CHAPTER I
INTRODUCTION

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1.1 INTRODUCTION

Working capital management is a vital area of Financial Management. The profitability and liquidity of the organization depends mainly on the management of working capital. It includes management of current assets and current liabilities in such a way that the equilibrium is attained between these two. It also includes the decision related to current assets and financing of these assets. The term "current assets means and includes, all the assets which can be converted into cash within an accounting year and includes cash, short term securities, debtors bill receivables and stock".[1] For the production of goods some current assets are required, but the moment goods are produced they do not go immediately in the market and ultimately in the hands of customer who pays for it. To continue this process of production-sales-, some lubricant in the form of current assets is required, and working capital management is management of this lubricant. "Much has been rightly made of the long term planning of capital budgets but the cost to industry due to inadequate planning in the use of working capital is immeasurable. Intuitive judgment is frequently used in estimating the current assets which will be required in the course of trading so that the temptation often arises to 'play safe', leading to the wasteful use of resources."[2]

Working capital management is that management which is concerned with current assets, current liabilities and interrelation exists between them. The working capital is termed as circulating capital as it circulates from cash to cash by transformation into various formats like cash to raw material, to work-in-progress to finished products to receivables to cash. It is needed to pay current obligations also. It is the life blood of the organization. Working capital is also known as hub of a cycle wheel, if hub gets disturbed the wheel gets damaged.

1.2 WORKING CAPITAL MEANING:

There are two interpretations to working capital (a) Balance Sheet concept and; (b) Operating Cycle concept. This section discusses the Balance Sheet concept of working capital.

According to Annual Survey of Industries working capital means "stock of raw materials, stores, fuels, semi finished goods, including work-in-progress and finished products and by-products; cash in hand and at the bank and the algebraic sum of sundry creditors as represented by (a)outstanding payments e.g. rent, wages, interest and dividend; (b) purchase of goods and services; and (c) short term loans and advances, sundry debtors comprising amounts due to the factory on account of sale of goods and services and advances towards tax payments."[3]

The simple definition of working capital is "excess of current assets over current liabilities."[4]

According to John Mayer "the excess of the assets of a business over its obligations represents the interest of the owner or owners in the business; this excess accounts call capital. They treat the current division of the balance sheet in a similar manner; call the excess of current assets over current liabilities the working capital."[5]

According to Gathman and Dougall "Working capital is excess of current assets over current liabilities which is popularly known as net working capital."[6]

As per John Mayer "Economist use the term working capital as a synonym for property rights and all the permanent form fixed capital and the revolving form current capital. Businessmen and accountants do not commonly use the term current capital; instead they refer to it as revolving, circulating, liquid or working capital."[5]

"The working capital of a business enterprise can be said to be that portion of its total financial resources which is put to a variable operative purpose."[7]

Therefore from the above definitions the working capital can be defined as excess of current assets over current liabilities, the current assets are to be managed in such a way that financial manager can pay the firm's current liabilities, from it and financing of current assets in such a way that the very purpose of the business of wealth maximization of shareholder is achieved.

On the basis of time working capital can be divided into two parts:

(i) Permanent working capital and;

(ii) Temporary or Variable working capital.

Permanent working capital as per Tandon Committee is termed as "core current assets." These are the assets in which minimum amount is invested in current assets through - out the year to carry minimum business activities.

The amount of working capital remains same at any point of time for financing decision and it is corresponding with the size of business, greater the size greater the amount and *vice versa.* Supply of such working capital is advisable from long-term funds.

Temporary or Variable Working Capital suggests that the amount required fluctuates with the time to time and according to business activities. During the time of higher sales extra investment is required in inventory and also in receivables and *vice versa.* The supply of such working capital is advisable to be financed from short-term funds.

There are two concepts of working capital *Gross Working Capital* and *Net Working Capital.*

The term *Gross Working Capital* means firm's investment in total current or circulating assets. Current assets are those assets which can be converted into cash within a period of twelve months and include cash, short-term securities, debtors, bills receivables and stock or inventories.

The Gross concept represents entire amount of funds that are used for current operating purpose.

According to Husband and Dockeray "management prefers the Gross working capital or total current assets concept it takes into consideration all the current resources of the enterprise, from whatever source derived and their application to the current and future activities of the enterprise."[5]

The term *Net Working Capital* is defined as excess of current assets over current liabilities. The net working capital can be positive or negative. A positive working capital is excess of current assets over current liabilities and negative is excess of current liabilities than current assets.

The concept of Gross mainly concentrates on two aspects of current assets;

i) Optimum investment in current assets and; ii) financing of current assets.

   The investment in current assets should be optimum as to avoid excessive or inadequate investment, as excessive investment in current assets affects the profitability of the firm as fund remains idle and inadequate investment endangers the firm for its solvency as it may lead to failure to meet its current obligations. Another aspect of arranging for funds to finance the current assets, whenever the need for working capital arises due to any reason, the amount should be available to make good the need of working capital. Similarly whenever the fund is in excess of the requirements it should be invested immediately to earn maximum return out of it and fund should not remain idle. The financial manager has to look after all the opportunities that are available in the market.

ii) The financing of current assets can be done from either long term funds or short term funds or from appropriate mix of both. The long term funds are owner's fund *i.e.* equity, preference capital, debentures, long term debt or retained earnings. A portion of working capital may be financed from long term funds. However financing of working capital need differs with the firm-to-firm, business to business and other factors.

According to Colin Park and John W. Gladson "thinking of working capital as the net mixture of off setting liquid items leads to thinking realistically about inflows and outflows of working capital funds. Thus reservoir or net pool of working capital is too narrow a concept. To visualize dynamic funds movements in enterprise operations, working capital must be seen as a boiling pool of liquid purchasing power, not a stagnant and with the passage of time. Internal changes between or among various items in the fund or the net current assets are not always recognized in conventional significance from a managerial view point."[5]

1.3 OPERATING CYCLE:

This is the second interpretation of working capital. This is based on the time period required to convert the raw material into the finished product. The operating cycle consists three main activities.

