Capital

Net working capital is commonly defined as the difference between current assets and current liabilities “The term net working capital can be defined in two ways.

- A. The most common definition of net working capital is the difference between current assets and current liabilities.
- B. And Alliterative definition of working capital is that portion of firm’s current assets, which is financed with long-term funds. Current liabilities are those liabilities which are intended to be paid in the ordinary course of business within a short period of normally one accounting year out of current assets or the income of the business.

Current liabilities include:

- 1. Bills payable
- 2. Sundry creditors Accounts payable
- 3. Accrued outstanding expenses
- 4. Short-term loan, Advantages and deposit
- 5. Dividend policy
- 6. Band overdraft

The gross concept is a financial or going concern concept where as net working capital concept is as accounting concept of working capital.

These two concepts emphasis that excessive investment in current assets affects profitability as idle investment yield nothing, similarly inadequate investment in current assets intakes it difficult of currying out day-to-day operations of business smoothly.

The need for net concept of working capital arises due to the fact that short –term creditors want an enterprises to maintain current assets at higher level as compared to current liabilities. It shows the extent of protection provided to short-term liabilities.

“In fact the choice of particular concept will depend upon the purpose. Thus of the concepts, the net is more useful. The purpose is to find all the liquidity position of an enterprise. If on other hand, the interest lies in finding out where the total current assets of an enterprise are being put to maximum use, the gross concept is preferable.”(S.M. Slay, *financial Management of public Enterprises*)

Business enterprises have to hoard sufficient current assets to pay current liabilities and constitute a margin or buffer for maturing obligation within the ordinary operation cycle. If the corporation is making adequate profit then such financing of net working capital is most likely to be form retained earnings. For a loss maker, however, other long term

sources like team loan debenture or equally share should represent the equivalent of net working capital. This concept enables business firms to have true picture of their financial position and also to measure the sufficient liquidity. But expensive current assets show idle funds with additional cost to be borne.

### 2.2.2 Types of Working Capital

Working capital can be classified into two categories on the basis of necessities in any organization for continuous production and sales without any interruption.

#### a. Permanent working capital

Permanent working capital refers to that level or current assets which is required on a continuous basis over the entire year. It may again be classified in to regular working capital and reserve margin.

##### i. Regular Working Capital

The minimum amount of liquid capital needed to keep up the circulation of capital from cash to inventories to receivable and back again to cash in non as regular working capital. There is a positive relationship between the requirement of regular working capital and size of business.

##### ii. Research Margin

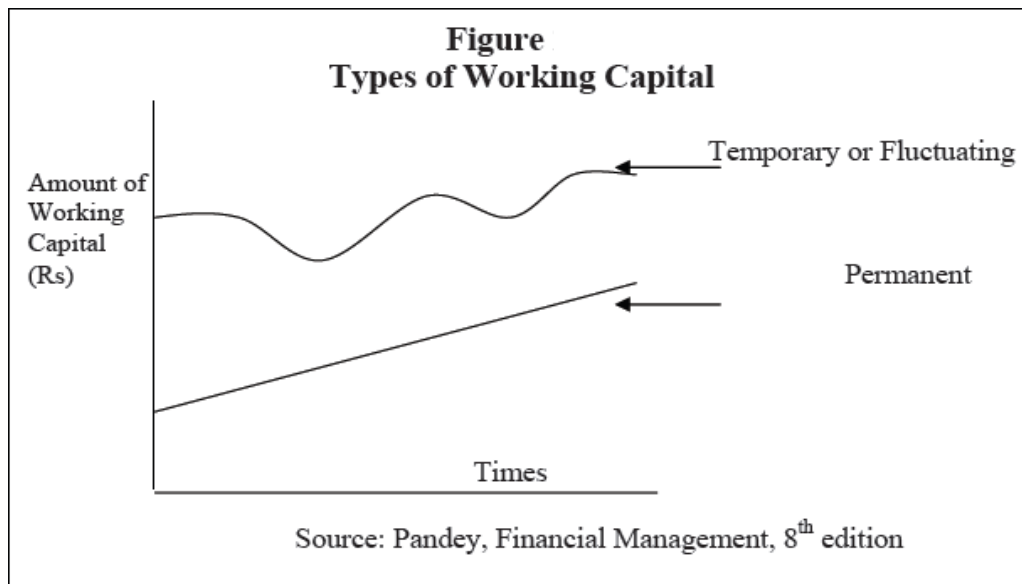
Research margin represents the excess of amount over the need for regular working capital. This working capital should be provided for unexpected and extra ordinary needs.

#### b. Temporary or Variable working capital

Variable working capital represents that person of working capital which is required over permanent working capital. If the nature of production and sales of a firm is directly related to seasonal variables, it should stoke extra raw material, working progress an inventory of finish goods. Thus this portion of working capital depends upon the nature of firms' production relation between labor and management.

Therefore, if a firm has sound management on the portion of working capital, it can easily win over their competitors in today's competitive market.

**Figure 2.1**  
**Types of working Capital**



**c. Negative working Capital**

If current liabilities exceed current assets, then the working capital is clearly a negative quantity, which is called negative working capital. Excess of current liabilities over current assets means negative working capital, a negative quantity, which is disastrous for a company.

**2.2.3 Needs and Objectives of Working Capital**

Each and every firm needs sufficient volume of working capital in order to run the business smoothly. We will hardly find a business form which does not require any amount of working capital. Indeed, firms differ in their requirement of the working capital.

Business organization has an aim to maximize the shareholder investment. In order to accomplish this objective, the business organization should earn sufficient return for its operations. Earning a steady amount of profit requires successful sales activity. “Sales do not convert into cash instantly; there is invariably a need for working capital in the form of current assets to deal with the problem arising out of the lack of immediate realization of cash against goods sold” (M.Y. Khan & P.K. Jain, *Financial Management*). Thus, sufficient working capital is necessary to sustain sales activity. It is also necessary to solve the problem or to pay for liabilities like creditors, short-term loan etc.

**Needs and Objectives of working capital can be listed as follows:-**

- A. For the purpose of raw materials, components and spares.
- B. To pay wages and salaries.

- C. To maintain day-to-day expenses and overhead cost such as fuel power and office expenses.
- D. To meet the selling expenses as packing, advertising etc.
- E. To provide credit facilities to the customers.
- F. To maintain the inventory of raw materials, work-in-progress stores, spares and finished stock etc.
- G. To pay the short-term debt and debt and bank loan in time.
- H. To keep the business in solvency position.
- I. To face for the economic depression and emergencies.
- J. To grab the opportunity.
- K. To get regular return and to make the shareholders intension well towards the organization.

#### 2.2.4 Nature of Working Capital

“Working capital management is focused with the problem that arises in attempting to manage the current and current liabilities and their interrelationship that exist between them. The concept of working capital has undergone a change. Formerly, it was considered a margin safety for short-term creditors. i.e. meeting obligations as and then they fall due working capital is required for caring of the day –to-day operations of a firm and should not be taken merely as a margin of softy for short term creditors.” (S.P. jain & K.L. Narang: *Finacial management Accounting* )

The mature of working capital is described with the help of nature of cash cycle or operation cycle of the organization. “The operation cycle is the firm duration required to convert sales after the conversion of resources into inventories into cash.” (I.M. Panday, *Financial management*)

Current assets are usually converted into cash with in the current accounting cycle. “A firm begins with cash which is used for purchase of raw materials and bought on components. Materials and other operating supplies can also be purchased on credit which is turn generation account payable. Further cash is expended to pay the labor and manufacturing costs and further trade credit obtained to enable production of finished goods which are eventually sold on credit going size to account receivable. The collection of receivables brings cash the firm and creditors are paid.”( S.P. jain & K.L. Narang: *Finacial management Accounting* )

“Working capital has a volatile nature. This nature present some problems and contents in financing work capital need. The volatile mature of working refers to the change in

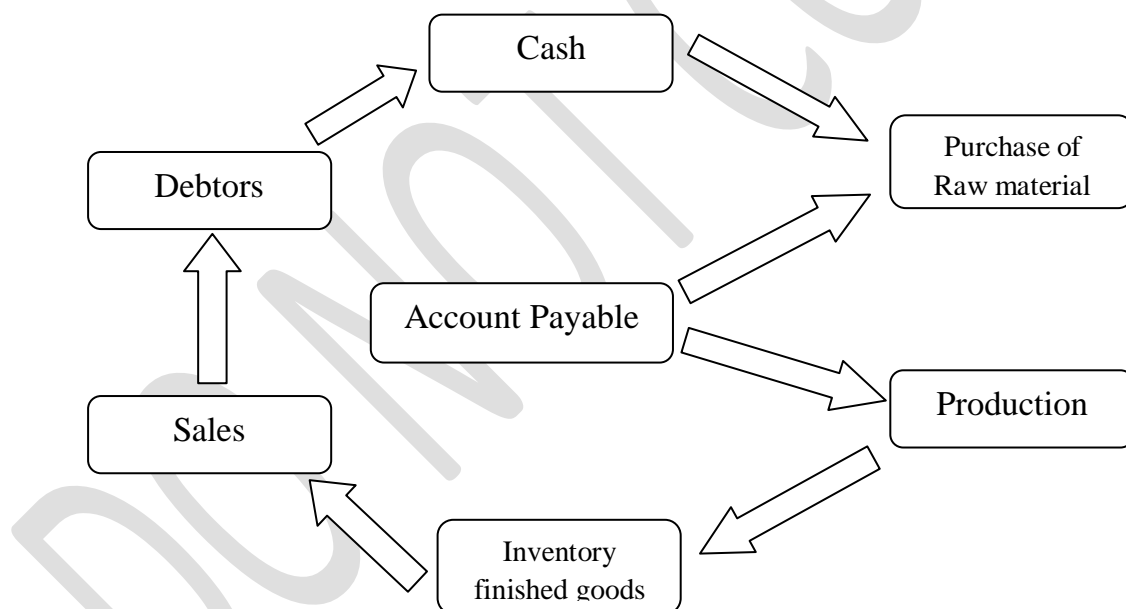
total current assets. Thus the nature of working is not static it changeable as per transitions of goods.” (John J Hampton : *As quoted by R.M. Dangol, K.P. prajapati* )

“In case of current liabilities current liabilities are obligations to outsiders repayable a short period usually within the accounting period or the operation cycle of the firm. It can be said to the counterpart of current assets. Conventionally, they are paid out of the current assets in some case, however existing current liabilities can be liquidated through the creation of additional current liabilities.( Khan M.Y and Jain P.K.: *As quoted by R.M. Dangol, K.P. prajapati* )

We can show working capital in cycle and it shows interrelation among the current assets and other components.

### Working Capital Cycle

**Figure 2.2**  
**Working Capital Cycle**



In order to reduce the requirement of working capital .The management should try to reduce the period of the operating cycle.

#### **2.2.5 Important of working capital**

Working capital is the life blood and nerve center of business .If the center becomes work, the business can hardly service sooner it is likely in collapse. Adequate working capital also makes available fund for unforeseen contingencies and a unit can successfully go through period of crisis. It is working capital. Which is the force behind

the fixed assets utilization, the manufacture and sale of new commodity may require not only a new plant but also additional raw materials and an increase in account receivable to support credit sale of the new product.

Adequate working capital creates an atmosphere of certainly security and confidence. General moral of management is enhanced, the employees are to get their remuneration at the fixed time and shareholders are assured a good return on their investment be course of good performance of the company.

That is an important the feeling of security, the sense of power the promoter, the self-confidence.

The need for working capital or current assets cannot be over emphasized. The objective of financial decision-making is to maximize the shareholders wealth. To achieve this, it is necessary to generate sufficient profits. In extend which profits can be earned will naturally depend on the sales, among other things. Sales do not convert into cash instantly; there is invariably a time-log between the sales of goods and the receipt of cash. There is, therefore a need for working capital in the form of current assets to deal with the problem arising out of the lack of immediate realization of cash against goods sold. Therefore, sufficient working capital necessary to sustains sales activity.

Working capital management is particularly important for small firms. Although such firm can minimize their investment in fixed assets by renting or leasing plant and equipment, they can't avoid investment in cash, receivables and inventories, therefore current assets are particularly significant for the financial manager of a small firm.

Adequate working capital has also a technical role to play in increasing the rate of return on funds invested in the business. A business unit can increase its rate of return on the capital invested, if it keeps pace with the technological developments taking plan into field to which it pertains.

General adequate working capital is better than inadequate working capital because inadequate working capital increase ideal funds which may earn profit may be unnecessary used to purchase of inventories and creates waste age and losses. And due to liberal credit policy it increase higher bad debts cause of inadequate working capital. Ideal funds can't increase profit should pay inters of ideal fund which reduce profit, So that an adequate working capital necessary for sound helps of business. A firm can preserve the solvency position create good will. Pay in time creates confidence face emergency period having adequate working capital.



### 2.2.6 Determinations of Working Capital

Working capital plays a vital role in the successful operation of the business. The requirement of working capital must be sufficient so as to yield maximum profit. It means working capital must neither be high nor low; rather it must be proper quantum.

“So many factors affect different company differently in different time periods. There are no set rules to determine marking capital requirements of the firm. A large number of factors influence the working capital needs of the firm. All factors are of separate importance. Also the importance of the factors changes for a firm over time. Therefore, analysis or relevant factors should be made in order to determine total investment in working capital” (I.M. Panday, *Financial management*)

Generally, the following factors are considered as the deterring factor of working capital.

- a. Size and nature of business.
- b. Manufacturing process and length of production cycle.
- c. Growth and expansion of business.
- d. Credit policy
- e. Profit-level
- f. Availability or raw materials
- g. Level of tax
- h. Price level change
- i. Demand policy
- j. Depreciation policy
- k. Operation policy
- l. Technological development
- m. Transport and communication facilities.
- n. Business cycle.
- o. Terms and condition of purchase and sales.

### 2.2.7 Structure of working capital

Structure of working capital includes a study of the elements of current assets and current liabilities. The important elements of current assets are inventory, receivables, cash and bank balance and short term investment other the trade investment. Current liabilities usually includes trade creditor. Bank borrowing accrued expenses accrued tax and up paid decides.

The details descriptions of three major components: as cash, marketable securities, inventory.

## **Cash:**

“Cash is the crucial components of the working capital of concern cash like blood streams in the human body gives strength to a business units, without it the firm in not able to pounce the other recourse that it needs to continue the operation of business unit to a standstill. Management has a duty. Therefore to see that the firms it manage sufficient cash balance at all times to meet its day to day requirements.” (S.P. jain & K.L. Narang , *Financial management Accounting*)

Cash is one of the most important factors for the business organization. Without the procurement and proper management of cash on business organization has the out flow and inflow of cash. The inflow of cash increases the liquidity and out flow the decrease it. The main source of cash inflow for a business organization are sale of goods and service, interest in advance etc, and the out flow is necessary for the payment of trade creditors. Administrative expenses wages. Interest, creation installment of loans, different types of cash purchase selling and distribution expenses etc. So there should be proper balance between cash inflow and cash outflow. In other words, there should be an adequate amount of cash in the firm but not excess cash them requirement is not profitable for business firm.

