CHAPTER III

CONCEPTUAL AND CONTEXTUAL ANALYSIS OF THE THEORY OF WORKING CAPITAL MANAGEMENT

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INTRODUCTION:

The management of working capital is a challenging task. Effective and efficient management of working capital can ensure the survival of a business enterprise and gasping for breath in their effort to maintain production and remain solvent. It is thus an integral part of the over all corporate management. The movement from working capital to income and profits and back to working capital is one of the most vital characteristics of business administration.[1]

Working capital may be regarded as the life-line of a concern. Its effective provision can ensure the success of a business while its inefficient management can lead not only to loss or profit but also to the ultimate downfall of what otherwise might be considered as a promising concern[2]. Working capital management has thus become a basic and broad measure for judging the performance of a business firm.

The two vital aspects of business life are liquidity and profitability. A firm may exist without making profits but cannot survive without liquidity. The management of working capital is a continuing function which involves control of the day-to-day ebb and flow of financial resources circulating in the enterprise.

CONCEPTS OF WORKING CAPITAL:

Basically there are two concepts of working capital. The gross working capital, commonly known as working capital, refers to a firm's investment in current assets. Those assets which are converted into cash within an accounting period are termed as current assets and includes cash, short-term securities, debtors, bill receivables and inventories. The same view is also held by Mead[3], Pandey[4], Bogen[5], Misra[6], Sharma[7], Kuchhal[8], Rammurty [9], Cohen Robbins [10], Field [11], Hampton [12], Malott Baker [13], Gole V. L.[14], Gersternberg [15] and Varanasy and Murthy[16].

Gross working capital is equal to the total of all current assets (including loans and advances) of a company. This definition of working capital has been endorsed by Professor J. Fred Weston and E. E. Brigham[17], Rao [18], Mehta [19], Archer and D Ambrosio[20].

Net working capital is the difference between current assets and current liabilities (including provisions)[21]. Weston [22], Kennedy [23], Gole [24], Guthman [25], Sharma [26], Park and Gladson [27], Myer [28], Howard [29], Gitman[30], Oshorn [31], Kuchhal [32] and Mishra [33] hold the same view. Current liabilities are those claims of outsiders, which are to be paid within an accounting period, and it includes creditors, bills payable, bank overdraft and outstanding expenses. Net working capital can either be positive or negative. A positive networking capital is attained whenever current assets exceed current liabilities. If current liabilities exceed current assets, a negative networking capital is obtained. Sometimes net working capital is also referred to as 'net current assets'. According to Professors Ralph D. Kennedy and Stewart Y. Mc. Mullen, "working capital is the excess of current assets over current liabilities, the amount of assets that has been supplied by the

long-term creditors and stockholders. Accountants hand book States that the Statement of working capital (excess of current assets over current liabilities) is designed to emphasise the current financial position"[34]. This definition of working capital has also been held by Lincoln[35], Saliers[36] and Stevens.[37]

The net concept of working capital has been defined by some authors as the "qualitative" concept and the total current assets concept as the "quantitative" concept of working capital[38]. The qualitative definition "shows the possible availability of current assets in excess of the current liabilities. It represents an index of financial soundness or margin of protection for current creditors and future current operations."[39]

The net and gross concept of working capital has its own uses. The choice will naturally depend on the purpose of the study. The net concept is more useful and preferable where the purpose is to find out the financial position, say short-term solvency or liquidity. A lender, creditor, bank or a credit institution may prefer to use this concept for its concern. But if the object is to determine the extent to which the working capital is put to use, the gross working capital concept should be preferred.

Working capital plays the same role in business as that of the heart in the human body. Just as the heart receives blood and circulates the same in the body, in the same way in working capital funds are generated and then circulated in business. When this circulation of fund stops, the business becomes lifeless. Thus, a prudent management of working capital is necessary for the success of a business.

IMPORTANCE OF WORKING CAPITAL:

A study of working capital and its management is of major importance because of its relationship with the day to day operations of a business. It is important to internal as well as external analysts. It is being increasingly realised that inadequacy or mismanagement of working capital is the chief cause of business failure. Management of working capital is an integral part of overall financial management and, ultimately, of overall corporate management. Working capital management thus throws a challenge and should be a welcome opportunity for a financial manager who is ready to play a pivotal role in his organisation.

Neglect of management of working capital may result in technical insolvency and even liquidation of a business unit. With receivables and inventories tending to grow and with an increasing demand for bank credit in the wake of strict regulation of credit in India by the Central Bank, managers need to develop a long-term perspective for managing working capital. Inefficient working capital management may cause either inadequate or excessive working capital which is dangerous.

A firm may have to face the following adverse consequences from inadequate working capital:

Growth of the firm may be stunted. It may become difficult for the firm to undertake profitable projects due to non-availability of funds. Implementing operation plans may become difficult and consequently the firm's profit goals may not be achieved. Operating inefficiencies may creep in due to difficulties in meeting even day to day commitments. Fixed assets may not be efficiently utilised due to

lack of working funds, thus lowering the rate of return on investments in the process.

Attractive credit opportunities may be lost due to paucity of working capital.

The firm loses its reputation when it is not in a position to honour its short-term obligations. As a result, the firm is likely to face tight credit terms.

On the other hand, excessive working capital may pose the following dangers:

Excess of working capital may result in unnecessary accumulation of inventories increasing the chances of inventory mishandling, waste, and theft.

It may provide an undue incentive for adopting too liberal a credit policy and slackening of collection of receivables, causing a higher incidence of bad debts which consequently has an adverse effect on profits.

Excessive working capital may make the management complacent, eventually leading to managerial inefficiency.

It may encourage the tendency to accumulate inventories for making speculative profits, causing a liberal dividend policy which becomes difficult to maintain when the firm is unable to make speculative profits.

An enlightened management, therefore, should maintain the right amount of working capital on a continuous basis. Financial and statistical techniques can be helpful in predicting the quantum of working capital needed at different point of time.

RATIONALE OF WORKING CAPITAL MANAGEMENT:

The problem of managing working capital has a separate entity, as against different decision-making issues concerning current assets individually. Working capital has to be regarded as one of the conditioning factors in the long-run operations of a firm which is often treated as an issue of short run analysis and decision making. The skills for working capital management are somewhat unique, though the goals are the same as in managing current assets individually, viz., to make an efficient use of funds, for minimising the risk of loss and to attain profit objectives.

Working capital management involves deciding on the amount and composition of current assets and how to finance these assets. These decisions involve trade off between risk and profitability. The greater the relative proportion of liquid assets, the less is the risk of running out of cash; all other things being equal. However, profitability will also be less. Resolution of the trade-off between risk and profitability with respect to these decisions depends upon the risk preferences of the management. The lower the proportion of liquid assets to total assets, the greater are the firms return on total investment. This strategy results in a low level of working capital. Offsetting the profitability of this strategy is a risk to the firm and probability of the technical insolvency.

Working capital management is concerned with the problems that arise in attempting to manage current assets and current liabilities and the inter-relationships that exist between them. The term current assets refers to those assets which in the ordinary course of business can be, or will be, turned into cash within one year without undergoing a diminution in value and without disrupting the

operations of a firm. The major current assets are cash, marketable securities, accounts receivable and inventory. Current liabilities are those liabilities which are intended to be paid out of the current assets or earnings of the concern within a year of their inception in the ordinary course of business. The basic current liabilities are account payable, bank overdraft, and outstanding expenses. The goal of working capital management is to manage the firm's current assets and current liabilities in such a way that a satisfactory level of working capital is maintained. This is so because if the firm cannot maintain a satisfactory level of working capital, it is likely to become insolvent and may even be forced into bankruptcy. The current assets should be large enough to cover its current liabilities in order, to ensure a reasonable margin of safety. Each of the current assets must be managed efficiently in order to maintain the liquidity of the firm while not keeping too high a level of any one of them. Each of the short-term sources of financing must be continuously managed to ensure that they are obtained and utilised in the best possible way.

