

# CHAPTER-ONE

## 1. INTRODUCTION

### 1.1 BACKGROUND

Nepal is basically an agricultural country where more than 80% of the economic active populations are dependent upon it. This sector has contributed about 40% of the GDP. However, because of the traditional methods of farming, lack of modern tools and equipments, non-availability of fertilizer and improved seeds, lack of irrigation facilities and poor governmental policy towards agriculture has made this sector a considerable less attractive. On the other hand increasing rate of educated generation does not prefer to return towards this sector. So industrialization can play vital role to assist the long term development of the country. Development of industries can make prominent role to generate employment opportunities, solving the great problem of unemployment, reduce import, to earn foreign currencies and balancing the payments as well.

After the industries revolution in Europe and America, the significance of industrial sector has been developing fast in the world. It has played an active and vital role to accelerate the economic development of the nation. It helps the nation by reducing the foreign dependency and keep sound, healthy and self-confidence level. It generates the employment opportunities in respect to the maximum utilization of internal resources. Most of the industrially advance countries are maintaining their strong economic position by increasing export promotion. After 1950, a new recent discipline in the branch of accounting is developed naming "Profit planning and control (PPC) is one of the comprehensive approaches that has been developed to facilitate affective performance of the management process. It is a systematic and formalized approach for performing significant phases of management planning and control function. It is managerial process that includes planning, organizing, staffing, leading and controlling. Therefore, the fundamental concept of PPC is that which includes all activities and tasks, which must be carried out for achieving maximum result.

A successful profit planning and control depends so many factors. They are as follows:

- (a) Managerial involvement and commitment.
- (b) Organizing adaptation.
- (c) Responsibility accounting.
- (d) Full communication.
- (e) Realistic expectation.
- (f) Flexible application.

- (g) Timeless
- (h) Individual and group recognition.
- (i) Follow up.

This research study is with reference to manufacturing concern Kamala Plastic (P) Ltd. It is one of the important manufacturing concerns in Nepal. It produces high-density polythene pipes.

## **1.2 Industrial Background of Kamala Plastic (P) Ltd.**

When public enterprises were unable to run successfully because of its own limitation like inefficient management, lack of efficient personnel (civil servant), weak labor relationship, political interference, bureaucratic tendency, administered pricing system, poor profitability, lack of commercial spirit, increase in corruption and exposure to public censure then privatization is highly prioritized. Kamala Plastic Pvt. Ltd. has established in private sector to put aside from the problem of public enterprises.

Kamala Plastic Pvt. Ltd. is situated in Dhanusha and the state is an outcome of agreement between Nepal government and government of India dated 2nd Jestha 2031 ( 10th May 1972 ) with the cost of Rs. 33,58,000 Nc. Estate was handed over to Nepal government on 1st Poush 2032 ( 16th December 1975 ).

Kamala plastic pvt.Ltd. lies at Janakpur, Dhanusha district and Janakpur zone. It is about 176 kilometers from Birgunj. There are thirteen industries and eight of them are closed and it is spread over an area of 24 katha of land. Kamala Plastic Pvt. Ltd. is spread over a area of 16 ropanies of total land. Kamala Plastic Pvt. Ltd. is one of the largest industries of the estate. Kamala Plastic Pvt. Ltd. has about 181 (male) employees and was established in 2035 B.S. as a domestic industry at first with specified capital of Rs.3,00,000 under the partnership act 2020. This industry was transferred into small scale industry during the period of 2042 B.S. In the period of 2043 B.S. the industry was introduced as a large scale company (Industry) by increasing its capital and began the operation from the shrawan of the same year. The products of Kamala Plastics are in the process of acquiring authority to use 'NS' mark i.e. Nepal standard it works 24 hours in the three working shifts of 8 hours each of all 7 days. Kamala plastic Pvt. Ltd. has 100% domestic market.

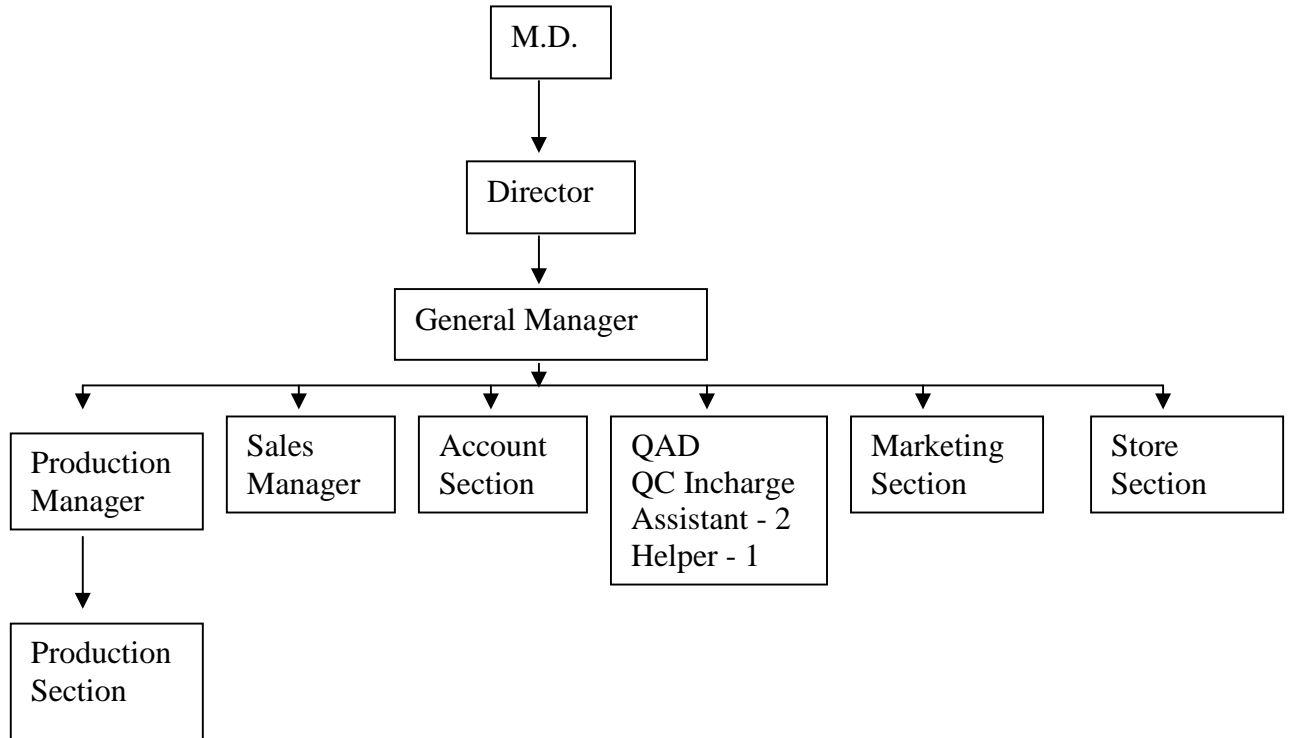
According to recent data of fiscal year 2065/066 the company has authorized issued and paid up capital of Rs. 4,50,00,000 dividend in to 4,50,000 equity shares of Rs.100 each. Nepal Plastic Pvt. Ltd. which is a manufacturing private concern produces High Density Polythene (HDPE) Pipe. Its annual capacity is 2400 metric ton but unfortunately is able to exploit only 29.03 % of its capacity.

### **1.3 Industries involved in Nepal in the production of High Density Polythene pipe.**

According to the booklet of Nepal Standard High Density Polythene pipe industries in Nepal obtaining Nepal Standard mark. They are listed as follows:

- 1.Nepal Polythine Plastic Ind. Pvt. Ltd. Balaju,Kathmandu
- 2.Narayani Plastic Pvt. Ltd., Kalaiya
- 3.Panchkanya Plastic Pvt. Ltd., Kotihawa, Rupandehi.
- 4.Nepal Plastic Pvt. Ltd., Dharan
- 5.Laxmi Plastic Pvt. Ltd., Nepalgunj
- 6.Tandan Plastic Pvt. Ltd., Nepalgunj
- 7.Nepal Blackcold Plastic Pvt. Ltd., Butwal.
- 8.Hishi Plastic Pvt. Ltd., Kathmandu
- 9.Kamala Plastic Pvt. Ltd. Janakpur
- 10.Yeti Plastic Pvt. Ltd. Kavre

#### 1.4 Organization Chart of Kamala Plastic Pvt. Ltd.



QAD = Quality Assurance Department

Source :- Quality Control manual of Kamala Plastic Pvt. Ltd.

## 1.5 STATEMENT OF PROBLEM

In the present study, we have taken the manufacturing concern Kamala Plastic Pvt. Ltd. Kamala Plastic Pvt. Ltd. has not utilized their full capacity. So, it is suffering from poor profit performance. Major problems faced by the Kamala Plastic Pvt. Ltd. are sighted as follows :

1. Lack of clear cut objectives or goals.
2. Available capacities are not fully utilized.
3. Lack of scientific evaluation system on every aspects of operation.
4. Lack of responsibility & accountability in every section.
5. Non application of modern managerial tools and techniques.

This study has tried to answer the following research questions on relation to Kamala Plastic Pvt. Ltd.

1. Whether the company has implemented profit planning or not ?
2. Flow profit planning system in Kamala Plastic can be improved ?
3. What are the major problems faced by the company on developing and implementing profits plans?
4. What fundamental principles is short term and long
5. Term planning is adopted by the company?

## 1.6 OBJECTIVE OF THE STUDY

1. To identify trend in sales and production
2. To analyze the present comprehensive profit planning system
3. To calculate BEP and cash flow statement.
4. To identify the weakness & strength of the industry
5. To point out unfavorable factor in profit plan & control.
6. To examine the various ratio.
7. To provide suitable suggestion and recommendations for improving profit plan.

## 1.7 IMPORTANCE OF THE STUDY

1. It forces management to consider expected future trends and conditions with proper analysis of adequate and appropriate primary data.
2. It measures efficiency and inefficiency in attaining enterprises objectives.

3. It helps to optimize the use of the firm's resources like laborer, material, capital etc.
4. It helps to co-ordinate integrate and balance the efforts of various departments in the light of the overall objectives of the enterprises.
5. It instills into managers the habit of evaluating carefully their problem and related variable before making any decisions.
6. It tends to remove the cloud of uncertainty that exists in many organizations.

## **1.8 LIMITATION OF THE STUDY**

This study confirms only to the profit planning of Kamala Plastic (p) Ltd. This study has been undergone through the data only five years. On the basis of financial document and planning documents, the accuracy of this study is depended upon the data availed by the management of Kamala Plastic (p) Ltd. This study is focused mainly with short term profit plan. This study is based on primary & secondary data available but mostly based on primary data. This study is for the partial fulfillment of MBS course, so it may not be useful for other aspects.

## **1.9 HYPOTHESIS FORMULATION**

Testing of hypothesis is one of the most important aspects of the theory of decision making. Effective advertisement can increase the sales. Is one of the hypothesis in this thesis.

Null Hypothesis (Ho) :- There in no relationship between advertisement and sales.

Alternative Hypothesis (H1) :- Advertisement can not increase the sales.

## **1.10 ORGANIZATON OF THE STUDY**

This research study is organized as:-

- ) Introduction
- ) Review of the literature
- ) Research Methodology
- ) Presentation and analysis of data
- ) Summary, conclusion and recommendation

Beside these chapters appendix and bibliography will be included in the last of the theses.

A. Introduction

General information, concept, meaning related to this thesis will be discussed.

## B. Review of the Literature

Almost all of the available literature on profit planning is based on the directions, first it is based towards profit planning and control and second it is based towards Kamala Plastic (P) Ltd. The literature mainly relates to various aspects of profit planning and control. Most of them were concerned with KPPL. Different concepts and views of the different author and writers about profit planning and control will be reviewed in this study for their retold studies as far as possible.

## C. Research Methodology

This chapters includes research design, period covered, nature of data, source of data, data collection, data analysis tools and research procedure followed.

## D. Presentation and Analysis of Data

In this chapter the data collected through various sources have been presented in a number of tables as the are required by the research objectives. This data has been interpreted and analyzed with the help of various analytical tools and techniques.

## E. Finding, Summary, Conclusion and Recommendation

In this chapter presented conclusion of research, major finding, recommendation and summary.

# CHAPTER - TWO

## 2. REVIEW OF LITERATURE

### 2.1. CONCEPTUAL BACKGROUND OF WORKING CAPITAL

Review of literature refers to the reviewing of the past studies in the concerned field. Such studies could be thesis/dissertation that are written earlier, books, articles, journals and any sort of other publication concerning the subject matter, which were written prior by a person or an organization. The purpose of this literature review is to be acquainted with what has been accomplished in the concerned subject matter and what is yet to be accomplished. In other words, it helps to find what actually is to be studied and foretells worthiness of the study being undertaken.

A number of studies have been carried out from different management experts, professionals, authors, and students of different levels of Maser Degree. The purpose of this chapter is to review the available literature on working capital position and management on the context of the Nepalese Industries including available information of Kamala Plastic Pvt.. Ltd. A short description of literature referred in the study is given below that support to make the study purposeful.

### 2.2 Meaning and Concept of Working Capital

In any business organization, working capital is just like lifeblood in human body and works as a central nerve of a living organization. For the successful day-to-day operation, management of current assets and current liabilities of business organization is highly essential. It is very detrimental on the success and failure of organization.

Business organization 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 cash and marketable securities are respectively considered purely liquid and near liquid assets, whereas account receivables and inventories are not. However, they can be liquidated as and when necessary within a period of less than one year. In a like manner, the current liabilities comprising sundry debtors, trade creditors, accounts payable, short-term bank loan and outstanding expenses etc. must be paid within one year as they become due.

Working capital management is not only concerned with the management of total current assets and the excess of current assets over current liabilities but it is concerned with all kinds of problems that arise in attempting to manage the current

assets, current liabilities and the interrelationships that exist between them.<sup>1</sup> The meaning of the term 'working capital' should not be allowed to limit either the gross or the net concept of working capital only. It is true that very often-working capital is interpreted as circulating capital as it keeps on circulating in the course of business transactions. The circulating capital is highly a descriptive and meaningful term. Working capital is constantly flowing and changing its form as the enterprise accomplishes its objectives and performs its operations. In a broader sense, both fixed and current assets circulate but the current assets have a much greater velocity or turnover rate.<sup>2</sup> Current assets are assets like cash, stock, debtors or short-term investments, which are either readily available cash or are convertible into cash within a short time relatively during the normal course of business. Current liabilities on the other hand are liabilities, which will fall due for payment within a relatively shorter period. Such periods vary from one month to twelve months. Instances are creditors, provisions for taxation and dividend claims.

2.2.1 Different elements of working capital may be summarized as:

1. Cash on hand and in the bank
2. Easily convertible securities held for short terms
3. Raw material stocks
4. Finished goods stocks
5. Sundry Work in progress stocks
6. Debtors

The study of gross and net concept of working capital in Nepalese public enterprises assumes greater significance. It is not known what the position of investment in gross and net working capital including their components in these enterprises and whether there has been any significant changes taking place in their size and structure over a period of time.

2.2.2 Gross concept

Gross concept in working capital means the firm's investment in current assets. Current assets are the assets, which can be converted into cash within an accounting year (operating cycle), and include cash, short-term securities, debtors, (accounts receivable or book debts) bills receivable and stock (inventory). Adam smith called "circulating capital" for current assets. In the word of Adam smith, "the goods of the merchant yield him no revenue in profit till he sells them for money and the money yields him a little till it is again exchanged for goods. His capital is continuously going from him in once shape and returning him in another and its only by means of such circulation's or successive exchange that can yield very him any

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<sup>1</sup> Smith, Keith V., "An Overview of Working Capital Management," (New York, West Publishing Company, 1975) P-4

<sup>2</sup> Schultz, Raymond G. & Schultz Robert E., "Basic Financial Management" (Syracuse University, International Text Book Company, 1972) P-111



profit. Such capital therefore may properly be called circulating capital”<sup>3</sup>. R.S Pradhan and K.D Koirala express their view about gross concept of working capital “if all the expenses needed to run the day to day operation of business such as amount to be invested in the form of cash, finished goods, receivables etc. are put together, it is called working capital. This working capital and total current assets are synonymous”.<sup>4</sup>

### 2.2.3 Net Concept

According to net concept, net working capital refers to the difference between current assets and current liabilities. Current assets and current liabilities both play a vital role in operation cycle of business, so all the current liabilities must be considered rather than current assets alone. Since working capital is current assets, it includes all those assets, which in the normal course of business return to the firm, as cash with in a short period. Ordinary investments, which may be readily converted into cash upon need, are also current assets. The current liabilities include those debts that mature within a year. If public enterprises fail to consider current liabilities, the management of working capital gives misleading results.

The view of net working capital is supported by distinguished authorities like Lincon, Davis and Gitman. They have defined net working capital as that portion of firm’s current assets which is financed with long-term fund. The concept of net working capital considers both current assets and current liabilities. As against the current assets, the company in turn has current liabilities like credit facilities through its accounts payable or sundry creditors.

As expressed by American Institute of Certified Public Accountants U.S.A., working capital sometimes called net working capital, is represented by the excess of current assets over current liabilities and identifies the relatively liquid position of total enterprise capital which constitutes a margin suffers for maturing obligations within the ordinary operation cycle of the business. Net working capital indicates the liquidity position of the business and shows the ability to pay its creditors.

Dr. Radhe Shyam Pradhan has published a book on management of working capital in Nepalese Public Enterprises. In this study, he has dealt with various issues for example type of working capital policy followed by those Public Enterprises liquidity position, structures of working capital, utilization, demand, components with change in volume of sales in these Public Enterprises. He revealed that most of the selected enterprises achieved a tradeoff between risk and return, thereby following neither an aggressive nor a conservative approach. Almost all the selected Public Enterprises had a positive net working capital and much of the growth in net working capital might, however, be attributed to inflation as the growth in net working capital at deflated prices has been much lower. In most of Nepalese Public Enterprises the liquidity measure should a poor liquidity position. It has been noticed

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<sup>3</sup> Smith, Adam, “**The Wealth of Nations**”, Modern lib. Inc., New York, 1973 P( 262-283)

<sup>4</sup> Pradhan, R. S. & Koirala, K. D. “**Some reflections on Working Capital management in Nepalese Corporation management Dynamics**”, Vol. 3 No. 1

that the enterprises had either negative cash flows or earning before tax or they had excessive net current debts, which could not be paid within a year.<sup>5</sup>

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 efficiently circulated. To have adequate, healthy and efficient circulation of Working Capital, it is necessary that Working Capital must be properly determined and allocated to its various segments, effectively controlled and regularly reviewed. In the opinion of well-known Indian professor I.M. Pandey, there are specially two concepts of Working Capital i.e. Gross Concept and Net Concept. The term Gross Working Capital simply called as working capital; refer to the firm's investment in current assets. Currents assets are the assets, which can be converted in to cash within an accounting year (or operating cycle) and include cash, short-term securities, debtors, bills receivables and stock (Inventory).

The term Net Working Capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year and include creditors, bills payable and outstanding expenses. Net Working Capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets.

The two concept of working capital- Gross and Net- are not exclusive, rather they have equal significance from management viewpoint. The gross working capital concept focuses attention on two aspects of current assets management: a) Optimum investment in current assets and b) financing of current assets.

The Net Working Capital, being the difference between current assets and current liabilities, is a qualitative concept. It emphasizes on a) Liquidity position of firm and b) Suggests some extent to which working capital needs may be financed by permanent sources of funds.

It may be emphasized that both gross and net concepts of working capital are equally important of r the efficient management of working capital. There is no precise way to determine the exact amount of gross or net working capital for any firm. The data and problems of each company should be analyzed to determine the amount of working capital. There is no specific rule as to how current assets should be financed. It is not feasible in practice to finance current assets by shout-term sources only. Keeping in view the constraints of the individual company, a judicious mix of long-term finances should be invested in current assets. Since current assets involve cost of funds, they should be put to productive use.<sup>6</sup>

Jemes C. Van Horne emphasizing liquid assets as important component of working capital says:

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<sup>5</sup> Pradhan, Dr. Radhe Shyam, “**Management of WC**”, New Delhi, National Book Organization, 1986

<sup>6</sup> Pandey I.M., Financial Management, Vikash Publishing House P. Ltd. Page- 325

“The term liquid assets are used to describe money and asset that are readily convertible into money. Different assets may be said to exhibit different degrees of liquidity. Money itself by definition the most liquid of assets, other assets have varying degree of liquidity, depending on the ease with which they can be turned into cash. For assets other than money, liquidity has two dimensions; (1) The time necessary to convert the assets into money, and (2) The degree of certainty associated with the conversion ratio or price realized for the assets.”<sup>7</sup>

In this way, he focuses in time and certainty factors of liquidity of current assets. In the consecutive chapters, he describes other components of working capital such as cash and marketable securities, accounts receivable and inventories, short-term financing, secured loans and term financing.

J. Fred Weston and F. Bugene Brigham have given the concept of working capital as: The term working capital originated at a time when most industries were closely related to agriculture, processors would buy 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 cost and these loans were retired with proceeds from the sale of the finished products.<sup>8</sup>

Dr. R. S. Pradhan and Dr. K. D. Koirala jointly prepared a research study on the “aspect of Working Capital Management in Nepalese Corporations” during 031/32 to 035/36. They found that investment of current assets had declined over the period in both manufacturing and non-manufacturing corporations. The major motive for holding cash in Nepalese Corporations was to provide a reserve for routine outflows of cash and for holding inventories was to facilitate smooth operation production and sales. The inventory in manufacturing corporations and cash and receivables in non-manufacturing enterprises were more problematic to manage.

With reference to the above problems and findings, they recommended that the need to control investment in working capital as a whole for manufacturing corporations as the average proportion of working capital to sales increased over time. Since the manufacturing and non-manufacturing corporations had trying to control investment in receivable, the focus of the attention should be derived to control of investment in cash and inventory. However, manufacturing corporations should pay attention to control the investment in inventory. They concluded that the investments in current assets had declined over the period in both type of corporations. Due to more liberal and less consistent credit policies; the Manufacturing Public Enterprises had consistently more investment in cash and receivables as compared to non-manufacturing corporations. Inventory management is of great importance to manufacturing enterprises and the cash and receivable to non-manufacturing enterprises.

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<sup>7</sup> Van Horne, James C., ‘Financial Management and Policy’, New Delhi, Prentice Hall of India P. Ltd. Page-343

<sup>8</sup> Weston, J. Fred, and Brigham, F. Bugene, – “Managerial Finance”- Illinois, The Dryden Press; page-267

Mr. N.K. Agrawal, Working capital management is the just like the lifeblood in human beings on any business firms. Hence, the management of working capital plays a vital role for successful existence of enterprises. It is the center on the routine of day-to-day administration of current assets and current liabilities. Therefore, working capital management in public enterprises is very important mainly for four reasons. Firstly, public enterprises must need to determine the adequacy of investment in current assets otherwise; it could seriously erode their liquidity base. Secondly, they must select the type of current assets, suitable for investment to raise their operational efficiency. Thirdly, they are required to ascertain the turnover of current assets, which determine the profitability of the concerns. Lastly, they must find out the appropriate resources of funds to finance the current assets.

Proper management of working capital must ensure adequate amount of working capital as per the need of business firms. It should be in good health and circulated. To have adequate healthy and efficient circulation of working capital it is necessary that working capital be properly determined an allocated to its various segments, effectively controlled and regularly reviewed.