The important objective in managing cash should be to trade off liquidity and profitability and profitability must be balanced in such a way that the organization retains its liquidity and at the same time maximize is profitability.

## **Marketable Securities**

“Marketable securities are short-term money market instruments like treasury bills, quoted, corporate share, debenture etc that can easily be converted into cash when the cash is needed in the business.” (S.P. jain & K.L. Narang , *Financial management Accounting*)

Now-a-days it has become a practice with business concern to invest their surplus cash in marketable securities. Marketable, usually gives lower yield them firm’s operating assets. There are two reasons for making investment in these securities.

There serve as a substitute for larger cash balance liquidation part of securities to increase the cash balance when cash outflows exceed, cash inflows.

There also used as a temporary investment to meet known financial requirement of the firm in near future.

### **Inventory:**

Inventory represents a major current assets investment in most manufacturing firms ranging from perhaps 25 to 75 percent of their current assets depending upon the magnitude of the firm and the types of industry.

“Inventory may consist of raw material work- in- progress and finished goods awaiting sale and shipment.” (R.A.Brealy & S.C.Myers, *principle of Corporate finance*)

According to Kul Shrestha, “A raw material includes that essential material, which is basically used to produce finished goods. Raw material are not final product but they are ingredients for it work in progress refers for that product which are not completed but under processing. It is the phase after raw material. Thirdly the finished goods refer to that stock of goods which is ready to consume and ready to sale and shipment, apart from their stores and supplies are also a kind of inventory. It includes fuel, oil, coal, lubricants, chemicals etc.”( R.A.Brealy & S.C.Myers : *principle of Corporate finance*)

In this way next concepts of inventory is “Adequate inventories facilitate smooth production activities and help to provide off shelf delivery to customers on other hand, excessive inventory is idea resource of the firm and can prove costly because it lies up working capital unnecessarily which could have been better used it been utilized for some other purpose. The major problem of inventory management Therefore should be to arrive at an optimal balance between too much inventory and too little inventory.

The optimum level if inventory is decided keeping in view the costs associated with holding inventories. There are two types of these cost, ordering cost and caring cost. A system for effective management of inventories involves there sub system economic order quantity record point and stock level.”( (M.Y. Khan & P.K. jain, *Financial Management*)

### **Receivables:**

Receivables is one of the important current assets representing amount owed to the firm as a result of the sale of good or service on credit in the ordinary course of business. This term is also applicable to prepaid expenses and short-term loans and advances to subsidiaries and employees and supplies of raw materials of stores, spares and equipment. Receivable like inventories, involve costs; it should be kept it mind that these cost should not exceed the profit earned on sale generated by receivables.

“Therefore, the objective of receivable management is achieving a balance, which result in the combination of sales and profit rates that maximize that fact of close co-operation of the finance executive with sales executives can hardly be over emphasized.” (M.Y. Khan & P.K. jain, *Financial Management*)

The greater the level of sales and longer the term of credit given to customers the more will be the quantum of investment in receivable. If the firm has a relatively liberal credit policy it will have still higher quantum of investment in receivable than a firm which has followed a stricter credit policy. A liberal credit policy encourage customer to delay statement of their cost.

## **2.3 Working Capital Policy**

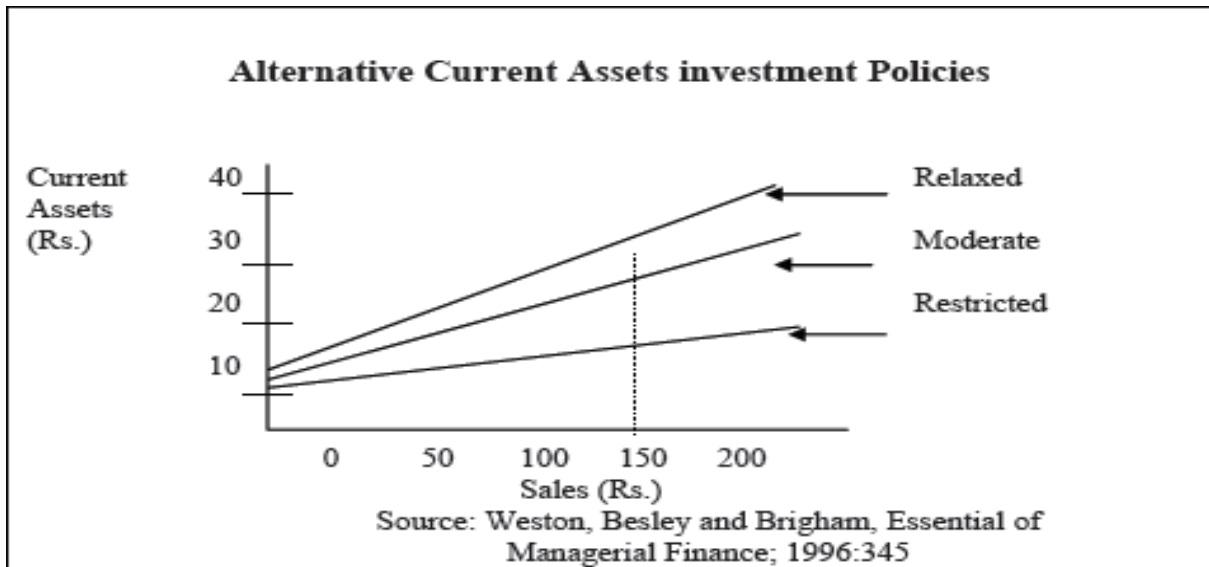
working capital policy refers to the firm’s basic polices regarding (i) target levels for each category of current asset and (ii) how current assets will be financed. So, first of all, in working capital management, firm has to determine how much funds should be invested in working capital in gross concept. Every firm can adopt different financing policy according to the financial manager’s attitude towards the risk return trade off One of the most important decisions of finance manager is how much current liabilities should be used to finance current assets. Every firm has to find out the different sources of funds for working capital

### **2.3.1 Current Assets Investment Policy:**

Current assets investment policy refers to the policy regarding the total amount of current assets to be carried to supports the given level of sales. There are three alternative current assets investment policies-Relaxed, restricted, and moderate policy.

**Figure: 2.3**

#### **Alternative Current Assets Investment Policies**



**i. Relaxed Policy:**

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

**ii. Restricted Policy**

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

**iii. Moderate Policy:**

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

**2.3.2 Current Assets Financing Policy**

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

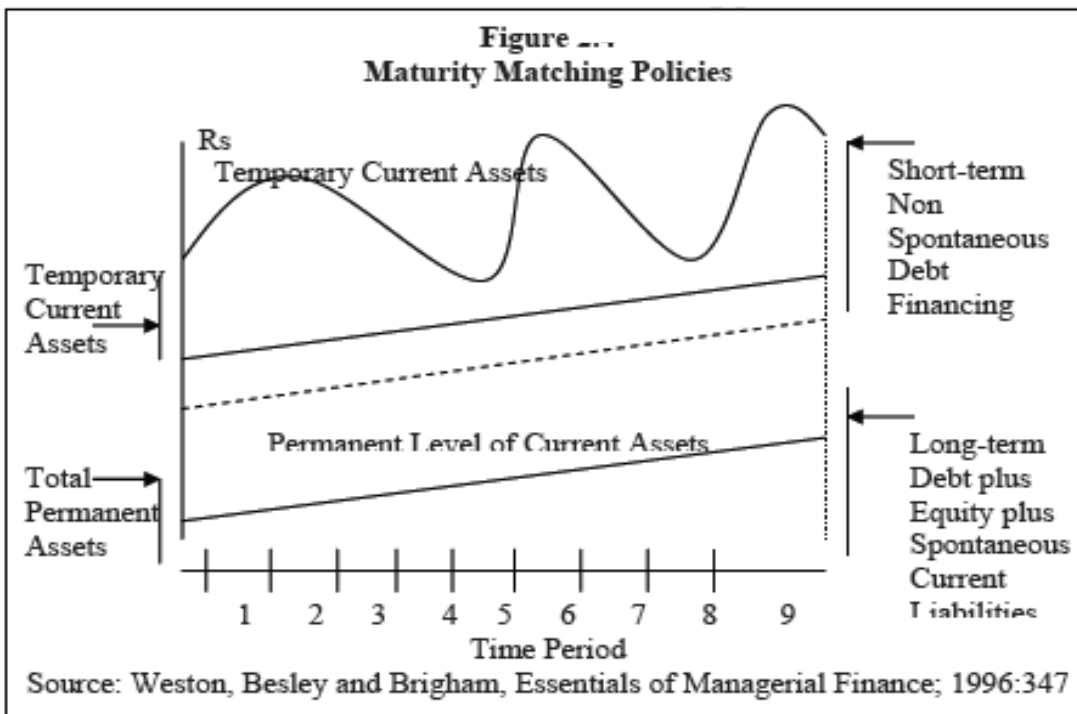
sources or financing. There are three variants - aggressive, conservative and moderate policies of current assets financing.

**i. Aggressive Policy:**

In an aggressive policy, the firm finances a part of its permanent current assets with short-term financing and rest with long-financing. In other words, the firm finances not only temporary current assets but also a part of the permanent assets with short-term financing. In general, interest rate increases with time i.e. shorter the times lower the interest rate. It is because lenders are risk adverse and risk generally increases with the length of leading period. Thus, under normal condition, the firm borrows on a short term financing rather than long term financing. On the other hand, if the firm finances its permanent current assets by short term financing, it runs risk of renewing the borrowing again and again. This continued financing exposes the firm to certain risk. It is because, in future interest expenses will fluctuate widely, and it may be difficult for the firm to raise funds during the stringent credit periods. In conclusion, there is higher risk, higher return and low liquidity position under this policy.

**Figure: 2.4**

**Maturity Matching Policies**



## ii. Conservative Policy:

In conservation policy the firm uses long term financing to finance not only fixed and permanent current assets, but also part of the temporary current assets. It means that firm depends more on the long - term source for financing needs. This policy leads to high level of current liabilities and higher interest cost. The risk and return are lower than or that of aggressive policy und liquidity position is higher than or aggressive one.

## iii. Moderate Policy:

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

## 2.4 Review of Journals and Articles

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

**Shrestha (1998)** in his article "*Working capital Management in Public Enterprises*" states that manager often lacks basic knowledge of working capital and its overall impact

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

**Acharya (2000)** in his article on "*Problems and impediment in the Management of Working Capital in Nepalese Enterprises*", he said that working capital management, especially in public sector, has been a relatively weak area. He has described operational problems as well as organizational problems faced by the organizations. Some the operational problems were slow inventory turnover, change in working capital had low impact on profitability, current liabilities increased largely than current assets etc. whereas organizational problems were lack of regular evaluation of financial result and regular internal and external audit system, under utilization of capacity, unsatisfactory functioning of financial department etc.

**Shrestha (2002)** in his article "*Working Capital Management in Public Enterprises*" has studied the working capital management of ten-selected Public Enterprises. He has also found that out of ten Public Enterprises six were operating in losses while only four were getting some percentage of profit. With the reference of his findings he has brought certain policy issues such as lack of suitable financial planning, negligence of working capital management, deviation between turn over and return on net working capital. At the end, he has made some suggestive measure to overcome from the above policy issue i.e. identification of needs funds regular check of accounts, development of management information system, positive attitude towards risk and profit and determination of right combination of short term and long term sources of funds to finance working capital needs.

**Mahat (2004)** has published article relating to "*Spontaneous Resources Working Capital Management*." The article has defined the three major sources of working capital i.e. equity financing, debt financing and spontaneous sources of financing regarding the working capital management. Debt financing includes short term bank financing such as bank over draft, cash credit, bills purchase and discounting, letter of credit etc. whereas spontaneous sources of working capital include trade credit, provisions and accrued expenses.



The article has defined that working capital management is one of the important pillars of corporate finance. However, Nepalese industries are facing difficulty in their survival but the cause of recession, which can bring best and worst in corporate finance such as environment should be enough to cope with the possible worst happening in future for WC management.

The study has said that managing the WC resources for the profit making industries are routine affairs of just making payments and arranging collection of debtors. In constant, the company in debt trouble, it is rather difficult to meet its working capital gap by the way of debt financing the company should have to bear interest which may cause to increase the percentage of operation expenses to the turn over and depletion of operation expenses of the turnover and depletion in the profit. Therefore, spontaneous source of WC will be better in WC in order to improve its performance. Consequently, in a changed economic scenario; even company should realize that inability to manage WC might land them in a vicious circle that can be hard to get out from. It is indeed essential for industries to tighten their belts and check their financial stability to face and stand in forthcoming complete day.

## 2.5 Review of Thesis

In this section, an attempt has been made to review some of the selected research studies related to working capital management of different companies. Besides review of available research studies, some of these relevant unpublished thesis dissertations of MBAIMBs students of Tribhuvan University related to working capital management of different Nepalese companies have been reviewed as follows:

**Shrestha (2002)** has carried out his research on “*A Study in Working Capital Management of Dairy Development Corporation*” The main objective of the study is to analyze the current assets and current liabilities and their impact and relationship to each other. The major findings of his study are as follows:

- The major components of current assets in DDC are inventory. Cash and bank balance, sundry debtors and miscellaneous current assets in which inventory hold the major portion respectively in each year. The company's investment in the form of working capital has been increasing.
- The average investment in current assets is lower with respect to fixed assets during the study period and DDC has no clear vision about the investment in current assets to fixed assets portion

- The average receivable turnover and ACP is in fluctuating trend during the study period.
- There is ineffective liquidity position and unsatisfactory profitability ratio in DDC.
- The overall return position DDC is negative i.e. not in favorable condition. It is because of inefficient utilization of CA. TA and shareholder's wealth.

**Gurung (2002)** has carried out his research on “*A Study on Working Capital Management of Nepal Lever Limited.*” The main objective of his study is to examine the working capital management of Nepal Lever Limited. The major findings of his study are as follows:

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

**Gartaula (2003)** has carried out his study on “*Working Capital Management of Tea Development Corporation*”. His basis objective was to examine and measure the working capital structure on NTDC. The major findings of the study were:

- Inventory constitutes the most important and largest element of working capital.
- There is increasing trend of sundry debtors. This indicates slack position of sales with accumulation of inventories.
- There is poor liquidity position of the firm and lower risk of technical insolvency.