STRUCTURE OF WORKING CAPITAL:

The structural study of working capital involves the analysis of the composition of current assets and current liabilities. The current assets consist of inventory, cash receivables and marketable Securities[40]. Current liabilities usually comprise of borrowings, trade credits, assessed tax and unpaid dividend.[41]

Inventory

Inventory is the most significant concept of working capital and has an important contribution to the maximisation of profit of a

business enterprise. Inventory is therefore termed as the most important item of current assets of a business. According to American Institute of Management Accountants designate the aggregate of those items of tangible personal property which are held for sale in ordinary business course or in the process of production or to be currently consumed in the production of goods or services available for sale. [42]

Broadly speaking, the inventories may be divided into raw material, semi-finished goods, finished goods and stores and spares.

Raw material includes the items which are held in their original form for production.

Semi-finished goods is the raw material which has been processed to change their form, size and physical or chemicals properties.

Finished goods include complete manufactured and inspected goods that are ready for sale.

Stores and spares and other goods are consumed in the creation and distribution of goods and services.

Stocks of raw materials and semi-finished goods facilitate production and stock of finished goods needed for the smooth functioning of marketing operation. Inventories serve as a link between production and distribution of goods.

Receivables

Receivables generally occupies an important position in the structure of working capital. It refers to all claims held against other for future receipt of money. It arises out of delivery of goods or rendering of services and includes book accounts, notes, bills, and accrued receivables. In the broader sense it covers prepayment on

purchases and expense contract and advance to subsidiaries, employees and officers.[43]

Receivables are considered earning assets because it is required to finance sales. But the contribution of receivables to the profit earning of a business enterprise is an indirect one. A firm grant trade credit to attract the potential customers to buy its products at favourable terms.

The major characteristics of receivables are as follows:

(1) It involves an element of risk which needs to be carefully analysed.

(2) It is based on economic value.

(3) It implies futurity.

The various items included in receivables are book accounts, notes, bills, pre-payments, loans and advances and accrued receivables. Promissory notes and trade acceptances (bills of exchange) are self-liquidating instruments of credit and can be discounted before the date of maturity. Receivables arising from period-adjustments of sales are designated as accrued receivables. Prepayments arise when payment is made in advance of the receipt or utilisation of goods and services. Insurance premiums, rent, prepaid taxes and other advances are included in it. Loans and advances include amounts advanced against the purchase of fixed assets, stores and spares, share of deposit with customers and other authorities, advances to the employees and other officers of the company. Besides credit policy, the size of receivables depends upon the efficiency of credit administration department. The receivables indirectly contribute to optimising working capital.

Cash and Short-term Investments or Marketable Securities:

Cash is one of the most important components of current assets. Cash is both a means and an end for a business firm. Cash is in the form of bank accounts, demand deposits, call loans, time deposits etc. Cash is kept in the business to meet the running expenses and for protection against those emergencies that are likely to arise. It is an ultimate output realised by selling the goods or services. Due to its liquidity it plays a very important role in the working of an enterprise. Short-term marketable securities are a gainful investment of redundant cash balances lying with an enterprise. It may consist of government securities, bonds, debentures and shares which are readily marketable and may be converted into cash at a short notice

FINANCING OF WORKING CAPITAL:

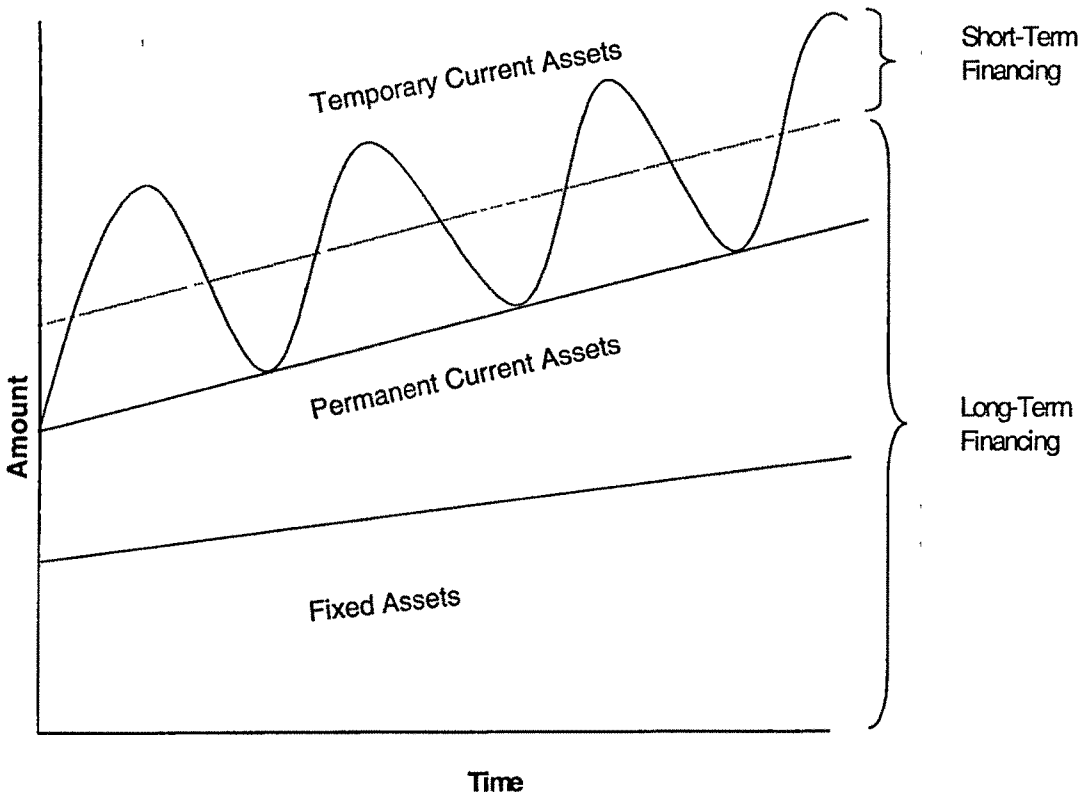
One of the important decisions in the field of working capital management is the financing of different kinds of current assets - both permanent and temporary – with diverse sources of working capital. To quote O. M. Joy: " In comparing financing plans we should distinguish between three different kinds of financing: long-term financing, negotiated short-term financing and spontaneous short-term financing.[44] Working capital of a concern is financed by spontaneous current liabilities and long-term sources. Spontaneous current liabilities are trade creditors, bank overdraft, short-term loans and provisions. Long-term sources are mainly share capital, debentures and long-term loans.

There are a number of approaches to determine an appropriate financing mix. The three basic approaches are (i) Conservative approach (ii) Matching approach and (iii) Aggressive approach.

(i) Conservative approach:

The financing policy of the firm is said to be conservative when it depends more on long-term funds for its financing needs. It relies heavily on long-term financing and therefore is less risky. The situation is illustrated in Fig.1.