(i) Purchasing resources.

(ii) Production; and

(iii) Distributions.

The period between the purchase of raw material which is paid after some period, which represents the accounts payable period, and the time period between the purchase of raw material and sale of finished goods represents the inventory period and the time gap between the payments from debtors from date of sales represent the debtors period. These activities create funds that are not certain as well as not synchronized. They are not certain because, it is difficult to predict with complete accuracy the receipts (from sales) and disbursements (production costs and purchase of material). They are also not synchronized because in most of the cases disbursements take place prior to receipts.

Operating Cycle = Inventory Conversion Period + Receivables Conversion Period

Where

$$\text{Inventory Conversion Period} = \frac{\text{Average Inventory}}{(\text{Cost of Sales}/365)}$$

$$\text{and Receivables Conversion Period} = \frac{\text{Accounts Receivables}}{(\text{Annual Credit Sales}/365)}$$

Cash Conversion Cycle represents the time interval in between the production and sales during which working capital finance must be done to carry out the business activities. Increase in length of cash conversion without simultaneous increase in payable deferral period lengthens the cash conversion cycle and creates more demand of working capital.

The period between the purchase of raw material which is paid after some period which represents the accounts payable period and the time period between the purchase of raw material and sale of finished goods represents the inventory conversion period and the time gap between the payments from debtors from date of sales represent the debtors period. The time gap between the purchase of raw material and realization of cash out of sales represent the cash cycle. The operating cycle is the sum of the inventory period and the accounts receivable period and cash cycle is equal to the operating cycle less the accounts payable period.

In the case of trading firm "the operating cycle will include the length of time required to convert (i) cash into inventories,(ii) inventories into accounts receivable and (iii) accounts receivable into cash. [8]

In the case of a "financing firm", the operating cycle includes the length of time taken for (i) conversion of cash into debtors and (ii) conversion of debtors into cash.[1]

To examine the time taken to convert cash into cash are ought to be examine the payable deferral period.

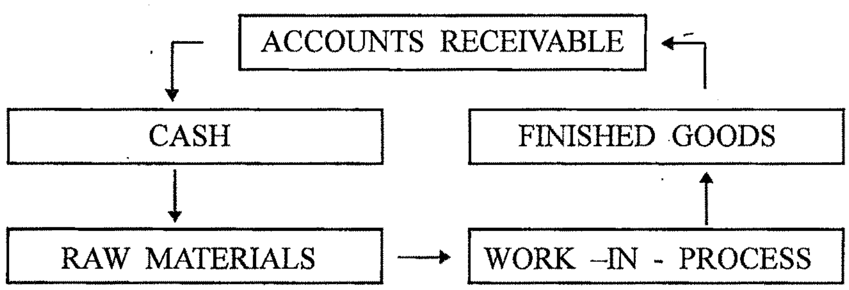
$$\text{Payable Deferral Period} = \frac{\text{Accounts Payable}}{(\text{Cost of Sales}/365)}$$

Thus

Cash Conversion Cycle = Operating Cycle – Payables Deferral Period.

The cycle will repeat repeatedly and look as shown in EXHIBIT 1.1.

EXHIBIT 1.1



(Source : Dr. Maheshwari S.N.(1997) Management Accounting and Financial Control, Sultan Chand & Sons. p238)

1.4 FACTORS INFLUENCING WORKING CAPITAL REQUIREMENTS:

There are various factors which influences the working capital requirements and they are dependent from firm to firm and from time to time and also from industry to industry. These factors are discussed in the following paras:

i. *Nature and Size Of Business:* The requirement of working capital is related with nature of business e.g. a service industry like electricity or banking or insurance has short term operating cycle and mostly cash sales are done, requires less working capital and a manufacturing companies requires relatively higher working capital.

ii. *Seasonality of Operations:* The seasonal concerns require more working capital during peak seasons as compared to off seasons.

iii. *Manufacturing Cycle:* The manufacture cycle starts with purchases and ends with the production of finished goods. If the cycle is longer, the requirement of working capital would be more.

iv. *Business Fluctuations:* The demand for the product may differ from time to time and with season to season. Seasonal fluctuations affect the production and demand for working capital also. During seasons, production increases the expenses also increases. Similarly when there is off season period certain overheads are required to be incurred by the firm such as wages and salaries, interest etc. the expenses also increases.

v. *Production Policy:* A steady production policy may tie-up certain funds in inventories during off-season. A variable production policy may be adopted depending upon the demand.

vi. *Market Conditions:* The competition prevailing in the market has an impact on working capital requirement.

vii. *Firm's Credit Policy:* A credit policy not only affects the working capital requirement but also affects book debts also. Generally norms of credit policy of the firm are determined as per the industry to which they belong. However there are certain firms which may differ from industry's credit policy and set their own policies.

viii. *Conditions of Supply:* The new material supply for converting it into finished goods product is made promptly and adequately, the inventory is not required to be stored much

ix. *Availability of Credit:* The credit terms granted by the creditors has an impact on working capital requirement. The need is dependent on liberal or strict policy of credit.

x. *Growth and Expansion Activities:* The growth of the firm either in terms of sales or in terms of fixed assets, requires more working capital.

xi. *Profit Margin and Profit Appropriation:* The profit generated should be well planned in order to judge whether it is available for working capital. The appropriation of profit is also equally important. The retain or distribute profit policy also affects working capital requirement.

xii. *Price Level Changes:* A rising price level more requires more amount of working capital because in rising prices, level of investment increases in current assets.

1.5 COMPONENTS OF WORKING CAPITAL:

The Gross working capital has three major components, *viz*

- Inventory,
- Receivables,
- Cash: and
- Current Liabilities

Sometimes there is a smaller component of 'Loans and Advances' also in the 'Gross Working Capital' or 'Current Assets'. To derive 'Net Working Capital' from 'Gross' current liabilities are required to be reduced. The following paras discusses each component of the Current Assets.