**Sharma (2004)** has carried out his research on “*A Study on Working Capital Management of Nepal Battery Company Limited (NBCL)*”. The main objectives of his study are as follows:

- To analyze the liquidity, composition of working capital. Assets utilization and profitability position of NBCL.
- To study the relationship between sales and different variables of working capital in NBCL.
- The major findings of his study are as follows:

- There is unsound inventory management policy, unnecessary tie up of working capital and less utilization of working capital in NBCL.
- There is insignificant relationship in between inventory into sales. This indicates the inefficiency in turning its inventory into sales.
- There is good liquidity position of the company.
- He also found that there is an operating inefficiency in the company and by reducing operating expenses: the company can improve its profitability.

**Pathak (2005)** has done a research on “*An evaluation of working Capital Management of Nepal Lube Oil Limited,*” The main objectives of this study are to appraise the working capital management of NLO ltd. and to study the relationship between sales and different variables of working capital. To achieve these objectives, this study have taken five year period and applied the secondary data.

The major findings of this study are:-

- The growing tendency of investment over current assets could have adverse effects in NLO Ltd’s wealth maximization goal in long run. The study has suggested that NLO Ltd should determine certain rate of return in investment and sales target should be set.
- The company should always concern about the current assets and CL and regular check should set. It will control the excess and shortage of working capital of the company.
- The company should give attention to manpower planning and should avoid both under staffing and over staffing.

**Yadhav (2006)** has conducted the research on “*Working capital management of Listed in Nepal Stock Exchange*” The study has used financial as well as statistical tools to analysis the financial data of 2000 to 2005. The study has also used primary and secondary source of data. The main objection of his study is to apprise the working capital management of listed hotels and to find out the relationship between the different variables of WC.

The major findings of this study are:

- Yak and Yeti, oriental and Soltee Crowne Plaza are suffering from excess of CA over the CL.
- Yak and Yati has followed conservative financing policy whereas Soltee and Oriented have following aggressive financing policy.
- The relationship between CA and CL, CA and net sales, and net WC, are found negative and receivable and net sales are positive of the selected hotels.

- From the primary information, it has also found that oriental and Yak and Yati are not implying and credit standard policy and credit payable policy.
- The liquidity and profitability position of all selected is satisfactory.

## 2.6 Research Gap

Review of literature is an essential part of all studies. It is a way to discover what other research in the end of our problem has uncovered. A critical review of literature helps the research through understanding and insights into previous research works that relates the present study. It also avoids investigating problem that has already been definitely answered. Therefore researcher seems to identify these new contributions and add them to the body of knowledge before researcher conducts own investigation. The purpose of literature review is this to find out what research have been conducted in ones chosen field of the study and what remains to be done. It provides to move ahead the past research work. It provides separation point to researcher from others. It establishes to a point of departure for future research in this research work. Since I have selected the KPUGL and five Accounting years for analysis because of this period none of research is held till now. This analysis is taking recent years practices of Kumar Plastic Udyog Private Limited in working capital management. Since DNPL is the only of the major company working with foreign investment in Nepal and its share in market is very good so the research is meaningful and useful.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The basic objective of this study is to evaluate the working capital position of Kumar Plastic Udhog Pvt. Ltd. The study covers a period of 5 years to fulfill the objectives following methodology has been adopted. The main objective of this study is to analyze, examine highlight and interpret the working capital position of KPUPL. Over the years and recommend suggestions improvements. So the purpose of this chapter is to analyze and fulfill the stated objectives. The methodology for obtaining above objectives consists of source of data, data collection procedure and tools and techniques of analysis.

#### **3.2 Research design**

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.

Research design is the plan, structure and strategy of investigation conceives so as to obtain answer to research question and to control variance. Research design also can be defined as the plan. Stricture and strategy of investigation concerned so as to answer the research questions and to control variants. Thus, it is not possible for a researcher to conduct a research project without a research design.

#### **3.3 Nature and sources of data**

Generally, we can classify the data into primary and secondary. Primary data are those which are takes from the interview of the concerned person of the company. These data are essential and important for the study at the time of research. This study is primary based upon secondary data, which are publishing by the company during the fiscal year 2063/64 to 2067/68.

For the study purpose, 5 years audited balance sheets, profit & loss accounts and other related document. Which is secondary nature collected from the company.

### **3.4 Population and Sample**

Population is a total unit of all Plastic Udhyogs about which we are going to study or research where as sample is the number of representatives about of total population. It is difficult to analyze all the published financial statement of the population. A sample has been chosen for the study of KPUPL which will represent the total population. The research has taken only 5 years data from 2060 to 2064 fiscal year which is very important for the study.

### **3.5 Data Processing Procedure**

The collected raw data are processed raw data are processed and presented in tabular form, with the help of simple arithmetic rules. The entire raw data are converted in to approximate and condensed in the form of summery balance sheet and profit and loss account most of the data have been complied in one form and processed and interpreted as per the need of the study. The secondary type's data are presented for the analytical purpose after the tabulation of the data. These types of data processing represent are clear situation.

### **3.6 Method/Tools of Data Analysis**

After the data have been tabulated the researcher most states the work of analyzing them. In briefly the following statistical and analytical tools are used to analyze the collected data. Specially, secondary data has taken. So the, major sorce of secondary data for the study will be taken as follow:

- a. Annual audit Report of the KPUPL.
- b. Previous studies and reports
- c. Journal and other published and unpublished related documents and reports for central library TU, Shankar Dev Campus and Post Graduate campus, Biratnagar.
- d. Various internet websites.
- e. Other published materials etc.

### 3.6.1 Financial Tools

#### 3.6.1.1 Ratio Analysis

Ratio is the numerical or an arithmetical relationship between two figures. It is expressed when one figure divided by another. Analysis means to describe it more & more. It can be used to index for evaluation. Ratio can be expressed as percentage time & fraction.

The use of ratio as a tool of financial analysis involves their comparison, for a single ratio, like absolute figure fails to reveal the true position. Under the analysis of ratio, there are only taken as profitability ratio & activity ratios etc.

#### 3.6.1.2 Comparison of Working Capital

Our main focus of the research is about the working capital management, Thus we have to discuss about the management of funds & relationship between them. Their relation can be analyzed by the comprising of various individual assets to total current assets & total current liabilities. The comparison of individual assets to current assets & fixed assets as follow:

##### a) Current assets to total current assets (CATA):-

Current assets to total assets expressed the relationship between the total assets & total current assets. The high % of CATA shows the risk & decreasing the profitability. The low percentage of it indicates by the help of following formula.

$$CATA = \frac{\text{Total current assets}}{\text{Toatal assets}} \times 100\%$$

##### b) Current assets to total fixed assets (CAFA):-

The ratio of current assets to fixed assets shows the relationship between CAFA. The higher ratios of CAFA show greater liability of the SSU.

$$CAFA = \frac{\text{Current assets}}{\text{Fixed assets}} \times 100\%$$

##### c) Cash And Bank Balance To Current Assets (CBCA):-

The ratio of cash and bank balance to current assets shows the relationship between cash and bank balance (liquid assets) to current assets. The small ratio of its shows the sound management and vice-versa, Thus the working capital is directly affected by it.

The relationship can be expressed by:-

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

d) Cash And Bank Balance To Total Assets (CBTA):-

The ratio of cash and bank balance to total assets shows the relationship between cash and bank balance (liquid assets) to total assets. The higher ratio indicates higher liquidity and lower risk and lower ratio indicates poor liquidity and higher risk. The greater the ratio indicates the sound working capital.

The relationship between CBTA can be expressed as:-

$$CBTA = \frac{\text{Cash \& Bank Balance}}{\text{Total Assets}} \times 100\%$$

e) Inventories to Total Assets (ITA):-

The ratio of inventories to total assets shows the relationship between inventories to total assets. On the other hand it shows the relation between how volume of inventories must be kept to how volume of total assets. The higher ratio of it shows the liberal credit policy of WC managements.

The relationship between ITA can be expressed as:-

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

f) Receivable to total assets (RTA):-



The ratio shows the relationship between receivables & total assets. It indicates how volume of assets should be maintained to how volume of receivable. The higher ratio of RTA indicates the liberal credit policy of the business organization about its working capital structure.

The relationship between RTA can be expressed as:-

$$RTA = \frac{\text{Receivable}}{\text{Total Assets}} \times 100\%$$

g) Receivable to current Assets (RCA):-

The receivable to current asset shows the relationship between receivable & current assets. The higher percentage of receivable to current assets -indicates the greater working capital & vice-versa.

The relationship between RCA can be expressed as:-

$$RCA = \frac{\text{Receivable}}{\text{TCA}} \times 100\%$$

h) Inventories to current assets (ICA):-

The relationship between inventories & current assets express the how volume of inventories should be profitable for the business organization in respect of business organization of ICA indicates liberal inventory policy & vice- versa.

The relationship between ICA can be expressed as:-

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

i) Inventories Turnover Ratio

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

$$ITR = \frac{\text{Cost of Goods Sold}}{\text{Closing Inventory}}$$

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

**a) Inventory Conversion Period**

The inventory conversion period is the average length of time required to convert material into finished goods and then to sell those goods. It is amount of time the product remains in inventory in various stages of completion.

$$\text{Inventory Conversion Period} = \frac{\text{Inventory}}{\frac{\text{Cost of goods sold/sales}}{365}}$$

**j) Receivable or Debtors Turnover Ratio (RTR):**

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

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

**k) Total Assets Turnover (TATR):**

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

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

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

**3.6.2 Statistical Tools**

The various statistical tools as under have been used have been used for the analysis and interpretation of data. The sample data collected 5 years from fiscal years. There tools are discussed in the following heading.

**3.6.2.1 Arithmetic Mean (Average)**

The arithmetic mean is the most popular and commonly used measure of central tendency, which represents the entire data by a single value. The arithmetic mean of values of a variable is defined as the ratio of the total values to the number of values. It can be calculated as follows.

$$\bar{x} = \frac{\sum X}{N} \quad \text{Where:} \quad \sum X = \text{Sum of the observation}$$

$\bar{x}$  = Mean value

N = Number of observation

### 3.6.2.2 Correlation Co-efficient (r)

The most important method of measuring the correlation between the two variables is Karl Pearson's coefficient measuring the degree of association between the two variables. The formula for calculating simple correlation co-efficient (r) by Karl Pearson's method is:

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

To interpret the value of correlation, the relationship between variables is positive if the value of 'r' is greater than 0 and it is negative if the relationship between variables is less than 0. Similarly, if the value of 'r' is +1, the relationship is perfect positive and if it is -1, the relationship is perfectly negative. If the value of 'r' is 0, the relationship between variables is zero.

### 3.6.2.3 Probable Error (P.E.)

Probable Error of the correlation coefficient denoted by P.E. it is calculated under as.

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

Coefficient of correlation always falls between -1 to +1. The value of correlation and minus signifies the negative correlation and input signifies the positive correlation. For 'r' is less than its P.E. It is not all significant, and greater than -0.5 than considered signification.

### 3.6.2.4 Standard Deviation

The standard deviation is an important and widely used measure of dispersion. The measurement of the scatterness of the mass of figures in a series about average is known as dispersion. The standard deviation is an absolute measurement of dispersion in which the drawbacks present in other measures of dispersion are removed. The high amount of dispersion reflects high standard deviation. The small standard deviation means the high degree of homogeneity of the observations. It is calculated for selected dependent and

independent variables specified, It is the positive square root of the arithmetic mean of the square deviation from arithmetic mean.

$$\sigma = \sqrt{\frac{\sum(x - \bar{x})^2}{N}}$$

Where,  $\sigma$  = standard deviation

$x$  = value of each of the observation

$N$  = number of observation

$\bar{x}$  = Actual mean of the variable

### 3.6.2.5 Co-efficient of variation (C.V)

Co-efficient of variation is the relation measure based on the standard deviation and it defined as the ratio of the standard deviation to the mean expressed in percent.

$$C.V = \frac{\sigma}{\bar{x}} \times 100\%$$

## **CHAPTER - IV**

### **PRESENTATION AND ANALYSIS OF DATA**

#### **4.1 Introduction**

The main objective of this study is to analysis the working capital management of KPUPL This chapter has been organized to present the results, analyze and interpret them accordingly. The presentation and analysis of the data in this study has been done to evaluate the working capital position through the financial reports from the fiscal year 2063/2064 to 2067/2068.

Efforts have been made to analysis working capital management in terms of composition of current assets, turnover position, liquidity position and profitability position of KPUPL. The composition of current asses is analyzed by making relationship of cash component of current assets is analyzed by making relationship of each component of current assets with fixed assets, total assets etc. The turnover position is analyzed with the help of current assets turnover, net working capital turnover, turnover of cash, receivables and inventory. The liquidity position is analyzed with the help of gross profit margin, net profit margin, return on total assets and return working capital.

Data collected for the analysis of working capital management are presented in the tabular form and they are analyzed with the help of financial tools/techniques and statistical tools.

#### **4.2 Analysis of Financial Position of the Company**

Any types of business organization require fixed assets well as current assets. Each and every business organization has financed their capital in the assets like cash marketable securities, inventories, receivable and so on for day to day operation of business organization. Total current assets which is known as W/C as per in gross concept most of the organizations require some amount of W/C and this requirement differ according to the size of the organization. Therefore C/A are those assets or resources of a firm, which are either held in the form of cash or are converted in cash with in accounting period, usually a year of the business.

A firm needs W/C (gross) because the production, sale and cash flow are not instantaneous. The firm needs cash to purchase raw materials and pay expenses those may not be perfect matching between cash inflow and cash cut flow. Cash may also be

held to meet the future expenses. The stocks of raw materials are kept in order to ensure smooth production and to protect against the risk of non availability of raw materials. The firms have to invest enough funds in C/A for the success of the sales activities. C/A is an integral part of overall financial management and has to greater impact on maximization of owner's capital. In this context it is necessary to have proper analysis for current assets management therefore firstly the overall current assets are analyzed.

Therefore it can be studied that the efficient management of C/A is an integral part of overall financial management and has to greater impact on maximization of owner's capital. In this context it is necessary to have proper analysis for current assets management therefore firstly the overall current assets are analyzed.

**Table: 4.1**  
**Position of Current Assets**

**Rs in '000**

Particular	Average %	F/Y 2063/64	F/Y 2064/65	F/Y 2065/66	F/Y 2066/67	F/Y 2067/68
<b>Inventory</b>		807.70	1,655.93	976.29	1,184.00	827.11
%	86.23	94.80	93.23	96.23	89.24	57.64
<b>Debtors</b>		0	0	0	0	0
%	0	0	0	0	0	0
<b>Bank &amp; cash</b>		25.37	19.31	20.71	76.50	586.43
%	10.55	2.98	1.09	2.04	5.77	40.87
<b>Diposit</b>		18.90	100.89	17.50	66.28	21.44
%	3.22	2.22	5.68	1.72	5.00	1.49
<b>Total</b>		851.97	1,776.13	1,014.50	1,326.78	1,434.98

**(Source: Annual Report of KPUPL, Biratnagar)**

The above table 1 represents the current assets position of the company. The above table shows investment pattern of the company in the current assets and their fluctuation in year. As per table, investments in inventories and Bank and Cash have been found as major in comparison to other current asset. Sometimes the parentage share of loan, advance and deposit is greater where as sometimes the percentage of share of inventory more the former. In this way, it can't be ignored contribution loan, advance and deposit is covered share of current assets respectively.

