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Chapter

Management of Working Capital

INTRODUCTION

Capital required for a business can be classified under the two heads :

(a) Fixed Capital

(b) Working Capital

(a) **Fixed Capital :** The term "Fixed Capital" stands for that amount of capital which is required for long-term to create production facilities through purchase of fixed assets such as plant and machinery, furniture, equipment etc. These assets represent that part of firm's capital which is blocked on a permanent or fixed basis and yield returns over the life of such assets.

(b) **Working Capital :** The term "Working Capital" refers to the short-term funds to meet operating expenses such as cash, marketable securities, debtors, inventories etc. In other words, Working Capital refers to that part of the firm's capital which is required for the efficient and effective used of fixed assets.

CONCEPTS OF WORKING CAPITAL

There are two concepts of working capital viz. :

(1) Gross Working Capital Concept and

(2) Net Working Capital.

(a) **Gross Working Capital Concept :** According to this concept, gross working capital refers to the firm's total investment in all the current assets of a business.

Gross Working Capital = Total Current Assets

Definitiosn of favouring this concepts are :

According to **Mead, Malott and Field,** *"Working Capital means total of current assets".*

According **J.S. Mills** "the sum of the current assets is the working capital of the business."

(b) **Net Working Capital :** Net working capital supports the view that working capital is the difference of firm's current assets and current liabilities. In otehr words, it is the excess of current assets over current liabilities.

Net Working Capital = Current Assets – Current Liabilities

Net working capital may be positive or negative whereas gross working capital is always positive. A positive net working capital arises when current assets exceed current liabilities and a negative net working capital arises when current liabilities exceed current assets.

Both aspects have equal importance for management - the first focuses the attention on the optimum investment in and financing of the current assets whereas the second indicates the liquidity position of the firm and suggests the extent to which working capital needs may be financed by permanent sources of funds.

COMPONENTS OF WORKING CAPITAL

Constituents of Current Assets : Current assets refers those assets which are converted into cash within a short period of time or nit exceeding one year *viz.* :

(1) Cash in hand
(2) Cash at Bank
(3) Short term Investments or (marketable securities)
(4) Receivables (Debtors + B/R) arising out of sales other than deferred receivables (including bills purchased and discounted by bankers)
(5) Inventories or stock :
(a) Raw materials, (b) Work-in-process, (c) Stores and spares, (d) Finished goods
(6) Advance payment for tax
(7) Accrued income
(8) Pre-paid expenses
(9) Fixed deposits with banks (maturing within one year)
(10) Government and other Trustee securities (other than for long term purpose e.g. Sinking Fund, Gratuity Fund etc.)
(11) Advances for purchase of raw materials, components and consumable stores
(12) Deposits kept with public bodies for normal business operation maturing within the normal operating cycle
(13) Money receivable from contracted sale of fixed asset during the next 12 months

Constituents of Current Liabilities : Current liabilities refers those liabilities which have to be paid within a short period of time in no case exceeding one year, *viz.* :

(1) Sundry creditors (trade) for raw materials and consumable stores and spares
(2) Bills Payable
(3) Short term borrowings
(4) Interest and other charges due for payment (or outstanding expenses)
(5) Unsecured loans maturing within one year
(6) Public deposits maturing within one year
(7) Advance/Progress payments from customers
(8) Deposits from dealers, selling agents etc.
(9) Installments on term loans, deferred payments credits, debentures and long term deposits payable within one year
(10) Statutory liabilities:
(a) Provident fund dues
(b) Provision for taxation
(c) Sales tax, excise
(d) Statutory obligations towards workers
(11) Miscellaneous current liabilities:
(a) Dividends
(b) Liabilities for expenses
(c) Gratuity payable within one year
(d) Any other payment due within 12 months

than current assets, ...

NEED OF WORKING CAPITAL

In every organization Working Capital is needed depending upon the uses. In order to study the need of working capital of an organization, one has to study the organization under different circumstances i.e. under the various stages of the business cycle like introduction, growth and maturity. An organization needs a huge amount of working capital in its introduction stage to meet the initial expenses or the preliminary expenses like advertising, promotion, formation etc.

As the organization moves from introduction to growth, the requirements also goes on increasing as the organization in this stages is in the mode of expansion. The working capital needs goes on increasing until the organization reaches its maturity stage. The requirement of working capital at the maturity stage is less as compared to those in growth stage. Thus to get the better picture of the working capital needs of the business, the various stages need to be considered. There are also many other factors that have the influence on the working capital requirement of the business.