1.5.1 INVENTORY MANAGEMENT

Inventories are the Stock of the products which is manufactured for the purpose of sale and the components that make up the product. The inventories are one of the major elements, which help the firm in obtaining desired level of sales. The major forms especially in manufacturing companies or firms can be grouped in four parts, i) Raw- Material, ii) Work-In-Progress, iii) Finished Goods and iv) Inventories of Supplies. Inventories are the most significant part of current assets, which forms nearly 60 to 65 percent part in the current assets. In the total assets of the firm inventories are the second largest asset category after Plant and Machinery and Land and Building and it forms nearly 15 to 30 percent part of the total assets. Looking to the huge investment involved in it the management of inventories are to be carried out effectively and efficiently and under or over investment in it should be avoided. Slight ignorance in managing it may affect the very purpose of profitability and liquidity and sometimes total failure of the business.

The decision and management of inventories are generally taken at higher level at production, purchases and marketing level. The core role is played by the finance department and inventories are properly monitored and controlled. The benefits of holding inventories are that it helps the firm in separating process of purchasing, production and selling. The stock is required to be maintained to supply on demand by the customer and can avoid difficulties in executing order. It forms a cushion in the cycle of purchase, production and sales function. The benefits of holding inventories are: avoiding losses of Sales, reducing ordering cost, achieving efficient production runs, price decline, product deterioration, obsolescence, materials costs, ordering costs, carrying costs

Since the risk like price decline, product deterioration, obsolescence and costs like material cost, ordering cost and carrying costs are involved in inventories the maintenance of inventories are expensive, still the firm or company holds the inventory. The motives of holding inventory are transaction motive, precautionary motive. The motives of holding inventory are transaction motive (to satisfy the expected level of activities of the firm).The precautionary motive (to provide a cushion or buffer if actual level is different than expected) and the speculative motive (to purchase large quantity, hold it and sell it when prices are increasing or an anticipated change in the product).

1.5.1. i Objectives Of Inventory Management:

The inventory management deals with two conflicting problems:

i) To maintain inventory for smooth and efficient production and marketing activities; and

ii) To maintain minimum investment in inventory so that the purpose of profitability is achieved. The excess inventory results in low profitability and an inadequate inventory may hamper the production and marketing activities. Therefore, the objective of inventory management is to determine and maintain the optimum level of inventory investment, the over or under investment in inventories should be avoided, over investment results into: a) The tie up of funds and loss of profits .b)Carrying costs may be excessive; and c) The risk of liquidity and there are other losses like price fluctuations, product deterioration, obsolescence etc. The under investment is also dangerous as it may result in following consequences like: a) Production being held up and b) Failure to deliver the product to customers in turn results in permanent loss of the customer. Thus the major costs attributable to inventory management are

- The money blocked up in inventories
- The carrying cost of inventories *e.g.* storage, insurance etc.
- The ordering quantity, depending on frequency and quality of order.

Hence, the effective inventory management should: a) Ensure continuous supply of raw materials for effective and efficient production. b) Maintain sufficient supply of raw materials in the time of short supply and price fluctuations .c) Maintain sufficient supply of finished goods for smooth functioning of marketing activities and efficient customer services. d) Minimize the carrying and other costs: and e) Ensure optimum level of investment in inventories. To achieve these objectives, one has to balance between the carrying cost, ordering costs as well as the money tied up into inventories. Moreover, as a sound management practice, one should also try to get the maximum benefit of the quantity discounts available. While doing all these, enough care be taken about the lead time and the safety stock. All these will help in deciding the periodicity of ordering, quantity of ordering the point in time when order be placed. For this there are various tools available and this are discussed in the following paras.

1.5.1. ii An Economic Ordering Quantity (EOQ):

This is the trade off between ordering and carrying cost. It is the quantity of order, at which annual total cost of ordering and holding are the minimum.

Assumptions of EOQ are the forecast usage/ demand for a given period is usually one year and throughout the year and no delay in placing order. The costs divided into (i) ordering and (ii) carrying cost and it is constant. The cost of carrying is fixed percentage of the average value of the inventory. The EOQ is derived by

$$Q = \sqrt{\frac{2SxU}{P\ C}}$$

Where Q = Economic ordering quantity

S = Cost of placing an order

U = Annual demand/usage of an item

P = Price in unit.

C = Present carrying cost.

✦ Quantity Discounts and Order Quantity:

There is an assumption in standard EOQ that price per unit remains constant irrespective level of the size of the order. This assumption does not take into account the discount available on quantity which influences the price per unit. In order to determine the optimum size of the order where quantity discounts are available, the following procedure may be adopted.

(i) Determine the order quantity using the standard EOQ formula in which assumption is that there is no quantity discount it may be called Q*.

(ii) If the Q* enables the firm to get quantity discount then it represents the optimal order size.

(iii) If the Q* is less than the minimum order size required for quantity discount the profit change Q1 as result of increasing the order quantity from Q* to Q1, the formula is:

$$\Delta\pi = UD + [U/Q^* - U/Q^1]\ S - [Q^1\ (P-D)\ C/2 - Q^*PC/2]$$

Where

$\Delta\pi$ = Change in Profit, U = Annual Usage or Demand, D = Discount per unit when quantity discount available, Q* = EOQ assuming no quantity discount, Q^1 = minimum order size required for quantity discount, S = Cost of placing an order, P = Unit purchase price without discount and C = Inventory Carrying cost expressed as a percentage.

✦ Inflation and Order Quantity

The basic assumption under the EOQ is that price per unit is constant but under the inflationary condition this may not be a true formula. The rate of inflation is not predictable but if it is predictable that rate be applied to EOQ formula by deducting this rate from 'C' i.e. inventory carrying cost expressed as a percentage. The reason for such adjustment is that it off sets to some extent the carrying cost associated with holding the inventory.