### 2.2.4 Requirement of Working Capital

There is a difference between current and fixed assets in terms of their liquidity. Affirm requires many years to recover the initial investment in fixed assets such as plant and machinery or land and buildings. On the contrary, investment in current assets is turned over many times in a year. Investment in current assets such as inventories and book debts (Accounts receivable) is realized during the firm's operating cycle, which is usually less than a year. The most of manufacturing firm involves following cash conversion cycle:

Inventory Conversion Period (ICP) is the length of time required to convert inputs (Resources) into output (Finished goods)

$$ICP = \frac{\text{Current Assets}}{\text{Fixed Assets}} \times 100 \text{ or } \frac{360}{\text{Inventory Turnover Ratio}} \text{ days}$$

Receivable Conversion Period (RCP) is the length of time required to collect outstanding amount from customers.

$$RCP = \frac{\text{Receivables}}{\text{Net Credit Sales}} \times 360 \text{ days or } \frac{360}{\text{Receivable Turnover Ratio}} \text{ days}$$

Payable Deferral Period (PDP) is the length of time taken by company for able to defer payments on various credit purchases of venders.

$$PDP = \frac{\text{Creditors}}{\text{Net Credit Purchase}} \times 360 \text{ days}$$

If the Depreciation is excluded from expenses, the total of ICP and RCP minus PDP is referred as Cash Conversion Cycle (CCC), such as

$$CCC = ICP + RCP - PDP \text{ (Days)}$$

Requirement of Working Capital = CCC x working capital needed per day

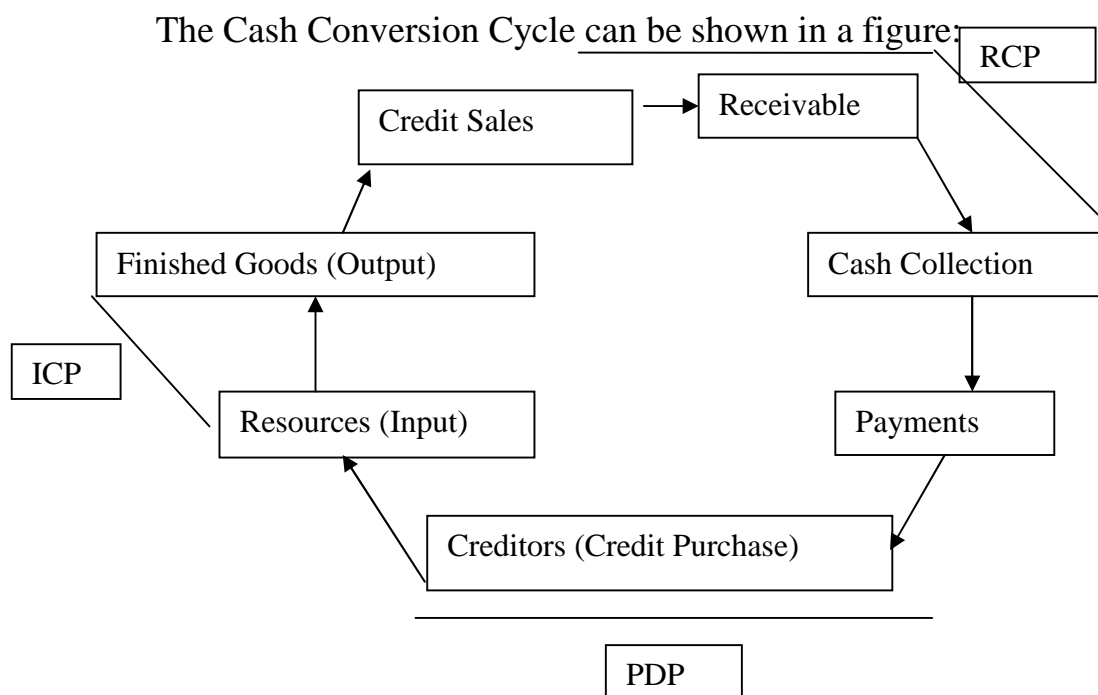


Figure: 1- Cash Conversion Cycle

### 2.2.5 Cost Trade-off

Different way of looking into the risk return trade-off is in terms of the cost of operating a particular level of current assets. There are two types of costs involved: the cost of liquidity and the costs of Illiquidity. If the firm's level of current assets is very high, its return on assets will be low, as funds tied up in idle cash and earn nothing and high levels of debtors reduce profitability. Thus, the cost of liquidity (though low rates of return) increases with the level of current assets.

The cost of Illiquidity is the cost of holding insufficient current assets. The firm will not be in a position to honor its obligations if it carries too little cash. This may force the firm to borrow at high rates of interest. This will also adversely affect the credit worthiness of the firm and it will face difficulties in obtaining funds in

future. All this may force the firm into insolvency. Similarly, the low level of stocks will result in loss of sales and customers may shift to competitors. In addition, low level of book debts may be due to tight credit policy, which would impair sales further. Thus, the low level of current assets involves costs, which increase as this level falls.

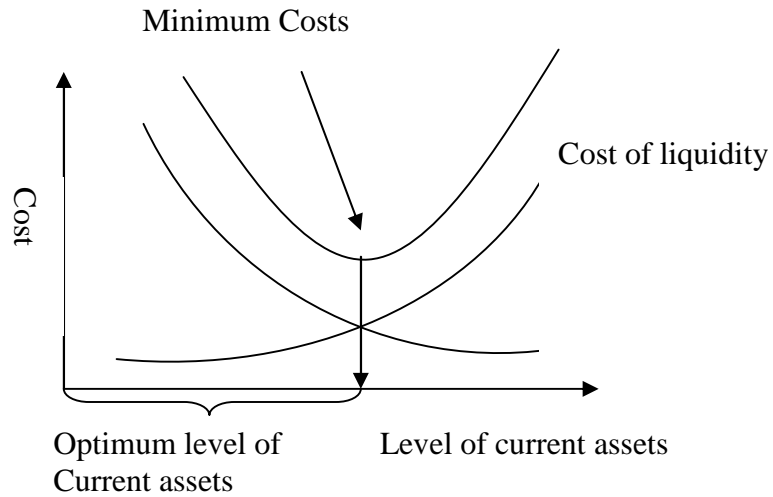


Figure: 2 Cost Trade-Off

In determining the optimum level of current assets, the firm should balance the profitability-solvency tangle by minimizing total costs (cost of liquidity and Illiquidity), this is given in figure that high level of current assets increases cost of liquidity while cost of Illiquidity decreases and vice-versa. The firm should maintain its current assets at that level where the sum of these two costs is minimized. The minimum cost point indicates the optimum level of current assets in figure-2.

#### 2.2.6 Liquidity versus Profitability (Risk and Return)

Almost all financial decisions involve some sort of risk return trade off but this is more so in the case of working capital decisions. To take an example, the lower the cash balances held on hand, the higher would be the expected return, but at the same time, the enterprise will have to assume the greater risk of running out of cash. The higher return is due to the less money tied up in non-income earning assets and the higher risk is due to the possibility of shortage of cash in the event of urgency. Thus, a low liquidity is associated with high rates of return. However, it does not mean that low liquidity is in the best interest of shareholders. No doubt, profitability has to do with the overall goal of shareholders' wealth, but liquidity has to do with ensuring that the enterprise is able to satisfy all its current financial obligations.<sup>9</sup> The firm would make just enough investment in current assets if it was possible to estimate working capital needs exactly. Under perfect certainty, current assets holdings would be at minimum levels. A larger investment in current assets under uncertainty would mean a low rate of return on investment for the firm, as excess investment in current assets would not earn enough return. A smaller investment in current assets, on the other hand, would mean interrupted production and sales, because of frequent stock-outs and inability to pay to creditors in time due to restrictive policy. As it is not possible to estimate working capital needs accurately, the firm must decide about levels of current assets to be carried. The current assets holdings of the firm will depend upon its working capital policy. The company may follow either conservative or aggressive policy. It does not mean that larger the working capital, the better it is. Regarding the size of working capital to be held in the business, there is likely to be some position or range of positions that is best. If the investment in fixed assets is held constant, then the benefits resulting from an additional increase in working capital will be subject to diminishing returns. If the objective of working capital management is to maintain high liquidity in the business, it means a reduced return to shareholders and a lower risk of becoming technically insolvent. Similarly, if the objective is to maintain low liquidity, it means an increased return but a high risk of becoming technically insolvent. All working capital policies ranging from low to high liquidity policies but are not equally favorable. The extremely high and low liquidity policies are not at all favorable as the required rate of return or cost of capital is higher than the expected rate of return. Hence, only those liquidity policies are favorable where the expected rate of return is higher than the required rate of return or cost of capital. These policies have different risk and return implications.

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<sup>9</sup> Smith, Keith V., op. cit., P-12

### 2.2.7 Need for working capital

The management of working capital has been regarded as one of the conditioning factors in the decision making issue. It is no doubt, very difficult to point out as to how much working capital is needed by a particular company, but it is very essential to analyze and find out the solution to make an efficient use of funds for minimizing the risk of loss to attain profit objectives. Thus goes the importance of working capital in operating life of a company. A successful business keeps its working capital moving rapidly. Thus it is also a lead circulating capital or a moving capital. The transmutation of a company's working capital into income and profits and back into working capital is one of the most dynamic and vital aspects of business operation. And only this movement of current assets keeps the business alive. A fully equipped factory without the supply of materials to process and without cash to pay bills and store without stock to sell is of no use. These circumstances emphasize the importance of working capital in a business firm.

The need for working capital or current assets cannot be overemphasized. The objective of financial decision making is to maximize the shareholder's wealth. To achieve this, it is necessary to generate sufficient profits. The extent to which profit can be earned will naturally depend upon the magnitude of the sales among other things. A successful sales program is in other words, necessary form earning profit by any business extremes. However, sales do not convert into cash instantly; there is invariably a time lag between the sales of goods and 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 is necessary to sustain sale activity. Technically, this is referred to as the operating or cash cycle. The operating cycle can be said to be at the near of the need for working capital. Operating cycle is the time duration required to convert sales, after the conversion of resources into inventories into cash.

Most of the firms' aim is maximizing to wealth of shareholders. The firm should earn sufficient return from its operation. The extent to which profit can be earned naturally depends upon the magnitude of sale among the other things. For constant operation of the business, every firm need to hold the working capital components like cash, receivable, inventories etc. therefore, every firm needs working capital to meet the following motives:

#### The transactional motive

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

#### The precautionary motive

Precautionary motive is the need to hold cash and inventories to guard against the risk of unpredictable change in demand and supply forces and supply forces and



other factors such as strike, failure of important customer, unexpected slow down in collection of accounts receivable, cancellation of some order for goods and some other unexpected emergency. Thus, the firm needs the working capital to meet any contingencies in future.

#### The speculative motive

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

- ) Opportunities of profit making investment
- ) Opportunities of purchasing raw materials at a reduced price on payment of immediate cash
- ) Speculate on interest rate and
- ) Make purchases at favorable price etc.

Thus the firm need the working capital to meet the above three motives.

#### 2.2.8 Working Capital Policies

A firm's net working capital position is not only important as an index of liquidity but it is also used as measure of the firm's risk. Risk, in this regard, means changes chances of the firm being unable to meet its obligations on due date (Pandey, 1989:738). Working capital management involves deciding upon the amount and composition of current assets and how to finance these assets.

These decisions involve trade of between risk and profitability. The greater the relative proportion of liquid assets, the lesser the profitability as well as the risk of running out of cash all other things being equal. The longer the composite maturity schedule of securities used to finance the firm, the lesser the risk of cash insolvency all other things being equal.

Again the profits of the firm are likely to be less. Resolution of the trade off between risk and profitability with respect to these depends upon the risk preferences of management.

Working capital policy refers to the firm's basic policies reading target level of each category of current assets and how current assets will be financed (Weston, 1996 page 333). So, first of all, the 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 final 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.

#### 2.2.9 Current Assets Investment Policy

Current assets investment policy refers to the policy regarding the total amount of current assets to be carried to support the given level of sales. There are three alternative current assets investment policies Fat Cat, Loan and Mean and Moderate Policy (Weston et. all, 1996 page 334).

) Fat Cat Policy: This is known as Relaxed Current Assets Investment Policy. In this policy, the firm holds relatively large amount of cash, marketable securities, inventory and receivable to support a given level of sales. This policy creates longer inventory and cash conversion cycles. It also creates the longer receivable collection period due to the liberal credit policy. Thus, this policy provides the lowest expected return on investment.

) Lean and Mean Policy: This is also known as Restricted Current Assets Investment Policy. In lean and mean policy, a firm holds the minimum amount of cash, marketable securities, inventory and receivable to support a given of sales. This policy tends to reduce the inventory and receivable conversion cycle. Under this policy firm allows a tight credit policy and bears the risk of losing sales.

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

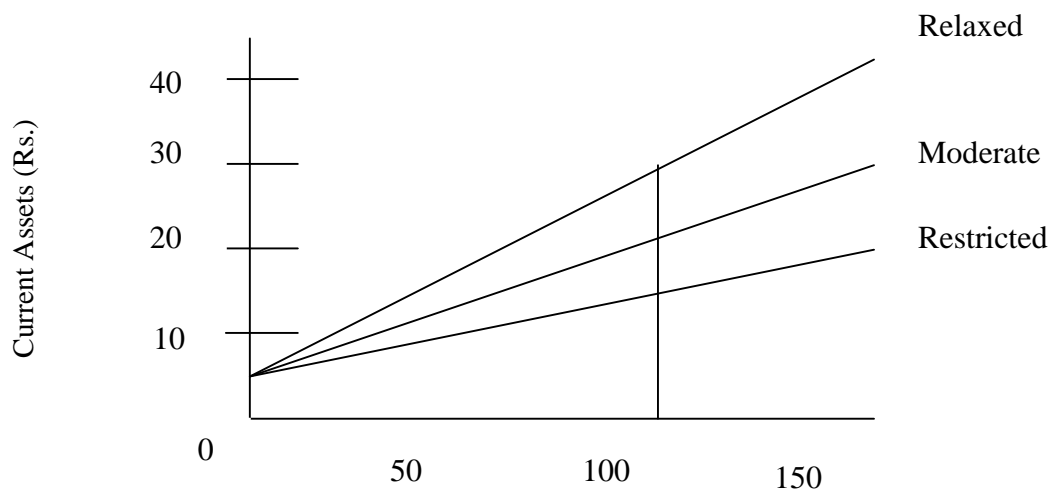


Figure-3 Alternative Current Assets Investment Policies (in thousand Rs)

The above figure shows that level of current assets as per different policies used to support sales of Rs 110.

Policies	Current Assets to support given level of sales Rs 110
Relaxed	Rs 30
Moderate	Rs 20
Restricted	Rs 13

(Source: Weston, Besley & Brigham, Essentials of Managerial Finance, p-345)

### 2.2.10 Current Assets Financing Policy

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

) Aggressive Policy: In as aggressive policy, the firm finances a part of its permanent current assets with short term financing and rest with long term financing. In other words, the firm finances not only temporary current assets but also a part of permanent current assets with short term financing. Figure 4 shows that short term financing finance 50% of the permanent current assets.

In general, interest rate increases with time i.e. shorter the time, lower the interest rate. It is because lenders are risk adverse and risk generally increases with the length of lending period. Thus, under financing rater than long term financing on the other side, if the firm finances its permanent current assets by short term finance, then it runs the risk of renewing the borrowing again. This continued financing exposes the firm to certain risk. It is because, in future the expenses will fluctuate wide and also, it may be difficult for the firm to raise the fund during the stringent periods. In conclusion, there is higher risk, higher return and low liquidity position under this policy.

Aggressive Financing Policy

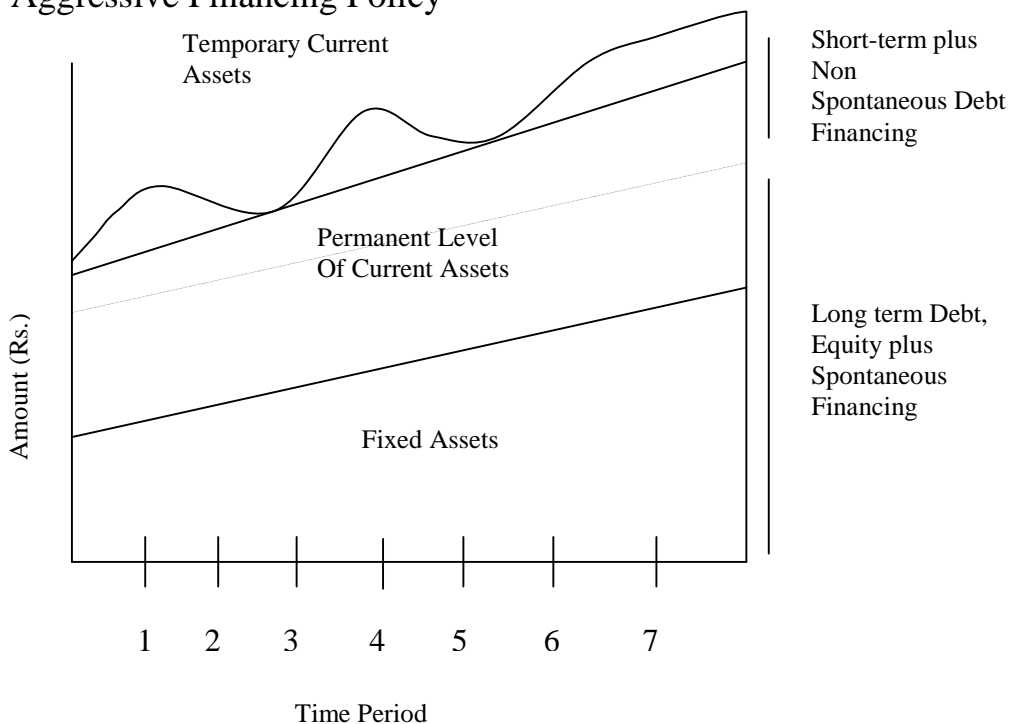


Figure- 4 (Source: Weston, Besley and Brigham, Essentials of Management Finance (p-347)

) Conservative Policy: In this policy, the firm uses long term financing to finance not only fixed assets and permanent assets but also a part of the temporary current assets. This policy leads to high level of current assets, with long conversion cycle low level of current liabilities and higher interest cost. The risk and return are lower that of aggressive policy and liquidity position is higher that that of aggressive one. The risk adverse management follows this policy:

#### Conservative Financing Policy

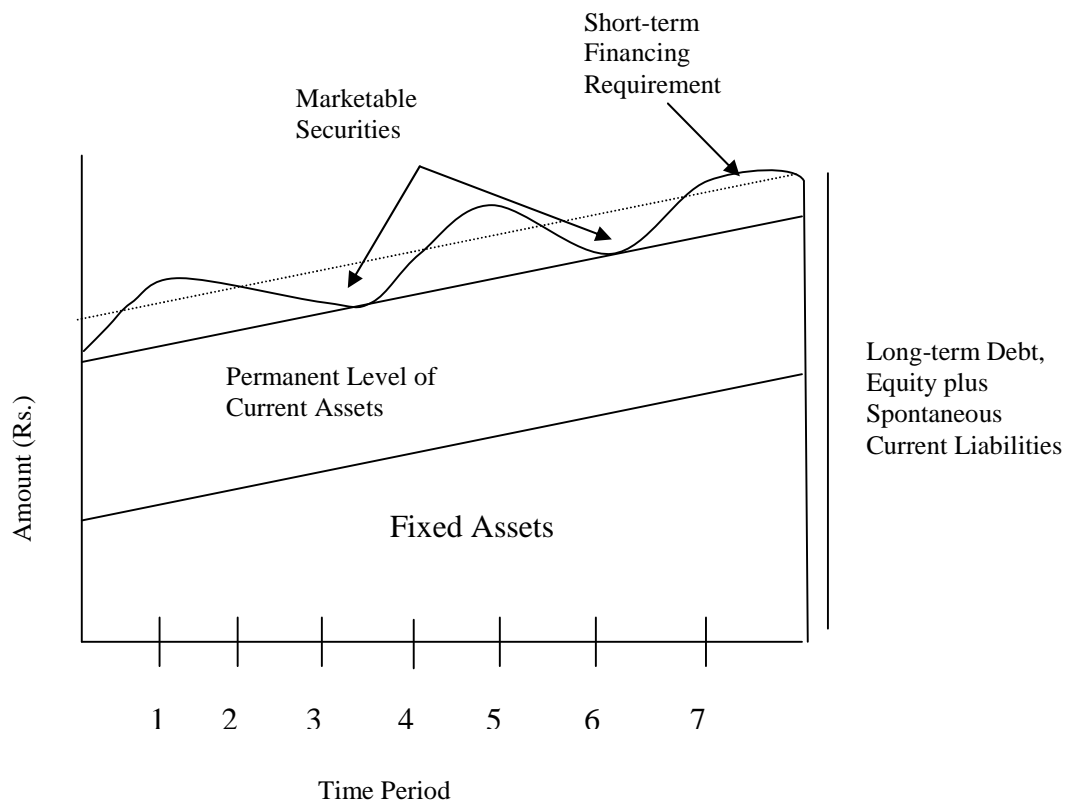


Figure-5

(Source: Weston, Besley and Brigham, Essentials of Management finance (p-347)

) 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. Figure-6 shows temporary working capital is financed by short term financing and long term by long-term financing. Thus working capital is zero under this policy.

### Moderate Financing Policy

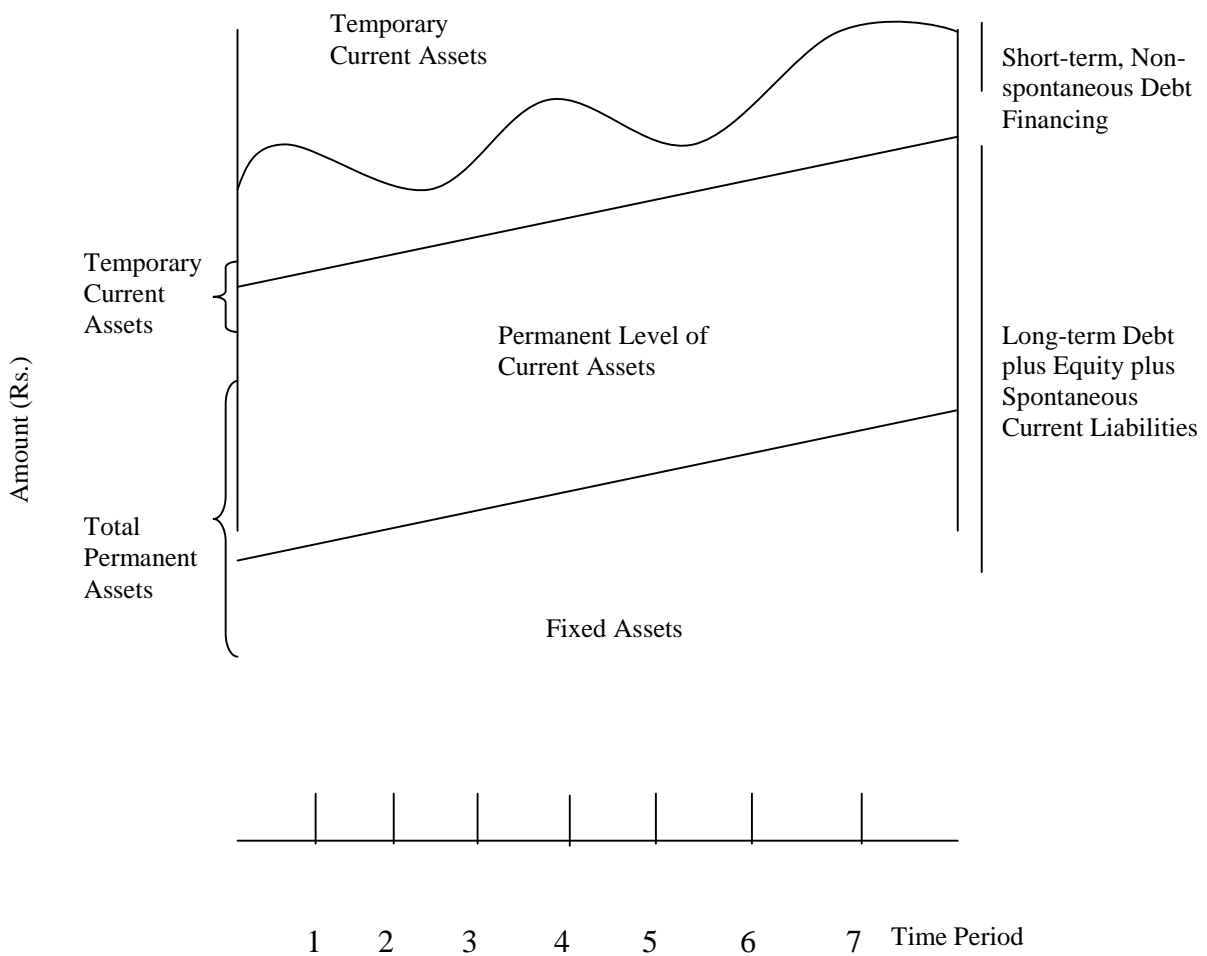


Figure-6

(Source: Weston, Besley and Brigham, Essentials of Management finance (p-347)).