FIG. 1

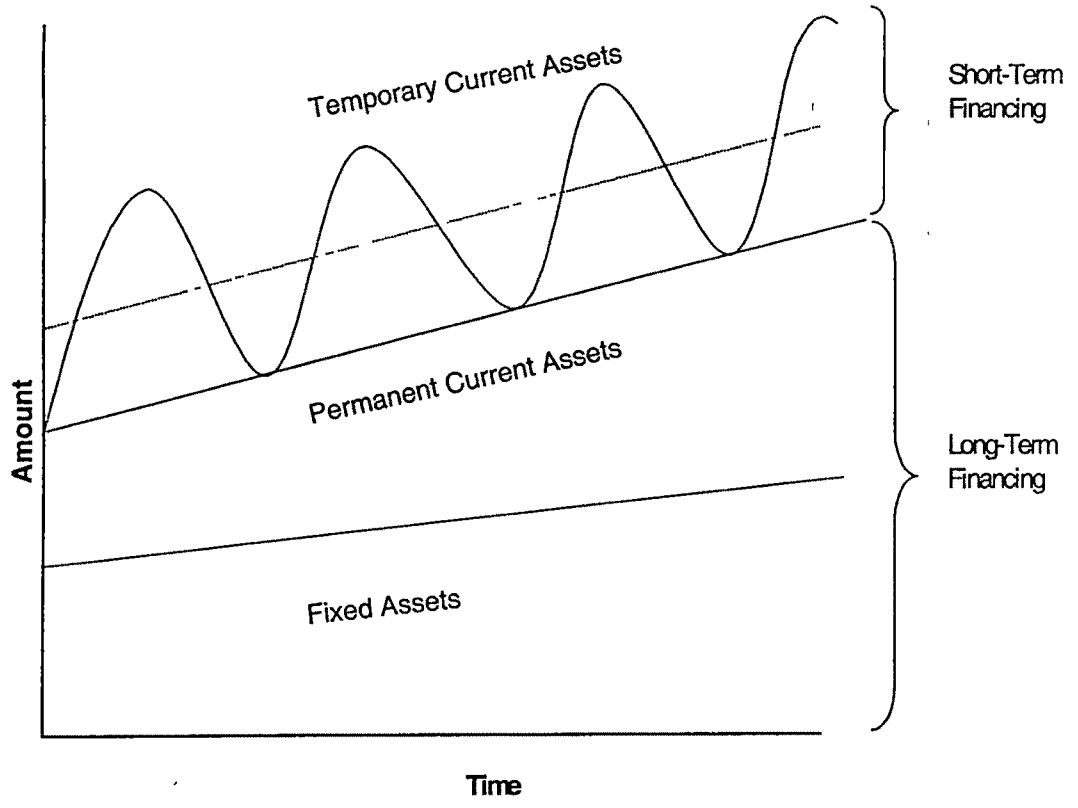


Conservative Approach of Financing (Growing firm)

(ii) Matching approach:

Long-term finance is used to finance fixed assets and permanents portion of current assets and short-term borrowings are used to finance variable. In other words, the firm adopts a financing approach which involves the matching of expected life of assets with the expected life of the source of funds raised to finance assets. It can be also seen from the Fig. 2.

FIG. 2

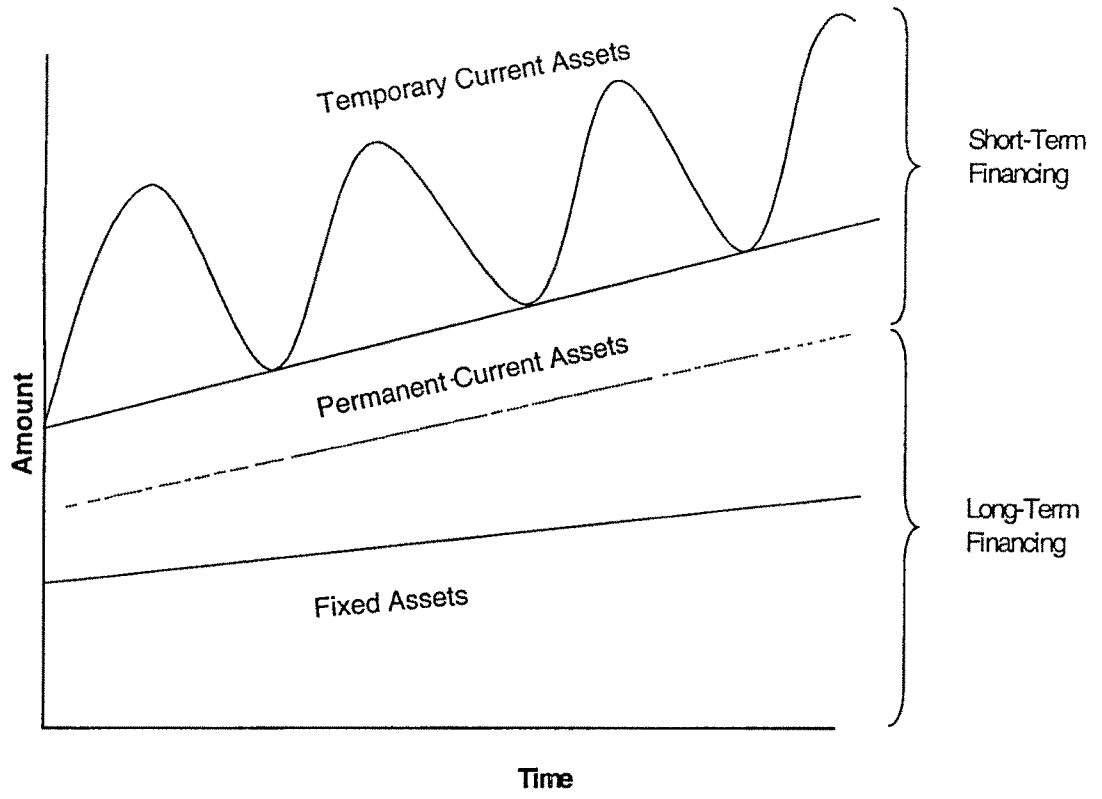


Matching Approach of Financing (Growing firm)

(iii) Aggressive approach:

An aggressive policy is said to be followed by the concern when it uses more short-term funds in the financing of current assets and a part of their fixed assets. The aggressive financing approach is illustrated in Fig. 3.

FIG. 3



Aggressive Approach of Financing (Growing firm)

Of the three financing approaches, return on equity is the highest in case of aggressive plan and lowest under the conservative plan. The aggressive plan is the most risky because short-term funds is maximum in this scheme; while short-term funds to total funds is minimum in the conservative plan and is less risky. In framing the

financial liquidity needs to be examined carefully. The financing of working capital depends on this liquidity structure and risk-taking.

According to Hampton[45], the firm must have long-term sources as a major portion of its working capital. In absence of long-term financing, the financial manager will spend excessive time in managing the liquidity aspects of the current assets rather than focusing on profits from the assets. The standard 2:1 current ratio and 1:1 liquidity ratio, allow for a large part of current assets to be financed by long-term sources of funds. For 2:1 current ratio, half the working capital is financed by long term loan or owner's fund. For the 1:1 liquidity ratio, the entire inventory which is normally one half of the current assets is financed by long term funds and owned funds.

Benefits of long-term financing are as follows[46]:

(i) **Reduced Risk:** Long term financing eliminates the need to repay loans at frequent intervals. This reduces the risk of repayment.

(ii) **Provides Stability:** If assets are financed from long-term funds, they will be available for a long period of time. They provide a certain stability to the firm's operation. The firm need not worry about purchase for production because of the available cash.

(iii) **Increase liquidity:** The firm can tie up the long-term funds in working capital which increases the liquidity and contributes to the profitability of the firm also.

Tandon Study Group[47] prescribes three methods of financing the working capital requirements. For the present study, the financing stages suggested by Tandon study group are emphasised to a large extent.

DETERMINANTS OF WORKING CAPITAL NEEDS:

There are no set rules or formulas to determine the working capital requirements of a firm. The corporate management has to consider a number of factors to determine the level of working capital. The amount of working capital that a firm would need is affected not only by the factors associated with the firm itself but also by economic, monetary and general business environment. Among the various factors, the following are important:

Nature and size of Business

The working capital needs of a firm are basically influenced by the nature of its business.[48] Trading and financial firms generally have a low investment in fixed assets, but require a large investment in working capital. Retail stores, for example, must carry large stocks of a variety of merchandise to satisfy the varied demand of their customers. Some manufacturing business like tobacco, and construction firms also have to invest substantially in working capital and only a nominal amount in fixed assets. In contrast, public utilities have a limited need for working capital and have to invest abundantly in fixed assets. Their working capital requirements are nominal because they have only cash sales and they supply services and not products. Thus, the amount of funds tied up with debtors or in stocks is either nil or very small. The working capital needs of most of the manufacturing concerns fall between the two extreme requirements of trading firms and public utilities.

The size of business also has an important impact on its working capital needs. Size may be measured in terms of the scale of operations. The hazards and contingencies inherent in a particular

type of business also have an influence in deciding the magnitude of working capital in terms of keeping liquid resources.