1.5.1. iii Re-Order Point

In the re-order, level calculation there is certainty that usages and lead time are known but it is not practically seen as there may be variance in usages or may be variance in lead time. This situation may result in to stock outs, which are dangerous as well as costly. In order to safeguard the stock outs the buffer or cushion stock is maintained which may be helpful if there is increase in demand of usage or delay in delivery. The safety stock level can be calculated, by applying formula:

Safety Stock = Average Usage X Period of Safety Stock

The formula for determining the order point when safety stock is maintained is:

Re-Order Point = (Lead Time X Average Usage) + Safety Stock

The safety stock is maintained as buffer but the calculation of safety stock is also required as to what extent safety stock should be maintained? The safety stock also involves two costs i.e. opportunity cost of stock outs and carrying costs. The raw Materials stock out causes production interruptions and may result in higher cost of production. On the other hand finished goods stock out may result in loss of customers' in turn low profitability. Larger the quantity of safety stocks larger will be the carrying cost and lower opportunity costs. The lower safety stock may result into frequent stock outs with higher opportunity costs with lower carrying cost. Thus the determination of optimal safety stock is of key importance.

1.5.1.2 Pricing Of Raw Materials and Valuation Of Stocks

For the purpose of pricing/costing of inventory mainly two methods are used:

- ✦ FIFO Method: First in first out the method assumes that the order in which materials were received, they are to be issued in that order only. Hence the pricing/ costing of material consumed will be in that order.

- ✦ Weighted Average Cost Method: Under this method material issued are priced at the weighted average cost of materials in the stock.

1.5.1.2. i **Valuation:** The inventory carried out by the firm are in the three forms i.e. raw material inventory, work-in-process inventory and finished goods inventory. The valuation of work-in-process and finished goods depends on two factors. a) method used for pricing material; and b) manner in which fixed manufacturing overheads are treated. The overheads cost depends upon two another system. *viz.* direct costing and absorption costing.

Therefore the work-in-process and finished goods valuation is lower in direct costing and higher under absorption costing. When inventory level increases the profit under direct costing is lower than absorption costing and when inventory level decreases the profit under direct costing increases as compared to absorption costing.

1.5.1.3 Criteria For Judging The Inventory System:

The objective of the inventory management is to minimize the cost and risk, for this purpose following criteria be adopted:

(i) **Comprehensibility:** The inventory system ranges from simple to complex. It may be manual or an automatic system. It should be understood by all the parties affected by it. The parties affected by it should have transparent system of its purpose logic and rationale behind it. This results in enthusiasm and more credibility of the system.

(ii) **Adaptability:** A certain degree of flexibility and adaptability must be designed into the system in order to accommodate change, new products, new situations, and new requirements and should take utmost care of all these.

(iii) **Timeliness:** On account of various factory the inventories suffers from certain losses like obsolescence caused by technological changes and change in customer behavior, deterioration of goods with the passage of time, price fluctuations. The timely actions are required to be taken for corrective action.

1.5.2 MANAGEMENT OF RECEIVABLES:

The management of receivables deals with the decisions regarding overall credit policy and collection policy made by the management. This also deals with the evaluation of each credit applicant/customer of the organization. The receivables arises on account of credit sales which are generally made to survive in the competitive market as customer may tend to buy on credit terms. Credit sales are treated as one of the tool in marketing management. When sales are made to the customer and cash is not received immediately, it is said that firm have granted trade credit to its customers, therefore receivables management are also called credit management as the firm is required to make credit policy, credit standards, credit period, discount offer, collection policy etc and it is also termed as "Accounts Receivables." This has three characteristics:

- It involves risk hence need to be analyzed carefully.
- It is based on the economic value to buyer immediately on purchases and on receipt of money to seller.
- It implies futurity because the payments from customer are to be received in future and it is termed as debtors, and treated as an asset of the firm.

Receivables are on the assets side of the balance sheet and represent amounts owed to the firm because of sale of goods or services in the ordinary course of business. The object behind this is to give reasonable time to customer to make payments. Receivables are major components of assets after Inventories. The time gap between sale of goods or services and receipt of payment to be financed from working capital, hence it also represents investment.

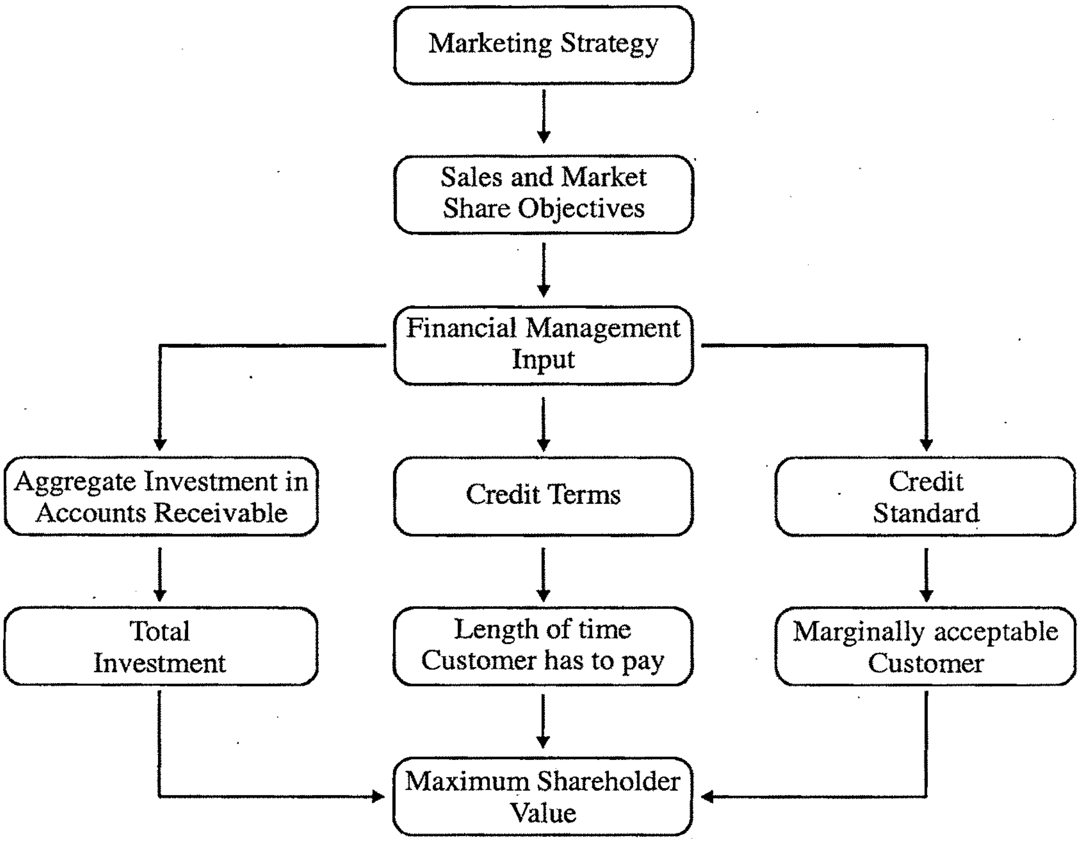
The purpose of credit sales is to earn more profit but sale of goods results in blocking of funds in accounts receivable. This fund has to be managed and the firm has to forgo interest on such short-term financing. Moreover, in the credit sales the chances of bad debts are also present. If firm decides to sale only in cash then customer may not be ready to purchase, hence the appropriate mix between cash and credit sales may be selected. The main objective of the receivable management is to promote sales and profits until that point is reached where the return on investment in further funding of receivables is less than the cost of funds raised to finance that additional credit (i.e. cost of capital)[3]