#### 2.2.11 Determining the Financing Mix

A study of determining the financing mix also gives an idea of risk-return tradeoff to be achieved in working capital management. Deciding how current

liabilities should be used to finance current assets is one of the most important decisions concerning working capital management. It is necessary to understand here that short-term funds are not available to finance fixed assets, for short-term lenders generally do not lend funds for financing long-term assets. The problem is therefore whether to limit the use of long-term funds to finance long-term assets only or they should be used also to finance current assets in addition to long-term assets. Determining an appropriate financing mix is again a matter of risk return tradeoff. A number of financing mixes is available to a financial manager ranging from low-liquidity high-profitability policies to high-liquidity low-profitability policies and his job is to pick the one that properly balances profitability and liquidity. Out of them, three approaches to financing mixes of different extremes are described in the following ways:

#### Approach 1: Aggressive approach

The first approach refers to the aggressive financing mix, which is quite risky leading to high profitability and low liquidity. The approach would be to finance seasonal requirements of funds by short-term sources and permanent requirement by long term sources under this approach, the risk of technical insolvency would be high as the net working capital is a lower level. The profitability in this approach would be high as the cost of fund is low.

#### Approach 2: Conservative approach

The second approach refers to a financing mix, which is less risky leading to low profitability and high liquidity. The approach would be to finance all funds required from long-term funds. The risk is considered low here because even if the total requirement of funds actually turns out to be more, the enterprise can expect to meet it from short-term sources easily as it has been not using them.

#### Approach 3: Moderate approach

This third approach refers to a financing mix, which is neither too risky nor least risky. It lies in between a low liquidity high profitability case and a high liquidity low profitability case. In other words, this approach aims at achieving a trade off between profitability and liquidity. The actual trade off in real life would however, depend upon management's capability to take risk.

From the above discussion it is clear that higher the liquidity, lower the risk leading to lower profitability and vice-versa. Working capital management, therefore ultimately aims at achieving some sort of a risk-return tradeoff. Moreover, this kind of tradeoff would fundamentally be a matter of management's attitude towards risk.

### 2.2.12 Financing Working Capital

The firm's working capital assets policy is never set in vacuum; it is always established in conjunction with the firm's working capital financing policy. Every manufacturing concern or industry requires additional assets whether they are in stables or growing conditions the most important function of financial manager is to determine the level of working capital and to decide how it to be financed. Financing of any assets is concerned with two major factors-cost and risk. Therefore, the financial management must determine an appropriate financing mix or decide how current liabilities should be used to finance current assets.

However, a number of financing mixes are available to the financial manager. He can resort generally three kinds of financing:

➤ Long Term Financing

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

➤ Short Term Financing

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

) Trade Credit

It refers to the credit that a customer gets from suppliers of goods in the normal course of business. The buying firms have not to pay cash immediate for the purchase is called Trade Credit. It is mostly an informal arrangement and is granted on an open account basis. Another form of trade credit is bills payable. It depends upon the term of trade credit. (Van Horne, 1994, P-471)

) Bank Credit

Bank credit is the primary institution sources for working capital financing. For the purpose of bank credit, amount of working capital requirement has to be estimated by the borrowers and banks are approached with the necessary supporting data.

After availability of this data, bank determines the maximum credit based on the margin requirement of the security. The types of loan provided by commercial banks are loan arrangement overdraft arrangement, commercial papers etc.

➤ Spontaneous Financing

Spontaneous financing arises from the normal operating of the firms. The two major sources of such financing are trade credit (i.e. credit and bills payable) and accruals. Whether trade credit is free of cost or not actually depends upon the terms of trade credit. (Pradhan, 2000, page-147)

Financing manager of the firm would like to finance its working capital with spontaneous sources as much as possible. In practice, the real choice of current

assets financing is either short-term or long term sources. Hence, the financing of working capital depends upon the working capital policy, which is perfectly dominated by management attitude towards the risk return.

There are three basic approaches for determining an appropriate working capital financing mix.

### ) Matching Approach

It is also known as Hedging Approach. If the firm attempts to match assets and liability maturities, the working capital financing policy is termed as moderate (maturity matching of self liquidity) policy. Hedging approaching is a method of financing where each asset would be offset with a financing instrument of the same approximate maturity.

With the matching approach, long-term financing will be used to finance fixed assets and permanent component of current assets as well as short-term financing is used to finance temporary or variable current assets or seasonal variations in current assets. The firm's fixed assets and permanent current assets are financed with long-term funds and as the level of these assets increases, the long-term financing level increases. The temporary or variable Current Assets are financed with short-term funds and as their level increases, the level of short-term financing increases. Under matching plan, no short-term financing will be used if the firm has a fixed Current Assets need only. However, due to the uncertainty of expected lives of assets exact matching is not always possible. With a hedging approach to finance the borrowing and payment schedule for short-term financing current assets less spontaneous financing. (Van Horn & Wachowics, 2000, page-209)

### ) Conservative Approach

The financing policy of firm is said to be conservative when it depends more on long term funds for financing needs. Under a conservative plan, the firm finances its permanent assets and a part of temporary current assets with long-term financing. In the period when the firm has no need for temporary current assets, the idle long-term funds can be invested in the tradable securities to conserve liquidity. The conservative plan relies heavily on long-term financing and therefore, the firm has less risk of facing the problem of shortage of funds (Pandey, 1989, page-570).

This approach heavily rises on long term financing. Permanent capital is used to finance all permanent assets requirements or also to meet some or all of the seasonal demands (Weston & Brigham, 1996, page-348)

### ) Aggressive Approach

An aggressive policy is said to be followed when it used more short-term financing than warranted by the matching plan. Under an aggressive policy, the firm finances a part of its permanent Current Assets with short-term financing. The



relatively more use of short term financing makes the firm more risky (Pandey, 1989, page-751).

### 2.2.13 Adequacy and In-adequacy of working capital

The firm should maintain a sound working capital position. It should have adequate working capital to run its business operations. Both excessive as well as inadequate working capital positions are dangerous from the firm's point of view. Excessive working capital means idle funds, which earn no profits for the firm. Paucity of working capital not only impairs firm's profitability but also results in production interruptions and inefficiencies. The dangers of excessive working capital are as follows:

- It results in unnecessary accumulation of inventories. Thus, chances of inventory mishandling, waste, theft and losses increase.
- It is an indication of defective credit policy and slack collection period. Consequently, higher incidence of bad debts results, which adversely affects profits.
- Excessive working capital makes management complacent, which degenerates into managerial inefficiency.
- Tendencies of accumulating inventories are to make speculative profits grow. This may tend to make dividend policy liberal and difficult to cope with in future when the firm is unable to make speculative profits.
- In-adequacy of working capital is also bad and has the following dangers:
  - It becomes difficult for the firm to undertake profitable projects by non-availability of working capital funds.
  - It becomes difficult to implement operating plans and achieve the firm's profit target.
  - Operating inefficiencies creep in when it becomes difficult even to meet day-to-day commitments.
  - Fixed assets are not efficiently utilized for the lack of working capital funds. Thus, the firm's profitability would deteriorate.
  - Lack of working capital funds renders the firm unable to avail attractive credit opportunities etc.
  - The firm loses its reputation when it is not in position to honor its short-term obligations. As a result, the firm faces tight credit terms.

Therefore, Tightened management should maintain a right amount of working capital on continuous basis.

### 2.2.14 Determinants of Working Capital

There are no set rules or formulae to determine the working capital requirement of the firm. The importance of efficient working capital management is an aspect of overall financial management. Thus a firm plans its operations with adequate Working Capital requirement or it should have neither too excess nor too inadequate working capital. A number of factors affect different firm in different ways. Internal policies and environment changes also affect the working capital. Manufacturing and trading enterprises need different volume of Working Capital as compared to public utility enterprises but quantitative amounts of Working Capital need to such enterprises can hardly be set due to the following environment that affects Working Capital needs of particular enterprises:

**a) Nature and size of business**

The working capital requirement of a firm depends upon the nature and size of business. Manufacturing or trading and small or large business firm vary on requirement of working capital. Trading and small business needs less WC and vice-versa.

**b) Manufacturing cycle**

It refers to the time involved to make the finished goods from the raw materials. It has a great impact on the Working Capital needs because the shorter the manufacturing periods and efficiency in production, the lesser the need of Working Capital to finance in Working Capital and longer the production cycle the funds are tied-up.

**c) Business fluctuation**

Business fluctuation also affects the requirement of working capital. The situation whether an enterprise is operating in the boom or recession and depression period also determines the Working Capital needs of the enterprises.

**d) Production Policy**

The production policy adopted by the firm also affects its working capital requirement. The policy whether to follow uniform and level production plan or varying production plan determines the Working Capital needs of the individual enterprise. Naturally, a firm following uniform production policy requires higher amount of WC and vice versa.

**e) Credit policy and availability of credit**

Credit policy and availability of credit is another important factor that affects the working capital requirement. If funds are readily and easily available from banks with favorable conditions and the creditors provide a liberal credit terms or credit facilities as well as the firm follows conservative sales policy then such firm needs lesser amount of Working Capital and vice versa.

**f) Growth and expansion activities**

The volume of assets or sales as well as expansion activities of the enterprises has direct bearing upon the needs of Working Capital. However, it is difficult to precisely determine the relationship between the growth and expansion of

the firm needs and working capital requirement. The trend of growth is higher as well as increasing expansion activities, the higher the need of Working Capital and vice-versa.

**g) Turnover of circulating capital**

Turnover and circulating capital also affect the requirement of working capital. How frequently and rapidly the working assets are converted into cash also determines the need of Working Capital and such turnover is determined by demand and sales policy of the particular enterprise.

**h) Competitive Conditions**

It is also an important determinant that plays the vital role for determining the requirement of working capital. An enterprise dominating in the market without having keen competition may be in a favorable situation for keeping less amount of WC.

**i) Price Levels Change**

Price level changes also affect the requirement of working capital of a firm.. Generally, rising price levels will require a firm to maintain higher amount of Working Capital due to same level of current assets will need more investment when price increases. In conclusion, the implications of changing price level on working capital position will vary firm to firm depending on the nature and other relevant consideration of the operation of the concerned firms.

**j) Operating Efficiency**

It is also the important factor, influences the working capital requirements of the firm. It refers to the efficient utilization of available resources at minimum cost. Thus, financial can contribute to strong working capital position through operating efficiency. If a firm has strong and higher the operating efficiency lower will be Working Capital requirement and vice versa.

**K) Profit Margin**

The level of profit margin differs on firm to firm. It depends upon the nature and quality of products, marketing management and monopoly power in the market. If the firm deals with the high quality product and has a sound marketing management and enjoyed the monopoly power in the market then it earns quite high profit and vice-versa. Profit is the source of working capital because it contributes towards the working capital as a pool by generating more internal funds.

**L) Level of Taxes**

The level of taxes also influences working capital requirement of a firm. The amount of taxes to be paid in advances is determined by the prevailing tax regulations. But the firm's profit is not constant, or can not be predetermined. Tax liability in a sense of short term liquidity is payable in cash. Therefore, the provision for tax amount is one of the important aspects of working capital planning. If tax liability increases, it needs to increase the working capital and vice-versa.

A number of studies have been carried out concerning working capital management on different natures of manufacturing enterprises of Nepal. Some of the views and findings made by some students and professionals have been reviewed in this section. The dissertations are related to public and Pvt. Ltd. enterprises, I believe, those findings relevant in the study.

#### 2.2.15 Sources and applications of Working Capital

Generally, the sources of Working Capital are as follows:

a) Funds from operations

The major source of working capital is the funds form operation, which refer to those funds which are generated by carrying out the central operations of a business.

b) Proceeds form the sale of non-current assets

Sale of non-current assets tantamount to conversion of non-current assets to current assets and is a source of fund regardless of the fact whether the assets is sold for a gain or loss.

c) Long-term borrowing

Long-term borrowing such as issue of debentures and convertible bonds results in the increase of current assets (cash) and therefore an increase in the working capital. In case of short-term borrowing, the increase of current assets is offset by an increase in the current liability and therefore results in no change in working capital.

d) Issue of shares for cash

Issue of shares results in an inflow of current assets and is, therefore, a source. In the case of sole proprietorship and partnership concerns additional capital introduced is a source of funds.

e) Non-operating income

Incomes like dividends, interest received form operations outside the framework of the central operation of a business results in an inflow of current assets and, therefore, to be shown as a source.

#### Application of Working Capital

The Working Capital can be used in the following activities:

a) Purchase of fixed assets

The purchase of long-term assets, such as plant & equipment, land & building either reduces current assets and or increase current liabilities. Consequently, the working capital is reduced.

b) Redemption or payment of long –term debt

Repayment of short-term debt is not considered as the uses of funds, since both current assets and current liabilities are reduced by the same amount. But the payment of a long-term results in the reduction of a current assets and, is therefore, use of fund.

c) Redemption of preference share or investment made

When cash is paid to redeem preference shares or to purchase securities as investment, working capital is reduced and therefore is use of fund.

d) Loss from operations

Any loss from the operation results in more outflows of funds as compared to inflow of funds and is, therefore use of funds.

e) Payment of dividend, tax etc

Any dividend or tax amount paid in cash results outflows of current assets, therefore, an application of funds.

### Sources and Application of Funds

#### Sources

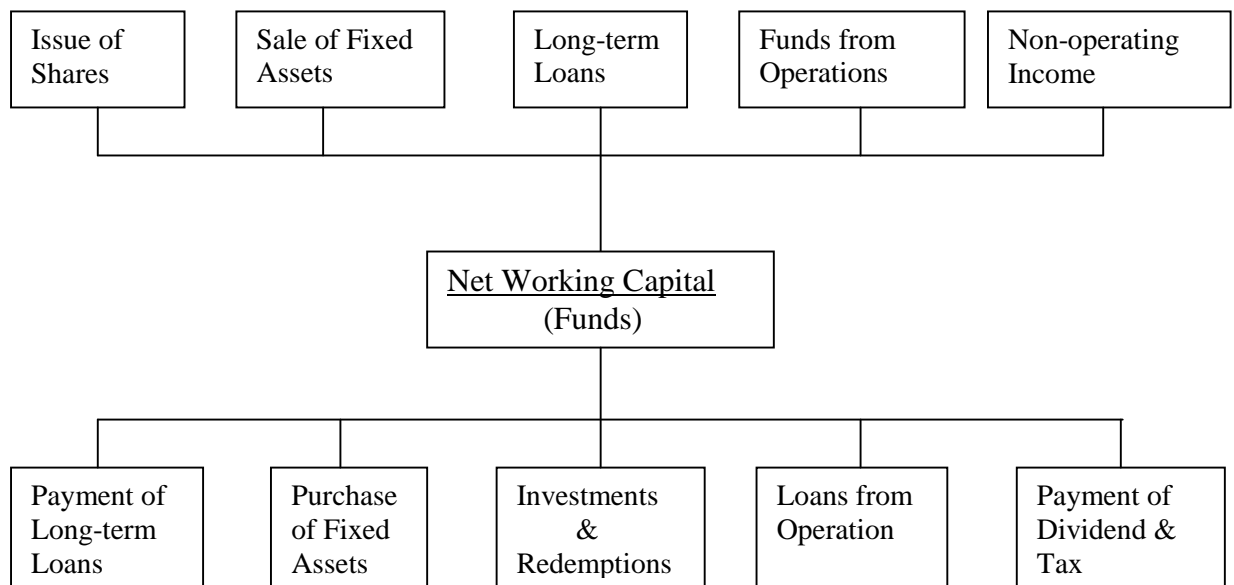


Figure-7 Applications

(Sources: Weston, Besley and Brigham, Essentials of Management Finance, page-347)

#### 2.2.16 Classification of Working Capital

Working Capital can be classified into two categories:

- ) Permanent or Fixed Working Capital
- ) Variable or Temporary or Fluctuating Working Capital

Permanent Working Capital refers to that level of Current Assets which is required on a continuous basis over the entire year. A manufacturing concern cannot operate regular production and sales functions in the absence of this portion of Working Capital. Therefore, a manufacturing concern holds certain minimum amount of Working Capital to ensure uninterrupted production and sales function. This portion of working Capital is directly related to the firm's expansion of operation capacity. (Srivastav, 1984, page-484)

Variable Working Capital refers to that portion of Working Capital, which is required over permanent Working Capital. Therefore, this portion of Working Capital depends upon the nature of firm's production; relation between labor and management. If a firm has sound management of this portion of working capital it can easily win other competitors in the cut-throat of the market.

### 2.3 Review of Journals/Articles

Articles, journals and bulletins are of great significance of thesis writing, so various published articles by different management experts and journals/bulletins relating to working capital have been considered.

With reference to this, Dr. Manohar K. Shrestha, in an article, has considered 10 Selected Public Enterprises and studied the working capital management in that Public Enterprises. He has focused on the liquidity, turnover and profitability position of those enterprises. In this analysis, he found that four Public Enterprises had excessive and the remaining four had failed to maintain desirable liquidity position. On the turnover side, two Public Enterprises had negative working capital turnover, four had adequate turnover, one had high turnover and the remaining three had not satisfactory net working capital. Six Public Enterprises were in losses out of ten Public Enterprises. Dr. Shrestha had brought certain policy issues such as lack of suitable financial planning, negligence of working capital management, deviation between liquidity and turnover of assets and inability to show positive relationship between turnover and return on networking capital. At the end, he had made some suggestive measures to overcome from the above policy issues, viz. identification of needed funds, 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.

Another article by Dr. K. Acharya<sup>10</sup> focused on working capital management of Nepal Tea Development Corporation (NTDC) for eight years from 1975/76 to 1982/83 A.D. In the study, he found that the net working capital of NTDC was negative due to increase in current liabilities. Inventory held the largest portion and it was accumulating in the corporation. The size of receivables of NTDC had also been increasing trend where as cash balance held by the corporation was insufficient

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15 Acharya, Dr. K., "The management of working capital in the PEs of Nepal", Nepalese Developments Studies, 1988

to meet the routine work of the corporation. At the same time, the liquidity position was very poor since current assets were less than the current liabilities. The turnover of inventory, receivables and current assets were below average. The break-even analysis revealed that the NTDC had been selling mostly below the break-even point. Even variable cost was higher than selling price. Dr. Acharya gave some suggestions regarding this were: proper planning of production and sales, new credit policy, action against the delinquent dealers, obtaining loans from any individual or financing institutions.

A comparative study of “problems in management of WC in Nepalese enterprise” has been conducted by Acharya states that of Nepalese enterprises the management of money and managers are found over conscious about receiving of money rather than its efficient utilization. Thus, the existing problems in the finance are mostly directed towards the management of WC rather than in any area. In his number of studies it has been repeatedly found that the gross inefficiency in the operation of public enterprises. He has stressed on high cost of production, which have left these PES in less secured position. Thus, he further added the cost of reduction is the only possible measure for smooth operation and long- term existence of the public enterprises in Nepal. The cost reduction program is highly associated with the optimization of working capital. He has focused some operational and organizational problems of Nepalese Public Enterprises not to follow traditional norm 2:1 between their current assets and current liabilities, low rate of inventory turnover, change in WC in relation to fixed capital has very low impacts over the profitability and not following conventional rule of debt to equity as 1:1, then transmutation of capital employed into sales management information, ineffective use of performance evaluation tools and techniques and WC management has never been considered a managerial job.

Similarly, he has suggested that Public Enterprises finance staff must be acquainted with the modern scientific tools used for the presentation and analysis of data. He further suggests avoiding the system of crisis decision, which prevailed frequently in their operation. They have to follow system and method for decision-making. Lastly, he has given emphasis to optimize the level of investment at a point of time. Neither excess nor lower investment of WC is desired by the management of enterprises. Both of these situations will erode the efficiency of the concern. This study is descriptive in nature. He has not used any data and research tools. The study has covered Nepalese PES (but not mentioned the name of PES). Each selected enterprise does not represent the entire industry in which it fails.

Dr. Radhe S. Pradhan<sup>11</sup> in his study aims at examining the various aspects of management of WC is selected manufacturing PES of Nepal. The specific objectives undertaken in his study are -

1. To conduct risk return analysis of liquidity of working capital position.
2. To assess the short- term financial liquidity position of the enterprises.

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<sup>11</sup> Pradhan, Dr. Radhe Shyam. “**Management of Working Capital**” (New Delhi, National Book Organization), 1986

3. To assess the structure and utilization of WC
4. To estimate the transactions demand function of working capital.

His study has mentioned the following findings:

- A. It has found that most of the selected enterprises have been activating a trade-off between risks and return there by following neither an aggressive nor a conservative approach.
- B. It has showed a poor liquidity of most of the enterprises. This poor liquidity position has been noticed as the enterprises have either negative cash flows or negative earnings before tax or they have excessive net current debts, which cannot be paid within a year.
- C. The Nepalese manufacturing PES has on an average half of their total assets in the form of current assets. Of all the different components of current assets, the share of inventories in total assets, on an average, is largest followed by receivables and cash in most of the selected enterprises?
- D. The economies of scale have been highest for inventories followed by cash and gross WC, receivables and net WC.
- E. The regressions results also show that the level of WC and its components and enterprises desires to hold depend not on a sale but on holding cost also.

His study is concerned with interrelationships that exist between managing current assets and current liabilities. The study manages to focus on net working capital concept. The study has employed ratio analysis, discriminate analysis and econometric models for its analysis. This study does not cover all the PES in manufacturing sector. Each selected enterprises does not represent the entire industry in which it fails. The manufacturing PES selected for the study differs in its working and nature. The study period covers ten years period from 1973 to 1982. He has mentioned only findings and conclusion in his study but not recommended any suggestions to solve the finding problems.

These studies show that WC management is the weakest or neglected part of financial management in most of the Public Enterprises in Nepal. It seems that Nepalese firms are following conservative approach in financing as well as in investing working capital.