Manufacturing Cycle

The manufacturing cycle starts with the purchase of raw materials and is completed with the production of finished goods. If the manufacturing cycle involves a longer period the need for working capital will be more because an extended manufacturing time span means a larger tie-up of funds in inventories. It is said that the longer the manufacturing cycle of a product the greater is its cost, and larger is the requirement of working capital [49]. Any delay at any stage of manufacturing process will result in accumulation of work-in-process and will enhance the requirement of working capital. It is also observed that firms making heavy machinery or such products, which involve long manufacturing cycle attempt to minimise their investment in inventories (and thereby in working capital) by seeking advance or periodic payments from customers.

Business Fluctuations

Seasonal and cyclical fluctuations in demand for a product considerably affect the working capital requirement, especially the temporary working capital requirements of a firm. An upward swing in the economy leads to increased sales, resulting in an increase in the firm's investment in inventory and receivables or book debts. On the other hand, a slump in the economy may result in fall in sales and consequently, a fall in the levels of stocks and book debts.

Seasonal fluctuations may also create production problems. Increase in production level may be expensive during peak periods. A firm may follow a policy of steady production in all seasons to utilise

its resources to the fullest extent. This will mean accumulation of inventories in off-season and their quick disposal in peak season. Therefore, financial arrangements for seasonal working capital requirement should be made in advance. The financial plan should be flexible enough to take care of any seasonal fluctuations.

Production Policy

If a firm follows a steady production policy, even when the demand is seasonal; inventory will accumulate during off-season periods and there will be higher inventory costs and risks[48]. If the costs and risks of maintaining a constant production schedule are high, the firm may adopt a policy of varying production schedule in accordance with the changes in demand. Firms whose physical facilities can be utilised for manufacturing a variety of products can have the advantage of diversified activities. Such firms manufacture their main products during the season and other products during off-season. Thus, production policies may differ from firm to firm, depending upon the circumstances. Accordingly, the need for working capital will also vary.

Credit Terms

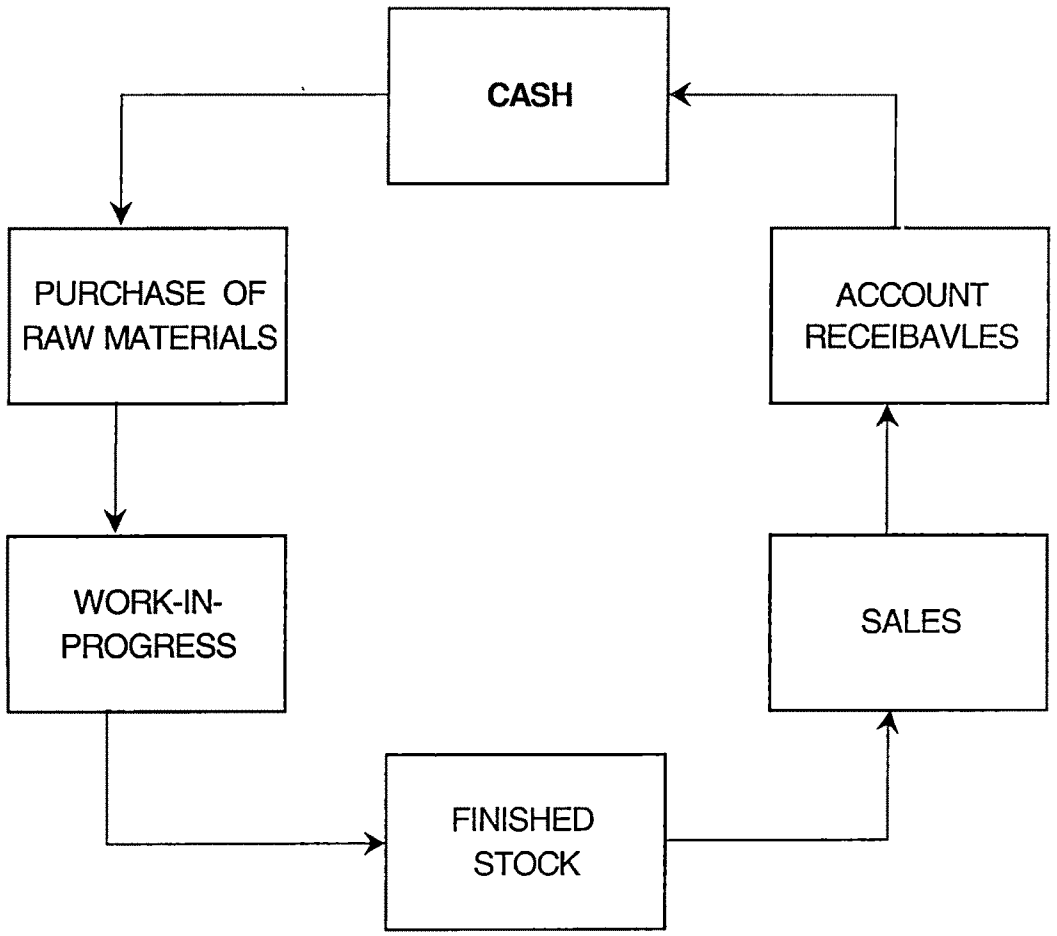
The credit policy of the firm affects the size of working capital by influencing the level of book debts. Though the credit terms granted to customers, to a large extent, depends upon the norms and practices of the industry or trade to which the firm belongs; it may endeavour to shape its credit policy within such constraints. A long collection period will generally mean tying of larger funds in book debts. Slack collection procedures may even increase the chances of bad debts.

The working capital requirements of a firm are also affected by credit terms granted by its creditors. A firm enjoying liberal credit terms will need less working capital.

Turn-over of Circulating Capital

The speed with which the operating cycle completes its round plays a decisive role in influencing the working capital need. Fig. 4 shows the operating cycle of a manufacturing concern.

FIG. 4



Operating Cycle

Growth and Expansion Activities

Logically speaking as a company grows, a larger amount of working capital will be needed, though it is difficult to State any fixed rule regarding the relationship between growth in the volume of a firm's business and its working capital needs. It is important to recognise that the need for increased working capital funds may precede the growth in business activities rather than following it. The shift in composition of working capital in a company may be observed with changes in economic circumstances and corporate practices. Growing industries require more working capital than those which are static.

Operating Efficiency

Operating efficiency means optimum utilisation of resources. The firm can minimise its need for working capital by directly controlling its operating costs. With increased operating efficiency the use of working capital is improved and the pace of cash cycle is accelerated. Better utilisation of resources improves profitability and helps in relieving the pressure on working capital.

Price Level Changes

Generally, a rise in price level requires a higher investment in working capital. With increasing prices the same levels of current assets need enhanced investment. However, firms which can immediately revise prices of their product upwards may not face a severe working capital problem in periods of rising price levels. The effects of increasing price level may, however, be felt differently by different firms due to variations in individual prices. It is possible that

some companies may not be affected by the rising prices, whereas other may be badly hit by it.

Other Factors

There are other factors which affect the determination of the need for working capital. A high net profit margin contributes towards the working capital pool. The net profit is a source of working capital to the extent that it has been earned in cash. The cash inflow can be calculated by adjusting non-cash items such as depreciation, outstanding expenses, loses written off etc. from the net profit.

The firm's appropriation policy, that is, the policy to retain or distribute profits also has a bearing on working capital. Payment of dividend consumes cash resources and to that extent reduces the firm's working capital. If the profits are retained in the business, the firm's working capital position will be strengthened.

In general, working capital needs also depend upon the means of transport and communication. If they are not well developed, the industries will have to keep huge stocks of raw material, spares, finished goods, etc. at places of production, as well as at distribution outlets.

CONTROL OF WORKING CAPITAL

The control of working capital means the sum total of the control of the various components of working capital. The basic goal of working capital management is to manage the current assets and current liabilities of a firm in such a way that a satisfactory level of working capital is maintained, i.e. it is neither inadequate nor excessive. Both inadequate as well as excessive working capital

positions are bad for any business. A sound working capital management policy is one which ensures higher profitability, proper liquidity and sound structural health of a business concern. In this context, working capital requirements can be determined mainly in three ways:

- Percent-of-sales Method;
- Time Series Analysis and
- Regression Analysis.