The need of working capital also arises because of the time gap between the production, sales and the realization of profits. Thus we can say that working capital is required for the following purposes:

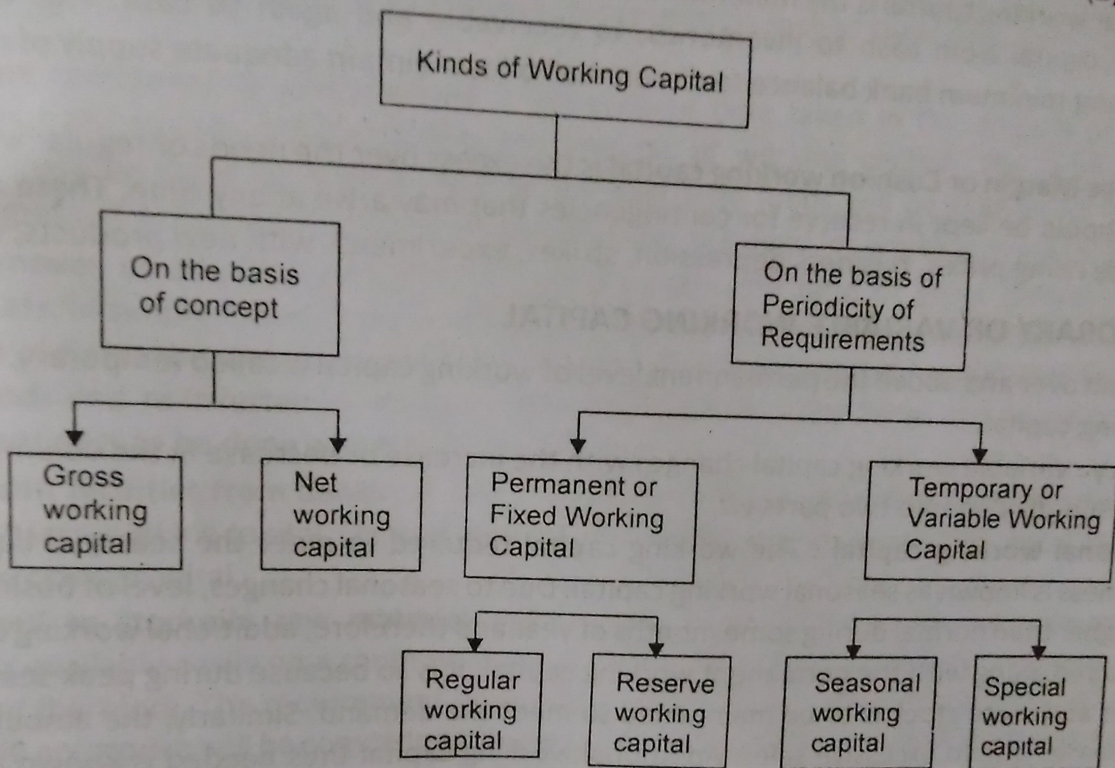
(1) For the purchase of raw-material, machinery and other components required to start the production
(2) For the payment of salary and wages to the employees at different levels.
(3) In order to incur the day-today expenses of the business like carriage, light, fuel etc.
(4) To meet the cost of packaging, branding, licensing etc.
(5) For the promotion of the products.
(6) For the distribution of the products.

(7) To provide for maintaining the proper level of inventory of raw-materials, finished goods, work-in-progress etc.

(8) In order to provide the credit facilities to the customers etc.

TYPES OF WORKING CAPITAL

Working capital can be classified in two ways *viz.* : (1) on the basis of its concept and (2) on the basis of periodicity of its requirements.



(1) ON THE BASIS OF CONCEPT

On the basis of its concept, the working capital may be divided into two parts *viz.* :

(i) Gross working capital

(ii) Net working capital.

Previously, we have already discussed Gross and net working capital.

(2) ON THE BASIS OF PERIODICITY OF REQUIREMENTS

On this basis also working capital can also be classified into two parts *viz.* :

(i) Permanent or Fixed Working Capital

(ii) Variable or Temporary Working Capital

(3) PERMANENT OR FIXED WORKING CAPITAL

It represents that part of working capital which is permanently locked up in the current assets to carry out the business smoothly and efficiently. This investment in current assets is of a permanent nature and will increase as the size of the business expands. Examples are the investments required to maintain the minimum stock of raw materials, work in progress, finished products, loose tools and equipments. It also requires minimum cash balance to be kept in reserve for the payment of wages, salaries and all other current expenditure throughout the year. The main features of this concept are as follows :

(a) Amount of permanent working capital remains in the business in one form or other.

(b) There is a positive correlation between the amount of permanent working capital and the size of the business.

(c) Permanent working capital is permanently needed therefore it should be financed through long-term funds *e.g.*, capital, debentures, long term loan etc.

The permanent or fixed working capital can again be subdivided into two parts *viz.* :

(a) **Regular working capital** is the minimum amount of liquid capital needed to keep up the circulation of the capital from cash to inventories, to receivable and again to cash. This would include sufficient minimum bank balance to discount all bills, maintain adequate supply of raw materials, etc.

(b) **Reserve Margin or Cushion working capital** is the excess over the needs or regular working capital that should be kept in reserve for contingencies that may arise at any time. These contingencies include rising prices, business depression, strikes, experiments with new products, etc.

(II) TEMPORARY OR VARIABLE WORKING CAPITAL

Any amount over and above the permannent level of working capital is called temporary, fluctuating or variable working capital.