The study of Smith relate to profitability versus liquidity tradeoff in working capital management. The study suggests that parallel monthly forecasts of liquidity and profitability can be useful in evaluating tradeoff between these two goals. Besides, such forecasts can also be useful in estimating the impact of certain working capital policies on those goals, and in reflecting the uncertainty of the future. The study illustrated the suggested procedures with a scenario of Smith Products, a wholesale firm. The study, however, did not employ any kind of new



methodology. It can be viewed simply as further elaboration and illustration of procedures suggested by other studies concerning working capital management.

The study by Smith discussed individual and collective effects of accounts receivable, inventories, accounts payable, and other accruals on profitability and liquidity. Based on the several assumptions made, the study mainly observed as follows for the Smith Products:

1. A tightened inventory policy reduces necessary borrowing to a lower level than does faster collection of receivables or slower payments of current liabilities.
2. Profitability increases only slightly, a result only of lower interest expenses from lower levels of needed borrowing.
3. The necessary borrowing can be reduced if receivables, payables and inventory policies are tightened.

The finding of current assets also involves a tradeoff between risk and return. A firm can choose from short or long-term sources of finance. If the firm uses more of short-term funds for financing both current and fixed assets, its financing policy is considered aggressive and risky. Its financing policy will be considered conservative if it makes relatively more use of long-term funds in financing its assets. A balanced approach is to finance permanent current assets by long- term sources and temporary current assets by short- term sources of finance.

## 2.4 Review of Dissertations

Besides review of available books and research studies, a number of studies have been made by students of MBS & MBA relating to working capital management in different Public Enterprises of Nepal. This section, hence will review some of those dissertations.

## 2.5 REVIEW OF RELATED THESIS

Here are vary few dissertation have been submitted in the topic of Profit Planning in Nepal. whatever the research in the area of profit planning have been made also not in depth and in detail. However, those researches work directly or indirectly influence the concerned authorities to adopt profit planning to improve the profitability and to fulfill the social expectations. Here, some of the research work which has been submitted in profit planning & control in the context of Nepal will be reviewed.

1. Shiv Prasad Nepal

A research paper conducted by Mr. Shiv Prasad Nepal on the topic " Profit Planning in Nepalese manufacturing & public enterprises. A case study of Lumbini Sugar Mills Limited" Submitted to central department of management, T.U. , Kathmandu, in 1995 , has the main objectives of to examine the degree of sales realization in respect to budget figure, to high light the planned production and actual trends, to examine the cost structure and to analyze the profit pattern of the company. To fulfill the objective Mr. Nepal has used both primary and secondary source of data. The time period covered by the study was 5 years from FY 2046/47 to FY 050/51. Some major findings of the study on the analysis of available data are pointed out as follows :

- A. There is no execute management planning instructions and effective communication system in Nepalese manufacturing public enterprises.
- B. Sales plan is the infrasture of profit plan other plans of profit plan depend upon sales plan but in Nepalese manufacturing public enterprises the infrastructure of profit plan is production plan.
- C. In Nepalese manufacturing public enterprises there is no detail expanses plan which is the necessary element of profit planning.
- D. In developing countries like Nepal supply side is important than demand side because the country can not fulfill the national element by internal production.

Mr. Nepal has recommended the suggestion to improve the profit plan in following:

- A. Top management should co-ordinate with all levels of management for setting goals for sub division.
- B. Sales plan is a primary plan of profit planning so it should prepare the strategic long range and tactical short range sales plan.
- C. It should prepare plan of material inventory, direct labor, variable cost and other expanses there are vital requirements of profit planning.
- D. Cost control is important in every manufacturing public enterprises, cost control is possible through standard cost technique so that the Lumbini Sugar Mills Ltd should implements the standard costing approach.

## 2. Bhim Narayan Upadhyay

Mr. Bhim Narayan Upadhyay has submitted a dissertation of the topic of " Profit Planning & control in manufacturing public enterprise of Nepal. A case study of Birgunj Suger Factory Limited". Submitted to the faculty of management central department of T.U., Kathmandu in 1998, in case of partial fulfillment of M.B.S. He has explored the data of seven years from FY 2047/48 to FY 2053/54.

Research methodology was followed through secondary sources of data for data gathering procedure. But for other essential information primary data were also used.

Mr. Upadhyay has pointed here various findings based on the analysis of data and information. Few major findings regarding to BSFL are as follows :

- A. The financial performance of manufacturing Public enterprises has quite dismal and not be hoped to improve the situation of the enterprises in near future.
- B. There is no well developed system of performance evaluation for employees and there is no fair and appropriate system of motivational enforcement to employees on the basis of their task performance.
- C. Cost volume profit relationship are not considered while developing sales plan and pricing strategy.
- D. The plan are prepared from top level and later it is communicated to the lower level.
- E. There is no adequate and clear out responsible a money various management level and departments.
- F.
- G. Major recommendation stated by Mr. Upadhyay to develop implement and improve the process of profit planning in PE from the initial stage to the end are as follows :
- H. Profit Planning manuals should be communicated from top level to lower levels.
- I. Trained and qualified manpower of budgeting and planning should be fixed and present manpower should be trained.
- J. Sales forecasting should be made on the realistic ground.
- K. The production budget should be prepared by interim time period and for responsibility centers.
- L. The statement of specific goals should be clear about the specific goals for which company and for its major sub division.

### 3. Gopi Bhandari

Mr. Gopi Bhandari has tried to point out some features and problems of profit planning in the context of Nepalese manufacturing company in his research work " A profit Planning in Nepal, A case study of Royal Drugs Ltd." submitted to the faculty of management central department of T.U., Kathmandu, in 1998, in course of partial fulfillment of MBS. He has explored the data of six years from 046/47 to 051/52. Research methodology was followed through secondary source of data for

data gathering procedure. But for other essential information primary data were also used.

Mr. Bhandari has pointed out various findings based on the analysis of data and information. Few major findings according to Mr. Bhandari are as under :

- A. Royal drug Ltd has not adequately considered controllable and non controllable variables affecting the company.
- B. Objectives are not clear, conflict between social objectives and profit objectives.
- C. They have no satisfactory achievement of specific goals that were targeted.
- D. Conflicting role due to lack of co-ordination among departmental manager in RDL.
- E. Failure in achievement due to inadequate evolution in internal & external variables.
- F. Red- tapism in decision making and implementation of profit plans and programs.
- G. Failure due to inadequate forecasting system.

Mr. Bhandari has recommended various recommendations to improve the profit planning system of Royal Drug Ltd. The major recommendations are :

- A. It seems necessary to develop implement and improve the process of profit planning from the vary beginning to the end.
- B. Cost volume profit analysis should be taken in to consideration while developing sales plan and pricing strategies.
- C. Identification and evaluation of external and internal variables is must to know the company's strength and weakness.
- D. A systematic approach to comprehensive profit planning should be adopted.
- E. Program to be improving the employee productivity should be made effective.
- F. Sales forecasting should be made on realistic basis.
- G. Trained and qualified manpower of budgeting and planning should be hired.
- H. System of periodical performance report should be strictly followed.

4. Ram Krishna Dhakal

Mr. Ram Krishna Dhakal has conducted thesis on the topic " Profit Planning in manufacturing company . A case study of Gorkhkali Rubber Udyog Limited. Submitted to the faculty of management central department of T.U., Kathmandu in 1999 , in case of partial fulfillment of M.B.S. The main objectives of the study are to analyze the effectiveness of profit planning in GRUL, to study the various budgets used by the company & to come out with the suitable suggestions and recommendations. The study covers seven years period of time from 2049/50 to 2055/56. Primary and secondary sources have been adopted through analysis he found the following major findings :

- A. GRUL has been suffered from a number of internal and external problems in formulating and implementation of profit plans and strategies.
- B. The budget maker seems to be more ambitions because of the achievement is very low.
- C. Flexible budget and CVP analysis show that the industry will be in negative profit even it utilize the hundred percent capacities.
- D. No competitor with in the country but export market is not profitable.
- E. Lack raw of material in domestic market and low productivity of manpower.
- F. Lack of strategy long range planning.
- G. Under utilization of available capacity.

Finally Mr. Dhakal has stated several recommendation to improve the performance of GRUL. The main suggestions are as follows:

- A. SWOT analysis should be defined and adopted.
- B. GRUL must restructure its capital structure and minimize the burden of high interest and bank charge in long term loans by issuing shares and refund the dept.
- C. Profit planning concept should be communicated from top to lower levels. All members of the company should be participated on planning process.
- D. Company should formulate appropriate strategic long range plan as well as tactical short range plan.
- E. Record and punishment system should be followed to motivate personnel.



# CHAPTER – THREE

## 3. RESEARCH METHODOLOGY

### 3.1 Introduction

This research methodology is followed to achieve the basic objective and goals of this research work "Research Methodology is the way to solve systematically about the research problem."<sup>21</sup>

" A statement of the purpose of research is made in the form of a problem so formulated to be tackled."

The basic objective of the present research is to high light the current practice of Working capital in manufacturing company ( Kamala Plastic Pvt. Ltd.) and focus on the relationship between performance and management system achieve these objectives.

Following are the major contexts of research methodology the course of this study.

### 3.2 Research Design

Research design is the plan structure and strategy of investigation. The design of this study is analytical as well as descriptive approaches. This study analyzes, examines and interprets different functional budgets applied as tools for Working capital in Kamala Plastic Pvt. Ltd. This research highlight the degree of application of Working Capital concept and it is mainly related with the quantitative plans and accounts of Kamala Plastic Pvt. Ltd.

### 3.3 Population and Sample

The total number of organization that manufactures HDPE is the population of this study Kamala Plastic Pvt. Ltd. is one of the leading organization of HDPE for earning foreign currency, employment generation & environmental balances. Kamala Plastic Pvt. Ltd. which is one of the oldest organization of HDPE is chosen randomly for case study purpose among the total population.

$$\text{Sample size} = \frac{n}{N} = \frac{1}{10} \times 100 = 10 \%$$

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<sup>21</sup> . Kothari C R “ Research Methodology , Methods and Technique “ New Delhi willey Eastern Ltd. 1990

### 3.4 Sources of Data

To attain the objective of this study secondary data have been uses.

Secondary data is collected from the following records.

- Publication of Kamala Plastic & official records.
- Published and unpublished documents related to Kamala Plastic.
- Report of auditor.

### 3.5 Period Covered

This study has been covered a period of 5 years from fiscal year 2060/61 to 2064/65 B.S. The strength and weakness of managerial planning and financial planning of Kamala Plastic Pvt. Ltd. are identified.

### 3.6 Data analysis Tools

The availed data from secondary sources are presented and analyzed as per required table and formats. As per requirements, such table and statistical tools are used in interpreted. Financial tools and statistical tools are used in course of this study. The financial tools used in this research works are variance analysis, cost volume profit analysis, ratio analysis and Flexible budgets and statistical tool used in this research works are mean, standard deviation, co-efficient of correlation, regression, time series, graphs tables and diagram etc.

### 3.7 Research Procedure

The following procedures have been followed for this research study :

- A. Useful secondary data are used.
- B. Selected Books, magazines are collected and explored.
- C. Data are described and explained in the light theoretical basis.
- D. The collected data are presented and arranged in tabulation forms, percentage chart, ratio analysis & BEP analysis.

### 3.8 Research Variances

This research variances of this study are mainly sales, production, inventories, capacity utilization, raw materials. profit & loss. overhead, cash Flow. capital expenditure etc. relating to long term and short term period of Kamala Plastic.

### 3.9 Research Questions



To obtain the basic objectives of this research, this study has tried to solve the following research questions.

- A. Whether the company has implemented profit planning or not ?
- B. How Working Capital system in Kamala Plastic can be improved ?
- C. What are the major problems faced by the company in developing and implementing Working Capital.

# CHAPTER – FOUR

## DATA PRESENTATION AND ANALYSIS

### **4.1 Introduction**

Working Capital is a predetermined detailed plan of action developed and distributed as guide to current operations and as a partial basis for subsequent evaluation of performance. It is a systematic approach for attaining effective management performance. Since the Working Capital is a primary purpose of Working Capital in business, then is to increase the chances of making a profit comprehensive Working Capital is a newly developed concept as a crucial way in the business organization. It is a recent phenomenon used extensively in the literature of business enterprise. Thus we can say WC is a tool which may be used by the management in planning the future course of actions and in controlling the action performance. " <sup>22</sup>

This research work is prepared to verify the present comprehensive Working Capital system applied by the Kamala Plastic Pvt. Ltd. This chapter will analyze the various functional budgets and their actual performance in comparison to budgeted amount to achieve the objectives. Working Capital is a systematic and formalized approach for accomplishing the planning, coordination and control responsibilities of management. A comprehensive Working Capital continues to be of prime importance in virtually all organization. Planning involves the control and manipulation of relevant variables ( i.e. controllable & non controllable ) and it reduces the impact of uncertainty. So that the enterprise could be saved from the chances of losses. Working Capital should exploit opportunities by using the limited resource. The heart of management's responsibility is the optimum use of limited resources by using the linear programming and it provides systematic Working Capital programme.

Generally reputed organizations prepare two types of Working Capital i.e. strategic long range Working Capital and another is tactical short range Working Capital. Kamala Plastic Pvt. Ltd. has not prepared strategic long range. Therefore this study is mainly focused on tactical short range Working Capital of Kamala Plastic Pvt. Ltd.

Long range profit plan encompasses five years time horizon and short range ( tactical ) Working Capital encompasses one year time horizon segmenting in to month, quarter & half year.

In respect to Kamala Plastic Pvt. Ltd., has no practice of preparing long range ( strategic ) Working Capital . Therefore, the analysis of long range Working Capital is limited, so the research is mainly focused on the short range ( tactical ) Working Capital of Kamala Plastic Pvt. Ltd. While developing the short range Working

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<sup>22</sup> . Gupta, S. P. , Management Accounting, Agra Sahitya Bhaawan, Delhi 1992 Page. 521.

Capital , it has no practice of segmenting annual target into monthly and quarterly basis. The fiscal year starts from 1st Shrawan to 31th Ashad.

Various functional budgets will be analyzed, comparison of budgeted target and actual results to analyze. Variance are included for analysis purpose. For study purpose, it covers the periods of five years from 2060/2061to 2064/2065 and detail analysis is made for FY 2063/64 & FY 2064/065.

#### 4.2 Defined objectives & Goals as a basic element of Working Capital.

Every organization should formulate goal or objectives because objectives are those ends which organization seeks to achieve through its existence and operations. Without setting objective and goal, no organization can move systematically and smoothly. All level of management should be well known about their enterprises goal & target. Goals and target should be communicated to lower level management, which is prime importance to achieve enterprise objective. The success or failure of an organization largely depends upon lower level management. Actually management helps to co-ordinate human efforts and enterprise's objectives to accomplish the goals by utilizing the efforts of other people.

In Nepalese manufacturing enterprise, goals and objectives are established in informal way. Most of people working in the organization have very little knowledge about their company's situation, goals and objectives. In such condition, effective planning can not be formulated. In absence of effective planning, it will be impossible to run business successfully.

So far Kamala Plastic is concerned, basic objectives of the organizations are as follows :

1. To produced high density polythine pipe ( in place of galvanise Iron pipe ).
2. To substitute import of such product.
3. To earn foreign currency.
4. To make country self dependent in plastic pipe production.
5. To create opportunity of employment.

Through, Kamala Plastic Pvt. Ltd. has not clearly defined and specified its main objectives in annual goals or targets such as share of market, growth rate, profit margin, return on investment etc. More ever, there is no clear cut and transparent policies and strategies to fix out their specifies goals and targets.

#### 4.3 Sales Budget / Plan

Sales plan provides basic management decisions about marketing & based on those decisions, it is an organized approach for developing a comprehensive sales plan. Preparation of sales plan is first & important step in developing the over all Woking Capital process of a firm. Sales are the primary source of cash & all other

functional budgets/ plans are prepared on the basis of sales plan. All business operations are directly linked with the sales plan thus sales plans should be realistic. A plan of operation must necessary be built around the activity of volume of business that can reasonably be expected during the specific periodic covered by the Workings.

The sales plan is the foundation for periodic planning in the enterprises. Most of the operational aspects including manpower requirements materials, cash etc. depend upon the volume of sales. Sales plan is prepared on the basis of sales plan involve the following four interrelated steps (a) The sales forecast (b) The marketing plan (c) The advertising & promotion budget (d) The selling expenses budget.

The major responsibility of preparation of sales budget goes to sales manager but chief executive should also participate in this complex process. As, we knew, sales price & sales volume are mutually inter-related with each other. So, suitable pricing strategy must be considered in the sales plan.

#### 4.3.1 Sales Plan in Kamala Plastic

Kamala Plastic is a HDPE pipe manufacturing company. There is no practice of preparing the long range as well as short range sales plan effectively. They prepare only short range sales plan in annual figure in rough way and it is not segmented in quarterly and monthly basis. Management of Kamala Plastic has little knowledge about budgeting. Generally how much they produce in the factory, they try to sell them through direct contact with third party. Initially concerned ministry of HMG determined its (product) price but these days plastic pipe producer's association is determining the price. It means while fixing the price, cost of production and market research is not considered. Not only this, analysis of cost volume profit relationship is followed. Kamala Plastic accepts the determined by plastic pipe producer's association.

The following table shows sales plan & achievement.

Table No. 1

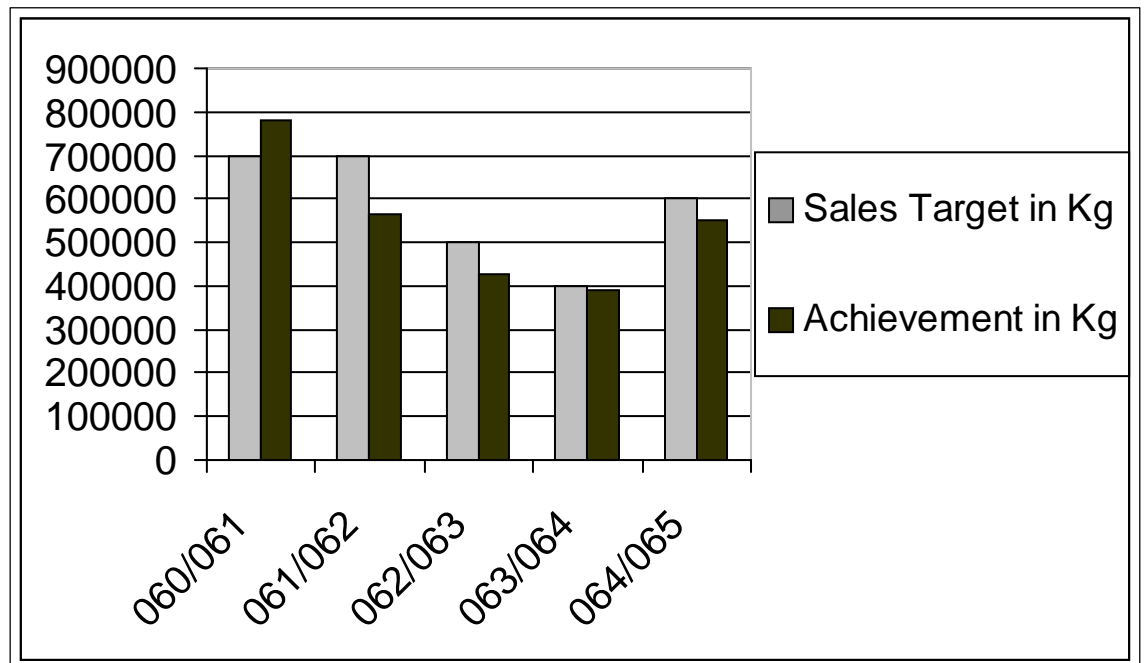
Fiscal Year	Sales Target ( Kg )	Achievement (Kg )	Percent
2060/061	7,00,000	7,80,025.420	111.43%
061/062	7,00,000	5,63,634.161	80.52%
062/063	5,00,000	4,25,205.953	85.04%
063/064	4,00,000	3,92,434.899	98.11%
064/065	6,00,000	5,51,263.180	91.88%

The above table shows that FY 2060/61 actual achievements are higher than the target sales but in FY 2061/62, 2062/63, 063/64 & 064/065 actual achievements

are lower than target sales. By the analysis of the above table it is said that target are not based on historical data. The gap between actual and target sales figure is fluctuating year by year. In FY 2061/62 the actual achievement was 111.43% while in FY 2062/63 the actual achievement was 80.92% based on budgeted sales of corresponding year. Such large gap indicates weak point of planning. It means target are not fixed according to last year performance and market research, sometimes target is made with pessimistic way and same times with optimistic way. All these prove that management of Kamala Plastic does not follow modern management tool of planning.

The above gap between target sales and actual achievement can be presented in the graph.

Graph :- 1



The above graph shows that the trend of sales target & sales achievement is fluctuating. Because of indefinite fluctuating nature of sales trend it is impossible to project the future potential sales.

To find out the nature of variability arithmetic mean, standard deviation, coefficient of variation and correlation of the budgeted and actual sales figure of Kamala Plastic are calculated. The detail calculation of those is shown in appendix - 2.

Summarizing the result from Appendix - 2.

	<b>Target Sales ( x )</b>	<b>Sales achievement ( y )</b>

Mean ( X )	5,80,000	5,42,512.72
Standard Deviation	1,16,619.04	1,36,542.45
C.V.	20.11 %	25.17%
Correlation ( r )	0.8492	
P E ( r )	0.0841	
6 time PE ( r )	0.5046	

By the analysis of mean standard deviation & coefficient of variation ( C.V.) it can be said that target sales is less variable, more stable, more uniform than of actual sales. Since the coefficient of variation of target sales is less than that of actual. It proves that target sales are fixed with considering actual past sales and actual market situation. It also signifies that Kamala Plastic is following budgeting procedure properly.

To find out the correlation of coefficient between budgeted sales & actual sales, Karl Pearson's Coefficient of correlation (r) is determined. For this purpose target sales figures (X) are assumed to be independent variable & actual sales (Y) are assumed as dependent variable. The value of r always lies between -1 to +1 . When r =1, it means there is perfect positive correlation between budgeted sales and actual sales. When r = -1, it means there is perfect negative correlation between budgeted sales and actual sales. When r = 0, it means there is no relationship between two variables. Here the value of r= 0.8492, it means there is positive correlation between budgeted sales and actual sales. The test of significance of the value of r can be tested by the help of probable error. Here, the value of six times probable error P(E) = 0.5046. Here the value of coefficient of correlation is greater than the value of six times probable error ( 0.8492 > 0.5046 ) . Therefore it can be concluded that the value of r is significant. So, it may be concluded that there is significant relationship between budgeted sales & actual sales.

A regression line also can be fitted to show the degree of relationship between target sales and actual sales.

So, the regression line of achievement (y) on targets (x) or y on x as under :

$$(y - \bar{y}) = r \cdot \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

From Appendix 2 ,We have

$$\bar{\Sigma}_x = 1.1662$$

$$\bar{\Sigma}_y = 1.3654$$

$$r = 0.8492$$

$$\bar{x} = 5.8$$

$$\bar{y} = 5.4251$$

Regression Line Y on X

$$y - 5.4251 = \frac{0.8492 \times 1.3654}{1.1662} (x - 5.8)$$

$$1.1662$$

$$\text{or, } y - 5.4251 = \frac{1.1595}{1.1662} (x - 5.8)$$

$$1.1662$$

$$\text{or, } y - 5.4251 = 0.9942 (x - 5.8)$$

$$\text{or, } y - 5.4251 = 0.9942 x - 5.7663$$

$$\text{or, } y = 0.9942 x - 5.7663 + 5.4251$$

$$y = 0.9942 x - 0.3412$$

Given the value of x (target sales) the expected achievements of sales can be ascertained.