Percent-of-Sales Method:

Percent-of-Sales method is a traditional method of determining the volume of working capital and its components. According to this method, working capital is determined as a percent of forecasted sales and is useful in forecasting of working capital requirements, particularly in the short-term. This method is suitable for individual companies in specific situations due to its linear relationship between sales and working capital.

Time Series Analysis :

Times series analysis helps in understanding past behaviour and planning future operations. Trend fittings and moving average are the two main time series methods.

Trend Fittings:

After arranging the data in a chronological order and thereafter it is tested with the help of various trend equations. If it fits then the trend or curve may be extrapolated to make the future forecast.

According to Firth,[48] the following are some of the examples by which the curve relationship may be defined.

Exponential curve may be equal to

$Y = a\ b^t$

In this equation, Y increase by constant rate. It is thus the equation for geometric progression. Simple polynomial curve may be equal to

$Y = a + b X$

This is straight line.

Second Degree polynomial

$Y = a + bX + cX^2$

This is second degree parabola equation and the trend value for any year may be computed by substituting in the question the value of X for that year.

$Y = a + bX + cX^2 + dX^3$

is known as higher degree polynomials curve.

In the simple modified exponential curve

$Y = a + bc^t$

In this exponential trend, growth rate at some stage declines and becomes asymptotic to a certain value.

Though, a number of different growth curves have been used to measure secular trend, but the curves used most widely to describe growth are the Gompertz curve.

The equation of the Gompertz Curve is

$Y = a\ b\ c^x$

Which when put to logarithmic form becomes

$\text{Log } Y = \log a + (\log b)\ c^t$

This curve serves to describe the growth of series which while increasing seem to approach some maximum value as a limit. Although the growth continues it does so at a decreasing rate.

The equation of the logistic curve is

$$\frac{1}{Y} = a + bc^t$$

If we use Y instead of 1/Y then the curve used in fitting trend is called modified exponential.

Moving Average :

This method is useful in bringing into focus the underlying trends of an erratic variable. The period of moving average should be chosen keeping in view the data and the requirements of the analysis. The smoothing of a series may be done by the exponential model. In this all the items in a series are assigned some weights. The highest weight is allotted to the most recent data and the lowest weight is allotted to the most recent data and the lowest weight to the data of first year in the series.

The model[49] may be expressed as

$$S_t(x) = ax_t = (1 - a)\ S_{t-1}(x)$$

Where X_t = the value of the series in time period t,

S_t (x) = Smoothed value (moving average) of series in time period 't'.

S_{t-1} (x) = Smoothed value (moving average) of the series in time immediately period to period 't'.

a = smoothing constant, $0 < a < 1$

Regression Analysis :

With the help of regression analysis we are able to establish the 'nature of relationship' between variables which further enable the analyst to study the functional relationship between the variables for the purpose of forecasting the value of the dependent variable on the basis of the value of the independent variable(s). The variable which is to be predicted is known as the dependent variable and the variable which influence the magnitude of the dependent variable are known as independent variables. Mathematically, the analysis indicates inherent casual relationship between the variables, e.g., the regression analysis may be presented mathematically as

$$Y = ax_1 + bx_2 + cx_3 + dx_4 + \text{-----}$$

Where Y is dependent variable

x_1, x_2, x_3, x_4 .... are independent variable

a, b, c, d, ... are the weights attached to various factors (known as regression co-efficient).

The relationship between the variables forming part of the equation is qualified by using past data and the analysis is used as a forecasting device.

Better control of working capital depends on the control of inventory, receivable and cash which may be discussed as follows:

INVENTORY CONTROL

The term inventory control relates to a set of policies and procedures by which an organisation determines which materials it will hold in stock and the quantity of each that it will carry. No inventory management can succeed in keeping low investment in inventories, high inventory carrying costs and losses due to obsolescence unless it installs the proper method of inventory control. The objective of inventory management is to have the appropriate amount of materials in the right place, at the right time and at low cost. Inventory control is important for the financial health of the corporation. If inventory is out of stock it forces customers to turn to competitors or results in a loss of sales. Excessive level of inventory, however, results in large inventory carrying costs, including the cost of the capital tied up in inventory warehouse fees, insurance etc. Studies carried out in India have revealed that scientific techniques of inventory management can reduce inventory investment sometimes to as much as 50 per cent or even more.

American production and inventory control society defined inventory control as "the technique of maintaining stock-keeping items at desired levels, whether they are raw materials, work-in-process or finished goods". The control and maintenance of inventory is a problem common to all organisations. Different types of organisation have different inventory management problems. By classifying organisation as retail, wholesale / distribution systems to manufacturing systems; the problem of inventory increase in magnitude and complexity. The inventory should be controlled by applying different techniques of Inventory Control.

TECHNIQUES OF INVENTORY MANAGEMENT AND CONTROL

There are three major techniques of inventory control:

1. Traditional Techniques;
2. Accounting Techniques and
3. Scientific Techniques.

1. Traditional Techniques:

Traditional techniques of inventory management and control are as follows:

(a) Fixation of Inventory Level

Carrying too much or too little of inventories is detrimental to any business, If very low inventories are maintained, frequent stock outs and heavy ordering costs are inevitable, while very large inventories involve heavy carrying costs, in addition to an unnecessary tie-up of funds. Therefore, an efficient inventory management requires the concern to maintain inventories at an optimal level. It requires fixing of various types of stock levels e.g. minimum stock level (the lower limit of stock which should always be maintained as a buffer stock), maximum stock level (the upper limit of stock which should not be allowed to exceed under normal circumstances), and the reorder stock level (the level of inventory when fresh order should be placed with the supplier for procuring additional inventory).

In fixing the maximum stock levels for inventory items, carrying costs, availability of space, price fluctuations, economic order quantity and future production plans and other factors are also considered. Reorder level is determined on the basis of consumption

during the lead period plus some margin for safety. It will be worthwhile if these levels of inventory are set by "Management by objectives" concept. This concept requires top management to set the inventory norms (limits) in consultation with the materials department.[50]

(b) Order-Cycling System

In this system, periodic reviews are made of each items of inventory and are placed to restore stocks to a prescribed supply level.

(c) Two-bin Systems

Under this system, inventory is usually stored in two bins; upon order receipt, an amount equal to the reorder point is put into one bin and the remaining order is placed in another bin. Stock is taken first from the bin which contains the difference between the order quantity and the reorder point. When stock in this bin is depleted, an order is released. Demand is then filled from the second bin containing the expected lead-time, quantity plus any safety stock. Due to this procedure, records need not be maintained of each withdrawal and the signal for replenishment order comes about by visual observation. The two-bin system is best suited for items of low value, of fairly constant use and are short lead times such as office supplies, nuts, bolts and so forth.

(d) ABC Analysis

Among selective control techniques "ABC" (always better control) analysis of inventories is the most popular. This analysis has an analytical approach that provides "the most control for the least

amount of controlling"[51]. This analytical technique for inventory management is based on the concept that items of higher value attract more control and attention of the management. "ABC classification of inventories is based on the concept that the items of greater value, even if less in number, should be watched more closely and looked after by the top management; whereas items of lower value, though larger in number, may not call for strict control and can be looked after by a junior executive. Items of the middle category are moderately controlled by middle level management.[52] Thus, under this technique, all the items of inventory are classified into three categories viz. A, B and C, according to their importance in monetary items. Herbert J. Richmond observes, "The ABC plan concentrates on importance and exemption"[53]. 'A' category items are usually looked after by one of the senior executives and the top management receives stock reports of these items every month or earlier; 'B' and 'C' items are being put under the charge of junior executives in stores / material departments in different units. This analysis is very helpful in the determination of stock levels for various store items.

The breakdown into A, B, and C items is arbitrary and further divisions may be established. Each organisation should tailor its inventory system to its own peculiarities. Organisations may choose to group their inventory into more than three classifications maintaining same principle. High value items receive the most attention and low value items the least.

(e) High-Medium-Low (HML) Classification

The HML classification is similar to ABC classification, but considers the unit value of the item instead of assumption value of item. The cut-off point depends on the individual units.