If the receivables are not increased in tune with sales, the amount of working capital requirement is bound to go up. The investments in receivables are nearly 54 to 57 percent of total working capital. The large part of receivables are tied up in loans and advances if the credit terms and the collection policies are liberal.[6] The credit policy affects the shareholder's worth when there is an over investment in receivables. Even when the credit terms, like discount period credit are not in line with competitors it may result into reduction of sales and resulting into reduction of share holder's worth.

1.5.2. i Objectives of Receivables Management:

The basic objectives of Receivables Management is shareholder's wealth maximization, which is the fundamental objective of the Financial Management. This can be displayed in Exhibit 1.2

EXHIBIT 1.2



(Source : Bhalla V. K. (1997) Financial Management and Policy, Anmol Publications Pvt. Ltd., New Delhi.. p310)

Thus, the receivables management is not only the finance department, but it is the part of the corporate strategy.

The basic motives of receivables management are financial motive, operating motive, controlling motive and the pricing motive.

- **Costs Involved in Receivables Management:**

The management of accounts receivable involves management of fund for temporary period and fill the gap between credit sales till the payments are received and opportunity cost involved. There are three types of costs involved. The Capital Costs, Administrative Cost, Collection Costs and the Defaulting Costs. In the *Capital Costs,* the fund is blocked in the resources as credit sales to realization of cash on payment by customer; to fill the gap an additional fund is required. There are certain costs like salaries and wages, purchases of raw material, after sales services etc. are to be filled from additional fund. These funds may either be raised from outside short term or long-term sources or internal sources like retained earnings, this involves cost. If additional fund is raised from outside sources firm, will have to borrow it on interest and if it is raised from internal sources firm will have to forgo the opportunity costs, which firm otherwise, would have earned. *Administrative Costs* refer to costs involved in maintaining separate administrative staff for maintaining records, special investigation staff to judge the credit worthiness of proposed customers etc. *Collection Costs*, refers to costs involved to recover the money from the defaulters. *Defaulting Costs,* consists of cost for inability of the firm to recover money from the customers, they are termed as bad debts and to be written off.

1.5.2. ii Receivables Management and Monitoring

There are various aspects required to be taken care of in the credit management. For this purpose the terms of payment and credit policy are important. Amongst the terms of payment this may relate to cash terms, open accounts, credit period etc. For determining the credit policy at the outset credit standards required to be examined. While deciding this credit standard emphasis be given to character, capacity, conditions, collateral and capital and financial soundness. For better management of receivables key ingredients are credit terms, credit period, cash discounts and collection efforts. The credit terms specify credit period and cash discount rates. The credit period is the period elapsing between the date when the purchases receipts its settlement of account and date when the payment due. The cash discount rate expresses the reduction in the purchase price that purchases will receive, if it pays within cash discount period. Both these taken together will affect to average collection period.

The credit terms depends on number of factors like, competition, operating cycle, type of goods, perishability, seasonality of demand, consumer acceptance, cost and pricing, types of customer and profitability. For the purpose of decision making it is necessary to examine the impact on income of unit change in any of this variable.

For the purpose of credit granting to a single customer there are various methods *viz.* numerical scoring, discriminate analysis, or risk classification etc. For the purpose of management of receivables, some specific information in the form of Average Collection Period, Aging Schedule and Collection Matrix plays an important role.

- **Monitoring Accounts Receivables**

There are mainly three methods to monitor accounts receivables.

Day's Sales Outstanding: (DSO) which measures the quality of debtors who are prompt payers or slow payers. Longer period indicates liberal credit policy or inefficient credit policy or inefficient collection efforts.

Aging Schedule (AS) The object of this schedule is to have closer watch on quality of debtors. The aging schedule classifies outstanding accounts receivables at a given point of time into different age brackets, by ascertaining sales and payments received from individual customer from ledger. The schedule may be prepared at a regular interval and to be compared inter-firm or with industry Aging Schedule and

Collection Matrix: The traditional method of DSO and AS suffers from the limitation that they are mainly dependent on sales and payment by customers, if sales increases than the schedule will differ or may remain constant even there are no change in pattern of payment by customer. The correct picture can be judged by collection matrix in which firm may judge whether the collection is improving, stable or deteriorating and it provides historical record of collection percentages that can be projected for monthly receipts of budgeting period.

1.5.3 CASH MANAGEMENT

Cash is an omnipresent phenomenon in a business. One of the key aspects of working capital management. The cash keeps the business running hence, it is compared with blood in the human body; cash is lifeblood of the any business. In any activity of business, the cash is involved directly or indirectly. It is the liquid assets in the business and liquidity of other assets is measured in terms of their conversion into the cash. For the smooth running of business, proper and effective cash management is essential. Since lot of skill is required in the management of cash any wrong decision in this regard, may put business in a difficult situation.