To analysis the trend of actual sales and to estimate the possible future sales for a given period of time, we can use another statistical tool called square method. A straight line trend by this method will show the relationship between time or years and actual sales of the relevant years. In this method, it is assumed that the sale is consistently changed with the change in time and such change can be expressed by the components of time series. Five years data ( 060/061 to 064/065 ) are taken into consideration to abstract the required value to fit the straight line trend. To fit the straight line trend the time factor is considered as independent variables (x) and actual sales are considered as dependent variables (y). Then the straight line trend by the least squares method for actual sales upon time is expressed by equation:

$$Y = a + bx \text{ where } x \text{ is the time.}$$

Table No. – 2

<b>FY</b>	<b>Actual sales in kg ( y)</b>	<b>X</b>	<b>x<sup>2</sup></b>	<b>Xy</b>
060/06	7.80025420	3.54819467	12.58968542	27.67682044
1	5.63634161	1.38428208	1.916236877	7.80228669
061/06	4.25205953	0	0	0
2	3.92434899	-0.32771054	0.107394198	-1.28605053
062/06	5.51263180	1.26057227	1.589042448	6.94907078
3				
063/06				
4				
064/06				
5				
N = 5	y = 27.1256361 3	x= 5.86533848	x <sup>2</sup> = 16.20235894	xy= 41.1421273

To find out the value of a and b.

$$\text{Where , } a = \frac{\sum y}{N} = \frac{27.12563613}{5} = 5.42512723$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{41.1421273}{16.20235894} = 2.53926773$$

Substituting the value of a and b in Straight line trend equation.

$$Y = a + b x$$

$$Y = 5.42512723 + 2.53926773 x$$



This trend line shows the positive figures of sales, which means the sales will increase by 2,53,926.773 Kgs in the next year.

Fiscal year 060/061 is assumed as base year. Therefore the value of x in FY 060/061 is zero. x is calculated by subtracting the figures of FY 060/061 from each year's actual sales (  $x = y - 4.25205953$  ).

Following points can be pointed out based on the sales analysis.

1. Kamala Plastic does not prepare long term sales plan. Only short term sales plan is prepared on the annual basis.
2. While fixing the price, BEP analysis & cost of production is not seriously considered.
3. There is large gap between budgeted sales and actual sales in FY 061/062.
4. There is positive correlation between budgeted sales & actual sales.
5. The straight line trend shows the increasing trend of sales in future.
6. KamalaPlastic does not have experts and skilled planners. The management of KPPL has in adequate knowledge of budgeting.

#### 4.4 Production Budget

After completing sales budget, production budget is prepared. Preparation of production budget is the second step in developing Working Capital. Production budget specified the planned quantity of goods to be produced in the budgeted periods to meet budgeted sales and planned inventory level. Actually production budget fully depends upon sales budget & inventory policy. Planned capacity also should be considered while developing production budget . The responsibility of preparing production budget goes to production manager. We can understand the production planning mathematically as under :

Production Unit = Planned sales + Final inventory - Initial inventory.

##### 4.4.1 Production Budget in Kamala Plastic

There is no effective preparation of long range and short range production plan. Generally Kamala Plastic only prepares short range production plan for coming year in annual figures. There is no provision of segmenting annual figure in to half yearly, quarterly or monthly. General manager prepares production budget with the

half of production section. In Kamala Plastic, General manager & production manager is same. While preparing production budget neither sales budget is considered nor inventory policy or inventory level is considered. There are no hard and fast rules regarding production & inventory. Plant capacity is another factor in production budget. Kamala Plastic has sufficient capacity ( 2400 MT ) to meet production target but it is not utilizing its capacity due to market.

The following table shows the production target achievement ( Capacity utilization : 2400 MT )

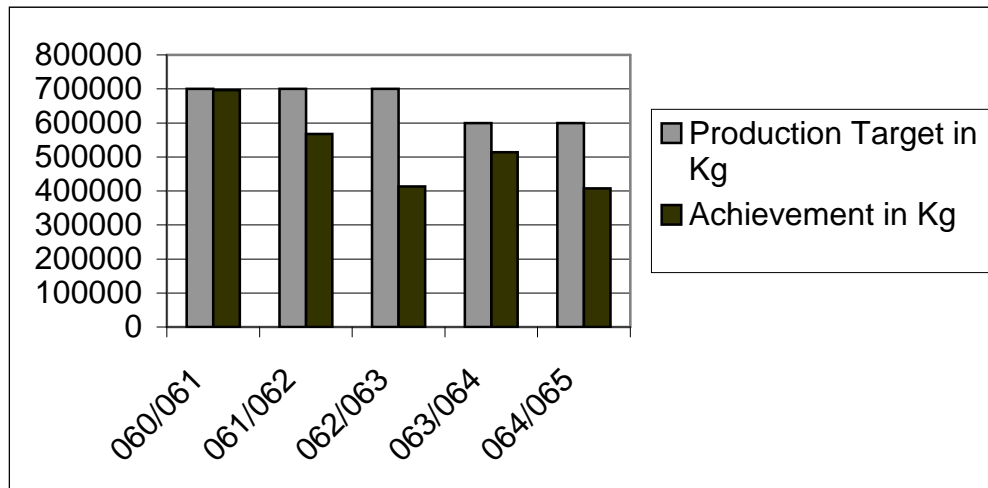
Table No. – 3

<b>F Y</b>	<b>Production Target in Kg</b>	<b>Percent</b>	<b>Achievement In Kg</b>	<b>Percentage</b>
060/061	7,00,000	29.16	6,96,725.00	99.53 %
061/062	7,00,000	%	5,67,967.00	81.14 %
062/063	7,00,000	29.16	4,13,240.62	59.03 %
063/064	6,00,000	%	5,14,205.00	85.70 %
064/065	6,00,000	29.16	4,07,434.00	67.91 %
		%		
		25.00		
		%		
		25.00		
		%		

The above tables shows the percentages of achievement of target fluctuating in year by year. This is due to fluctuating nature of sales achievement is below than budgeted production. The actual achievement ranges from 59.03 % to 99.53 % of budgeted production. All these indicate poor situation of planning . On the other hand, capacity utilization percentage is not satisfactory. It is very low. It means fixed assets are not fully utilized which increases fixed cost.

The target & achievement of production of five years can also be shown through the help of graph.

Graph No. 2



To find out the nature of variability of production budget & achievement of different years, arithmetic mean, standard deviation, coefficient of variations and coefficient of correlation should be calculated. The detail calculation is shown in appendix - 3.

Summarizing the results from Appendix - 3

	<b>Budgeted production in Kg</b>	<b>Actual Production In Kg</b>
Mean	6,60,000.000	5,19,914.324
S. D.	48,989.795	1,07,363.656
C.V.	7.42 %	20.65 %
Correlation ( r )	0.4494	
P.E. ( r )	0.2407	
6 time PE ( r )	1.4442	

The above analysis shows that coefficient of variation is lower in budgeted production than that of actual production. It means the nature of variability is more in actual production than in budgeted production.

To find out the correlation between target figures and actual figures, Karl Pearson's coefficient of correlation ( r ) is determined. For this figures ( x ) are assumed to be independent variable and achievement figures of production ( y ) are assumed to be dependent variable. Here, Karl Pearson's coefficient of correlation ( r

= 0.4494 ) indicates that there is normal positive relationship between budgeted Production & actual production . The test of significance of the value of r can be calculated by probable error of relationship between target & actual production. Here the value of six times P.E.(r) = 1.4442. Coefficient of correlation is less than the value of six times probable error ( 0.4494 < 1.4442 ). It means value of r is not significant. So, it may be concluded that there is no significant relationship between budgeted production and actual production.

A regression line also can be used to find out the relationship between targeted and achieved production. For this purpose achievements ( Actual ) have been assumed to be dependent upon targets. So, the regression line of achievement ( y ) on targets ( x ) or y on x is as under :

$$(y - \bar{y}) = r \cdot \frac{\Sigma y}{\Sigma x} (x - \bar{x})$$

From Appendix 3 ,We have

$$\Sigma x = 0.4899$$

$$\Sigma y = 1.0736$$

$$r = 0.4494$$

$$\bar{x} = 6.6$$

$$\bar{y} = 5.1991$$

$$(y - \bar{y}) = r \cdot \frac{\Sigma y}{\Sigma x} (x - \bar{x})$$

$$\text{or, } y - 5.1991 = 0.4494 \times \frac{1.0736}{0.4899} (x - 6.6)$$

$$\text{or, } y - 5.1991 = \frac{0.4825}{0.4899} (x - 6.6)$$

$$\text{or, } y - 5.1991 = 0.9849 (x - 6.6)$$

$$\text{or, } y - 5.1991 = 0.9849 x - 6.5003$$

$$\text{or, } y = 0.9849 x - 6.5003 + 5.1991$$

$$y = 0.9849 x - 1.3012.$$

Given the value of x ( target production ) the expected achievement of production can be ascertained.

Time element is an another important factor, which determine the future production. This time production relationship can be expressed in terms of a straight line trend by least squares method.

Table No. – 4

Fitting the straight line trend by the method of Least Squares Method.

<b>Fiscal Year</b>	<b>Actual Prod. in Kg ( y )</b>	<b>x</b>	<b>x<sup>2</sup></b>	<b>Xy</b>
060/061	6.96725	2.8348438	8.03633937	19.7510655
061/062	5.67967	1.5472638	2.39402526	8.78794779
062/063	4.1324062	0	0	0
063/064	5.14205	1.0096438	1.01938060	5.1916389
064/065	4.07434	-0.0580662	0.00337168	0.23658144
N = 5	y = 25.9957162	x = 5.3336852	x <sup>2</sup> = 11.4531169	xy = 33.4940707

To find out the value of a and b.

$$\text{Where , } a = \frac{\sum y}{N} = \frac{25.9957162}{5} = 5.19914324$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{33.4940707}{11.4531169} = 2.92445025$$

Substituting the value of a and b in Straight line trend equation.

$$Y = a + b x$$

$$Y = 5,19,914.324 + 2,92,445.025 x$$

This trend line shows the positive figures of production, which means the production will increase by 2,92,445.025 Kgs in the next year.

Fiscal year 060/061 is assumed as base year. Therefore the value of x in FY 060/061 is zero. X is calculated by subtracting the figures of FY 060/061 from each year's actual production (  $x = y - 4.1324062$  ).

Following points can be pointed out based on the production budget.

1. KPPL does not prepare long term production budget. It only prepare short term production budget in annual figure.
2. The production budget is prepared based on sales budget.
3. The percent of production achievement is not satisfactory. Generally achievement is less than target.
4. Production target is more variable than actual production.
5. There is normal positive relationship between production budget and actual budget.
6. The actual production is less variable than actual sales.

#### 4.4.2 Relationship between actual sales & actual production

Production plan or budget is prepared on the basis of sales budget. So, it is necessary to analyze whether production meets sales or not. So, it is significant to analyze the relationship between sales and production.

The following tables shows the actual sales and actual production of Kamala Plastic for the past five years.

Table No. – 5

F Y	Actual sales in Kg	Actual production in Kg
060	7,80,025.420	6,96,725.00
/061	5,63,634.161	5,67,967.00
061	4,25,205.953	4,13,240.00
/062	3,92,434.899	5,14,205.00
062	5,51,263.180	4,07,434.00

/063		
063		
/064		
064		
/065		

The above table shows the actual production & actual sales are nearly similar. To find out the nature of variability, mean, standard deviation & coefficient of correlation are calculated. The detail calculations are shown in appendix - 4.

Summarizing the results from Appendix - 4.

	<b>Actual sales in Kg</b>	<b>Actual Production in Kg</b>
Mean	5,42,512.7226	5,19,914.324
S.D.	136542.446455	1,07,363.656423
C.V.	25.17 %	20.65 %
Correlation coefficient ( r )	0.7557	
P.E. ( r )	0.1294	
6 times PE ( r )	0.7764	

The above result shows that the coefficient of variation ( C.V. ) of actual sales is greater than that of actual production. Therefore, an actual sale has the nature of more variability than actual production.

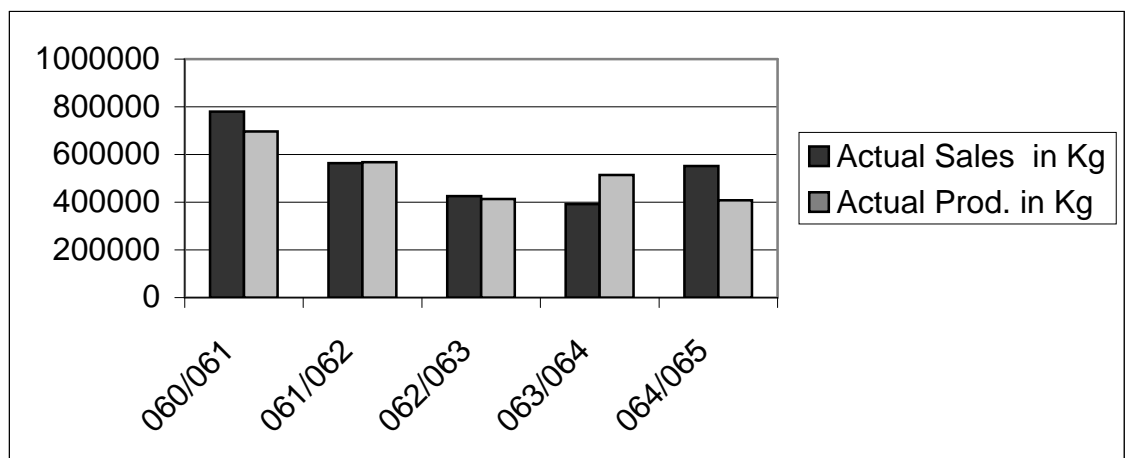
If the sale is high then production should be high to meet the demand of higher sales. So, actual sales and actual production should be positively correlated. To find out such relationship, coefficient of correlation is calculated. After calculating the Karl Pearson's coefficient of correlation, it can be examined whether

there is positive correlation between actual sales and actual production or not. The detail calculation of coefficient of correlation is shown in Appendix - 3 in which actual sales is assumed to be independent variable denoted by x and actual production is assumed to be dependent variable denoted by y.

From the detail calculation, the value of  $r$  ( 0.7557 ) shows that there is high degree of positive correlation between actual sales and actual production. The calculated value of  $r$  is significant because the calculated value of  $r$  ( 0.7557 ) is less than the value of six times probable error ( 0.7764). So, it may be concluded that there is no significant relationship between actual sales ( x ) and actual Production ( y ).

The data of actual sales and actual production can be plotted in the graph.

Graph No. 3



This figures proves that there is no any trend either increasing or decreasing of actual production and actual sales. And also indicates that there is small gap between actual sales & actual production.

#### 4.5 Inventory Budget

Every Management should maintain certain level of inventory for smooth sales activities. Inventory includes raw material, work in progress and daily consuming goods. Finished goods inventory is the cushion between sales and production. When sales exceeds production then inventory is used for sales and the level of inventory is decreased and on the other hand when production exceeds sales then the excess production is kept into store hence the level of inventory is increased. Different companies have different inventory policies according to their nature. Generally inventory level of product depends upon the production process marketable season of the product. Storability of the product etc .

There are some policies in maintaining inventory.

- (i) Unstable inventory policy v/s Stable production policy.
- (ii) Stable inventory policy v/s Unstable production policy.



(iii) Flexible in both policy & Production.

There are some consideration in setting inventory policies for material & parts.

(i) Timing & quantity & manufacturing needs.

(ii) Economies in purchasing through quantity discount.

(iii) Availability of material & parts.

(iv) Lead time ( order & delivery )

(v) Permissibility of material & parts.

(vi) Store facility needed.

(vii) Capital requirements to finance inventory.

(viii) Cost of storage.

(ix) Risk involved in inventories.

(x) Opportunity costs.

The following table shows the inventory position of Raw material & Finished goods of Kamala Plastic Pvt. Ltd.

Raw Material

Table No. - 6

F Y	Opening Inventory		Closing Inventory	
	Kgs	Cost in Rs	Kgs	Cost in Rs

<u>2060/061</u>				
HDPE Granules	3,62,911.46	2,25,86,565.25	1,55,469.56	1,06,52,774.25
PVC Granules	1,800.00	2,06,912.25	1,800.00	2,06,912.25
Master Batch	-	-	-	-
Total	3,64,711.46	2,27,93,477.50	1,57,269.56	1,08,59,686.50
<u>2061/062</u>				
HDPE Granules	1,55,469.56	1,06,52,774.25	1,10,890.00	73,37,591.30
PVC Granules	1,800.00	2,06,912.25	1,800.00	2,06,912.25
Master Batch	-	-	5,035.00	5,66,146.65
Total	1,57,269.56	1,08,59,686.50	1,17,725.00	81,10,650.20
<u>2062/063</u>				
HDPE Granules	1,10,890.00	73,37,591.30	36,605.20	22,88,557.10
PVC Granules	1,800.00	2,06,912.25	1,800.00	2,06,912.25
Master Batch	5,035.00	5,66,146.65	-	-
Total	1,17,725.00	81,10,650.20	38,405.20	24,95,469.30
<u>2063/064</u>				
HDPE Granules	36,605.20	22,88,557.10	681.95	46,154.38
PVC Granules	1,800.00	2,06,912.25	1,800.00	2,06,912.25
Master Batch	-	-	825.00	1,02,052.50
Total	38,405.20	24,95,469.30	3,306.95	3,55,119.13
<u>2064/065</u>				
HDPE Granules	681.95	46,154.38	41,907.50	38,30,313.51
PVC Granules	1,800.00	2,06,912.25	1,800.00	2,06,912.25
Master Batch	825.00	1,02,052.50	-	-
Total	3,306.95	3,55,119.13	43,707.50	40,37,225.76

## Finished Goods

Table No. - 7

F Y	Opening Inventory		Closing Inventory	
	Kgs	Rs	Kgs	Rs
060/061	1,37,506.468	1,12,56,279.46	54,206.480	48,57,946.02
061/062	54,206.480	48,57,946.02	58,539.319	50,03,355.59
062/063	58,539.319	50,03,355.59	46,573.986	38,72,626.94
063/064	46,573.986	38,72,626.94	69,721.067	59,86,948.02
064/065	69,721.067	59,86,948.02	32,662.886	35,19,426.07

The above tables shows that the closing inventory of KPPL has been fluctuated year by year. It has been fluctuated from 32,662.886 Kgs to 69,721.067 Kgs in the study period. It is clear that KPPL is unable to reduce the inventory in FY 61/62 as compared to FY 60/61, total closing stock in FY 61/62 is 69,721.067 Kgs whereas the total stock in FY 060/061 was 46,573.986 Kgs. The inventory is increased by 49.69 % than FY 60/61. KPPL neither follows any appreciate inventory policy nor coordinates among production, purchasing & sales department.

### 4.6 Capacity Utilization

Kamala Plastic Pvt. Ltd. is facing so many problems of under utilizing its available capacity. Management looks very indifference about capacity utilization where as cost of production broadly depends upon the utilization of capacity. Cost of production will be lower at optimal level of capacity utilization.

Following tables shows the trends of capacity utilization of Kamala Plastic Pvt. Ltd.

Table No. - 8

( Production capacity 2400 M. Ton. )

Fiscal Year	Capacity Utilization in Kgs	Capacity Utilization in Percentage
060/061	6,96,725.00	29.03 %
061/062	5,67,967.00	23.66 %

062/063	4,13,240.62	17.22 %
063/064	4,07,434.00	16.98 %
064/065	5,14,205.00	21.42 %

The above tables shows that more than 70 % capacity has been idle. It means investment on fixed cost has been idle which creates serious adverse impact in their profit position. The trend of capacity utilization is fluctuating in each year. In FY 062/063 capacity utilization is 16.98 % but in 2060/061 capacity utilization is 29.03 % which indicates very poor knowledge about profit planning. To improve profitability of Kamala Plastic Pvt. Should strictly follow Working Capital technique.

#### 4.7 Raw material purchase Budget of KPPL

After preparing production budget raw material purchase budget is prepared. Raw material purchase budget is developed in order to fix the quantity and amount of raw material for the budgeted periods to meet the target production. Purchase of raw material fully depends upon budgeted production & policy of closing inventory of raw material.

The following formula should be used to determine material requirements for the planned period.

Raw material required for Production = Production units X required unit of raw material for each unit of period.

Responsibility of preparing raw material budget goes to purchasing manager, he should prepare the budget very seriously because more than 50 % of production cost covers by raw material purchase which affects profit position of the organization. To determine raw material purchase unit, we can use following formula.

Raw material purchase unit = Raw material requirements + Closing inventory of raw material – Opening inventory of raw material.

Preparation of raw materials budget plans the prime importance in profit planning. KPPL does not prepare raw material budget. It only records the cost of raw material purchase in profit & loss a/c by material types. The following table shows the quantity and amount of raw material purchase from FY 2060/061 to FY 064/065.

#### Raw Material Purchase Trends of KPPL

Table No. – 9

Fiscal Year	HDPE Granules		Master Batch	
	Kgs	Rs.	Kgs	Rs.
060/061	5,61,000	3,84,38,897.40		
061/062	5,44,975	3,60,61,119.30	5035.00	5,66,146.65
062/063	3,42,000	2,13,80,628.80	353.20	59,661.00
063/064	3,78,500	2,56,17,399.22	1,000.00	1,23,700.00
064/065	5,65,750	5,17,12,004.58	550.00	48,400.00

By the analysis of above table, it is clear that Kamala Plastic Pvt. Ltd. does not prepare material purchase budget nor adopts any inventory policy. Raw material purchase of Kamala Plastic Pvt. Ltd. is fluctuating year by year. Purchase of HDPE granules in FY 61/62 is 3,78,500 Kgs where as in FY 062/063 it is 5,65,750 Kgs. It all proves that KPPL has no knowledge about material purchase budget. So purchasing manager of Kamala Plastic Pvt. Ltd. should determine economic order quantity and should prepare material budget to improve their profit position.

#### 4.8 Direct Labor Budget

The direct labor budget should be prepared by responsibility centers for the annual profit plan. Direct labor cost include all expenditure for employees, Top executives, Middle management, Staff officer, Supervisor and skilled or unskilled labors. Direct labor is calculated by multiplying the units produced and estimated labor hours for each units. After determining total labor hours required labor cost is calculated by multiplying the labor hours and wage rate/hours.

Planning and controlling direct labor cost refer the area of Personnel needs recruitment, training, Job description and evaluation, performance evaluation, union negotiations and wages and salary administration.

Kamala Plastic Pvt Ltd. does not prepare direct labor budget. 181 male employees are working in it as a permanent staff. As per requirement. Other temporary staffs are hired. Permanent staff is paid salary as monthly basis and temporary staffs are paid daily wages. Wages and salaries are treated in three ways. They are ( i ) Manufacturing wages ( ii ) Administrative staff salary ( iii ) Selling & distribution staff salary.

The following table shows the actual manufacturing wages for labor of previous years.

Table No. – 10

<b>Fiscal Year</b>	<b>Actual Manufacturing Wages ( Rs. )</b>
--------------------	---

060/061	45,52,215.25
061/062	43,21,923.75
062/063	37,96,190.52
063/064	42,76,261.27
064/065	37,42,292.50

The following table shows the actual administrative staff salary and Selling & Distribution Staff salary of previous years.