The items under this analysis are classified into three groups: high, medium and low. For another classification the items are listed in descending order of their unit price. The management for deciding the three categories then fixes the cuts off lines. HML analysis helps to:

(i) assess storage and security requirement;
(ii) keep control over consumption at the departmental head level;
(iii) determine the frequency of stock verification;
(iv) evolve buying policies to control purchases; and
(v) delegate authority to make purchases.

(f) XYZ Classification

While the ABC classification has the value of the consumption as the basis; the XYZ classification has the value of inventory stored as the basis of differentiation. X items are those inventory value which have high values, while Z items are those values which have low values. This classification therefore, helps in identifying the items which are being extensively stocked. If the management is not alert, one can expect C items to be in the X category. Therefore, the XYZ and ABC classification are used in conjunctions and controls can be effected on the items according to whether they are AX, BY, CZ and so on.

(g) Vital-Essential-Desirable (VED) Classification

The VED classification is applicable largely to spare parts. Stocking of spare parts is based on strategies different from those of raw materials because their consumption pattern is different. While

consumption of raw material depends directly on the market demand for production, the demand for spare parts depends on the perfc:rmance of the plant and machinery. Statistically, demand for spares follows the poison distribution and therefore, spares are classified as vital, essential and desirable. This implies that vital class of spares has to be stocked adequately and so on. The result will be more impressive if VED analysis and ABC analysis are used together.

(h) Fast-Slow-Non Moving (FSN) Classification

An issue from stores is the criterion employed in this analysis. Under this analysis items are classified into three groups: F, S, and N. To conduct the analysis the period taken is usually in terms of the number of months that have elapsed since the last movement is recorded. Such an analysis is useful in identifying:

(i) active items which require to be reviewed regularly,
(ii) surplus items whose stocks are higher than the rate of consumption, and
(iii) non-moving items which are not being consumed.

(i) Scarce-Difficult-Easy (SDE) Classifications

This classification is based on problems of procurement like non-availability, longer lead-time, location of suppliers' etc. Accordingly items are classified into three groups called 'Scarce', 'Difficult' and 'Easy'. 'Scarce' group consists of items which are in short supply or imported. Such items are best procured once a year in view of the effort and expenditure involved in the procedure for import. 'Difficult' classification includes those items which are available indigenously but are not easy to procure. 'Easy'

classification covers those items which are readily available. Forward buying method may be followed for some of the items in the Scarce group, scheduled buying and contract buying may be resorted for 'Easy' group.

(j) Government-Ordinary-Local-Foreign (GOLF) classification

'Source of procurement' is the criterion employed in this analysis. The analysis classifies the items into four groups. 'G' group covers items procured from government suppliers. Transactions with this category of suppliers involve long lead-time and payments in advance or against delivery. 'NG' (O in GOLF Classification) group comprises of items from ordinary suppliers (other than government). Transactions with this category of suppliers involve moderate delivery time and availability of credit usually in the range of 30 to 45 days. 'L' group consists of items bought from local suppliers. 'F' group consists of items procured from foreign suppliers. Suitable control mechanism need to be instituted depending upon the suppliers from whom items are purchased.

(k) Seasonal-Off seasonal (SOS) Classification

SOS classification is based on the seasonality of the items or otherwise. The analysis classifies the items into two groups: 'S', i.e. seasonal items and 'SOS', i.e. off-seasonal items. Seasonal items are of two types viz.:

(i) those that are available only for a limited period – for e.g. raw materials for cigarette and paper industries are available for a limited period only and therefore such items are procured to last till the full year, and

(ii) those that are available throughout the year.

However since their prices are lower during the harvest time bulk purchases should be made at that time.

(l) Equal Treatment Method

Another method of inventory control is through equal treatment for each item of inventory. Every item is equally important because the shortage or absence of a very small part can stop the production process. Therefore, many concerns adopt this technique. In this system, the bias of ordering each item and the degree of control are the same.

(m) Review System:

Under this method, the ordering frequency or the length of time between two orders is fixed but the size or quantity of the orders varies with usage. Under this system, safety stock has to provide protection against random variations during the review period as well as the lead-time. On the other hand, in this system, there is a built-in safety in that the replenishment internal between two successive orders, varies to take care of variation in the rate of demand.

(n) Economic Order Quantity (EOQ)

Economic order quantity refers to determination of an order size which ensures minimum possible cost and at the same time does not cause any obstacle to the production process. In other words, economic order quantity is the quantity at which the cost of acquisition equals the cost of possession. Economic order quantity helps to achieve the lowest unit cost. There are various methods of ascertaining economic order quantity viz.,

(i) Tabular determination of economic order quantity through trial and error method.

(ii) Graphical presentation of economic order quantity.

(iii) Economic order quantity through algebraic formula.

Economic order quantity is determined at the point where ordering cost equates the carrying cost and where the total unit cost is minimum.

(o) Perpetual Inventory Control

This system is based on the economic order quantity and the reorder point. Under this system a running record of the quantity in stock is maintained. Each time a unit is issued from stock, the withdrawal is logged and the stock position is compared with the reorder point. If the stock position is equal to or less than the reorder point, an order is prepared for a fixed number of units. If the stock position is more than the reorder point, no action is taken. Under this system the reorder point and the order quantity are fixed; the review period and demand rate are variable and the lead time can be fixed for variable.

2. Accounting Techniques:

The Accounting techniques of inventory control are as follows:

(a) Inventory Accounting and Recording System

This refers to the mathematical process which reveals the quantity, quality and the value of inventory carried and preserved in godown on a given date relating to a specified period. It includes the proper recording and reporting of inventories. The scientific inventory

system provides protection against over-stocking, under-stocking, wastage in manufacturing process and duplication of orders, etc.

(b) Value Analysis Techniques

It is one of the most important accounting techniques of inventory control and widely applied for cost reduction and quality improvement. It is an organised creative approach which involves application of a wide variety of skills for the purpose of achieving a reduction in cost and improving the quality. In order to achieve better results, ABC analysis may be synthesised with 'Value Analysis' especially for A and B category items.

(c) Ratio Analysis Techniques

These are various types of inventory ratios which are widely used for inventory control purposes. These are :

(i) Inventory Turnover Ratio
(ii) Raw material Turnover Ratio
(iii) Semi-finished goods Turnover Ratio
(iv) Finished Goods Turnover Ratio
(v) Stores & Spares Turnover Ratio
(vi) Inventory to Net Working Capital Ratio

(d) Inventory Information System

Inventory information system is a process, by which an organisation's inventory information is received, registered, recorded, handled, processed, stored and ultimately disposed off. This system helps management to exercise purposeful control with regard to both the primary objectives of inventory management, to ensure an

adequate supply of materials, stores, spares etc. and to keep down inventory to a minimum.

(e) Profitability Analysis

Profitability and liquidity are the two dimensions which have considered while measuring the effectiveness of an inventory management system. Profitability analysis, measures how effectively these funds have been used while liquidity analysis, we measure whether the funds applied are adequate for the level of business.

(f) Variance Analysis

The control technique associated with budgeting is variance analysis. Inventory variances in terms of quantity and price can conveniently be calculated in comparison to standards that have already been determined before production begins.

(g) Responsibility Accounting

Responsibility accounting is a system of control of delegating and locating responsibility for costs. It is an approach to cost control that rests on the performance of persons responsible for the implementation of decisions. It is an accounting system designed to control costs by relating executives responsible for their occurrence. Responsibility Accounting can be used in the field of inventory management and for the different functions, such as inventory planning, setting inventory levels, inventory pricing and valuation, inventory control, stores management, inventory handling etc. which are the responsibility centers.

In addition to the above accounting techniques, the other techniques such as Value Added Techniques, Uniform Costing, Inter-Firm Comparison, Inventory Flow Statement etc. can also be used, provided these techniques are related to materials cost and can be useful in controlling the inventory items.