Cash, generally is 1 to 3 percent of the total assets. It is the liquid assets of the organization and management of the same is quite vital. A sound cash position maintains the objective of liquidity and profitability. The management of cash is concern with, Cash flow into and out of the firm, Cash flow within the firm; and Cash balance held by enterprise at a point of time.

The cash is significant because it pays firm's obligations but it is unproductive. The firm should keep balance in such a way to keep themselves liquid and investment in short term securities if the cash is excess to earn profits. The prediction of cash flow is difficult as inflows and outflows are not necessarily coinciding. Cash flows would be more at the time of dividend payments, tax payments, purchases and cash inflow would be more other than these periods or there may be large cash sales or debtors might have paid etc.

As per John Maynard Keynes there are *three possible motives for holding cash*[11]

The *Transaction Motive*, *The Precautionary Motive* and *The Speculative Motive.*

The *Transaction Motive* deals with holding of cash to meet the future obligations, which may not coincide between inflows. The *Precautionary Motive* is to keep cash as cushion or buffer to meet any contingencies, which may occur in future, which is unexpected like early presentation of bill, price rise in raw material, late payment by customers. These all factors affect the working capital. However if firm has capacity to borrow at short notice or if excess cash is invested in short term marketable securities the need for working capital would be less. The *Speculative Motive* is to tap out some investment opportunities. These motives of cash management depend upon the expected cash inflow and outflow, the maturity structure of liabilities, and the ability to borrow at short notice.

Objectives Of Cash Planning

There are mainly two objectives of cash management, *viz* Meeting Cash Disbursement and Minimizing Funds Locked up as Cash Balance. By following certain techniques of cash management, the receipts and payments of cash flows can be managed. Inflows and out flows to be planned to judge surplus or deficit and cash budget may be prepared (cash planning). The cash inflows or outflows to be managed in such a way that cash inflows to be generated fast and outflows to be delayed (managing cash flows). An appropriate level of cash balance to be decided and equilibrium between cost of excess cash and danger of cash deficiency should be determined (determination of optimum cash level), and the idle cash may be invested into short term securities or bank deposits to earn profits (investing idle cash).

1.5.3. i Cash Collection and Disbursement

The object of cash management is to accelerate the cash inflows and to decelerate the cash disbursement. Cash collection acceleration by reducing time lag between the time a customer pays the bill and the time the cheques is collected, and funds become available. The difference between cash in the books of the firm and balance in bank is termed as 'float.' Greater the time in converting such float, longer will be the time in converting such fund to be used by firm. Such floating can be managed in such a way that such float time would be reduced. To reduce the float, there are certain techniques like:

Decentralized Collections: The collection time includes mailing time, cheques processing delay and bank's time to credit the amount. A firm may be operating in a wide area and if collection centre were only one than floating time would be higher. Therefore, it is suggested that firm should have decentralized system of collection. It is called 'Concentrating Banking', in which collection centers are in different location and not in only one office. This helps the firm in minimizing the time lag between mailing time and use of such funds after it realization. In this system, firms will have different accounts with banks with different areas, collection centers will deposit such amount to banks, and such funds transferred to head office through transfer or telex. This method reduces the float and financing requirements. The system helps in potential savings and to be compared with cost of maintaining it. The system should be adopted where savings are greater than cost.

Lock-box System: Under this system customer is advised to mail their payments to special post office boxes called 'lock-box' which is dealt by banks, instead of sending these mails to firm's head office. For internal accounting, purpose of firm, bank prepares detailed reports. It helps in cutting down in mailing time, reduces the processing time as cheques are directly deposited by bank, easy realization of funds as cheques is drawn on the same bank.

Delaying Payments: Opposite to speeding the collection, firm may adopt a system of slowing down of payments. It helps the firm in conserving cash and reducing financial requirements. The controlling can be exercised by making payments on due date only and not early not late as well as by centralized disbursement, moreover by matching the receipts and payments with suppliers cash inflows and outflows can be managed.

Playing the Float: When the actual bank balance of the firm is greater than balance in firm's book, such difference is called payment float. This may arise due to transit delay or processing delay. Such time gap between cheques drawn and cheques presented may be invested to earn some interest. Over and above this EDI and Core Banking are the emerging tools to manage cash.

1.5.3. ii Optimum Cash Balance

An optimum balance is required to be maintained so that as and when payment falls due that can be met. Cash is required for purchase of raw materials wages payments, dividend, tax, interest payments etc. A trade-off between risk and return is required to be maintained. If cash balance is less and there is a need for cash, firm has to borrow the money or sell the marketable securities, if cash is kept more than required the liquidity position is good but it may affect the interest loss which firm could have otherwise earned by investing such cash. Therefore to determine the equilibrium between these two i.e. transaction costs and opportunity costs the optimum balance is required. This can be achieved by:

Minimum Bank Balance: Bank is the main source of finance. Bank asks the firm to maintain minimum balance of the funds and earn interest to compensate services provided by them. Appropriate working capital requirements are required to be maintained, this helps in optimum working cash balance.

Uncertainty: Since cash inflows and outflows do not match perfectly, it is difficult to determine optimum cash balance. Since cash flows are unpredictable the information on transaction costs, opportunity costs and the degree of variability of net cash flows to determine appropriate working cash balance. Greater the degree of variability, higher the minimum cash balance. The difference between maximum and minimum should be invested in marketable securities when balance is zero, the marketable securities to be sold and amount should be transferred to working capital balance.

Investment of Surplus Funds

The excess cash should be invested into marketable securities to earn opportunity costs and on need may be converted into cash. Such excess of cash may be realized during peak period when sales are more, may be held as buffer, or may be kept as precautionary measure and such funds are invested. It is very important responsibility of a financial manager. The policy of the firm of investment also determines the investments and it is termed as near money. For the purpose of investment decision, the enterprise should examine safety, liquidity, yield and maturity.