The percentage share of all C/A indicates that there is not consistency in yearly change rather there exist a few fluctuations. It has adopted sometime increasing and sometime decreasing trend. The maximum percentage share of Bank and Cash is seemed in fiscal year 2067/68 i.e.40.87% and minimum percentage share is seemed in 2064/64 i.e. 1.09%

Inventories occupy another major share in C/A. It is also no consistency trend. The percentage of share in 2065/66 seems maximum and in 2067/68 seems minimum i.e. 96.23% & 57.72% respectively and in as whole it average 86.23% C/A.

Sundry debtors of the company seem zero for all the fiscal year.

Position of cash and bank balance also is in fluctuating trend. Sometimes it increases and sometimes it decreases. Low percentage of cash shows the higher turnover of stock realization of more cash and sound liquidity of the company.

In total current assets of Kumar Plastic Udhog Private Limited is increasing trend respectively.

### 4.3 Current Assets on 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 day to day activities. Higher percentages of current assets in total assets denote greater liquidity position of the firm as well as lower the risk being in solvent and vice-versa. The table 2 given below represents the percentage of current assets to total assets.

**Table: 4.2**  
**Current Assets to total Assets**

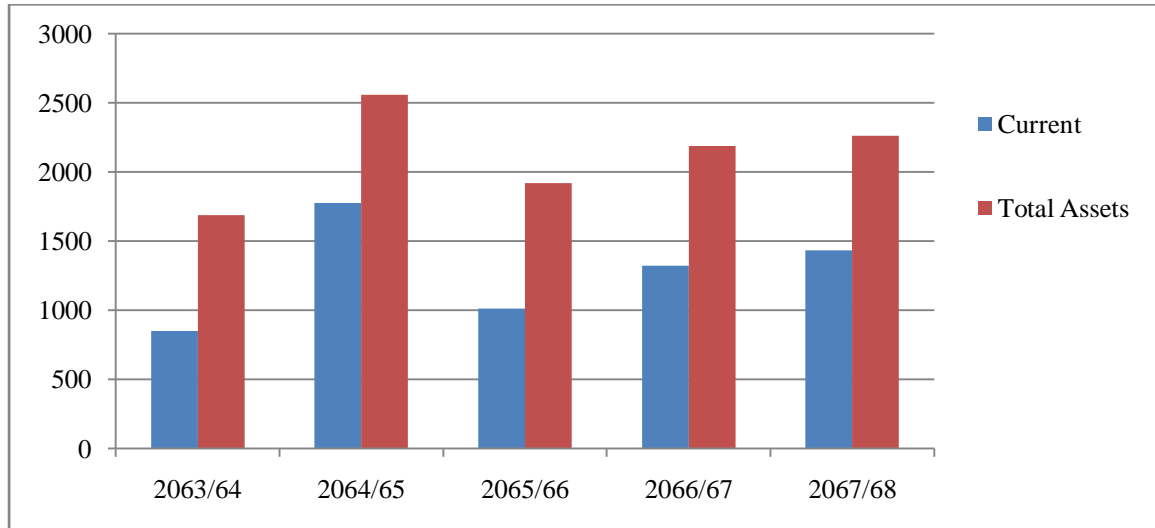
**Rs. in '000**

Year	Current	Total Assets	Ratio %	% Change
2063/64	851.97	1691.88	50.36	0
2064/65	1776.13	2561.35	69.34	18.98
2065/66	1014.5	1920.7	52.82	-16.52
2066/67	1322.78	2188.38	60.45	7.63
2067/68	1434.98	2263.22	63.40	2.96
<b>Total</b>	<b>6400.36</b>	<b>10625.53</b>	<b>60.24</b>	

(Source: Annual Report of KPUPL, Biratnagar)

**Figure: 4.1**

### Current Assets to Total Assets



The above table shows the percentage of current assets to total assets of KPUPL. The ratio represents the proportion of current assets investment to total assets investment of KPUPL for selected 5 years of study period. Five years period the above table shows that the proportion of current assets of total assets is fluctuating. In 2063/64 current assets volume is Rs.851.97 ('000). This is 50.36% of total assets. It has increased by 18.98% in the year 2064/65, and decreased year 2065/66 by 16.52% respectively. The percentage of current assets is highest in the year 2064/65 which is 69.34% of total assets. This increase is mainly due to the holding of highest amount of Inventory and Loan, Advance & deposit.

The relation between C/A and T/A are not uniform Higher level of C/A indicates good Liquidity position but it adversely affect the profitability of the company because idle money earn nothing.

#### 4.4 Current Assets on Fixed Assets

This ratio shows the relationship between current assets and fixed assets. An actual proportion of current assets and fixed assets can be determined through it the lower ratio denotes slackness in trading activities and higher mechanization. On the other hand, an increase in ratio may reveal that inventories and debtors have been intensively used; increase in this ratio means increase in profit and expansion of business activities. In such situation relative size of working capital of KPUPL is analyzed in the following table.



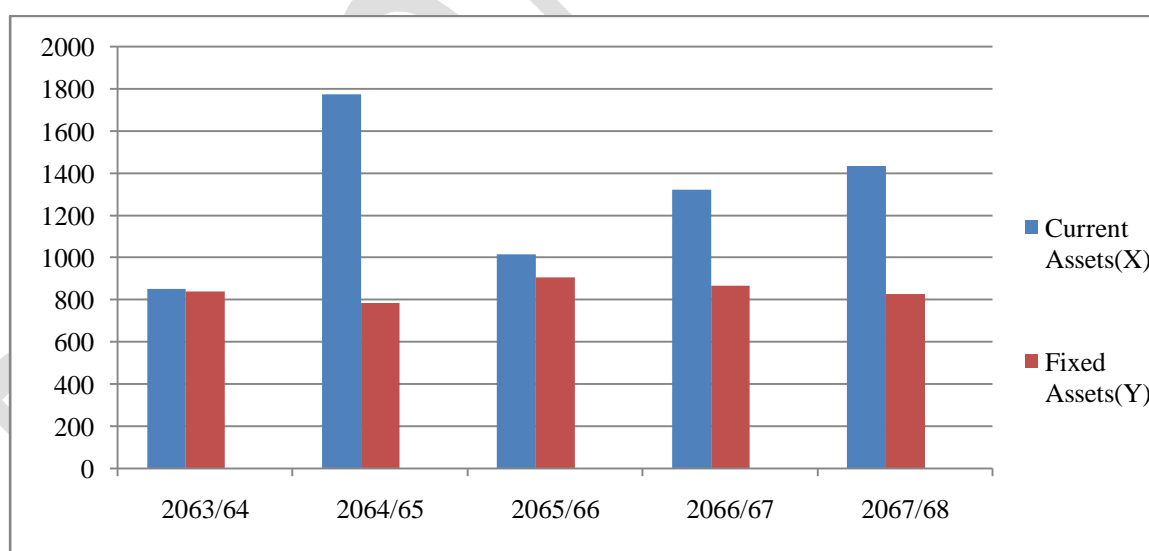
**Table: 4.3**  
**Current Assets to Fixed Assets**

Rs. in '000

Year	Current Assets(X)	Fixed Assets(Y)	Ratio
2063/64	851.97	839.91	101.44
2064/65	1776.13	785.22	226.20
2065/66	1014.5	906.2	111.95
2066/67	1322.78	865.6	152.82
2067/68	1434.98	828.24	173.26
<b>Total :-</b>	<b>6400.36</b>	<b>4225.17</b>	<b>765.66</b>
<b>Average :-</b>	<b>1280.072</b>	<b>845.034</b>	<b>153.13</b>
$\sigma$	<b>324.25</b>	<b>40.13</b>	<b>59.32</b>
<b>C.V. in %</b>	<b>25.33</b>	<b>4.75</b>	<b>38.74</b>

(Source: Annual Report of KPUGL, Biratnagar)

**Figure: 4.2**  
**Current Assets to Fix Assets**



The standard deviation measures the dispersion from the expected rate of return. It is the measures of total risk, Higher the standard deviation higher the total risk of a security and vice versa.

Co-efficient of variation is the relation measure based on the standard deviation and it defined as the ratio of the standard deviation to the mean expressed in percent. It shows the risk per unit of return and provides a more meaningful basis for comparison when the expected return on two alternatives is not the same.

The CV captures the effects of both risk and return, It is a better measures of evaluating risk in situations where investment differ with respect to both their amounts of total risk and their total return. A company with a low C.V. has less risk.

From the above table we can say that there are 5 years CA & F.A., but all of them the highest CA & FA are Rs. 1776.13 (‘000) & Rs. 906.2 (‘000). Similarly the lowest CA & FA are Rs. 851.97(‘000) & Rs. 785.22(‘000). The above table also shows that the lowest percentage of CA & FA is 101.44% in 2063/64 & highest percentage is 226.20 in year 2064/65, where the average ratio is 153.13%.

#### **4.5 Analysis of Current Ratio, Quick Ratio and Profitability Position**

The ability of a firm to meet its obligation in the short-term is known as liquidity. It reflects the short-term financial strength of the organization. A firm should ensure that it does not suffer from lack of liquidity and also that it has not too much liquidity. The failure of a company to meet its obligations due to lack of liquidity will result in bad credit ratings. Loss of creditor’s continece or even in lawsuits results the closure of the company. A very high degree of liquidity is also bad as idle assets earn nothing. Therefore, it is necessary to strike a proper balance between liquidity and lack of liquidity.

Here we go through current ratio and quick ratio to evaluate and analyze the liquidity of the firm.

##### **4.5.1 Current Ratio**

Current ratio is frequently used to measure the liquidity position of the firm. This ratio is calculated by dividing current assets by current liabilities. This ratio shows the availability of current assets in Rupees for every one Rupee of current liabilities. Generally high value of current ratio is considered as in indication that the firm is liquid and has the ability to pay its bill and vice-versa.

The current ratio of KPUPL is calculated in the table given below:

**Table: 4.4**  
**Analysis of Current ratio**

Rs in '000

Year	CA (X)	CL (Y)	Current Ratio (CA/CL)
2063/64	851.97	7.90	107.84
2064/65	1776.13	11.27	157.60
2065/66	1014.50	5.80	174.91
2066/67	1322.78	412.05	3.21
2067/68	1434.98	41.48	34.59
Total	<b>6400.36</b>	<b>478.50</b>	<b>478.16</b>
Average	<b>1280.07</b>	<b>95.70</b>	<b>95.63</b>
$\sigma$	<b>324.25</b>	<b>158.71</b>	<b>67.14</b>
C.V.in %	<b>25.33</b>	<b>165.84</b>	<b>70.21</b>

(Source: Annual Report of KPUGL, Biratnagar)

The standard deviation measures the dispersion from the expected rate of return. It is the measures of total risk, Higher the standard deviation higher the total risk of a security and vice versa.

Co-efficient of variation is the relation measure based on the standard deviation and it defined as the ratio of the standard deviation to the mean expressed in percent. It shows the risk per unit of return and provides a more meaningful basis for comparison when the expected return on two alternatives is not the same.

The CV captures the effects of both risk and return, It is a better measures of evaluating risk in situations where investment differ with respect to both their amounts of total risk and their total return. A company with a low C.V. has less risk.

In above table, current ratio is found fluctuating during the study period. It is observed highest 1.75:1 times in F.Y. 2065/66 and the lowest 0.03:1 times in F.Y. 2066/67. Average current ratio is 0.13:1. If the standard current ratio (2:1) is taken, it can be said that KPUGL hold strong liquidity position. In each year current ratio is higher than normal ratio 2. Thus it is not satisfactory condition.

The current ratio of KPUGL reflects the higher liquidity maintained by the firm or there is lower risk of short term solvency. Excess current assets are not beneficial to the company, because, it shows the investment in unproductive assets, and working nothing.

#### 4.5.2 Acid-Test Ratio/Quick Ratio

The acid test ratio or quick ratio is the relationship between quick assets and current liabilities. The ratio is measure of liquidity designed to overcome the defect of the current ratio. It is a measurement of company's ability to convert its current assets quickly into cash in order to meet its current liabilities. Higher is the ratio, better is the ability to honor current obligation. The quick ratio is finding out by dividing quick Assets by current obligation.

The quick ratio is finding out by dividing quick Assets by current liabilities.

$$\text{Quick Ratio} = \frac{\text{Quick assets}}{\text{Current Liabilities}}$$

**Table: 4.5**  
**Analysis of Quick Ratio**

**Rs in '000**

<b>Year</b>	<b>Quick Assets (X)</b>	<b>CL (Y)</b>	<b>Quick Ratio</b>
2063/64	44.27	7.90	5.60
2064/65	120.20	11.27	10.67
2065/66	38.21	5.80	6.59
2066/67	138.78	412.05	0.34
2067/68	607.87	41.48	14.65
<b>Total</b>	<b>949.33</b>	<b>478.50</b>	<b>37.85</b>
<b>Average</b>	<b>189.87</b>	<b>95.70</b>	<b>7.57</b>
<b><math>\sigma</math></b>	<b>212.75</b>	<b>158.71</b>	<b>4.53</b>
<b>C.V. in %</b>	<b>112.06</b>	<b>165.84</b>	<b>63.80</b>

(Source: Annual Report of KPUPL, Biratnagar)

Standard deviation is the measures of total risk, Higher the standard deviation higher the total risk of a security and vice versa.

Co-efficient of variation is the relation measure based on the standard deviation and it defined as the ratio of the standard deviation to the mean expressed in percent.

Quick ratio is also fluctuating trend during the study period. The average quick ratio is found to be 0.02:1 time. The quick ratios calculated above are observed higher than standard level (1:1) each year. Thus it is not satisfactory condition.