Table No. – 11

<b>Fiscal Year</b>	<b>Actual Administrative Staff Salary ( Rs. )</b>	<b>Actual Selling &amp; Distribution Staff Salary ( Rs. )</b>
060/061	19,59,303.00	13,19,295.00
061/062	19,10,252.00	13,85,215.00
062/063	19,52,222.00	13,60,400.00
063/064	20,38,970.00	13,20,860.00
064/065	21,16,265.00	14,00,750.00

#### 4.9 Overhead Budget

Expenses Working Capital is not reduction of cost but it means better utilization of limited resources. Overhead budget should be focus on the relationship between expenditure and benefits derived from those expenditures.

Knowledge of cost behavior is essential in cost Working Capital . There are three types of expenses :- ( i ) Fixed expenses ( ii ) Variable expenses ( iii ) Semi variable expenses. Moreover, expenses can be divided in to controllable. Expenses budget should be developed separately for each responsibility center and by interim periods.

Overhead budget can be divided into three types.

- ( i ) Production overhead Budget
- ( ii ) Administrative expenses Budget
- ( iii ) Selling & Distribution Budget.

#### 4.9.1 Production Overhead Budget

Generally the expenses incurred in production process are known as production overhead or factory overhead. In factory overhead both variable and fixed expenses are included . Factory overhead budget should be based on Production Budget.

The following table shows the production overhead expenses of KPPL.

Table No.- 12

<b>Fiscal Year</b>	<b>Actual Production Overhead Expenses ( Rs. )</b>
060/061	88,75,010.37
061/062	51,88,995.39
062/063	35,07,692.57
063/064	31,01,706.76
064/065	35,18,448.15

According to the above table the actual production overhead expenses are fluctuating in each year. There is no specific trend i.e. increasing or decreasing in production overhead expenses. This cost is directly related with production quantity.

Kamala Plastic Pvt. Ltd. fixes the annual expenses in rough way and there is no practice to divide these expenses in to production, administrative, Selling & distribution.

The detailed Production Over head for FY 060/061 & 064/065 are presented below :

Table No. – 13

Element of Cost	F Y 061/062	F Y 062/063
	Rs.	Rs.
Electricity & water charge	21,64,519.32	26,87,357.35
Land & House rent	1,93,507.80	1,93,507.80
Generator expanses	6,65,466.17	6,02,855.00
Insurance	10,215.00	8,550.00
Medicine ( Labor )	15,015.50	16,010.00
Miscellaneous	12,528.20	10,168.00
<b>Total</b>	<b>31,01,706.76</b>	<b>35,18,448.15</b>

Above tables shows the total production overhead expanses incurred to produce 5,14,205.00 Kgs of polythine pipe for the FY 061/062 and 4,07,434.00 Kgs in FY 062/063. Total production overhead expanses incurred in 061/062 and 062/063 are Rs. 30,61,251.99 and Rs. 35,18,,448.15 respectively. Kamala Plastic Pvt. Ltd. does not prepare production overhead expanses budget so, it is difficult to compare actual & budgeted overhead.

#### 4.9.2 Administrative Expanses Budget

Administrative expanses are related to those expanses which incurred in administration department. In the other words, Administration expanses means those expanses other than manufacturing and selling & distribution expanses. Mostly administrative expanses are fixed in nature. More or less, these expanses do not change as per production volume. However, Kamala Plastic does not prepare administrative expanses budget.

The following tables shows the actual administrative expanses of previous year.

Table No. - 14

Fiscal Year	Total Administrative Expanses ( Rs. )
060/061	54,48,184.28
061/062	32,22,582.27
062/063	32,84,999.78
063/064	31,89,642.27



064/065	34,02,856.29
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The detailed Administrative Expenses incurred in FY 2061/062 and 062/063 are presented below :

Detailed Administrative Expenses

Table No. - 15

SN.	Particulars	FY 061/062	FY 062/063
		Rs	Rs
1.	Staff Salary & Allowances	20,38,970.00	21,16,265.00
2.	Stationary & Printing	65,730.00	60,854.00
3.	Traveling &	2,17,918.73	2,44,563.46
4.	Transportation Expenses	15,370.00	8,425.00
5.	Magazine & News paper	89,174.71	1,42,163.84
6.	Bank Commission	2,42,992.90	2,74,292.14
7.	Transportation vehicle Expenses	56,033.56	85,567.00
8.	Donation	18,572.00	19,880.00
9.	Worship Expenses	5,200.00	22,473.00
10.	Membership fees	2,72,852.52	2,45,198.35
11.	Postage & telegram	10,000.00	10,000.00
12.	Auditors fees	5,000.00	22,650.00
13.	Quality expenses	1,37,210.85	1,04,432.50
14.	Miscellaneous office	11,232.00	46,192.00
15.	expenses	3,385.00	-
16.	ISO Certification Expenses	-	100.00
	Penalty on VAT		
	Renue Expenses		
	<b>Total</b>	<b>31,89,642.27</b>	<b>34,02,856.29</b>

#### 4.9.3 Selling & Distribution Expenses Budget

Selling & distribution expenses related to those expenses which incurred in the process of selling , distribution & delivery of product to customers. When selling activities are increased naturally selling expenses will be increased. It covers significant portion of total expenses. Kamala Plastic Pvt. Ltd. does not prepare Selling & Distribution expenses Budget. In selling & distribution expense budget, Kamala Plastic Pvt. Ltd includes following headings.

- (i) Salary & allowance ( Selling Department )
- (ii) Tender Expenses
- (iii) Advertising
- (iv) Guest Entertainment.
- (v) Measurement Expenses.
- (vi) Pipe transportation Expenses.
- (vii) Packing Expenses.

The following tables shows the actual Selling & Distribution expenses of previous year.

Table No. – 16

Fiscal Year	Actual Selling & Distribution Expenses ( Rs. )
060/061	39,89,252.50
061/062	36,52,159.25
062/063	37,19,488.50
063/064	35,93,836.50
064/065	39,78,863.50

The Detailed Selling & Distribution Expenses Budget incurred in FY 061/62 & FY 062/063 are presented below :

Table No. – 17

S.N.	Headings	F Y 061/062	FY 062/063
		Rs.	Rs.
1.	Salary & allowances	13,20,860.00	14,00,750.00
2.	Tender Expenses	44,553.00	46,633.00
3.	Advertising	9,900.00	25,050.00
4.	Guest Entertainment	1,28,039.80	1,32,010.00
5.	Measurement Expenses	1,030.50	1,030.50
6.	Pipe transportation	8,45,580.00	9,53,890.00
7.	Expanses Packing Expenses	12,43,873.20	14,19,500.00
	Total	35,93,836,.50	39,78,863.50

#### 4.10 Other Expanses Budget

Other expanses budget included those expanses which are not mentioned in above. Such as depreciation , interest & Bank charges, amortization cost etc. In case of Kamala Plastic , Factory depreciation, Office depreciation, Interest & Bank charges are included in other expanses budget. Among them depreciation has been treated as operating expanses and interest and Bank charges have been treated as non-operating expanses where as interest & bank charges are cash expanses.

The following table shows the Factory & Office depreciation incurred in Past Years.

#### Depreciation Expanses Budget

Table No. - 18

Fiscal Year	Factory Depreciation	Office Depreciation	Total
060/061	9,39,375.66	3,21,142.95	12,60,518.61
061/062	11,44,965.40	3,54,703.57	14,99,668.97
062/063	14,62,857.60	3,79,321.41	18,42,179.03
063/064	1,45,968.09	3,62,215.26	18,21,901.29
064/065	15,39,835.23	3,95,177.75	19,35,012.92

The above table clearly defines that KPPL has been expending its large amount on these cost headings. Kamala Plastic does not prepare other expenses budget separately. So, it is difficult to find out the various between budgeted & actual other expanses.

#### 4.11 Cash Budget

Cash budget is the most essential tools of cash management. It is an integral part of cash planning. The cash budget is a plan of future cash receipt and payment. Cash budget is known as the statement showing the estimated cash income ( Cash inflows ) and expenditure ( Cash outflow ) over a projected time period. It presents the planned cash inflows, outflows and ending cash position by interim period for a specific time . Cash budget plays vital role to co-ordinate among working capital, sales revenue, expanses, investments and liabilities.

To Maintain a sound cash position is the great challenge of financial manager. So, he should keep other functional budget in mind before preparing cash budget. The level of cash position should neither less or more because deficiency of cash create problem in manufacturing operation while excess cash creates the problem of over capitalization means idle finance.

Kamala Plastic Pvt. Ltd. does not prepare cash budget. KPPL prepare cash flow statement which gives information about the beginning and ending cash position.

The following table shows the cash flow statement of FY 2061/062 and FY 062/063.

Table No. 19

#### Fiscal Year 2061/062

Particulars	Amount ( Rs )	Amount ( Rs. )
( A ) <u>Cash Generated from Operating</u>		

<u>Activities</u>	22,72,992.05	
Net Profit before Tax & appropriations	18,21,901.29	
Add : Depreciation	4,564.06	
Add : Interest Expanses		
Cash before change in Working Capital	40,99,457.40	40,99,457.40
Add : <u>Change in Working Capital</u>		
Decrease in Current Assets	1,08,39,432.87	
Increase in Current Liabilities	5,97,005.15	
Decrease in cash for payment of	( 5,89,457.16 )	
Income Tax & Other	( )	
Interest Payment	( 4,564.06 )	94,98,676.80
Penalty on performance Bond	( 13,43,740.00 )	
Cash Generated from Operating Activities		1,35,98,134.20
( B ) <u>Cash Generated from Investing Activities</u>		
Increase In Fixed Assets	( 28,82,507.51 )	
Increase in Investment	( 92,32,395.81 )	
Cash Generated from Investing Activities	( 1,21,14,903.32 )	( 1,21,14,903.32 )
(C ) <u>Cash Generated from Financing Activities</u>		
Dividend	( 15,75,000.00 )	
Cash Generated from Financing Activities	( 15,75,000.00 )	( 15,75,000.00 )
Net Cash flow ( A ) + ( B ) + ( C )		( 91,769.12 )
Add : Opening Cash & Bank Balance		15,26,915.76

Closing Cash & Bank Balance		14,35,146.64
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Table No. 20

Fiscal Year 2062/063

Particulars	Amount ( Rs )	Amount ( Rs. )
<u>( A ) Cash Generated from Operating Activities</u>		
Net Profit before Tax & appropriations	91,54,857.42	
Add : Depreciation	19,35,012.92	
Add : Interest Expenses	7,392.31	
Less : Profit on sale of Land	44,78,839.00	
Cash before change in Working Capital	66,18,423.65	66,18,423.65
Add : <u>Change in Working Capital</u>		
Increase in Current Assets	( 40,83,804.14 )	
Increase in Current Liabilities		
Decrease in cash for payment of	16,90,892.22	
Income Tax & Other	(584,084.41 )	
Interest Payment	( 7,392.31 )	
Cash Generated from Operating Activities	36,34,035.01	( 29,84,388.64 )
<u>( B ) Cash Generated from Investing Activities</u>		
Increase In Fixed Assets	( 88,44,183.10 )	

Decrease in Investment	3,68,634.00	
Decrease in Fixed Assets	1,18,45,000.00	
Cash Generated from Investing Activities	26,32,182.90	26,32,182.90
<u>(C ) Cash Generated from Financing Activities</u>		
Dividend	-	-
Cash Generated from Financing Activities	-	-
Net Cash flow ( A ) + ( B ) + ( C )		62,66,217.91
Add : Opening Cash & Bank Balance		14,35,146.64
Closing Cash & Bank Balance		77,01,364.55

#### 4.12 Capital Expenditure Budget

Capital expenditure is the process of Working Capital the long term and short term expenditures for expansion and contraction of investments in operating ( fixed ) assets. A capital expenditure is the use of funds to obtain operational assets that will help to earn future revenues or to reduce future costs. Capital expenditures include such fixed assets as property, plant, equipment, major renovations and patents. Capital expenditures become expenses in the future as their related goods and services are being used to earn higher future profits from future revenues or to achieve future cost savings.

Kamala Plastic Pvt. Ltd. does not strictly follow the expenditure budget. When fixed assets are needed board of directors taken decision where to add the assets or not. However, certain amount of capital addition is allow in annual budget. While decision for addition of fixed assets is taken, evaluation criteria of capital expenditures are not followed strictly only rough calculation is made. Kamala Plastic Pvt. Ltd. does not use modern tools & technique for capital decision like Net present value, Internal Rate of Return & etc. Only pay back period is calculated with the help of estimating data.

The following tables shows a picture of addition of capital expenditure for past years.

Table No. - 21

	Balance of 060/061	Addition in 061/062	Addition in 062/063	Addition in 063/064	Addition in 064/065
1. Land	16,13,521.0 0	-	-		61,66,161. 00

<b>2. <u>Building Group</u></b>					
(a) Factory			- 12,51,681.8		-
(b) Ware house	8,22,786.00		0		-
	15,02,585.73		-		
<b>Total</b>	<b>39,38,892.73</b>		<b>- 12,51,681.80</b>		<b>61,66,161.00</b>
<b>3. <u>Computer Office Equipment</u></b>					
(a) Furniture	1,20,108.70		-	-	-
(b) Office Equipment	6,75,876.32		-	-	-
(c) © Safe Box	38,927.58		-	-	-
<b>Total</b>	<b>8,34,912.60</b>		<b>-</b>	<b>-</b>	<b>-</b>
<b>4. <u>AutomobilesGroup</u></b>					
Vehicles	17,20,257.34		-	-	-
<b>Total</b>	<b>17,20,257.34</b>		<b>-</b>	<b>-</b>	<b>-</b>
<b>5. <u>Construction Group</u></b>					
(a) Machinery	67,14,704.30	37,08,258.47	3,44,851.20	17,44,183.85	15,98,924.84
(b) Generators		19,34,795.09	-	-	-
	35,600.59				
<b>Total</b>	<b>67,50,304.89</b>	<b>56,43,053.56</b>	<b>3,44,851.20</b>	<b>17,44,183.85</b>	<b>15,98,924.84</b>
<b>6. Old Coins</b>	<b>140.00</b>				
<b>Total</b>	<b>140.00</b>				
<b>Total ( 1+2+3+4+5+6)</b>	<b>1,32,44,507.56</b>	<b>56,43,053.56</b>	<b>15,96,533.00</b>	<b>17,44,183.85</b>	<b>77,65,085.84</b>



Above tables indicates that Kamala Plastic Pvt. Ltd. invested a huge amount for fixed assets in different fiscal year. The major capital expenditure made in F Y 062/063 was Rs. 77,65,085.84.

#### 4.13 Profit & Loss Account of KPPL

Profit is the major element of each & every business endeavors for survival, further development and full filling social expectation.

After preparing all functional budgets, Budgeted profit & loss a/c is prepared. Profit & Loss a/c is developed to report the financial results of the various functional sub plans and commitments. P/L a/c shows the operating efficiency of the organization of an accounting year.

In case of KPPL , it does not prepare budgeted P/L a/c in advance. It prepares P/L a/c at the end of each year to know the profit loss situation. Being a manufacturing organization, Kamala Plastic Pvt. Ltd. is able to earn certain level of profit in spite of low capacity utilization and heavy investment in fixed assets.

The following tables shows the Profit & Loss trend of Kamala Plastic Pvt. Ltd of the past years.

Table No. - 22

#### Profit & Loss Trend of KPPL

Fiscal Year	Amount ( Rs. )
060/061	4,91,872.68
061/062	1,47,515.46
062/063	1,11,758.36
063/064	3,81,553.25
064/065	1,52,326.26

By the analysis of above table, KPPL is able to earn certain level of profit. However, percentage of profit on the turnover is not satisfactory. In FY 2058/059, KPPL is able to achieve the highest profit i.e Rs. 4,91,872.68 and in FY 2060/061, KPPL made the lower profit of Rs. 1,11,758.36 in the analysis period.

The reason behind low percentage of profit is excess inventory of Raw material and finished goods, high depreciation cost and low capacity utilization. It all shows KPPL does not take serious consideration to control cost and be careless an profit plan.

The following table shows the actual P/L a/c of the FY 2061/062 & FY 2062/063.

Table No. – 23

S. N .	Particulars	FY 061/062		FY 062/063	
		Rs.	Rs.	Rs.	Rs.
1.	Sales Revenue		4,53,52,049.		7,26,18,737.
2.	Cost of Production		55		61
3.	Gross Profit (1) –		3,37,79,857.		5,79,81,368.
4.	(2)		52		75
5.	Other Income		1,15,72,192.		1,46,37,368.
			03		86
	<u>Other Business Expenses</u>	31,89,642.	30,806.26	34,02,856.	3,68,634.00
		27		29	
	(a) Administration Exp	35,93,836.		39,78,863.	
		50		50	
	(b) Distribution Expenses	8,50,456.5		9,41,387.5	
		9		4	
6.	© Maintenance Expenses	2,27,299.2		4,67,601.8	
		0		4	
	(d) Bonus Expenses		79,03,540.8		87,90,709.1
7.		42,306.33	9	-	7
8.	(e) Special Fees		40,99,457.4		62,15,293.6
9.	Net Operating Profit		0		9
1	( 3 + 4 – 5 )				
0	Interest expenses		4,564.06		7,392.31
1	Depreciation		18,21,901.2		19,35,012.5
1	Interest on Investment		9		2
1	Gain on sale of Land		-		4,03,129.96
2			-		44,78,839.0
1	Income before Tax		22,72,992.0		0
			5		91,54,857.8

3	( 6 – 7 – 8 + 9 + 10 )		5,70,000.00		2
	Provision for	5,89,457.16		5,84,084.41	21,70,000.00
	Income Tax				
1	Income Tax (	5,00,000.00		5,70,000.00	
4	Previous Year )				
	Tax		89,457.16		
	Provision				
1	Penalty on		13,43,740.00		14,084.41
5	Performance				
	Bond		2,69,794.89		-
1	Net profit after Tax				69,70,773.41
6	( 11 – 12 – 13 – 14 )		1,11,758.36		
1	Balance brought		3,81,553.25		
7	forward				3,81,553.25
1	Total Profit ( 15 +				73,52,326.66
8	16 )				
1	Proposed Dividend		3,81,553.25		72,00,000.00
9	Profit transfer to				0
	Balance				
	Sheet ( 17 – 18 )				1,52,326.26

#### 4.14 Balance Sheet of KPPL

Balance sheet is prepared at the end of the fiscal year. It is prepared after completing all functional budget as well as budgeted P/L a/c & cash budget. Budgeted balance sheet reflects the true picture of assets, liabilities & capital of the company according to plan. Balance sheet shows the real financial position of the firm. It simply a statement of assets & liabilities of a firm.

KPPL does not prepare a projected balance sheet in advance. But at the end of each fiscal year it prepares Balance Sheet to show real financial position of the firm.

The balance sheet for FY 061/062 & FY 062/063 are presented below :

Table No. – 24

	061/062	062/063
<b>Assets</b>		
<b>1. <u>Current Assets</u></b>		
Inventories ( Jinshi goods )	70,41,808.00	78,97,521.83
Sundry debtors	52,31,624.88	1,57,49,434.32
Advance & deposit	91,78,482.81	18,88,763.83
Cash & other balance	14,35,146.64	77,01,364.55
<b>Total Current Assets</b>	<b>2,28,87,062.48</b>	<b>3,32,37,084.53</b>
<b>2. Fixed Assets</b>	<b>1,45,83,066.29</b>	<b>1,41,26,075.47</b>
<b>3. Investment</b>	<b>1,09,46,433.87</b>	<b>1,13,15,067.87</b>
<b>Total</b>	<b>4,84,16,562.64</b>	<b>5,86,78,227.87</b>
<b><u>Capital &amp; Liabilities</u></b>		
Capital	4,50,00,000.00	4,50,00,000.00
Reserve & profit	3,81,553.25	1,52,326.26
Sundry creditors	24,65,009.39	1,13,55,901.61
Provision	5,70,000.00	21,70,000.00
<b>Total</b>	<b>4,84,16,562.64</b>	<b>5,86,78,227.87</b>

In FY 062/063, the liabilities side of the balance sheet shows 76.69% of share capital and 0.26% of reserve and profit. It has no ownership capital as a result there is no burden of interest. In the assets side inventory ( Jinshi goods ) has the significant, 13.46% of the total assets.

#### 4.15 Performance Evaluation

Performance reports constitute an important part of internal management control procedures. These reports serve to motivate managers to perform in conformity with expectation. Moreover they signal super management where

operations are not proceeding according to the plans. To be effective performance reports should be tailored to the organizational structure and simple, accurate & timely and used to facilitate management by exception.

The performance reporting phase of a comprehensive WC program significantly influences the extent to which the organization's planned goals and objects are obtained. Performance evaluation is an important phase of control process.

It is impossible to evaluate all the techniques of performance evaluation but this study uses the following evaluation techniques to measure the performance of KPPL.

- ( i ) Financial Ratio.
- ( ii ) Identification of Cost variability & Cost Volume Profit analysis
- ( iii ) Flexible Budget
- (iv ) Variance Analysis

#### 4.15.1 Financial Ratio

An arithmetical relationship between two figures are known as ratio. It is computed by dividing one item of relationship with the other. Ratio simply means one number expressed in terms of another.

Ratio analysis is a technique of analysis and interpretation of financial statement. To evaluate the performance of an organization by creating the ratio from the figures of different accounts consisting in balance sheet & income statement is known as ratio analysis.

Here are presented some important ratios.

$$1. \quad \text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$2. \quad \text{Quick Ratio or, Acid Test Ratio or,}$$

$$+ \quad \text{Liquid Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$[ \text{Quick Assets} = \text{Current Assets} - ( \text{Inventory} + \text{Prepaid} ) ]$$

3. Debt Assets Ratio =  $\frac{\text{Total Debt}}{\text{Net Tangible Assets}}$
4. Inventory Turnover Ratio =  $\frac{\text{Cost of goods sold}}{\text{Average Inventory}}$
5. Capital Employed Turnover Ratio =  $\frac{\text{Sales}}{\text{Total Capital Employed}}$
6. Total Assets Turnover Ratio =  $\frac{\text{Total net sales}}{\text{Total assets}}$
7. Return on Capital Employed Ratio =  $\frac{\text{Net Profit AT}}{\text{Total Capital}} \times 100\%$
8. Operating Ratio =  $\frac{\text{Cost of goods sold} + \text{Operating Expenses}}{\text{Sales}} \times 100\%$
9. Gross Profit Margin Ratio =  $\frac{\text{Gross Profit}}{\text{Sales}} \times 100\%$
10. Net Profit Margin Ratio =  $\frac{\text{Net Profit}}{\text{Sales}} \times 100\%$

The following tables shows some important financial ratios of KPPL for Five years from FY 060/061 and FY 064/065.

Table No. - 25

S.N.	Ratio	FY 060/061	FY 061/062	FY 062/063	FY 063/064	FY 064/065
1.	Current Ratio	4.73	4.32	8.58	7.54	2.46
2.	Quick Ratio	3.03	2.80	6.73	5.22	1.87
3.	Debt Assets Ratio	0.17	0.17	0.08	0.06	0.23
4.	Inventory Turnover Ratio	9.03	9.95	7.99	6.85	12.20
5.	Capital Employed Turnover Ratio	1.97	1.39	1.04	1.0	1.61
6.	Total Assets Turnover Ratio	1.63	1.16	0.96	0.94	1.24
7.	Return on Capital Employed Ratio	15.85 %	9.85 %	3.41 %	0.59 %	15.44 %
8.	Operating Ratio	91.81%	91.36 %	92.28 %	91.91 %	92.95 %
9.	Gross Profit Margin Ratio	18.66%	21.70 %	24.41 %	25.52 %	20.16 %
10.	Net Profit Margin Ratio	8.06%	7.09 %	3.28 %	0.59 %	9.60 %

( i ) Current Ratio :-

The ratio is the relationship of current assets and current liabilities. The current ratio is calculated by dividing current assets by current liabilities. The current ratio is a measure of the firm's short Term solvency. It indicates the availability of current assets in rupees for every one rupees of current liabilities. The standard current ratio 2:1 which means an enterprises should have the current assets equal to two times of current liabilities. The comparison to current liabilities, investment in current assets is very high in KPPL.