There are various options available with the firm to invest surplus funds. They are fixed deposits with Banks, Treasure Bills, Mutual Fund Schemes, Commercial Paper, and Certificates of Deposits: (CD), Inter-Corporate Deposits, Ready Forwards and Bill Discounting

According to Keith V. Smith, there are seven strategies to manage the surplus funds[11].

a) Do Nothing

b) Make Ad-Hoc Investments

c) Ride the Yield Curve

d) Develop Guidelines

e) Utilize Control Limits

f) Managing with a Portfolio Perspective

g) Follow a Mechanical Procedure

h) Managing with a Portfolio Perspective

i) Follow a Mechanical Procedure.

1.6 FINANCING OF CURRENT ASSETS

The assets are divided into fixed assets and current assets and current assets are further divided into two parts: permanent current assets and temporary current assets. The permanent current assets are required all the time even the sales is zero. The temporary current assets are variable and vary with the business fluctuations.

The investment in the current assets can be done exactly if working capital need can be judged exactly and the holding of the current assets would be minimum. However in practice if is not possible to judge the working capital requirement exactly. If the investment in the current assets is high than return on investment would be low. Simultaneously if the investment is low than it may endanger the production or sales process for reason of stock outs and the creditors would not be paid in time. The holding of the current assets depends upon the working capital policy of the firm, which may be conservative or aggressive policy. The conservative policy tends to low return and risk and aggressive policy has high return and risk.

The financing of working capital is mainly divided into three types, the long term, and short term and spontaneous. Long- term finance is share equity or preference, debentures, retained earnings, debts from the financial institutions etc. Short term sources are bank loans, commercial papers, factoring receivable but these finances has to be planned. The spontaneous finance are creditors, bills payable, outstanding expenses etc. these finance are cost free and should be in priority and to be used fully. The financing of Current Assets can mainly be divided into 3 approaches:

i *Matching Approach:* it also termed as hedging approach, in this the maturity of source of funds should match the nature of asses to be financed. It is further categorized into Permanent working capital to be financed from long-term finance and Temporary working capital to be financed from short-term funds.

ii *Conservative Approach:* in this approach the requirements of all the funds should be finance from long-term sources and short-term sources to be used only incase of exigencies. This approach is less risky, but more costly as compared to hedging approach.

iii *Aggressive Approach:* in this approach a part of permanent current assets is financed by short term sources.

The Trade-off is required between Hedging Approach and Conservative Approach

This can be done by finding the average of the maximum and minimum requirement of working capital and average of these can be finance by long term funds and remaining working capital may be financed by short term funds for this purpose Cost of Financing: and Flexibility are the criteria to be given importance.

The main objective of the working capital policy are profit maximization and solvency of the firm. The solvency is more if the current assets investments are more as outsiders or the creditors dealing with the firm can be sure that their payment will be made as and when due. If the investment in the current assets is more the firm would be treated as solvent or very liquid and helps in smooth production and sales process. However if the investment in the current assets is more which results in the tie up of the funds in the current assets this results in low profitability. If the firm decides to keep, low balance in the current assets than firm's solvency would suffer but simultaneously the profitability would increase as low investment in the current assets.

1.7 WORKING CAPITAL FINANCING: BANKING POLICY

To streamline the financing of working capital requirement government appointed various committees over a period of time..

Dehejia Study Group was appointed in the year 1968 to determine the extent to which credit needs of industry and trade likely to be inflated and how such trends could be checked. The study group recommended for appraisal of credit applications and segregations of requirements into Hard Core component like raw material, finished goods and short term component for temporary requirement of the funds and dealing of the industry with one bank only and for large borrowers adoption of consortium arrangement.

After the nationalization of the banks in 1969, the RBI appointed a committee in July 1974, under the Chairmanship of *Shri P.L.Tandon.* The terms of the reference of the committee were to suggest guidelines for commercial banks to follow up, supervise, use and safety of the funds, to obtain required data periodically, to prescribe inventory norms for different industries, satisfactory and sound financial structure, resources for financing minimum working capital requirements. The salient features of the recommendations of the committee are to fixation of norms for lending inventory and receivables norms for 15 industries which represent the maximum level of holding of inventory and receivables according to the time element. The three lending norms are recommended, in the first method borrower to continue 25% of working capital gap from long term funds. The working capital gap is total current assets minus current liabilities other than bank borrowings. In the second method, borrower to provide minimum 25% of the total current assets, which gives current ratio of 1.33:1,, and in the third method, the borrower contribution from long term funds will be to the extent of entire core current assets (an absolute minimum level of investment is all current assets required to carry out minimum level of business activities), and minimum 25% of the balance current assets.

In the March 1979, the RBI appointed committee under the Chairmanship of *Shri K.B.Chore*. They recommended for continuation of lending through the cash credit, loans and bill. They recommended periodical review of the lending. Further, they recommended fixation of separate limits for peak level and non peak level requirements, submission of quarterly statement having working capital limits of 50 lacs and above. The committee also put the limit that borrowers should not reach banks frequently for ad hoc or temporary limits, and further recommended to reduce over dependency on the banks.

The RBI appointed the committee in 1882 under the Chairmanship of *Shri S.S.Marathe,* for giving meaningful directions to the credit management and they recommended to lend for working capital to trade and industry according to second method of lending recommended by the Tandon committee and suggested to introduce 'Fast Track' method. In this method banks can release the 50% and (75% in case export oriented manufacturing units), without prior approval of the RBI. The requirements which are to be complied by borrowers are reasonable of estimate /projections in regard to sales, chargeable current and assets current liabilities (other than bank borrowings) and net working capital, classification of current assets and liabilities, in conformity with the guidelines issued by the RBI, maintaining current ratio minimum to 1.33:1(except exempted categories) in terms of *Chore Committee,* on the cash credit system, submission of operating statements annual accounts and review of accounts.