## 4.6 Profitability Position

### 4.6.1 Gross profit Margin Ratio

The difference between net sales and lots of goods sold is a very significant terms, because it represents the margin of gross profit on sales. It is generally contended that the margin of gross profit should be sufficient enough to recover all operating expenses and also to leave adequate amount as net income in relation to sales and owner's equity. The gross profit margin reflects the efficiency of operations of the company.

$$GPM = \frac{GP}{Sales} \times 100\%$$

**Table: 4.6**

#### **Analysis of Gross Profit Margin**

**Rs in '000**

<b>Year</b>	<b>Gross Profit (X)</b>	<b>Sales (Y)</b>	<b>Ratio %</b>
2063/64	236.59	1825.66	0.13
2064/65	422.73	2277.12	0.19
2065/66	362.94	3063.21	0.12
2066/67	409.32	2656.87	0.15
2067/68	491.15	3748.88	0.13
<b>Total</b>	<b>1922.73</b>	<b>13571.74</b>	
<b>Average</b>	<b>384.55</b>	<b>2714.35</b>	<b>0.14</b>
<b><math>\sigma</math></b>	<b>84.61</b>	<b>659.73</b>	<b>2.39</b>
<b>C.V. in %</b>	<b>22.00</b>	<b>24.31</b>	<b>16.63</b>

(Source: Annual Report of KPUPL, Biratnagar)

Standard deviation is the measures of total risk, Higher the standard deviation higher the total risk of a security and vice versa.

Co-efficient of variation is the relation measure based on the standard deviation and it defined as the ratio of the standard deviation to the mean expressed in present.

The above table shows the gross profit margin of KPUPL for fiscal year 2063/64 to 2067/68, which is 13.10%, 18.56%, 11.85%, 15.41% & 13.10% respectively. The corporation's average gross profit margin is 14.19%.

#### 4.6.2 Net Profit Margin Ratio

Net profit is the profit, which comes after deducting operating expenses and income tax from gross profit. This ratio is the relationship on net profit after tax to sales. This ratio shows the ability of management to operate business with sufficient success. The ratio of net profit to sales essentially expresses the cost price effectiveness of the operation. The operating expenses mainly affect the net profit of the company.

Net profit is the profit, which comes after deducting operating expenses and income tax from gross profit. This ratio is the relationship on net profit after tax to sales. This ratio shows the ability of management to operate business with sufficient success. The ratio of net profit to sales essentially expresses the cost price effectiveness of the operation. The operating expenses mainly affect the net profit of the company.

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net sales}} \times 100\%$$

**Table: 4.7**  
**Analysis of Profit Margin**

**Rs. in '000**

<b>Year</b>	<b>Net Profit (X)</b>	<b>Sales (Y)</b>	<b>Ratio %</b>
2063/64	11.78	1825.66	0.65%
2064/65	52.69	2277.12	2.31%
2065/66	12.67	3063.21	0.41%
2066/67	27.39	2656.87	1.03%
2067/68	128.59	3748.88	3.43%
<b>Total</b>	<b>233.12</b>	<b>13571.74</b>	<b>7.83%</b>
<b>Average</b>	<b>46.624</b>	<b>2714.348</b>	<b>1.57%</b>
$\sigma$	<b>43.57</b>	<b>659.73</b>	<b>1.10</b>
<b>C.V.</b>	<b>93.46</b>	<b>24.31</b>	<b>63.95%</b>

(Source: Annual Report of KPUPL, Biratnagar)

Standard deviation is the measures of total risk, Higher the standard deviation higher the total risk of a security and vice versa.

Co-efficient of variation is the relation measure based on the standard deviation and it defined as the ratio of the standard deviation to the mean expressed in present.

The net profit margin calculated above shows that firm is able to earn profit in the F.Y. 2063/64 to 2067/68. The corporation has not loss in five years. Net profit margin is the

highest in 3.43% F.Y. 20667/68 and lowest 0.41% in 2065/66. Average net profit margin of the corporation over the study period is 1.72%. Corporation's net profit margin from F/Y 2063/64 to 2067/68 is at satisfactory level since margins are higher than the average in these years. But there is no loss in any F/Y.

## 4.7 Turnover Position

The behavior of working capital utilization and improvement can be analyzed with the help of turnover ratio. These ratios measure the effectiveness with which a firm uses its available resources. These ratios are called turnover ratios since they indicate the efficiency with which the resources are being converted into sales (turnover).

The turnover ratio and conversion period depends on the firm's working capital policy. If the firm follows a conservative policy, it will have low inventory turnover ratio and high conversion period and vice-versa.

### 4.7.1 Inventory Turnover Ratio and Inventory Conversion Period

Inventories are the stock of the product, a company manufactures for the sales and the inventories are the components that make up a product. Inventory is the major part of the current assets. The shortage of required inventory results irregular production and hamper the production process. In other hand the excess inventory causes unnecessary holding of capital which increases the cost. These ratios measure the effectiveness with which a firm utilizes its inventory.

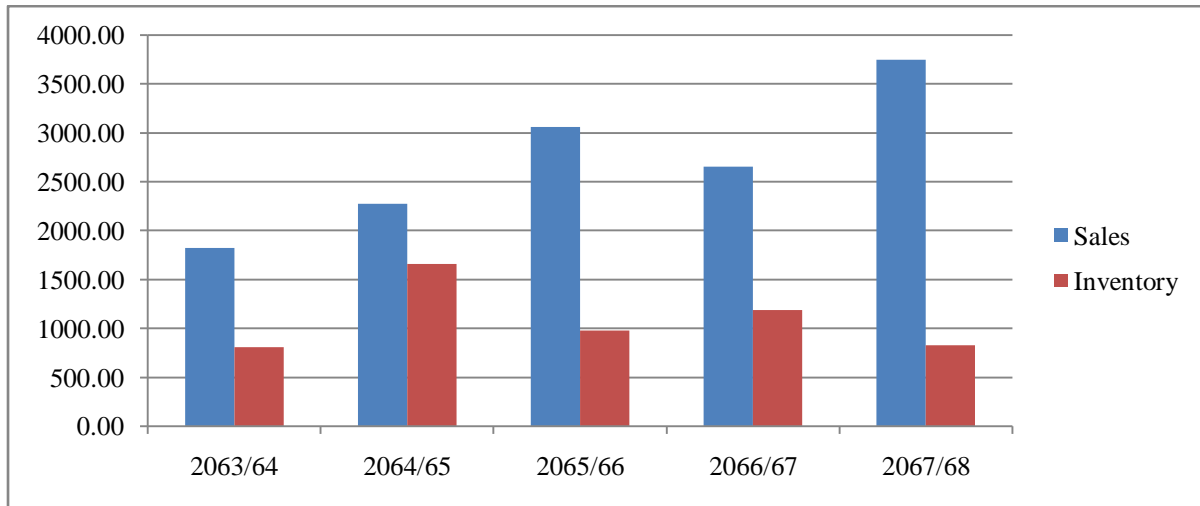
**Table: 4.8**  
**Inventory Turnover Ratio and Inventory Conversion Period**

Rs. in '000

F/Y	Cost of Goods Sold	Inventory	ITR	ICP (In Days)
2063/64	1589.07	807.7	1.97	185.52
2064/65	1854.39	1655.93	1.12	325.94
2065/66	2700.27	976.29	2.77	131.97
2066/67	2247.55	1184	1.90	192.28
2067/68	3257.73	827.11	3.94	92.67
<b>Total</b>	<b>11649.01</b>	<b>5451.03</b>	<b>11.69</b>	<b>928.38</b>
<b>Average</b>	<b>2329.802</b>	<b>1090.206</b>	<b>2.34</b>	<b>185.68</b>

(Source: Annual Report of KPUPL, Biratnagar)

**Figure: 4.3**  
**Inventory Turnover Ratio and Inventory Conversion Period**



The above table shows the ITR of KPUGL. The inventory turnover is fluctuating between 1.18 to 3.94 times during the study period. The average inventory turnover is 2.34 times and the average cost of goods sold and inventory of KPUGL during the five years study period are Rs. 16649.01 ('000) and Rs. 1090.206 ('000) respectively. The inventory conversion period of KPUGL is fluctuating between 93 days and 326 days. On average it will take KPUGL 186 days to convert its inventory into sales which is very high. Thus there is a poor utilization of inventory.

#### **4.7.2 Receivable or Debtor Turnover Ratio**

Receivable is the major component of current assets. It indicates the efficiency of the firm with the collection of book debts. The higher the ratio, the better it is, since it would indicate the debts are being collected more promptly.

There are no any debtors in KPUGL during study period. Therefore, no any collection period in book debts for KPUGL i.e. ACP=0.

#### **4.7.3 Total Assets Turnover Ratio**

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



**Table: 4.9**  
**Total Assets Turnover Ratio**

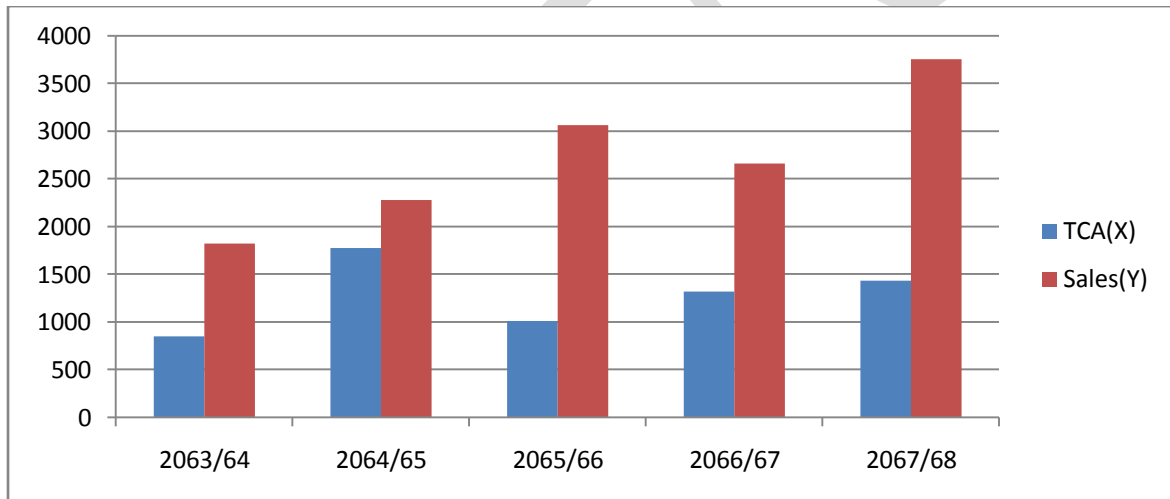
Rs. in '000

<b>Year</b>	<b>TCA(X)</b>	<b>Sales(Y)</b>	<b>TATR</b>
2063/64	851.97	1825.66	2.14
2064/65	1776.13	2277.12	1.28
2065/66	1014.5	3063.21	3.02
2066/67	1322.78	2656.87	2.01
2067/68	1434.98	3748.88	2.61
<b>Total :-</b>	<b>6400.36</b>	<b>13571.74</b>	<b>11.07</b>
<b>Average :-</b>	<b>1280.072</b>	<b>2714.35</b>	<b>2.21</b>

(Source: Annual Report of KPUPL, Biratnagar)

**Figure: 4.4**

**Total Assets Turnover Ratio**



The above table shows the TATR of KPUPL during the five years study period. The TATR is fluctuating below 1.28 to 3.02 times. The average sales and total assets are Rs. 13571.74 ('000) and Rs. 6400.36 ('000) respectively. The Company's average TATR during the observed period is 2.21 times which indicates that the firm has to invest Rs. 1 in its total assets in order to generate sales of Rs 2.21.

#### **4.8 Proportion of Inventory to Current Assets and Total Assets**

Inventory is the most important element of current assets. A firm may require inventory of raw material, work in progress, finished goods and spare parts. Inventory of raw material and work in progress and spare parts are required to ensure smooth and regular

production while finished goods inventory is needed to facilitate sales. Therefore a firm should invest optional in inventory to ensure its production and sales. Both excessive level of inventories consumes the funds of the firm, which can't be used for any other purpose and thus, involve an opportunity cost. Similarly, inadequate inventory is also harmful due to the fact that is poses the change of production hold-up and failure to meet delivery commitment. Therefore, the inventory position must be optimal so that neither it causes to problem of excess inventory nor the problem of short.

The table presented below reveals the proportion of inventory on current assets and total assets and its average position during the study period.

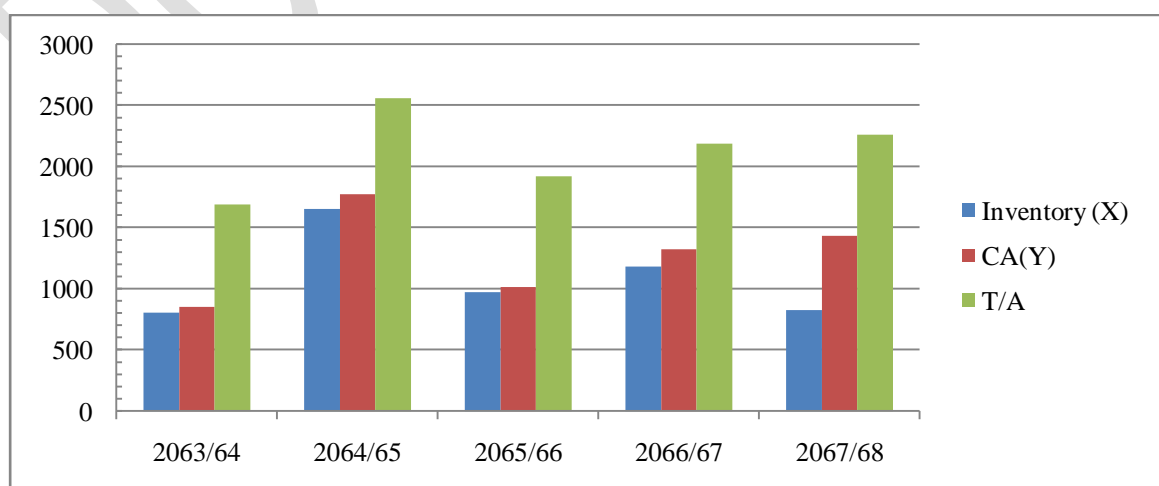
**Table: 4.10**  
**Inventory to current Assets and Total Assets**

Rs. in '000

Year	Inventory (X)	CA(Y)	Ratio %	T/A	Ratio %
2063/64	807.7	851.97	94.80	1691.88	47.74
2064/65	1655.93	1776.13	93.23	2561.35	64.65
2065/66	976.29	1014.5	96.23	1920.7	50.83
2066/67	1184	1322.78	89.51	2188.38	54.10
2067/68	827.11	1434.98	57.64	2263.22	36.55
<b>Total</b>	<b>5451.03</b>	<b>6400.36</b>		<b>10625.53</b>	
<b>Average :-</b>	<b>1090.21</b>	<b>1280.072</b>	<b>86.28</b>	<b>2125.11</b>	<b>0.00</b>
$\bar{O}$	313.32	324.25	14.5	297.61	9.12
<b>C.V. in %</b>	<b>28.74</b>	<b>25.33</b>	<b>1.16</b>	<b>14.00</b>	<b>17.96</b>

(Source: Annual Report of KPUPL, Biratnagar)

**Figure: 4.5**  
**Inventory to Current Assets and Total Assets**



Standard deviation is the measures of total risk, Higher the standard deviation higher than total risk of a security and vice versa.