( ii ) Quick Ratio :-

Quick ratio establishes a relationship between quick or liquid assets and current liabilities. It is found out by dividing the total of the quick assets by total of current liabilities. Quick assets means those current assets other than Inventory & prepaid expenses. It also show the liquidity position of the firm. Quick ratio is in increasing trend. The standard quick ratio is 1:1 which means an enterprise should have quick assets equal to current liabilities. The quick ratio of KPPL is sound and short term financial strength good.

( iii ) Debt Assets Ratio :-

It is the relationship between the total liabilities and total assets. This ratio indicates that ratio of financing assets by the liabilities. Debt assets ratio of KPPL is in increasing trend. The standard debt assets ratio is 80%. Debt assets ratio of KPPL is lower than that of standard ratio. Highest ratio is not preferable for a company.

( iv ) Inventory Turnover Ratio: -

It is the relationship between cost of goods sold and average inventory. This ratio indicates as to how fast the goods are sold and whether stock position of the enterprise is satisfactory or not. This ratio is computed by dividing the cost of goods sold by a average inventory. The standard turnover ratio is 9 times or more. Inventory turnover ratio range is 6.85 to 12.20. A high inventory turnover ratio is indicative of good inventory management. A low inventory turnover ratio implies excessive inventory levels than warranted ratio of KPPL indicates excessive



inventory level than necessary, which is not favorable to the organization. So, KPPL should increase sales and reduce the stock level to improve the inventory turnover position.

( v ) Capital Employed Turnover Ratio :-

It is the relationship of sales & total capital employed. Higher capital employed turnover ratio is preferable which shows that firm is very efficient on sales activity. The standard capital employed turnover ratio is 3. Capital employed turnover ratio is ranges in between 1.0 to 1.97 which is not satisfactory because this ratio is less than standard capital employed turnover ratio.

( vi ) Total Assets Turnover Ratio :-

It is the relationship between sales and total assets. A higher ratio indicates better utilization of total assets & vice – versa. In case of KPPL total assets turnover ratio are not satisfactory because it's ratio less than standard total assets turnover ratio. The standard total assets turnover ratio is 1.8 or more. This indicates the firm has not good management regarding about that. To improve this ratio further KPPL should increase sales and some excess assets should be disposed off.

( vii ) Return on Capital Employed Ratio :-

It is the relationship between net profit and capital . A higher percentage of return on capital employed is preferable which indicates higher operating profit. The standard return on capital employed ratio is 31%. The range of return on capital employed ration are 0.59% - 15.85%. This ratio of KPPL is not satisfactory because there is very low percentage in each year. Low percentage of return on capital employed shows that KPPL is unable to yield desired return. To improve this situation KPPL should increase operating profit & should curtail the unnecessary cost.

( viii ) Operating Ratio :-

It is relationship between operating expanses including cost of goods sold and sales. A low percentage of operating ratio indicate good management and high percentage indicates the inefficiency of management in minimizing operating cost. Low operating ratio means the higher operating profit. So, the minimum percentage is preferable.

The standard operating ratio is less than 80%. The operating ratio of KPPL ranges from 92.28 % to 92.95 % which indicates poor situation of the organization. So, KPPL should increase its sales volume & reduce the operating expanses.

( ix ) Gross Profit Margin Ratio :-

It is the relationship between gross profit margin & sales. Higher percentage of gross profit margin ratio is preferable which shows efficiency in minimizing the cost of goods sold and maximizing the profit. The standard gross profit margin ratio is 45% or more. In case of KPPL, Gross profit margin ranges in between 18.66 % to 20.16 % in analysis period which indicates not so satisfactory situation because gross profit margin ratio are less than standard in each year. So, to improve further KPPL should minimizing the direct expanses.

( x ) Net Profit Margin Ratio :-

It is the relation between net profit & sales. Higher percentage of net profit margin indicates the higher overall efficiency of the business and better utilization of total resources. The standard net profit margin ratio is 10% or more. In case of KPPL, net profit margin ratio ranges in between 0.59 % to 9.60 % and it does not show specific trend. However low percentage of positive net profit margin ratio indicates favorable situation in some extent but it is not satisfactory. To improve the situation, KPPL should control the operating cost as well as fixed cost.

#### 4.16 Planning of Profit with Cost – Volume – Profit Analysis

##### 4.16.1 Identification of Cost Variability

Identification of the variability of cost is necessary in planning & control of the cost. Thus the knowledge of cost behavior is very important. Generally cost behavior in two ways with relation to the volume of output. First, it does not change with the change in output and second it changes proportionately with the change in output. Cost behavior gives us answer as the output in a firm increase or decrease what happens to each expense incurred to produce that output?

The cost remains constant in total for certain range of output for a certain time within an activity level is known as fixed cost and it does not change either there is

increase or decrease in output. The expenses which change in total to the change in output called variable cost. There is direct relationship between variable cost and output. As output changes, the expenses change in the same direction but not in proportion to the change in output is called semi variable expenses which is neither fixed nor variable. Classification of costs into fixed and variable is very important tool for planning of cost volume profit analysis. But, KPPL has not maintained any clearly boundaries about cost classification as fixed and variable components.

The following tables shows the cost classification in KPPL of FY 2063/064 & 2064/065.

Table No. 26

Sn	Cost Items	Behavior	FY 063/064	F Y 064/065
			Rs	Rs.
1.	Raw material Purchased	Variable	2,57,41,099.2	5,17,60,404.5
2.	Wage manufacturing	“	2	8
3.	Selling & Distribution	“	42,76,261.27	37,42,292.50
4.	expenses	“		
5.	Water & Electricity Charges	“	22,72,976.50	25,78,113.50
	Fuel		21,64,519.32	26,87,357.35
			6,65,466.96	6,02,855.00
	Total		3,51,20,322.4	6,13,71,022.9
			8	3
6.	Selling & Distribution	Fixed		
7.	expenses	“	13,20,860.00	14,00,750.00
8.	Land & House Rent	“		
9.	Insurance Factory	“	1,93,507.80	1,93,507.80
10	Sundry expenses	“	10,215.00	8,550.00
11	Depreciation expenses	“		
12	Repair & Maintenance	“	12,528.20	10,168.00
13	Fixed Administration	“		
	expenses		18,21,901.29	19,35,012.92
	Salary ( Factory )		8,50,456.59	9,41,387.54

			11,50,672.27	12,86,591.29
			20,38,970.00	21,16,265.00
	Total		73,99,111.15	78,92,232.55

By the above table shows the total fixed cost is Rs. 78,92,232.55 in FY 063/064 & Rs. 73,99,111.15 in FY 064/065 and total variable cost is Rs. 3,51,20,322.48 in FY 063/64 & Rs. 6,13,71,022.93 in FY 064/65. Although there is no practice to separate the cost into variable and fixed which is the weakness of the organization.

#### 4.16.2 Cost Volume Profit Analysis

Cost Volume Profit analysis is the relationship between cost volume & profit. It is an important tool for studying the relation between volume, cost, price and profit. It is an important tool used for Working Capital.

There factors cost volume and profit are interconnected and dependent with each other. Profit depends upon sales, selling price depend upon the cost & cost depend upon the volume of production.

Cost-Volume-Profit analysis helps in managerial decision making, cost & Working Capital. Cost Volume Profit analysis says what sales volume is needed to avoid losses and to earn desire profit.

Cost volume profit analysis of KPPL is based on some assumption, which are as follows:

- (i) The costs can be divided as fixed & variable.
- (ii) Cost volume structure is based on the accounting data 064/065
- (iii) Activity base is selected in terms of sales volume.
- (iv) Selling price, variable cost volume ratio & fixed cost per annum are assumed remain constant.
- (v) Sales mix is constant.
- (vi) Changes in inventory has not been considered while analyzing cost volume profit of KPPL.

(vii) Non operating income & non operating expenses are not included in CVP analysis.

(viii) The efficiency and productivity will not change in short run.

Following formula will be used to evaluate the KPPL's Cost-Volume-Profit analysis.

Sales Revenue = Rs. 7,26,18,737.61

Total Variable cost = Rs. 6,13,71,022.93

Total fixed cost = Rs. 78,92,232.55

( i ) Variable Cost Volume Ratio ( V/V Ratio )

$$\begin{aligned} \text{V/V Ratio} &= \frac{\text{Total Variable Cost}}{\text{Sales}} = \frac{6,13,71,022.93}{7,26,18,737.61} \\ &= 0.84 \end{aligned}$$

( ii ) Profit Volume Ratio ( P/V Ratio )

$$\text{P/V Ratio} = 1 - \text{V/V Ratio} = 1 - 0.84 = 0.16$$

( iii ) Operating Break even point ( BEP ) in Rs.

$$\begin{aligned} \text{BEP} &= \frac{\text{Total Fixed Cost}}{\text{P/V Ratio}} = \frac{78,92,232.55}{0.16} \\ &= \text{Rs } 4,93,26,453.43 \end{aligned}$$

( iv ) Financial Break even point ( BEP ) in Rs.

$$\text{BEP} = \frac{\text{Fixed cost} + \text{Interest Expenses}}{\text{P/V Ratio}}$$

$$= \frac{78,92,232.55 + 7,992.31}{0.16} = \text{Rs. } 4,93,76,405.37$$

( v ) Margin of safety for budgeted year 063/064.

Budgeted quantity for FY 063/064 is 6,50,000 Kgs and Selling price based on FY 064/065 is Rs. 107.75 per Kg. So, budgeted sales will be Rs. 7,00,37,500.00

$$\begin{aligned} \text{Margin of Safety} &= \text{Budgeted sales} - \text{BEP Sales} \\ &= 7,00,37,500.00 - 4,93,26,453.43 \\ &= \text{Rs } 2,07,11,046.57 \end{aligned}$$

( vi ) Margin of Safety Ratio for FY 063/064.

$$\begin{aligned} \text{Margin of Safety Ratio} &= \frac{\text{Margin of Safety}}{\text{Budgeted Sales}} \times 100\% \\ &= \frac{2,07,11,046.57}{7,00,37,500.00} \times 100\% \\ &= 29.57\% \end{aligned}$$

( vii ) Budgeted Profit

$$\begin{aligned} &= \text{Margin of Safety} \times \text{P/V Ratio} \\ &= 2,07,11,046.57 \\ &= \text{Rs } 33,13,767.45 \end{aligned}$$

In the above calculation variable cost volume is 0.84 which means the proportion of variable cost is 0.84 ( 84% ) to each rupees of sales and remaining 0.16 ( 16 % ) is available to cover all other cost & make a profit. Break Even Point of KPPL is Rs 4,93,26,453.43 that is less than actual sales. Analysis of margin of safety indicates there are chances to earn more profit in future. In the conclusion if the company attempts the increase the sales revenue through various sales promotion techniques. It will be able to earn good profit in the future.

#### 4.16.3 Flexible Budget

Flexible budget is a budget which is prepared for more than one level of activity. The basis of flexible budget is the concept of expenses variability. It shows cost and profits at the various levels. Flexible expense budget is also called dynamic activity or output adjusted expenses budget. With the help of flexible budget, the company can determine the operation level by taking into consideration of the cost & profit at different level of utilization. A flexible budget estimate costs at several level of activity. This means that all cost must be identified as to how they behave with a change in volume whether they vary or remain fixed.

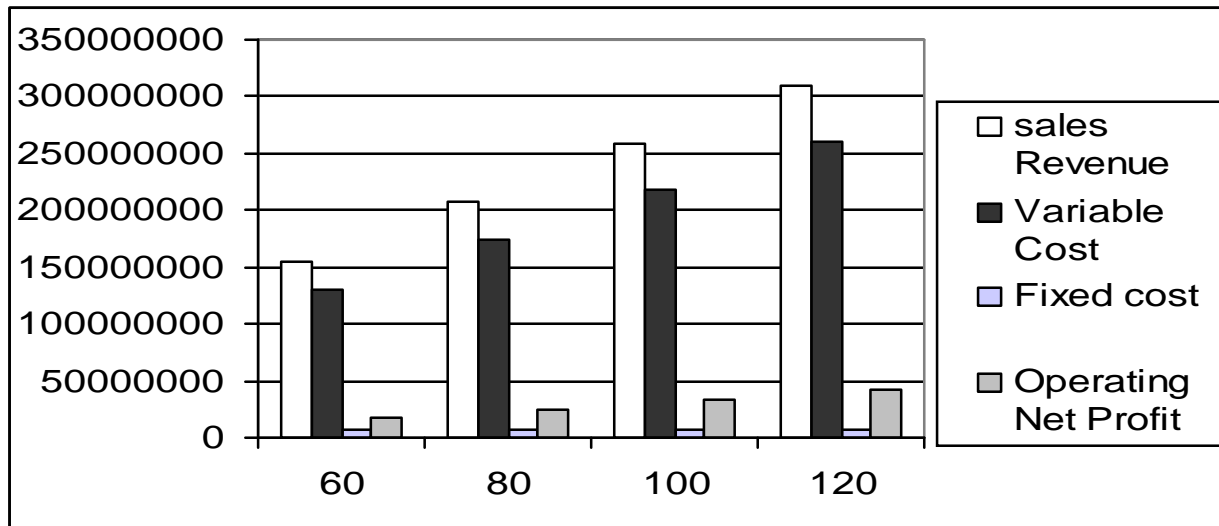
KPPL does not prepare its flexible budget. On the basis of cost and other data of FY 2062/063, a flexible budget of KPPL has been prepared below. Variable cost changes proportionately with the change in level of activity but fixed cost remain constant for a reasonable period of time. Flexible budget of KPPL is prepared as below at 60 % to 120 % capacity utilization.

Table No. 27

Flexible Budget of KPPL

Particulars	Activity levels in Percentage			
	60	80	100	120
Sales in Kg	14,40,000	19,20,000	24,00,000	28,80,000
Sales Revenue in Rs @ Rs 107.75	15,51,60,00	20,68,80,00	25,86,00,00	31,03,20,00
Less : Variable Cost	0	0	0	0
	13,03,34,40	17,37,79,20	21,72,24,00	26,06,68,80
	0	0	0	0
Contribution margin	2,48,25,600	3,31,00,800	4,13,76,000	4,96,51,200
Less : Fixed Cost	78,92,232.5	78,92,232.5	78,92,232.5	78,92,232.5
	5	5	5	5
Operating Net Profit	1,69,33,367.45	2,52,08,567.45	3,34,83,767.45	4,17,58,967.45

Graph – 4



The above table & diagram shows that if KPPL utilize 80 % of its capacity it was earn Rs. 2,52,08,567.45 and at 100 % it was earn Rs. 3,34,83,767.45. So, KPPL has to increase in production volume as well as sales volume to earn more profit in future. More capacity utilization is helpful to decrease the operating cost also.

#### 4.16.4 Variance Analysis

A Variance is the difference between actual results and planned or budgeted goals. Analysis of variance is the helpful in controlling the performance and achieving the profits that have been planned.

To analyze the variance the following steps are to be considered.

- (i) Attainable standard should be developed for material, labour overhead sales yield & profit.
- (ii) Computation of deviation between actual & budgeted results.
- (iii) Significant deviation should be investigated and reasons behind such deviation should be identified and diagnosed as controllable.
- (iv) For controllable causes of unfavorable variances, responsibility and accountability should be assigned.
- (v) To improve the unfavorable variances, necessary corrective action should be taken.



In KPPL there is no practice of analyzing variances. It only fixes the sales and production target but does not study between target & actual results seriously & formally.

The following tables show the sales & yield variances of KPPL.

Table No. 28

Sales Variance

FY	Target Sales in Kgs	Actual Sales in Kgs	Variances In Kgs	Remarks
060/061	7,00,000	7,80,025.420	80,025.420	Favorable
061/062	7,00,000	5,63,634.161	1,36,365.839	Unfavorable
062/063	5,00,000	4,25,205.953	74,794.047	Unfavorable
063/064	4,00,000	3,92,434.899	7,565.101	Unfavorable
064/065	6,00,000	5,51,263.180	48,736.820	Unfavorable

Table No. 29

Yield Variances

FY	Target Prod <sup>n</sup> In Kgs	Actual Prod <sup>n</sup> in Kgs	Variances in Kgs	Remarks
060/061	7,00,000	6,96,725.00	3,275.00	Unfavorable
061/062	7,00,000	5,67,967.00	1,32,033.00	Unfavorable
062/063	7,00,000	4,13,240.62	2,86,759.38	Unfavorable
063/064	6,00,000	5,14,205.00	85,795.00	Unfavorable
064/065	6,00,000	4,07,434.00	1,92,566.00	Unfavorable

The above sales variance shows unfavorable variances in FY 060/061, 061/062, 062/063 & 063/064 and Favorable variance in FY 060/061. The above Yield variances shows unfavorable in each year. The cause of unfavorable variances

should be identified & responsible department should be held accountable for those unfavorable sales & output variances and corrective action should be taken to avoid such unfavorable variance in coming year. The causes of favorable variances also should be identified and studied to save for long term.

# CHAPTER - FIVE

## 5.1 Findings

The above analysis of various functional budget, financial budgets, their achievements, cost-Volume-Profit analysis, Flexible budget shows the KPPL is suffering from the number of internal & external problems in formulating and implementing profit plans. KPPL is very careless to adopt the systematic and comprehensive ways of formulating and implementing the Working Capital. Although, if it adopts Working Capital & control system in systematic way for the coming days. Profit performance of the company will be bright & attractive. On the basis of data presented and their analysis, the major findings are as follows :

- (i) Specific goals and financial targets are not defined clearly to achieve the basic objectives of KPPL.
- (ii) (ii) Under utilization of available capacity less than 30 % of available capacity.
- (iii) Lack of detailed tactical profit plan, only annual amount is fixed.
- (iv) Unrealistic sales forecast and inadequate forecasting system.
- (v) Level of closing inventory of finished goods is high. It is more than average monthly sales.
- (vi) Excessive amount of cost of goods sold ( about 80 % of sales ).
- (vii) Inadequate Working Capital due to planning experts.
- (viii) Lack of defined authority and responsibility. As result there is no proper co-ordination among various responsible departments.
- (ix) Lack of raw raw materials in domestic market.
- (x) Careless in planning to reduce cost.
- (xi) Lack of strategic long range planning.
- (xii) There is no practice of taking corrective actions.
- (xiii) There is no practice of performance evaluation system.
- (xiv) The company is suffering from excessive depreciation cost.
- (xv) There is no practice of classifying expanses in systematic way, which creates huge problem in analyzing expanses.
- (xvi) Low productivity of man power.
- (xvii) Decision making power is reserved in top level management only.
- (xviii) According to bench mark Dept assets ratio will be 80% or less but Dept assets ratio of this company maximum 17% which is

less than Bench mark ( Standard ). The firm not good management of Dept to total assets ratio.

- (xix) According to bench mark capital employed turnover ratio will be 3. But capital employed turnover ratio of this company are 1.0 to 1.97 which is less than bench mark. So, the firm has not good management of sales to total capital employed.

## 5.2 Summary

Working Capital is one of the most important managerial tools used to earn profit and to control cost of business operations. This managerial device is very essential to step away on the way of success. Management remains incomplete without application of Working Capital & control because profit is the lifeblood of the organization. The enterprise which has been established in social sectors, should also generate profit at least for its survival in business society. Working Capital can be divided into two groups as functional plan and financial plan. Functional plan includes sales budget, production budget, raw material budget, Direct labor budget and Expenses budget etc. Financial plan includes cash flow, Capital expenditure, Plan budgeted income statement and Budgeted Balance Sheet.

From the point of view of time profit plans are divided into strategy long range profit plan for 5-10 years and tactical short range profit plan for one year detailed by interim periods. Working Capital is an artistic work. It should be net, clean, achievable and comprehensive.

Data and information collected for both primary and secondary sources are analyzed with the helps of statistical and financial tools. Statistical tools include percentage, mean, standard deviation, coefficient of variation, coefficient of correlation. Similarly, financial tools like financial ratios, Flexible budgets and cost volume profit analysis and variance analysis are used in the study purpose.

This research paper is designed to examine that to what extent KPPL is applying comprehensive Working Capital system. The practices and effectiveness of Working Capital is reviewed of the company with the help functional plan and financial plan having prepared a plan it is equally important to implement effectively and to evaluate performance appraisal. Difference between actual results and the budgeted may arise to indicate the necessity for correction. It is necessary to formulate the forwarded plan.

More than 80% of the population of our country has occupied agricultural sector. However, because of various problems this sector is considered less attractive and less safety. So, people of our country are trying to change their occupation from traditional agriculture to comprehensive industrial sector. Kamala Plastic Pvt. Ltd,

which produces high density polythine pipe plays a vital role to develop the incidence of national economy in relation to industrialization.

This study has been divided in five chapters consisting of Introduction, Conceptual Background of Working Capital and Review of the literature, Research methodology, Data presentation & analysis and Summary conclusion & recommendations.

### 5.3 Conclusion

After analyzing in detail the present practice of Working Capital process in KPPL the following conclusions have been drawn.

- 1) KPPL prepares some functional budgets like sales budget, Production budget, annual expenses budget. But, there is no practice of dividing annual amounts in to interim periods. Budgets are prepared an annual basis only.
- 2) KPPL has not prepared overhead budget in smooth manner.
- 3) Selling & distribution expenses are prepared on annual basis.
- 4) KPPL has high amount of depreciation cost.
- 5) There is no fair working environment and no fair system of reward and punishment to employees on the basis of their work performance.
- 6) The balance sheet of KPPL shows the huge inventory material and finished goods. Stock turnover also shows high inventory level which creates negative impact upon profitability.
- 7) KPPL has no practice of sales forecasting. Sales budget is depend upon production budget rather than on sales.
- 8) In KPPL, profit planning & control concepts are limited top level to lower level.
- 9) The basic objectives of the company are not clearly specified in annual targets.
- 10) Cost of production of KPPL is very high due to lack of technological advancement. Excessive burden of cost and high operating cost.
- 11) Capacity utilization of KPPL is very low due to unavailability of raw material and competitive market position.
- 12) Correlation between actual sales and target sales and actual production & actual sales is highly significant and positive. It means that increase in budgeted sales will also increase actual sales. Similarly increase in actual sales will also increase actual production.
- 13) The correlation between actual production & budgeted production is no significant.

- 14) Least square straight line of sales of KPPL shows increasing sales trend by each year.
- 15) The pricing policy of the company is not based on cost of production. But, it is based on competitor price. While fixing the price, cost volume profit relationship is not considered.
- 16) Costs are not classified neither fixed and variable nor controllable and non controllable. Moreover, the company looks careless to reduce the controllable cost. So, cost control devices are not effectively applied in KPPL.
- 17) KPPL does not prepare the raw material purchase budget. As a result company is unsuccessful to purchase an economic order quantity ( EOQ ).
- 18) KPPL does not prepare cash flow plan in advance. In other hand, cash flow statement is not adequately prepared. There is no detail description of sources of cash and uses of cash. It has also not plan of interim financing in case of cash shortages and interim investment in case of excess cash.
- 19) KPPL does not prepare adequate capital expenditure budget. As a result it is unable to evaluate capital expenditures proposals.
- 20) Liquidity position of the company is very sound. A high amount of working capital has been utilized in inventory and stock. But, excess investment in such current assets does not produce return.
- 21) The flexible budget shows that if the company utilizes it's full capacity, it will be able to earn handsome profit in future.
- 22) The operating position of the company is not good. Its V/V ratio and P/V ratio are 0.84 and 0.16 respectively because of lower contribution margin and high fixed cost. Company is running at minimum profit level. The major reason behind it may be high administrative cost.
- 23) Margin of safety ratio of company for budgeted year 063/64 is 29.57 % . This indicates company will able to earn profit of Rs. 33,13,767.45

#### 5.4 Recommendations

After the detail analysis of Working Capital in Kamala Plastic Pvt. Ltd. Some suggestions have been recommended in the basis of major findings to improve the formulation and implementation of Working Capital system of the company.