Indian Bank's Association (IBA), constituted a Group on 'Working capital finance' on 31-8-1996, under the Chairmanship of *Shri K. Kannan*, with a view to study modalities of working capital finance. They recommended for determining working capital finance with each bank and develop their own system of lending, regular interactions with the borrower, getting periodical affidavits from the borrower, declaring the assets, liabilities, performance, the bank to exchange information periodically with borrower and identify symptoms of sickness, if any and establishment of "Credit Information Bureau" to provide information on existing and/or new borrowers, which help in deciding sanction of credit.

1.8 WORKING CAPITAL MANAGEMENT

The working capital management helps in maintaining good health of any organization, which can be studied by working capital cycle like production-inventory turns into accounts receivables, cash generation, and purchases- production from various definitions given below:

John J. Hampton defined Working Capital Management "as that aspect of financial management which is concerned with the safe guarding and controlling of the firms current assets and the planning for sufficient funds to pay current bills."[5]

Gitman "The goal of working capital management is to manage each of the firm's current assets and current liabilities in a way that an acceptable level of net working capital is maintained." It is concerned with the determination of appropriate levels of current assets and their sufficient use and financing mix for raising current sources."[5]

Bhalla V.K. "Working Capital Management is the process of planning and controlling the level and mix of the current assets of the firm as well as financing these assets."[9]

The working capital management may be defined as the "management of current assets and the sources of their financing."[5]

R.J. Chambers "Working capital management is concerned with all decisions and acts that influence the size and effectiveness of working capital."[10]

Working capital management is that management which is concerned with current assets, current liabilities and interrelation exists between them. The working capital is termed as circulating capital as it circulates from cash to cash by transformation into various formats like cash to raw material, to work-in-progress to finished products- to receivables- to cash. It is needed to pay current obligations also. It is lifeblood of the organization. Working capital is also known as hub of a cycle wheel, if hub gets disturbed the wheel gets damaged.

There are two important questions in working capital management; one is what is the optimum level of cash, receivables and inventory to be maintained by the firm at a given level of sales and cost consideration? and second is what is the optimum level of finance for working capital for best returns? The answer is that no unproductive assets are to be kept and cheapest available source should be used for finance, investments to be done in short term assets and finance from short term liabilities.

The concept of working capital gross and net working capital and each having importance from management point of view. The gross working capital is mainly taking into consideration the optimum investment in current assets and financing of current assets. The optimum investment in current assets means excessive or inadequate investments in current assets are to be avoided. If the investment is excessive it leads to the profitability of the enterprise; as excess than required is an idle investment with no returns on investment. If the investment is inadequate the enterprise is in danger of solvency as it will not be able to pay its current obligations. In the business organization there are always chances of excess/ inadequate working capital due to some external forces also, to avoid such situation of working capital position the management should take periodic review of the financial position and take corrective actions promptly to achieve optimum level of profitability and liquidity.

1.9 RATIONALE OF THE STUDY

The working capital policy is one of the important financial decisions in any organization and it requires the special attention of the management and proper planning and control of it, to run the business smoothly. The working capital is termed as life blood of business and if proper planning is not done it may endanger the situation of the business and proper control may ensure smooth functioning of it. An appropriate planning control and an efficient working capital management help in cost effectiveness and wealth maximization. This makes it interesting to study, understand and analyze the management of working capital in an overall manner and to understand behavior of each component of the working capital for the selected industries.

1.10 ORGANIZATION OF THE STUDY

The present study is divided into eight chapters as follows:

Chapter I Introduction presents the Theoretical Framework of Working Capital Management, rationale of the study, and organization of the study

Chapter II presents the Literature Review from different authors, findings, and suggestions about various components of current assets working capital components and Working Capital Management

Chapter III presents The Research Methodology adopted in the present study.

Chapter IV presents Profile of Sample with reference to important ratios for the selected ratios over a period of time.

Chapter V carries out analysis of the behaviour of each of the Component of Working Capital over a period of time i.e. Inventory, Receivables and Cash using the tool of ratio analysis.

Chapter VI attempts to analyze variation, if any, for selected ratios between companies, between the years and between the industries.

Chapter VII intends to examine the impact, if any, of level of sales on level of working capital and the management of working capital on the profitability for each selected industry.

Chapter VIII Summary, Conclusions, Findings and Suggestions' presents the findings based on the study and suggestions based on the study.

This is followed by the Bibliography.

Reference:

1. Pandey I.M.,(1991) *Financial Management-* Vikas New Delhi. p325

2. Howard Leslie R.(1971) *Working Capital. Its Management and Control,* 1st ed. Macdonald and Evans Ltd., London. p1

3. *Annual Survey of Industries* (1961), General Review, Central Statistical Organization Calcutta p.11.

4. Dr.Maheshwari S.N.(1997) *Management Accounting and Financial Control,* Sultan Chand & Sons. pD240

5. Joshi Vijay Prakash,(1995)*Working Capital Management under Inflation* Anmol Publications Pvt. Ltd. New Delhi. pp24-27

6. Guthmann Herry G. and Dougall Herbert E.(1959) *Corporate Financial Policy,* Prentice Hall New York. p282

7. Rao K.R., (1985) *Planning Control in Public Enterprise in India* Ajanta Publications (India) p3

8. Mahato K.N.,(Oct 85) Financing Working Capital A case study Approach *Management Accountant-* Vol.20 No.10 pp 557-559.

9. Bhalla V.K. (1997) *Modern Working Capital Management A*nmol Publications Pvt. Ltd. New Delhi. p1

10. Chambers R.J. *Financial Management* (1953) Sweet & Maxwell Ltd. London. as refferred by Joshi Vijay Prakash,(1995)*Working Capital Management under Inflation* Anmol Publications Pvt. Ltd. New Delhi. p24-27

11. Chandra Prassana (1992) Financial Management Theory and Practice. Tata McGrow Hill Pub. Co. Ltd., New Delhi. pp708-721

12. Bhalla V. K. (1997) Financial Management and Policy, Anmol Publications Pvt. Ltd., New Delhi. p310

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