Co-efficient of variation is the relation measure based on the standard deviation and it defined as the ratio of the standard deviation to the mean expressed in present.

Form the above table it is clear that the inventory to current assets and total Assets are fluctuating trend. The proportion of inventory to current assets during the fiscal year 2063/64 to 2067/68 is 94.80%, 93.23%, 96.23%, 89.51%, 57.64. In this period the average of inventory to current Assets is 86.28%. Similarly the proportion of inventory on total assets is 47.74%, 64.65%, 50.83%, 54.10% & 36.55% during the F/Y 2063/64 to 2067/68 respectively. Again average proportion of inventory to total assets is found 50.77%.

#### 4.9 Analysis of Current Assets to Sales

The relationship between current assets to sales can be further presented to analysis the size of working capital. There is essential relationship between CA to sales because current assets include Cash, Bank, and Receivable marketable securities etc. Sales are depending up on cash & credit sales, if credit sales policy of KPUPL is high than its sales will be high. The help of KPUPL in a table as below can understand the relationship between CA to sales.

**Table: 4.11**

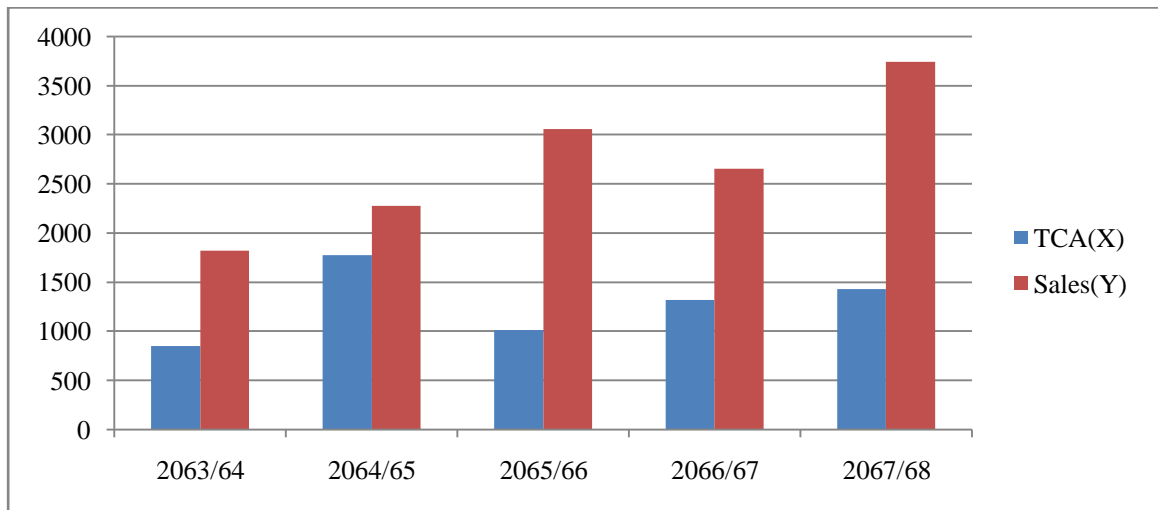
#### Current Assets to Sale

Rs. in '000

Year	TCA(X)	Sales(Y)	Ratio %
2063/64	851.97	1825.66	46.67
2064/65	1776.13	2277.12	78.00
2065/66	1014.5	3063.21	33.12
2066/67	1322.78	2656.87	49.79
2067/68	1434.98	3748.88	38.28
<b>Total :-</b>	<b>6400.36</b>	<b>13571.74</b>	<b>245.85</b>
<b>Average :-</b>	<b>1280.072</b>	<b>2714.35</b>	<b>49.17</b>
$\sigma$	<b>324.25</b>	<b>659.73</b>	<b>14.87</b>
<b>C.V. in %</b>	<b>25.33</b>	<b>24.31</b>	<b>30.24</b>

(Source: Annual Report of KPUPL, Biratnagar)

**Figure: 4.6**  
**Current Assets to Sale**



Standard deviation is the measures of total risk, Higher the standard deviation higher the total risk of a security and vice versa.

Co-efficient of variation is the relation measure based on the standard deviation and it defined as the ratio of the standard deviation to the mean expressed in present.

The above table of CA to sales clearly shows that the lowest part of current assets is Rs. 851.97 ('000) in the fiscal year 2063/64 & highest part is Rs. 1776.13 ('000) in the fiscal year 2064/65. Similarly, the lowest part of sales of KPUPL during last 5 year is Rs. 1825.66 & highest sales are Rs. 3748.88 ('000) in the fiscal year 2063/64 & 2067/68 respectively. The average current assets & average Sales are Rs. 1280.072 ('000) & Rs. 2714.35 ('000) respectively. In fiscal year 2063/64, 2066/67 & 2067/68 the actual sales are less than its average sales Rs. 2714.348. On the other hand, the ratio of CA to sales for the fiscal year 2065/66 is 33.12% & the highest ratio is 78% for the year 2064/65. The average ratio of all of the 5-Years is 49.17%.

#### **4.10 Cash and Bank Balance to Current Assets**

Cash and Bank balance both are liquid assets of the KPUPL. Which assures the sale increase or decrease, Cash & Bank of KPUPL is necessary for the incensement of business volume. The relationship between Cash & Bank to current assets has tight-knit relation. The following table shows the ratio of cash & bank balance to current assets for 5 years.

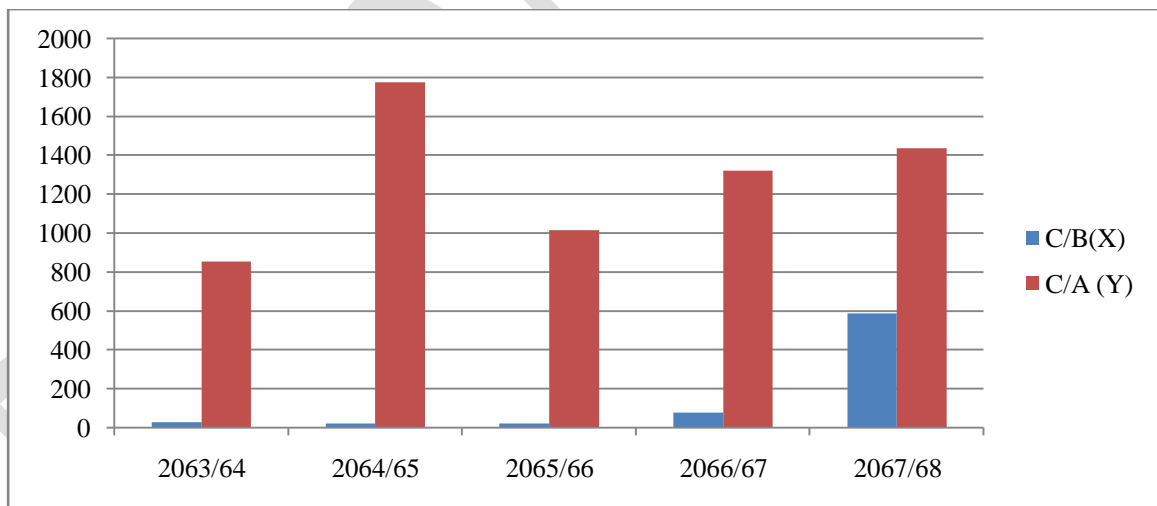
**Table: 4.12**  
**Cash & Bank Balance to Current Assets**

Rs. in '000

Year	C/B(X)	C/A (Y)	Ratio %
2063/64	25.37	851.97	2.98
2064/65	19.31	1776.13	1.09
2065/66	20.71	1014.5	2.04
2066/67	76.5	1322.78	5.78
2067/68	586.43	1434.98	40.87
<b>Total :-</b>	<b>728.32</b>	<b>6400.36</b>	<b>52.76</b>
<b>Average :-</b>	<b>145.664</b>	<b>1280.072</b>	<b>10.55</b>
$\sigma$	<b>221.41</b>	<b>324.25</b>	<b>15.24</b>
<b>C.V. in %</b>	<b>152.00</b>	<b>25.33</b>	<b>144.45</b>

(Source: Annual Report of KPUPL, Biratnagar)

**Figure: 4.7**  
**Cash & Bank Balance to Current Assets**



Standard deviation is the measures of total risk, Higher the standard deviation higher the total risk of a security and vice versa.

Co-efficient of variation is the relation measure based on the standard deviation and it defined as the ratio of the standard deviation to the mean expressed in percent.

The above table shows that the proportion of Cash & Bank to current assets is high in 2067/68. The Average Cash & Bank balance is Rs. 145.664 ('000), which is less than 2067/68, and greater than 2063/64, 2064/65, 2065/66 & 2066/67.

## 4.11 Correlation Analysis

Correlation analysis deals with determining the degree of relationship between two variables. This analysis describes not only the magnitude of relationship but also its direction. The measure of correlation, correlation coefficient summarizes in one figure, the direction and degree of correlation. Thus, correlation analysis refers to the techniques used in measuring the relationship between the variables. Correlation analysis between the different variables of KPUPL is measured and tested by Karl Pearson's method, popularly known as coefficient of correlation and is denoted by symbol 'r'. The value of r lies in between +1 and -1.

### 4.11.1 Correlation Analysis between Current Assets & Current Liabilities

The following table shows the necessary values of variables, which are used to determine the value of correlation coefficient between current assets and current liabilities.

**Table: 4.13**  
**Current Assets & Current Liabilities**

**Rs. in '000**

<b>Year</b>	<b>CA X</b>	<b>CL Y</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>	<b>XY</b>
2063/64	8.52	7.9	72.59	62.41	67.31
2064/65	17.76	11.27	315.46	127.01	200.17
2065/66	10.15	5.8	102.92	33.64	58.84
2066/67	13.23	412.05	174.97	169785.20	5450.51
2067/68	14.35	41.48	205.92	1720.59	595.23
<b>Total</b>	$\sum x$ <b>64.0036</b>	$\sum y$ <b>478.5</b>	$\sum x^2$ <b>871.86</b>	$\sum y^2$ <b>171728.86</b>	$\sum xy$ <b>6372.06</b>

(Source: Annual Report of KPUPL, Biratnagar)

(See: appendix 1)

The regression equation of Y (current liability) on X (current assets) has been used to describe the change in the value of Y for given change in the value of X whereas the regression equation of X (current assets) on Y (current liability) has been used to describe the change in the value of X for given variations in the value of Y.

The correlation coefficient 'r' between current assets and current liabilities is 0.096. This reveals that this is positive and low degree of relationship between current assets & current liabilities. Thus increase decrease in current assets results increase decrease in current liabilities.

After calculation,

$$PE = 0.3$$

$$5 \times PE = 1.5$$

Hence, 5PE is greater than 'r'. So the value of 'r' calculated is not significant.

#### 4.11.2 Correlation Analysis between Current Assets and Total Assets

The following table shows the necessary values of variables, which are to be used in determining the value of correlation coefficient between current assets and total assets.

**Table: 4.14**

##### **Current Assets and Total Assets**

**Rs. in '000**

<b>Year</b>	<b>CA X</b>	<b>TA Y</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>	<b>XY</b>
2063/64	851.97	1691.88	725852.88	2862457.93	1441431.00
2064/65	1776.13	2561.35	3154637.78	6560513.82	4549290.58
2065/66	1014.5	1920.7	1029210.25	3689088.49	1948550.15
2066/67	1322.78	2188.38	1749746.93	4789007.02	2894745.30
2067/68	1434.98	2263.22	2059167.60	5122164.77	3247675.44
<b>Total</b>	$\sum x$ <b>6400.36</b>	$\sum y$ <b>10625.53</b>	$\sum x^2$ <b>8718615.44</b>	$\sum y^2$ <b>23023232.04</b>	$\sum xy$ <b>14081692.46</b>

(Source: Annual Report of KPUPL, Biratnagar)

(See: appendix 2)

Now, we calculate correlation coefficient 'r' using Karl Pearson's correlation coefficient.

$$r = 0.99$$

The correlation coefficient 'r' between current assets and total assets is 99.51. This reveals that there is positive and very low degree relationship between current assets and total assets. Thus increase / decrease in current assets results increase / decrease in total assets.

To test significance of value of correlation coefficient, we calculate probable error (PE),

$$P.E. = 0.01$$

Now,

$$5 \times P.E. = 5 \times 0.01 = 0.05$$

We found that 'r' is > than 5 PE. So the value of 'r' calculated above is significant.

### 4.11.3 Correlation Analysis between Current Assets & Sales

The following table shows the necessary values of variables, which are to be used in determining the value of correlation coefficient between current assets (gross working capital) and sales.

**Table: 4.15**  
**Current Assets and Sales**

Rs. in '000

Year	CA X	Sales Y	X <sup>2</sup>	Y <sup>2</sup>	XY
2063/64	8.52	18.06	72.59	326.04	153.84
2064/65	17.76	22.77	315.46	518.53	404.45
2065/66	10.15	30.63	102.92	938.33	310.76
2066/67	13.23	26.57	174.97	705.90	351.45
2067/68	14.35	37.49	205.92	1405.41	537.96
<b>Total</b>	$\sum x$ <b>64.00</b>	$\sum y$ <b>135.52</b>	$\sum x^2$ <b>871.86</b>	$\sum y^2$ <b>3894.20</b>	$\sum xy$ <b>1758.45</b>

(Source: Annual Report of KPUPL, Biratnagar)

(See: appendix 3)

The regression equation of Y (sales) on X (current assets) has been used to describe the change in the value of Y for given change in the value of X whereas the regression equation of X (current assets) on Y(sales) has been used to describe the change in the value of X for given variations in the value of Y.

Now, we calculate correlation coefficient 'r' using Karl Pearson's correlation coefficient.

$$r = 0.22$$

The correlation coefficient 'r' between current assets and sales is 0.22. This reveals that these in positive relationship between C.A. & Sales. Thus, increase in C.A. result increases in sales.

To test the significance of value of correlation coefficient, now we calculate probable error (PE)



Then we get,

$$P.E. = 0.29$$

$$\text{Now, } 5 \times P.E. = 5 \times 0.29 = 1.45$$

We found that 5 PE is > than 'r'. So the value of 'r' calculated above is not significant.

#### 4.11.4 Correlation Analysis between Inventory & Sales

The following table shows the necessary values of variables, which are to be used in determining the value of correlation coefficient between inventory & sales.