- (i) All members of company should be participated while formulating plans and policies. Working Capital concept be communicated from top to lower levels. Adequate budget educations should be provided to improve Working Capital system.

- (ii) KPPL should clearly define its basic objectives. Based on basic objectives annual goals and targets should be fixed.
- (iii) KPPL should analyze SWOT ( Strength, Weakness, Opportunities and Threat ) to strengthen its capability and reduce its weakness.
- (iv) Company should formulate appropriate strategic long range plan as well as tactical short range plan.
- (v) KPPL should try to minimize the gap between planned and actual sales by the help of modern forecasting tools.
- (vi) KPPL needs to increase in production and sales volume for the utilization of available capacity.
- (vii) To control expenses KPPL should develop overhead budget in systematic way overhead expenses. KPPL should be classified in separate headings.
- (viii) KPPL should classified cost into controllable and uncontrollable, fixed variable implement the effective cost control devices.
- (ix) Cost volume profit relationship should be considered while fixing price quantities of sales.
- (x) KPPL should manage reward and punishment system to motivate the staff.
- (xi) Trained and qualified manpower of budgeting and Working Capital should be helped and present manpower should be trained to implement the Working Capital effectively.
- (xii) Capital structure of KPPL should be restructured because there is no long term debt. So the company should done to take loan to avoid fund crisis and utilize its most profitable manner.
- (xiii) KPPL should effectively plan to utilize its idle capacity by launching new product or by expanding current product line.
- (xiv) Flexible budget system should be considered while formulating Working Capital.
- (xv) Direct labor budget should be developed which helps to assets labor requirements to prepare manpower planning and to estimate per unit labor cost.
- (xvi) Capital expenditure budget should be developed while purchasing fixed assets and to evaluate the proposals.
- (xvii) The policy should be formulated to finance cash in case of cash deficit and utilize its excess cash in short term investment.
- (xviii) Performance evaluation system should be followed strictly to improve poor performance or to take corrective action.

- (xix) Inventory level should be maintained on economic order quantity or optimum level.
- (xx) Finally the company should adopt comprehensive profit planning approach. Basic fundamentals of Working Capital should be considered while formulating and implementing the Working Capital.



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Appendix – 1

Calculation of mean, Standard deviation, Coefficient of variation, Correlation, Probable error of target sales and actual sales. Figures in Lakhs ( 00000 )

F Y	Target Sales(X)	Actual Sales(Y)	X = X – X (X =5.8 )	y = Y – Y ( Y= 5.42512723)	xy	x <sup>2</sup>	y <sup>2</sup>
060/06	7	7.8002542	1.2	2.37512697	2.850152	1.44	5.6412281
1	7	0	1.2	0.21121438	36	1.44	42
061/06	5	5.6363416	- 0.8	-1.1730677	0.253457	0.64	0.0446115
2	4	1	- 1..8	- 1.50077824	26	3.24	16
062/06	6	4.2520595	0.2	0.08750457	0.938454	0.04	1.3760878
3		3.9243489			2.701400		2.2523353
063/06		9			83		13
4		5.5126318			0.017500		0.0076570
064/06		0			91		5
N = 5	X = 29	Y = 27.125636 13	x = 0	y = 0	xy = 6.760965 52	x <sup>2</sup> = 6.8	y <sup>2</sup> = 9.3219198 2

Arithmetic mean of Target sales

—

$$X = \frac{\sum X}{N} = \frac{29}{5} = 5.8$$

Arithmetic mean of Actual sales

—

$$Y = \frac{\sum Y}{N} = \frac{27.12563613}{5} = 5.42512723$$

Standard deviation of Target Sales

$$\sigma_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{6.8}{5}} = 1.16619037$$

Standard Deviation of Actual Sales

$$y = \sqrt{\frac{y^2}{N}} = \sqrt{\frac{9.32191982}{5}} = 1.36542446$$

### Coefficient of Variation of Target Sales

$$CV_x = \frac{\sigma_x}{\bar{x}} \times 100\% = \frac{1.1662}{5.8} \times 100\% = 20.11\%$$

### Coefficient of Variation of Actual Sales

$$CV_Y = \frac{\sigma_y}{\bar{y}} \times 100\% = \frac{1.3654}{5.4251} \times 100\% = 25.17\%$$

### Coefficient of Correlation

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} = \frac{6.76096552}{\sqrt{6.8 \times 9.32191982}} = \frac{6.76096552}{7.96172436} = 0.84918357$$

### Probable Error

$$PE(r) = \frac{0.6745}{N} (1 - r^2) = \frac{0.6745}{5} (1 - 0.8492^2) = \frac{0.18809064}{2.23606798} = 0.0841$$

$$6 \text{ times of } PE(r) = 6 \times 0.0841 = 0.5046$$

### Appendix – 2

Calculation of mean, Standard deviation, Coefficient of variation, Correlation, Probable error of target Production and actual Production. (Figures in Lakhs (00000))

F Y	Target Prod. (X)	Actual Prod. (Y)	X = X - X̄ (X=6.6)	y = Y - Ȳ (Y=5.199143)	xy	x <sup>2</sup>	y <sup>2</sup>
060/06 1	7	6.9672500	0.4	1.76810676	0.7072427 0	0.16	3.126201 51

061/06 2	7	5.6796700	0.4	0.48052676	0.1922107	0.16	0.230905
062/06 3	7	4.1324062	0.4	-1.06673704	0	0.16	97
063/06 4	6	5.1420500	-0.6	-0.05709324	-	0.36	1.137927
064/06 5	6	4.0743400	-0.6	-1.12480324	0.4266948	0.36	91
					2		0.003259
					0.0342559		64
					4		1.265182
					0.6748819		33
					4		
N = 5	X = 33	Y = 25.995716	x = 0	y = 0	xy = 1.1818964	x <sup>2</sup> = 1.2	y <sup>2</sup> = 5.763477
		2			6		36

Arithmetic mean of target Production

—

$$X = \frac{\sum X}{N} = \frac{33}{5} = 6.6$$

Arithmetic mean of actual Production

—

$$Y = \frac{\sum Y}{N} = \frac{25.9957162}{5} = 5.19914324$$

Standard deviation of Target Production

$$x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{1.2}{5}} = 0.48989795$$

Standard Deviation of Actual Production

$$y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{5.76347736}{5}} = 1.07363656$$

Coefficient of Variation of Target Production

$$CV_x = \frac{x}{\bar{X}} \times 100\% = \frac{0.4899}{6.6} \times 100\% = 7.42\%$$

Coefficient of Variation of Actual Production

$$CV_Y = \frac{\sigma_y}{\bar{y}} \times 100\% = \frac{1.0736}{5.1991} \times 100\% = 20.65\%$$

Coefficient of Correlation

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{1.18189646}{\sqrt{1.2} \sqrt{5.76347736}} = \frac{1.18189646}{2.62986175} = 0.4494$$

Probable Error

$$PE(r) = \frac{0.6745 (1 - r^2)}{N} = \frac{0.6745 (1 - 0.4494^2)}{5} = \frac{0.53827774}{2.23606798} = 0.2407$$

$$6 \text{ times of } PE(r) = 6 \times 0.2407 = 1.4442$$

Appendix – 3

Calculation of mean, Standard deviation, Coefficient of variation, Correlation, Probable error of actual sales and actual Production. ( Figures in Lakhs ( 00000 )

F Y	Actual Sales ( X )	Actual Prod. ( Y )	x = X – X (X =5.42512626)	y = Y – Y (Y=5.19914324)	Xy	x <sup>2</sup>	y <sup>2</sup>
060/06	7.8002542	6.9672500	2.37512794	1.76810676	4.1994797	5.641232	3.126201
1	0	5.6796700	0.21121535	0.48052676	7	73	52
061/06	5.6363416	4.1324062	-1.17306673	-1.06673704	0.1014946	0.044611	0.230905
2	1	5.1420500	- 1.50077727	-0.05709324	2	92	97
062/06	4.2520595	4.0743400	0.08750554	-1.12480324	1.2513537	1.376085	1.137927
3	3				3	55	91
063/06	3.9243489				0.0856842	2.252332	0.003259
4	9				4	41	64
064/06	5.5126318				-	0.007657	1.265182
5	0				0.0984266	22	33
	5				5		
N = 5	X = 27.125636 13	Y = 25.995716 2	x = 0	y = 0	xy = 5.5395857 1	x <sup>2</sup> = 9.321919 83	y <sup>2</sup> = 5.763477 37

Arithmetic mean of Actual Sales

—

$$X = \frac{\sum X}{N} = \frac{27.1256313}{5} = 5.42512626$$

Arithmetic mean of Actual Production

—

$$Y = \frac{\sum Y}{N} = \frac{25.9957162}{5} = 5.19914324$$

Standard deviation of Actual Sales

$$s_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{9.32191983}{5}} = 1.36542446$$

Standard Deviation of Actual Production

$$s_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{5.76347737}{5}} = 1.07363656$$

Coefficient of Variation of Actual Sales

$$CV_x = \frac{s_x}{\bar{x}} \times 100\% = \frac{1.3654}{5.4251} \times 100\% = 25.17\%$$

Coefficient of Variation of Actual Production

$$CV_Y = \frac{s_y}{\bar{y}} \times 100\% = \frac{1.0736}{5.1991} \times 100\% = 20.65\%$$

Coefficient of Correlation

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{5.53958571}{\sqrt{9.32191983} \sqrt{5.76347737}} = \frac{5.53958571}{7.32984815} = 0.7557$$

Probable Error

$$PE(r) = \frac{0.6745}{N} (1 - r^2) = \frac{0.6745}{5} (1 - 0.7557^2) = \frac{0.28930486}{2.23606798} = 0.1294$$

$$6 \text{ times of } PE(r) = 6 \times 0.1294 = 0.7764$$



Appendix – 4

Kamala Plastic Pvt. Ltd., Dhanusha, Janakpur

Comparative Balance Sheet

For the Fiscal Year 2060/061 to 2064/065.

	060/061	061/062	062/063	063/064	064/065
Assets					
1. <u>Current Assets</u>					
	1,58,55,207.02	1,37,89,750.79	72,94,702.29	70,41,808.15	78,97,521.83
Inventories ( Jinshi goods )	1,21,84,176.64	1,13,43,066.99	2,36,93,926.97	52,31,624.88	1,57,49,434.32
	1,48,48,235.75	87,52,488.22	13,02,719.45	91,78,482.81	18,88,763.83
	13,03,909.06	52,53,416.02	15,26,915.76	14,35,146.64	77,01,364.55
Sundry debtors	4,41,91,528.47	3,91,38,722.02	3,38,18,264.47	2,28,87,062.48	3,32,37,084.53
Advance & deposit	88,74,724.48	1,37,68,106.07	1,35,22,460.06	1,45,83,066.29	1,41,26,075.47
Cash & other balance	17,69,215.00	12,94,280.06	17,14,038.07	1,09,46,433.87	1,13,15,067.87
Total Current Assets					
2. Fixed Assets					
3. Investment					
Total	5,48,35,467.95	5,42,01,108.15	4,90,54,762.60	4,84,16,562.64	5,86,78,227.87
<u>Capital &amp; Liabilities</u>					
Capital	4,50,00,000.00	4,50,00,000.00	4,50,00,000.00	4,50,00,000.00	4,50,00,000.00
Reserve & profit	4,91,872.68	1,47,515.46	1,11,758.36	3,81,553.25	1,52,326.26
Sundry	80,93,595.27	81,92,592.69	34,43,004.24	24,65,009.39	1,13,55,901.61
	12,50,000.00	8,61,000.00	5,00,000.00		21,70,000.00

creditors Provision				5,70,000.00	
Total	5,48,35,467.95	5,42,01,108.15	4,90,54,762.60	4,84,16,562.64	5,86,78,227.87

Appendix – 5

Cost Summary For Finding Financial Ratios

	F Y 060/061	FY 061/062	FY 062/063	FY 063/064	FY 064/065
Current Assets	4,41,91,528.47	3,91,38,722.02	3,38,18,264.47	2,28,87,062.48	3,32,37,084.53
	93,43,595.27	90,53,592.69	39,43,004.24	30,35,009.39	1,35,25,901.60
Current Liabilities	2,83,36,321.45	2,53,48,971.23	2,65,23,562.18	1,58,45,254.33	2,53,39,562.70
	93,43,595.27	60,53,592.69	39,43,004.24	30,35,009.39	1,35,25,901.60
Quick Assets	5,48,35,467.95	5,42,01,108.15	4,90,54,762.60	4,84,16,562.64	5,86,78,227.87
Total Debt	7,27,76,966.82	4,90,61,327.06	3,54,90,181.87	3,37,79,857.52	5,79,81,368.75
	80,57,112.74	49,30,650.80	44,37,991.26	49,29,787.48	47,53,187.04
Total Assets	8,94,73,827.24	6,26,59,468.82	4,69,52,626.01	4,53,52,049.55	7,26,18,737.61
	1,66,96,960.42	1,35,98,141.76	1,14,62,444.14	1,15,72,192.03	1,46,37,368.86
Cost of Goods Sold	72,08,239.46	44,45,642.78	15,39,242.90	2,69,794.89	69,70,773.01
	93,72,405.35	81,85,412.14	78,38,387.97	79,03,540.89	87,90,709.17
Average Inventory	4,54,91,872.68	4,51,47,515.46	4,51,11,758.36	4,53,81,553.25	4,51,52,326.26
Sales					
Gross Profit					
Net Profit					
Operating Expenses					
Total Capital Employed					

Appendix - 6

Different Ratio Test from FY 060/061 to FY 064/065.

Kamala Plastic Pvt. Ltd.

Ratio	Formula	FY 060/061	FY 061/062	FY 062/063	FY 063/064	FY 064/065
Current Ratio	<u>Current Assets</u>	<u>4,41,91,528</u>	<u>3,91,38,72</u>	<u>3,38,18,26</u>	<u>2,28,87,06</u>	<u>3,32,37,08</u>
	<u>Current Liabilities</u>	<u>.47</u>	<u>2.02</u>	<u>4.47</u>	<u>2.48</u>	<u>4.53</u>
		93,43,595.27	90,53,592.69	39,43,004.24	30,35,009.39	1,35,25,901.60
		= 4.73	= 4.32	= 8.58	= 7.54	= 2.46
Quick Ratio	<u>Quick Assets</u>	<u>2,83,36,321</u>	<u>2,53,48,97</u>	<u>2,65,23,56</u>	<u>1,58,45,25</u>	<u>2,53,39,56</u>
	<u>Current Liabilities</u>	<u>.45</u>	<u>1.23</u>	<u>2.18</u>	<u>4.33</u>	<u>2.70</u>
		93,43,595.27	90,53,592.69	39,43,004.24	30,35,009.39	1,35,25,901.60
		= 3.03	= 2.80	= 6.73	= 5.22	= 1.87
Debt Assets Ratio	<u>Total Debt</u>	<u>93,43,595.27</u>	<u>90,53,592.69</u>	<u>39,43,004.24</u>	<u>30,35,009.39</u>	<u>1,35,25,901.60</u>
	<u>Net Tangible Assets</u>	<u>.95</u>	<u>8.15</u>	<u>2.60</u>	<u>2.64</u>	<u>7.87</u>
		5,48,35,467.95	5,42,01,108.15	4,90,54,762.60	4,84,16,562.64	5,86,78,227.87
		= 0.17	= 0.17	= 0.08	= 0.06	= 0.23
Inventory Turnover Ratio	<u>Cost of goods sold</u>	<u>7,27,76,966</u>	<u>4,90,61,32</u>	<u>3,54,90,18</u>	<u>3,37,79,85</u>	<u>5,79,81,36</u>
	<u>Average Inventory</u>	<u>.820</u>	<u>7.06</u>	<u>1.87</u>	<u>7.52</u>	<u>8.75</u>
		80,57,112.74	49,30,650.80	44,37,991.26	49,29,787.48	47,53,187.04
		= 9.03	= 9.95	= 7.99	= 6.85	= 12.20
Capital Employed Turnover Ratio	<u>Sales</u>	<u>8,94,73,827</u>	<u>6,26,59,46</u>	<u>4,69,52,62</u>	<u>4,53,52,04</u>	<u>7,26,18,73</u>
	<u>Total Capital Employed</u>	<u>.24</u>	<u>8.82</u>	<u>6.01</u>	<u>9.55</u>	<u>7.61</u>
		4,54,91,872.68	4,51,47,515.46	4,51,11,758.36	4,53,81,553.25	4,51,52,326.26
		= 1.97	= 1.39	= 1.04	= 1.0	= 1.61
Total Assets Turnover Ratio	<u>Total net Sales</u>	<u>8,94,73,827</u>	<u>6,26,59,46</u>	<u>4,69,52,62</u>	<u>4,53,52,04</u>	<u>7,26,18,73</u>
	<u>Total Assets</u>	<u>.24</u>	<u>8.82</u>	<u>6.01</u>	<u>9.55</u>	<u>7.61</u>
		5,48,35,467.95	5,42,01,108.15	4,90,54,762.60	4,84,16,562.64	5,86,78,227.87

		= 1.63	= 1.16	= 0.96	= 0.94	= 1.24
Return on Capital Employed Ratio	$\frac{\text{Net Profit AT}}{100\% \text{ Total Capital}} \times$	$\frac{72,08,239.4}{6}$ 4,54,91,872 .68 = 15.85%	$\frac{44,45,642.}{78}$ 4,51,47,51 5.46 = 9.85%	$\frac{15,39,242.}{90}$ 4,51,11,75 8.36 = 3.41%	$\frac{2,69,794.8}{9}$ 4,53,81,55 3.25 = 0.59%	$\frac{69,70,773.}{17}$ 4,51,52,32 6.26 = 15.44%
Operating Ratio	Cost of goods sold + Operating Exp. X 100% Sales	$\frac{7,27,76,966}{.82}$ + $\frac{93,72,405.3}{5}$ 8,94,73,827 .24 = 91.81%	$\frac{4,90,61,32}{7.06}$ + $\frac{81,85,412.}{14}$ 6,26,59,46 8.82 = 91.36 %	$\frac{3,54,90,18}{1.87}$ + $\frac{78,38,387.}{97}$ 4,69,52,62 6.01 = 92.28 %	$\frac{3,37,79,85}{7.52}$ + $\frac{79,03,540.}{89}$ 4,53,52,04 9.55 = 91.91 %	$\frac{5,79,81,36}{8.75}$ + $\frac{87,90,709.}{17}$ 7,26,18,73 7.61 = 92.95 %
Gross Profit Margin Ratio	$\frac{\text{Gross Profit}}{100\% \text{ Sales}} \times$	$\frac{1,66,96,960}{.42}$ 8,94,73,827 .24 = 18.66 %	$\frac{1,35,98,14}{1.76}$ 6,26,59,46 8.82 = 21.70 %	$\frac{1,14,62,44}{4.14}$ 4,69,52,62 6.01 = 24.41 %	$\frac{1,15,72,19}{2.03}$ 4,53,52,04 9.55 = 25.52 %	$\frac{1,46,37,36}{8.86}$ 7,26,18,73 7.61 = 20.16 %
Net Profit Margin Ratio	$\frac{\text{Net Profit}}{\text{Sales}} \times 100\%$	$\frac{72,08,239.4}{6}$ 8,94,73,827 .24 = 8.06 %	$\frac{44,45,642.}{78}$ 6,26,59,46 8.82 = 7.09 %	$\frac{15,39,242.}{90}$ 4,69,52,62 6.01 = 3.28 %	$\frac{2,69,794.8}{9}$ 4,53,52,04 9.55 = 0.59 %	$\frac{69,70,773.}{01}$ 7,26,18,73 7.61 = 9.60 %

### Appendix – 7

Kamala Plastic Pvt. Ltd. Dhanusha, Janakpur

Comperative Profit & Loss Account for the fiscal year 2061/2062 to 2065/2066

	060/061	061/062	062/063	063/064	064/065
1. Sales Revenue	89,473,82 7.24	62,659,46 8.82	46,952,63 6.01	45,352,04 9.55	72,618,73 7.61
2. Cost of Production	72,776,96 6.82	49,061,32 7.06	35,490,18 1.87	33,779,85 7.52	57,981,36 8.75
3. Gross Profit	16,696,96	13,598,14	11,462,44	11,572,19	14,637,36

	0.42	1.76	4.14	2.03	8.86
4. Other Income	1,449,199.21	1,703,188.67	419,758.00	430,806.26	368,634.00
5. <u>Other Business Expenses</u>	9,372,405.35	8,185,412.14	7,838,387.97	7,903,540.89	8,790,709.17
(a) Administration Expenses	4,297,494.83	3,513,803.35	3,284,999.78	3,189,642.27	3,402,856.29
(b) Distribution Expenses	4,102,753.50	3,656,254.03	3,719,488.50	3,593,836.50	3,978,863.50
© Maintenance Expenses	478,295.11	552,751.18	524,925.11	850,456.59	941,387.54
(d) Bonus Expenses	421,287.53	405,352.28	220,556.01	227,299.20	467,601.84
(e) Extra Fees	72,574.38	57,251.30	88,418.57	42,306.33	-
6. Net Operating Profit	8,773,754.28	7,115,918.29	4,043,814.17	4,099,457.40	6,215,293.69
7. Interest Expenses	15,198.23	14,282.45	12,387.45	4,564.06	7,992.31
8. Depreciation Expenses	1,260,518.61	1,499,668.97	1,842,179.09	1,821,901.29	1,935,012.92
9. Interest on Investment	10,414.27	8,212.50	16,312.51	-	403,129.96
10. Income From Sale of Fixed Assets	-	-	-	-	4,478,839.00
11. Income Before Tax	7,508,451.71	5,610,179.37	2,205,560.14	2,272,992.05	9,154,257.42
12. Provision for Income Tax	150,000.00	861,000.00	500,000.00	570,000.00	2,170,000.00
13. <u>Income Tax</u>	150,212.25	303,536.59	166,317.24	89,457.16	14,084.41
Tax Provision	1,275,212.00	453,536.50	1,027,314.00	589,457.10	584,084.40
14. Penalty for Performance Bond	-	-	-	1,343,740.00	-

15. Net Profit	7,208,239. 46	4,445,642. 78	1,539,242. 90	269,794.8 9	6,970,773. 01
16. Balance Brought Forward	963,633.2 2	491,872.6 8	147,515.4 6	111,758.3 6	381,553.2 5
17. Total Profit	8,171,872. 68	4,937,515. 46	1,686,758. 36	381,553.2 5	7,352,326. 26
18. Proposed Dividend	7,680,000. 00	4,790,000. 00	1,570,000. 00	-	7,200,000. 00
19. P/L Transferred to Balance Sheet	491,872.6 8	147,515.4 6	111,758.3 6	381,553.2 5	152,326.2 6