3. Scientific Techniques

The successful application of different scientific inventory control techniques enables the organisation to reduce the investment in inventories and also inventory costs, thus leading to improved profitability. The scientific inventory techniques are mentioned below:

(a) Statistical Techniques of Inventory Control

Different statistical techniques may be used in such areas of inventory management and control as inventory planning, quality control etc.,

The different techniques which are generally used for the purpose of inventory management and control are:

(i) Time Series Analysis
(ii) Correlation and Regression Analysis
(iii) Probability Theory
(iv) Index Number

(b) Operation Research Techniques of Inventory Control

Operation research is a scientific way of tackling complex problems in the management of large systems of men, machines,

money and materials. The purpose is to help management in scientific decision-making. The hallmark of operations research is the quantitative approach to problem solving incorporating measurements of factors such as risk, uncertainty, etc., so that production and comparison of alternative decisions, strategies and controls are possible.

(c) Performance Evaluation and Review Technique (PERT)

One of the most important problems confronted by materials manager in the present times, is planning for materials, ensuring that the various stages of work are brought forward in a logical sequence with minimum cost and least delay. For instance, if the management desires to complete the job of making or building much earlier then the stipulated time; then extra cost has to be incurred to expedite the job. For this purpose the critical path has to be compressed and this process is called 'Crash Programming' and the costs include direct, indirect and opportunity costs. Therefore, the use of network needs clear definition of its objectives, thus forcing proper communication and enabling the management by exception to be adopted?

(d) Computer

This is an era of computers, innumerable computer software and hardware have come to the rescue of executives and managers. Since computerisation of inventory control provides better control and profitability, the field of materials management has emerged fast in applying the rich potentialities of computers. There are distinct advantages of an integrated computer system like involving the line personnel and providing timely and quick information on the materials

position. It is also used for operational convenience and not merely for calculation.

Integrated Management Information System (IMIS) of computers is applicable in the following areas. The list is only illustrative and not exhaustive:

(i) Long and short-term production schedule
(ii) Materials manual
(iii) Requirement of non-stock items from the user department
(iv) Information regarding lead-time, supply position, price trends
(v) Material requisition
(vi) Purchase order
(vii) Bill of materials
(viii) ABC Analysis and inventory levels
(ix) Vendor rating
(x) Obsolete items etc.

JUST-IN-TIME (JIT) INVENTORY SYSTEM

Just-In-Time Inventory Management System developed by the Japanese is used in repetitive manufacturing. The underlying principles of JIT technique are that, piling up of inventory in any concern is undesirable and the lead time in arranging and disposing off the inventory should be reduced as far as possible. In fact, an ideal situation where no inventory is carried may not be possible but attempts should be made to reach closer to that stage. In an ideal JIT environment, inventory will be brought in just-in-time when these are

required so that they are not kept waiting for consumption. But implementation of this system requires proper production scheduling and planning. It cannot run without good production planning. Another requirement is an effective material handling procedure. There are certain demerits in this system. Extra payments have to be made for high quality and proper scheduling of deliveries. Further purchases have to be made in small quantities doing away with the economy of scale. Though the system is costly, their saving in the form of reduction in the cost of inventory management is worthwhile. One major factor in holding inventory is the cost involved in keeping it. In India it varies from 22% to 30% per annum. The average works out to about 25% per annum. In other words, for every Rs. 100000 invested in inventory, each company incurs Rs. 25000 every year just to hold it. A successful implementation of JIT system would save Rs. 25000 per Rs. 100000 investment in the inventory.

There are numbers of areas in which cost leaks exist and one of the major ones is in the area of inventory management. A nationwide study of this area reveals that a manufacturing firm on an average losses more than 1% of its profits on account of non-availability of materials inspite of high inventory investment. This clearly emphasizes the need for efficient inventory management and effective inventory control.

It therefore needs to be highlighted that good inventory control systems minimise the possibility of delays in production. It results in economies in many ways. It eliminates duplication in ordering and encourages better utilization of available materials. It also minimises losses caused by damage due to careless handling.

RECEIVABLES CONTROL:

Receivables are a part of current assets and are created out of sales of goods and services. Receivables may be known as account receivables, trade receivables or customer receivables. The period of credit and, extent of receivables depends upon the credit policy followed by the business firm. The decision regarding credit terms, i.e., the period of credit and cash discount are governed by various factors, such as the buyer's stock, turnover rate, the approach of competitors, the nature of commodity, the margin of profit and the availability of funds. The credit period and cash discount may vary from firm to firm. The important techniques for evaluating receivables control are discussed below:

1. Receivable Turnover

Sales on credit are an inevitable necessity in today's business world of today. Business cannot exist without selling the product on credit. The basis difference between cash sales and credit sales is the time gap in the receipt of cash. As a matter of fact it implies utilisation of sellers cash by the buyers; a kind of interest free loan to customers. From the point of view of business, selling on credit constitutes an investment. Every business firm invests money in credit sales to earn money by increase in sales. The return on investment is maximum when the amount of investment is optimal and the optimal point is determined through cost and benefit analysis.

Higher receivable turnover rate indicates, on the one hand, a quick collection of debtors and, on the other, enables the firm to transact a larger volume of business without a corresponding increase in the investment receivables.

2. Percentage of collection reports

The percentage of collection figures helps in evaluating the efforts of the credit department. It may be compared with the previous collection percentage figures. If the trend is downward, corrective action may have to be taken. Many firms regard it as a means of controlling credit and collection policies.

3. Report of aging of accounts

This is another method of analysing the liquidity of receivables. The aging of receivables helps in forecasting. The longer the amount remains due, the higher will be the size of receivables. The length of time for which credit is extending to customers is called the credit period. It is generally stated in terms of a net date. For example, if the firm's credit terms are 'net 40' it is expected that customers will repay credit obligation not later than 40 days. A firm's credit period may be governed by the industry norms. By Depending on its objectives, a firm can lengthen the credit period. On the other hand, a firm may tighten its credit period if customers default too frequently and bad-debt losses building up.

The Aging Schedule breaks down debtors according to the length of time for which they have been outstanding and gives a detailed idea of the quality of debtors. The average collection period measures the overall quality of debtors, while the aging schedule very clearly points out to the slow paying debtors.

4. Report of Bad Debts

These are debts which remain unsettled despite the fact that a long period has elapsed after the due date. A regular and periodical analysis ensures recovery from all the debtors. Credit investigation assists in the prevention of cash flow problems because credit is extended to credit worthy customers who are expected to make payment in time and also because there are least chances of bad debts. Credit analysis assists in solving the cash flow problems by ensuring the inflow of cash from debt collection as and when it is due.

The amount of loss by way of bad debts as percentage of credit sales shows the extent of loss due to credit risk. If the percentage is high the credit sales shows the extent of loss due to credit risk. If the percentage is high the credit decision is ineffective, calling for an urgent review of the same. Bad debts provisions should be made considering the age and quality of the outstanding debts.

5. Report on Delinquent Account

Report of delinquent accounts shows the volume of delinquent accounts to credit sales. Delinquent accounts are past due amounts which remain uncollected for a long period. Normal delinquency ratio is based on the past experience of the firm. If the actual position exceeds the normal, it indicates that the credit and collection policy is liberal.[54]

6. Credit and Collection Policies

The credit and collection policies are discussed as follows:

Credit Policy:

The credit policy followed by a business is crucial to its cash flow. A liberal credit policy is expansionary in nature. A stringent and tight credit policy restricts trade debts to a limited few that have been screened well. It is essential that companies spell out in clear and precise terms the credit policy directions in writing, in the general interest of the organisation. Inter-alia the credit policy has to cover the following aspects related to credit decision making and follow-up:

a. Customer selection
b. New customer evaluation,
c. Customer classification
d. Fixing credit terms such as credit period, cash discount, credit limit etc.
e. Policy regarding credit information collection or use of services of credit rating agencies.
f. Credit collection programs and organisation
g. Credit control and review

Collection Policy

The collection policy of a firm can either be strict or liberal. A strict collection policy involves payment on or before the due date. Failing in this, results in forfeiture of cash discount, if any, charging of interest for the period of default, stopping future suppliers and

resorting to legal action to recover the overdue amount. A liberal policy involves submission of periodical Statement of accounts. Between these two extremes lies a flexible collection policy which includes reminding the customer through correspondence, telephonic or personal contacts. In case such methods prove ineffective, firms are constrained to hand over the case to their solicitors for legal action, if it seems profitable.