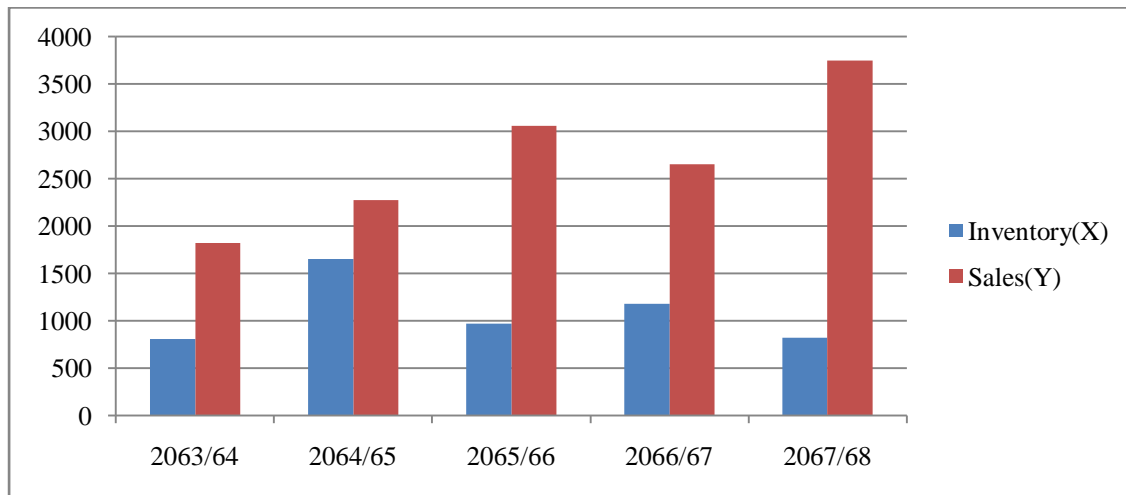
**Table: 4.16**  
**Proportion of Inventory to Sales**

Rs. in '000

Year	Inventory(X)	Sales(Y)	Ratio %
2063/64	807.7	1825.66	44.24
2064/65	1655.93	2277.12	72.72
2065/66	976.29	3063.21	31.87
2066/67	1184	2656.87	44.56
2067/68	827.11	3748.88	22.06
<b>Total:-</b>	<b>5451.03</b>	<b>13571.74</b>	<b>215.46</b>
<b>Average:-</b>	<b>1090.206</b>	<b>2714.348</b>	<b>43.09</b>
$\sigma$	<b>289.03</b>	<b>659.73</b>	<b>16.91</b>
<b>C.V. in %</b>	<b>26.51</b>	<b>24.31</b>	<b>39.24</b>

(Source: Annual Report of KPUPL, Biratnagar)

**Figure: 4.8**  
**Proportion of Inventory to Sales**



Standard deviation is the measures of total risk, Higher the standard deviation higher the total risk of a security and vice versa.

Co-efficient of variation is the relation measure based on the standard deviation and it defined as the ratio of the standard deviation to the mean expressed in percent.

The above table shows that proportion of inventory to sales has maximum in the year 2066/67. The proportion of inventory to sales in this year is 50.76%. Where the sales amount is Rs. 2277.12 ('000) only but the inventory amount is Rs. 1155.93 ('000). The proportion of inventory to sales is minimum in the year 2067, which is only to 22.06%, where the sales amount is Rs. 3748.88 ('000) and inventory amount is Rs. 827.11 ('000) only.

**Table: 4.17**  
**Analysis between Inventory & Sale**

Rs. in '000					
Year	INV. X	Sales Y	X <sup>2</sup>	Y <sup>2</sup>	XY
2063/64	8.08	18.26	65.24	333.30	147.46
2064/65	16.56	22.77	274.21	518.53	377.08
2065/66	9.76	30.63	95.31	938.33	299.06
2066/67	11.84	26.57	140.19	705.90	314.57
2067/68	8.27	37.49	68.41	1405.41	310.07
<b>Total</b>	$\sum x$ <b>54.51</b>	$\sum y$ <b>135.72</b>	$\sum x^2$ <b>643.36</b>	$\sum y^2$ <b>3901.46</b>	$\sum xy$ <b>1448.24</b>

(Source: Annual Report of KPUPL, Biratnagar)

(See: appendix 4)

Now, we calculate correlation coefficient 'r' using Karl Pearson's correlation coefficient.

Thesis Submitted by Rekha Baral, T.U. Reg. No: 7-2-465-24-2003 Campus Roll No: 1669/064

Exam Roll No: 390736/066

$$r = -0.30$$

The correlation coefficient 'r' between Inventory & Sales is -0.30. This reveals that there is negative relationship between Inventory & Sales. Thus increase in inventory in inventory does not result increase in sales.

To test the significance of value of correlation coefficient calculated above, we calculate probable error. (PE)

$$P.E. = 0.27$$

$$\text{Now, } 5 \times P.E. = 5 \times 0.27 = 1.35$$

We found that 5 PE is > than 'r'. So the value of 'r' calculated above is not significant.

#### 4.11.5 Correlation Analysis between Cash & Sales

The following table shows the necessary values of variables, which are to be used in determining the value of correlation coefficient between Cash & Sales.

**Table: 4.18**  
**Analysis between Cash & Sale**

Rs. in '000					
Year	Cash X	Sales Y	X <sup>2</sup>	Y <sup>2</sup>	XY
2063/64	0.25	18.06	0.06	326.04	4.58
2064/65	0.19	22.77	0.04	518.53	4.40
2065/66	0.21	30.63	0.04	938.33	6.34
2066/67	0.77	26.57	0.59	705.90	20.33
2067/68	5.86	37.49	34.39	1405.41	219.85
<b>Total</b>	$\Sigma x$ <b>7.28</b>	$\Sigma y$ <b>135.52</b>	$\Sigma x^2$ <b>35.12</b>	$\Sigma y^2$ <b>3894.20</b>	$\Sigma xy$ <b>255.49</b>

(Source: Annual Report of KPUPL, Biratnagar)

(See: appendix 5)

Now, we calculate correlation coefficient 'r' using Karl Pearson's correlation coefficient.

$$r = -0.79$$

The correlation coefficient 'r' between Cash & Sales is 0.79. This reveals that there is positive relationship between Cash & Sales. Thus increase / decrease in cash results increase / decrease in sales.

To test the significance of value of correlation coefficient calculated above, we calculate probable error (P.E.)

$$P.E. = 0.11$$

$$\text{Now, } 5 \times P.E. = 5 \times 0.11 = 0.55$$

We found that ' $r$ ' < 5 PE. So the value of ' $r$ ' calculated above is not significant.

#### 4.11.6 Correlation Analysis between Net working Capital & Sales

The following table shows the necessary values of variables, which are to be used in determining the value of correlation coefficient between networking Capital & Sales.

**Table: 4.19**  
**Analysis between Net Working Capital & Sales**

Year	NWC X	Sales Y	X <sup>2</sup>	Y <sup>2</sup>	XY
2063/64	8.44	18.06	71.25	326.04	152.41
2064/65	17.65	22.77	311.47	518.53	401.88
2065/66	1.01	30.63	1.02	938.33	30.90
2066/67	9.11	26.57	82.94	705.90	241.97
2067/68	13.94	37.49	194.19	1405.41	522.41
<b>Total</b>	$\sum x$ <b>50.14</b>	$\sum y$ <b>135.52</b>	$\sum x^2$ <b>660.87</b>	$\sum y^2$ <b>3894.20</b>	$\sum xy$ <b>1349.56</b>

(Source: Annual Report of KPUPL, Biratnagar)

(See: appendix 6)

The regression equation of Y (sales) on X (net working capital) has been used to describe the change in the value of Y for given change in the value of X whereas the regression equation of X (net working capital) on Y (sales) has been used to describe the change in the value of X for given variations in the value of Y.

Now, we calculate correlation coefficient ' $r$ ' using Karl Pearson's correlation coefficient.

$$r = -0.05$$

The correlation coefficient ' $r$ ' between NWC & sales is -0.05. This reveals that these are negative relationship between NWC & Sales. Thus increase in NWC does not result increase in sales.

To test the significance of value of correlation coefficient calculated above, we calculate probable error (PE)

$$P.E. = 0.30$$

$$\text{Now, } 5 \times P.E. = 5 \times 0.30 = 1.5$$

We found that 'r' < 5×PE. So the value of 'r' calculated above is not significant.

#### 4.12 Major Finding of the Study

- i. The proportion of current assets to total assets is fluctuating during the observed period. It has varied from -16.52 to +18.98 % during the study period. The overall average of current assets to total assets is 12.048%. The percentage of current assets is highest in the year 2064/65 with 69.34% which is due to the holding highest amount in inventory and loan, advance and deposits.
- ii. The proportion of current assets to fixed assets is fluctuating during the observed period. It has varied from 1.01 to 2.26% during the study period. The overall average of current assets to fixed assets is 1.53%. Hence, the current assets investment policy or the company is shifting towards the aggressive policy.
- iii. Current ratio of KPUPL found fluctuating during the study period. It is observed highest 1.75:1 times in F/Y 2065/66 and the lowest 0.03:1 times in F.Y. 2066/67. Average current ratio is 0.13:1. If the standard current ratio (2:1) is taken, it can be said that KPUPL hold strong liquidity position. In each year current ratio is higher than normal ratio 2. Thus it is not satisfactory condition. The current ratio of KPUPL reflects the higher liquidity maintained by the firm or there is lower risk of short term solvency. Excess current assets are not beneficial to the company, because, it shows the investment in unproductive assets, and working nothing.
- iv. Quick ratio is also fluctuating trend during the study period. The average quick ratio is found to be 0.02:1 time. The quick ratios calculated above are observed higher than standard level (1:1) each year. Thus it is not satisfactory condition.
- v. As net profit margin calculated, that firm is able to earn profit in the F/Y 2063/64 to 2067/68. The corporation has not loss in five years. Net profit margin is the highest 3.43% in F/Y 20667/68 and lowest 0.41% in 2065/66. Average net profit margin of the

corporation over the study period is 1.72%. Corporation's net profit margin from F/Y 2063/64 to 2067/68 is at satisfactory level since margins are higher than the average in these years. But there is no loss in any F/Y.

- vi. The inventory conversion period of KPUPL is fluctuating between 81 days and 265 days. On average it will take KPUPL 157 days to convert its inventory into sales which is very high. Thus there is a poor utilization of inventory.
- vii. There are no any debtors in KPUPL during study period. Therefore, no any collection period in book debts for KPUPL
- viii. The TATR is fluctuating below 1.28 to 3.02 times. The average sales and total assets are Rs. 13571.74 thousands and Rs. 6400.36 thousands respectively. The Company's average TATR during the observed period is 2.21 times which indicates that the firm has to invest Rs. 1 in its total assets in order to generate sales of Rs 2.21.
- ix. The correlation coefficient 'r' between current assets and current liabilities is 0.096. This reveals that this is positive and low degree of relationship between current assets & current liabilities. Thus increase decrease in current assets results increase decrease in current liabilities.
- x. The correlation coefficient 'r' between current assets and total assets is 99.51. This reveals that there is positive and very low degree relationship between current assets and total assets. Thus increase /decrease in current assets results increase / decrease in total assets.
- xi. The correlation coefficient 'r' between current assets and sales is 0.22. This reveals that these in positive relationship between C.A. & Sales. Thus, increase in C.A. result increases in sales.
- xii. The correlation coefficient 'r' between Inventory & Sales is -0.30. This reveals that there is negative relationship between Inventory & Sales. Thus increase in inventory in inventory does not result increase in sales.
- xiii. The correlation coefficient 'r' between Cash & Sales is 0.79. This reveals that there is positive relationship between Cash & Sales. Thus increase / decrease in cash results increase / decrease in sales.
- xiv. The correlation coefficient 'r' between NWC & sales is -0.05. This reveals that these are negative relationship between NWC & Sales. Thus increase in NWC does not result increase in sales.

## **CHAPTER – V**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

This chapter summarizes the whole study, draws the major findings, conclusion and forwards the recommendation for more efficient working capital management of trading company of KPUPL.

#### **5.1 Summary**

The term “working capital management” is a very sensitive area of financial management abundantly used by trading sectors to improve their efficiency for the betterment of their organization “A study of working capital management of manufacturing/trading companies with respect to KPUPL” is an exciting and challenging study. The basic objects of this study it to examine the management of working capital position of trading company.

The first chapter focuses the brief introduction of the study, manufacturing and trading views, and historical background of the selected trading company, conceptual framework of working capital and its practices in Nepal. Some questions have been raised regarding the working capital management of KPUPL, with respect to the liquidity and financing policy and profitability position in the statement of the problem. It has also attempted to set the objectives, significance and limitation of the study.

The second chapter deals with the review of literature which include the conceptual thought, and different view of different writers, books and articles. The conceptual framework sheds light on concept and types of working capital. It attempts to explore the literature on the investment and financing policies of working capital. Some important forces which determine the working capital requirement of the firms are described in the conceptual framework. Review of literature section has attempted to review of studies done on the same topic of different organization and journals and articles.

Research Methodology followed in this study is given in the third chapter. It has included the research design. It presents the nature and sources of data collection and processing techniques and tools like statistical tools financial tools etc.

Presentation and data analysis of this study are given in the fourth chapter. For the purpose of study necessary data on working capital and other related variables have collected from secondary sources and presented in this chapter. All the data are tabulated

and analyzed by applying various important financial as well as statistical tools and techniques. Now, in this chapter attempt has been made to conclude the study by pinpointing the major findings and given some suggestions for future course of action.

This study has focused on the liquidity position, profitability position and efficiency of working capital and overall working capital management policy of KPUGL. To accomplish these objectives of the study, different financial variables and statistical tools like mean, coefficient of correlation and probable error has been used for the meaningful interpretation of the data. The analysis found out that high amount of current assets to KPUGL. KPUGL hasn't maintained the current assets properly. Similarly, KPUGL could not able to maintain the operating efficiency, which indicates that companies have to improve overall working capital policy to survive in present competitive market.

## **5.2 Conclusion**

In conclusion, it can be said that working capital is most important part of manufacturing and trading companies and it should not be neglected. These companies are not getting prosperous position due to their administrative negligence in day to day operation, unnecessary blockage of inventory and lack of specific working capital policy. While pinpointing to the sample companies, we can found that investment in current assets is high with respect to its total assets and net fixed assets and it has been stated after analyzing various turnover ratio that current assets is not properly utilized in the company. However, liquidity position of KPUGL is very strong. It shows that there are excess current assets.

Similarly, after analyzing the various profitability ratios, it can be conclude that there is operating inefficiency in Sample Company and overall return position of the company is also not in favorable condition because of inefficient utilization of current assets, total assets and shareholders wealth. Very short period is also not good for the company because the company can't get the credit due to the delay in paying obligation.

Although trading companies are following aggressive financing policy, which comprises higher risk and higher return and low liquidity position are not in condition of following this policy. Being unsteady in financial situation, company will be unsuccessful to take high risk and if attempts has been made to take risk cause to getting negative return. It means that risk return trade off is not matched in Nepalese trading companies. Hence, from our overall financial analysis, it can be said the Nepalese Trading companies are not in tremendous condition. They are suffering from sickness.



The correlation coefficient of the variables selected for the statistical analysis shows that KPUGL has significant and positive correlation with each other except with net profit and net working capital & sales. As we know that positive correlation means both the variables are moving towards the direction. Above stated finding also helps to conclude that KPUGL is financially steady, and better during the study period, it seems that main sources of cash of KPUGL are sales of goods and loan from bank. Besides this, company receives miscellaneous income, like sales of fixed assets. Corporation uses cash at huge amount for purchase of commodities paid bonus, interest, and income tax, purchase of fixed assets: selling expenses etc. the corporation holds cash for transaction motives.

During the study period, average current ratio of the company is recorded 4.15 times. If the standard current ratio i.e. 2:1 is taken, it can be concluded that KPUGL hold strong liquidity position. In each year, current ratio is higher than the standard level. Hence, current ratio of KPUGL reflects the higher liquidity maintained by the company or there is low risk of short-term solvency.

### **5.3 Recommendation**

Based on findings of the analysis mentioned above, the researcher has forwarded some practicable recommendation for the improvement of the working capital management of trading company.

1. KPUGL is following aggressive financing policy. It has poor return and turnover position. Which means that risk and return trade off is not matched in trading company, so, company better have to follow the mix financing policy between moderate and aggressive financing policy to reduce the risk and earn some profit.
2. To day to day business activities and earn maximum profit current assets should be properly managed. Inventory is consisting largest portion in total current assets. Therefore, the huge amount of inventory kept by the company should be reduced or optimum level should be adjusted according to the sale. In this regard management is advised to improve its marketing policy and should be integrated with credit policy. The credit policy has highly influence to the sales. So, certain target would be set for credit policy.
3. Negative working capital represents the poor financing management of the company. Therefore, to eradicate this situation, suitable working capital should be formulated and implemented. Keeping optimum size of investment in current assets and current liabilities and regular check of working capital could do it.

4. The management should give attention towards the unnecessary expanses: misuses of facilities, staffing, and heavy expenses on overheads are the major causes for high operating cost. to overcome such short comings management should be strict for use of facilities, not only these but also right number of workers in right place providing necessary training also contribute for lower administrative and operating cost.
5. Management is backbone of the company and success and failure of the company depends upon the managerial skill. So company should allocate some money for training of financial employees to produce skilled and experienced manpower.
6. It should adopt strength credit policy especially for its staff and workers for effective credit and collection performances as low total receivable. One of the reasons of lower turnover and high collection period arise due to more advances to company employees.
7. Corporation should manage its cash affairs in such a way as to keep cash balances to a minimum level and to invest the surplus cash funds in profitable opportunities.

**-THE END-**

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## Appendix 1

### Current Assets & Current Liabilities

Rs. in '000

Year	CA X	CL Y	X <sup>2</sup>	Y <sup>2</sup>	XY
2063/64	8.52	7.9	72.59	62.41	67.31
2064/65	17.76	11.27	315.46	127.01	200.17
2065/66	10.15	5.8	102.92	33.64	58.84
2066/67	13.23	412.05	174.97	169785.20	5450.51
2067/68	14.35	41.48	205.92	1720.59	595.23
<b>Total</b>	$\sum x$ <b>64.0036</b>	$\sum y$ <b>478.5</b>	$\sum x^2$ <b>871.86</b>	$\sum y^2$ <b>171728.86</b>	$\sum xy$ <b>6372.06</b>

#### The regression Y on X

$$b_{yx} = \frac{N \sum XY - \sum X \sum Y}{N \sum X^2 - (\sum X)^2}$$

$$b_{yx} = \frac{5 \times 6372.06 - 64.0036 \times 478.5}{5 \times 871.86 - (64.0036)^2}$$

$$b_{yx} = 4.88$$

$$a = \bar{Y} - b_{yx} \times \bar{X}$$

$$a = 95.7 - 4.88 \times 12.8$$

$$a = 33.24$$

We Know,

$$\hat{Y} = a + b_{yx} \times X$$

$$\hat{Y} = 33.24 + 4.88 \times X$$

#### The regression X on Y

$$b_{xy} = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - (\sum Y)^2}$$

$$b_{xy} = \frac{5 \times 6372.06 - 64.0036 \times 478.5}{5 \times 171728.86 - (478.5)^2}$$

$$b_{xy} = 0.002$$

$$a = \bar{X} - byx \times \bar{Y}$$

$$a = 12.8 - 0.002 \times 95.7$$

$$a = 12.61$$

We know,

$$\hat{X} = a + byx \times Y$$

$$\hat{X} = 12.61 + .002 \times Y$$

Calculation of correlation of coefficient 'r' using Karl Pearson's correlation coefficient

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

$$r = \frac{5 \times 6372.06 - 64 \times 478.5}{\sqrt{5 \times 871.86 - (64)^2} \times \sqrt{5 \times 171728 - (478.5)^2}}$$

$$r = \frac{31860.3 - 30624}{\sqrt{263.3} \times \sqrt{629677.75}}$$

$$r = \frac{1236.3}{16.23 \times 793.52}$$

$$r = 0.096$$

Calculation of probable error (PE)

$$P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$P.E = 0.6745 \times \frac{1 - (0.096)^2}{\sqrt{5}}$$

$$P.E. = 0.30$$

## Appendix 2

### Current Assets and Total Assets

Rs. in '000

Year	CA X	TA Y	X <sup>2</sup>	Y <sup>2</sup>	XY
2063/64	851.97	1691.88	725852.88	2862457.93	1441431.00
2064/65	1776.13	2561.35	3154637.78	6560513.82	4549290.58
2065/66	1014.5	1920.7	1029210.25	3689088.49	1948550.15
2066/67	1322.78	2188.38	1749746.93	4789007.02	2894745.30
2067/68	1434.98	2263.22	2059167.60	5122164.77	3247675.44
<b>Total</b>	$\sum x$ <b>6400.36</b>	$\sum y$ <b>10625.53</b>	$\sum x^2$ <b>8718615.44</b>	$\sum y^2$ <b>23023232.04</b>	$\sum xy$ <b>14081692.46</b>

Calculation of correlation of coefficient 'r' using Karl Pearson's correlation coefficient

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

$$r = \frac{70408462.3 - 3.68007217.19}{\sqrt{2628469.055} \times \sqrt{2214272.4}}$$

$$r = \frac{1240124511.3}{1621 \times 1488.04}$$

$$r = 0.99$$

Calculation of probable error (PE)

$$P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$P.E = 0.6745 \times \frac{1 - (0.99)^2}{\sqrt{5}}$$

$$P.E. = 0.01$$

## Appendix 3

### Current Assets and Sales

Rs. in '000

Year	CA X	Sales Y	X <sup>2</sup>	Y <sup>2</sup>	XY
2063/64	8.52	18.06	72.59	326.04	153.84
2064/65	17.76	22.77	315.46	518.53	404.45
2065/66	10.15	30.63	102.92	938.33	310.76
2066/67	13.23	26.57	174.97	705.90	351.45
2067/68	14.35	37.49	205.92	1405.41	537.96
<b>Total</b>	$\sum x$ <b>64.00</b>	$\sum y$ <b>135.52</b>	$\sum x^2$ <b>871.86</b>	$\sum y^2$ <b>3894.20</b>	$\sum xy$ <b>1758.45</b>

#### The regression Y on X

$$b_{yx} = \frac{N \sum XY - \sum X \sum Y}{N \sum X^2 - (\sum X)^2}$$

$$b_{yx} = \frac{5 \times 1758.45 - 64.00 \times 135.52}{5 \times 871.86 - (64.00)^2}$$

$$b_{yx} = 0.045$$

$$a = \bar{Y} - b_{yx} \times \bar{X}$$

$$a = 27.10 - 0.45 \times 12.8$$

$$a = 21.34$$

We Know,

$$\hat{Y} = a + b_{yx} \times X$$

$$\hat{Y} = 21.34 + 0.45 \times X$$

#### The regression X on Y

$$b_{xy} = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - (\sum Y)^2}$$

$$b_{xy} = \frac{5 \times 1758.45 - 64.00 \times 135.52}{5 \times 3894.20 - (135.52)^2}$$

$$b_{xy} = 0.11$$



$$a = \bar{X} - byx \times \bar{Y}$$

$$a = 12.8 - 0.11 \times 27.10$$

$$a = 9.82$$

We know,

$$\hat{X} = a + byx \times Y$$

$$\hat{X} = 9.82 + 0.11 \times Y$$

Calculation of correlation of coefficient 'r' using Karl Pearson's correlation coefficient:

$$r = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \times \sqrt{N \sum Y^2 - (\sum Y)^2}}$$

$$r = \frac{5 \times 175845 - 64 \times 135.52}{\sqrt{5 \times 87186 - (64)^2} \times \sqrt{5 \times 389420 - (135.52)^2}}$$

$$r = \frac{118.97}{16.23 \times 33.25}$$

$$r = 0.22$$

Calculation of probable error (PE)

$$P.E = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$

$$P.E = 0.6745 \times \frac{1 - (0.22)^2}{\sqrt{5}}$$

$$P.E. = 0.29$$

## Appendix 4

### Analysis between Inventory & Sale

Rs. in '000

Year	INV. X	Sales Y	X <sup>2</sup>	Y <sup>2</sup>	XY
2063/64	8.08	18.26	65.24	333.30	147.46
2064/65	16.56	22.77	274.21	518.53	377.08
2065/66	9.76	30.63	95.31	938.33	299.06
2066/67	11.84	26.57	140.19	705.90	314.57
2067/68	8.27	37.49	68.41	1405.41	310.07
<b>Total</b>	$\sum x$ <b>54.51</b>	$\sum y$ <b>135.72</b>	$\sum x^2$ <b>643.36</b>	$\sum y^2$ <b>3901.46</b>	$\sum xy$ <b>1448.24</b>

Calculation of correlation of coefficient 'r' using Karl Pearson's correlation coefficient:

$$r = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \times \sqrt{N \sum Y^2 - (\sum Y)^2}}$$
$$r = \frac{5 \times 1446.62 - 54.51 \times 135.52}{\sqrt{5 \times 643.36 - (54.51)^2} \times \sqrt{5 \times 3894.20 - (135.52)^2}}$$
$$r = \frac{-154.1}{15.67 \times 33.25}$$
$$r = -0.30$$

Calculation of probable error (PE)

$$P.E = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$
$$P.E = 0.6745 \times \frac{1 - (0.30)^2}{\sqrt{5}}$$
$$P.E. = 0.27$$

## Appendix 5

### Analysis between Cash & Sale

Rs. in '000

Year	Cash X	Sales Y	X <sup>2</sup>	Y <sup>2</sup>	XY
2063/64	0.25	18.06	0.06	326.04	4.58
2064/65	0.19	22.77	0.04	518.53	4.40
2065/66	0.21	30.63	0.04	938.33	6.34
2066/67	0.77	26.57	0.59	705.90	20.33
2067/68	5.86	37.49	34.39	1405.41	219.85
<b>Total</b>	$\sum x$ <b>7.28</b>	$\sum y$ <b>135.52</b>	$\sum x^2$ <b>35.12</b>	$\sum y^2$ <b>3894.20</b>	$\sum XY$ <b>255.49</b>

Calculation of correlation of coefficient 'r' using Karl Pearson's correlation coefficient:

$$r = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \times \sqrt{N \sum Y^2 - (\sum Y)^2}}$$
$$r = \frac{5 \times 255.49 - 7.28 \times 135.52}{\sqrt{5 \times 35.12 - (7.28)^2} \times \sqrt{5 \times 3894.020 - (135.52)^2}}$$
$$r = \frac{290.86}{11.07 \times 33.25}$$
$$r = -0.79$$

Calculation of probable error (P.E.):

$$P.E. = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$
$$P.E. = 0.6745 \times \frac{1 - (0.79)^2}{\sqrt{5}}$$
$$P.E. = 0.11$$

## Appendix 6

### Analysis between Net Working Capital & Sales

Year	NWC X	Sales Y	X <sup>2</sup>	Y <sup>2</sup>	XY
2063/64	8.44	18.06	71.25	326.04	152.41
2064/65	17.65	22.77	311.47	518.53	401.88
2065/66	1.01	30.63	1.02	938.33	30.90
2066/67	9.11	26.57	82.94	705.90	241.97
2067/68	13.94	37.49	194.19	1405.41	522.41
<b>Total</b>	$\sum x$ <b>50.14</b>	$\sum y$ <b>135.52</b>	$\sum x^2$ <b>660.87</b>	$\sum y^2$ <b>3894.20</b>	$\sum xy$ <b>1349.56</b>

#### The regression Y on X

$$b_{yx} = \frac{N \sum XY - \sum X \sum Y}{N \sum X^2 - (\sum X)^2}$$

$$b_{yx} = \frac{5 \times 1349.56 - 50.14 \times 135.52}{5 \times 660.87 - (50.14)^2}$$

$$b_{yx} = 0.004$$

$$a = \bar{Y} - b_{yx} \times \bar{X}$$

$$a = 27.1 - 0.004 \times 10.03$$

$$a = 27.06$$

We know,

$$\hat{X} = a + b_{yx} \times X$$

$$\hat{X} = 27.6 + 0.004 \times Y$$

#### The regression X on Y

$$b_{xy} = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - (\sum Y)^2}$$

$$b_{xy} = \frac{5 \times 1349.56 - 50.14 \times 135.52}{5 \times 3894.20 - (135.52)^2}$$

$$b_{yx} = 0.003$$

$$a = \bar{X} - b_{yx} \times \bar{Y}$$

$$a = 10.03 - 0.003 \times 27.10$$

$$a = 9.95$$

We know,

$$\hat{X} = a + b_{yx} \times Y$$

$$\hat{X} = 9.95 + 0.003 \times Y$$

Calculation of correlation of coefficient 'r' using Karl Pearson's correlation coefficient:

$$r = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \times \sqrt{N \sum Y^2 - (\sum Y)^2}}$$

$$r = \frac{5 \times 1349.56 - 5014 \times 135.52}{\sqrt{5 \times 660.87 - (50.14)^2} \times \sqrt{5 \times 3894.20 - (135.52)^2}}$$

$$r = \frac{-47.17}{28.11 \times 33.25}$$

$$r = -0.05$$

Calculation of probable error (PE)

$$P.E = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$

$$P.E = 0.6745 \times \frac{1 - (-0.05)^2}{\sqrt{5}}$$

$$P.E. = 0.30$$