7. Accounts receivable Report

Another important and useful device which helps to securing timely collections of debtors is 'Accounts Receivable Report' alongwith 'Aging Schedule'. It enables the firm to keep a constant watch on every outstanding account and take appropriate steps in time against overdue accounts as per the guidelines laid down by the 'collection policy' of the firm.

These periodical reports together with the age-schedule of accounts help to control receivables. A small percentage of firms do not prepare any receivables reports, since they market their products either through established dealers from whom they have already obtained sufficient advance or those who do not sell goods on credit.

8. Forecasting Expenses

The receivables are associated with a number of expenses. These expenses are administrative expenses, collection expenses, bad-debt losses etc. If the cost of receivables is more than the increasing income, further credit sales should not be allowed. On the other hand, if revenue earned by the increase in sales is more than costs of receivables, then sales should be expanded.

CASH CONTROL

Techniques used for Cash Management

A proper cash management necessitates the development and application of some practical administrative procedures to accelerate the inflow of cash and to improve the utilization of excess funds. Cash management will be successful only if cash collections are accelerated and disbursements, as far as possible, are delayed. An important cash management technique is the reduction in deposit float which is possible if a firm adopts a policy of decentralised collection. Some of the important processes that ensure decentralised collection so as to reduce:

1. the amount of time that elapses between the mailing of a payment by a customer, and
2. the point at which the funds become available to the firm for use.

The principal methods of establishing a decentralised collection network are

- Concentration Banking; and
- Lock-Box system

Concentration banking

In this system, big firms which have a large number of branches at different places, select some of these which are strategically located as collection center for receiving payment from customers. These center deposit the collection amount with local banks which

transfer these funds at the earliest to the central bank account of the company being operated by the head office. It is a useful technique to expedite the collection of account receivable. It reduces the time needed in the collection process by reducing the mailing time. Moreover, the normal operations of the company can be carried out with less cash balance and the quantum of idle funds is reduced to the minimum.

Lock Box system

This is another technique of reducing mailing process and collecting time. A lock box is a post office box under the control of a bank. The bank provides a lock box service collects the mail and deposits the cheques directly into the firm's account. These boxes are geographically located in such a way that the payment mailed by the customers will not take much time to reach the box. A local bank is authorised to pick up remittances from the box and deposit in the accounts of the company.

The lock box bank frequently provides services related to the acceleration of cash flows. For example, the bank may send automated information on a computer tape that can be handled directly by the firm's computer. Another service which a bank could use optical scanning equipment to read invoices, enclosed with cheques. The invoice information can then be forwarded to the firm on tape for direct procession and updating the receivable files. Another important service of the lock box bank is the "wire transfer" which is the fastest way to transfer the cash between banks. With the help of wire transfer system, cash may be immediately be available to the firm in the receiving bank.

Decelerating Disbursements

Techniques involved in slowing the release of payments to suppliers is as effective an instrument of cash control as methods involved for accelerating collection of receivables. Both techniques are concerned with reducing the cash requirements of the business. They constitute two sides of the same coin.

Float

Business at times deals with two balances associated with its bank account. One, the balance appearing in its firm's books of accounts and the other the actual cash balance as displayed in bank book. There can be several reasons for the difference in these two balances. The two most prominent reasons are:

- cheques presented by the business but not yet collected.
- cheques issued by the business but not yet presented.

The sum total of these two is known as 'Float'. The former is known as Collection Float and the latter as Disbursement Float.

Collection Float:

Collection float is represented by the aggregate of the amounts of the cheque which have been deposited in the bank but are in the process of collection by the bank. As soon as the cheques are deposited in the bank, the amounts are debited to the bank account appearing in the books of the business. But the bank accords the credit to its customer when it realises the amounts from the banks of

the customers. The time lag in the difference of balances in the result is known as Collection Float.

As a matter of fact, collection float is part of the overall 'Deposit Float' which additionally covers mailing float and processing float. Mailing float accrues due to time lag involved in the issue of cheques by customers and their receipts by the recipients. Processing float is the time taken by the business for processing the cheques for presentation to the bank.

Close monitoring of all the three is important for speedy collection of receivables.

Disbursement Float

Disbursement float is the sum total of all the cheques which have been issued to suppliers but are in the process of being presented to the bank for payments. The bank account in the books of the business is credited as soon as cheques are drawn on it and sent to the suppliers, but the bank would debit the account of its customer only on the receipt of the cheques from the bankers of suppliers. The difference between the two balances is known as Disbursement Float. The disbursement float is used as an item for delaying payments by adopting the technique of 'riding the float'.

Cash management techniques fall into two function areas: accelerating collections and decelerating disbursements. In both the areas, efforts are made to exploit their respective floats to the maximum. Collection float assists in accelerating the pace of cash inflow and disbursement float helps the business in delaying the cash out-flow.

DEFINITIONS :

For the purpose study the following definitions have been used:

Current Assets

Current Assets refers to assets which are either held in the form of cash or are expected to be realised in cash within an accounting period or operating cycle of the business. It includes total inventories, accounts receivable, loans and advances, cash and bank balances in the pharmaceutical companies.

Current Liabilities:

Current liabilities are those claims of outsiders which are expected to mature for payment within an accounting year. It includes short-term borrowing from banks other than those against debentures and other mortgages; trade dues, other current liabilities; sundry creditors, including advances received, provision for taxation and other current provisions.

Working Finance:

Working finance means the current assets minus current liabilities and provisions excepting short-term bank borrowings. This is also termed as working finance required.

Trade Credit and Provisions:

It includes the liabilities for goods supplied and works done, liabilities for expenses and all the current provisions.

Inventory:

Inventory includes the raw materials, semi finished goods, finished goods and stores and spares held by the pharmaceutical companies.

Receivables

The term receivable is a designation applicable to all claims held against others for future receipt of money, goods and services. It represents the extension of credit on an open account by the firm to its customers or in other words receivables include trade debtors, loans & advances and other receivable in the pharmaceutical companies.

Loans and Advances:

Loans and Advances include amounts advanced against the purchase of raw materials, stores and spares, staff salary and wages, prepayments, the share of deposit with the customers and other authorities and pre-payments.

Cash:

Cash includes cash in hand, cash balances at bank in the current account and short term deposit and marketable securities.

Liquid Funds:

Liquid funds refer to cash and short-term securities.

Capital Employed:

Capital employed means total assets consisting of net block, investments and gross working capital.

Net block:

It refers to the total value of fixed assets minus cumulative depreciation and allowances till the end of the accounting year and takes in to account addition there- to and deduction there-from.

Cost of Production:

It comprises raw material including consumable stores and other items used in the process of manufacturing, power and fuel, direct labour, repairs and maintenance, and other manufacturing expenses.

Cost of Sales:

This includes all expenses on production/operation excluding interest, plus/minus decretion/accretion to stocks of finished goods and work-in-progress.

Value of Output:

Value of output represents, cost of sales minus depreciation plus selling and distribution expenses and profit after tax excluding interest.

Gross Profit:

Gross profit represents the excess of income over expenditure after providing for depreciation and before providing for interest and taxes.

Net Profit:

Net profit represents the figure arrived at after deducting interest and taxes from Gross Profit but before appropriation to reserve.

Net Worth:

This represents paid up share capital plus reserves and surplus *less* accumulated losses and deferred revenue expenditure remaining unamortised.

Net Cash Flow:

It is the sales minus cost of sales plus non-cash charges like depreciation etc.

Earning Power:

Earning power is the multiplication of net margin and turnover of capital employed. Turnover of capital employed is the total sales divided by capital employed and net margin is found out by dividing net profit or loss by sales.

Gross margin:

Gross margin means gross profit divided by total sales.

Net margin:

It is found out by dividing the net profit by total sales.

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