Temporary : Variable working capital changes with the increase or decrease in the volume of business. It can also be sub-divided into two parts *viz.* :

(a) **Seasonal working capital :** The working capital required to meet the seasonal liquidity of the business is known as seasonal working capital. Due to seasonal changes, level of business activities is higher than normal during some months of year and therefore, additional working capital will be required along with the permanent working capital. It is so because during peak season, demand rises and more stock is to be maintained to meet the demand. Similarly, the amount of debtors increases due to excessive sales. Additional working capital thus needed is known as temporary working capital because once the season is over, the additional demand will be no more.

(b) **Special working capital :** It is that part of the variable working capital which is required for financing the special operations such as extensive marketing campaigns, experiments with products or methods of production, special jobs, etc. Need for temporary working capital should be met from short term sources of finance, *e.g.*, short-term loans etc. so that it can be refunded when it is not required.

FACTORS AFFECTING WORKING CAPITAL REQUIREMENTS

The need of working capital is not always the same. It varies from year to year or even month to month depending upon a number of factors. There are no set rules or formulae to determine working capital needs of the firm but a firm should have neither too much nor too little working capital. In order to determine the proper amount of working capital of a concern, the following factors should be considered carefully :

(1) Nature of business : The amount of working capital is basically related to the nature and volume of the business. In case trading and financial enterprises which have to invest been amount in fixed assets and a large amount in working capital. This so because the nature of their business is such that they have to maintain a sufficient amount of cash inventanies is and debtors. On the contrary, concerns having large investments in fixed assets require lesser amount of working capital. For example, public utilities such as railways, transport, water electricity etc. have a very limited need for working capital because they have to invest fairly large amounts in fixed assets. Their working capital need is minimal because they get immediate payment for their services and do not have to maintain big inventories.

(2) Size of the business unit : The general principle in this regard is that the bigger the size, the rger will be the amount of working capital required since the larger business units are required to aintain larger inventories for the flow of the business. The size of the business may be increased in terms f scale of its business operations.

(3) Seasonal variations : Strong seasonal movements create special problems of working capital n controlling the financial swings. The demand for certain products is seasonal and the stock of finished oods will accumulate upto the season of demand which requires an increasing amount of working capital hat remains tied up in stock of finished goods for some months such as sugar mills, oil mills or woolen mills, etc.

(4) Time consumed in manufacture : The average time taken in the process of manufacture is also an important factor in determining the amount of working capital. The longer the period of manufacture will be need for working capital because they funds will be tied up for longer period in work-in-progress. If the small the period of manufacture, the need for working capital will also be lesser.

(5) Turnover of circulating capital : Turnover means the ratio of gross annual sales to average working assets. In simple words, it means the speed with which circulating capital completes its rounds or the number of times the amount invested in working assets have been converted into cash by sale of the finished goods and re-invested in working assets during a year. The faster the turnover, the larger the volume of business to be done with given working capital.

(6) Credit facilities from banks : It the firm can get easy bank credit facility in case of need, it will operate with less working capital. On the other hand, if such facilities not available, it will have to keep large amount of working capital.

(7) Need to stockpile raw material and finished goods : If the raw material required by the enterprise is available easily on a continuous basis, there will be no need to keep a large inventory of such material and therefore. The requirement of capital is less. On the contrary, if the supply of raw material is irregular, the enterprise will be compelled to keep an excessive inventory of such materials which will result in high level of working capital.

(8) Terms of purchase and sale : Terms (cash or credit) of purchase and sales also affect the amount of working capital. If a company purchases all goods in cash and sells its finished product on credit also naturally, it will require larger amount of working capital. On the contrary, a concern having credit facilities and allowing no credit to its customers will require lesser amount of working capital.

(9) Conversion of current assets into Cash : The need of having cash in hand to meet the day-to-day requirements, e.g. payment of wages and salaries, rents, rates, etc. has an important bearing in deciding the adequate amount of working capital. The greater the cash requirements, the higher will be the need of working capital.

(10) Growth and expansion : Growing concerns require more working capital than those which are static. It is logical to expect larger amount of working capital in a growing concern to meet its growing needs of funds for its expansion and/or diversification programmes though it varies with economic conditions and corporate practices.

(11) Business Cycle Fluctuations : Business cycles fluctuations may be affect the requirement of in the direction of boom and depression. At times, when the prices are going up and boom conditions prevail, the tendency is to pile up a large stock of materials and to maintain a large stock of finished goods to meet the increased demand with an expectation to earn more profits. Hence, the need for working capital in boom conditions is found to increase. The other type of business cycle, i.e. depression has exactly an opposite effect on the level of working capital requirements.

(12) **Profit appropriation :** Some firms enjoy dominant position in the market due to quality product or good marketing. On the other hand, a firm facing extremely tough competition may earn low margins of profits. A high net profit margin contributes towards working capital provided it is earned in cash. The working capital requirement will be estimated on how the cash available is used rightfully. The contribution towards working capital is affected by the way in which profits are appropriated and therefore it is affected by taxation, depreciation, reservem, taxes, policy, etc. Hence, the need for working capital in boom conditions is bound to increase.

(13) **Price Level Changes :** Changes in price level also assets the working capital requirements. Generally, rising price levels will require higher amount of working capital to maintain the existing level of current assets.

(14) **Dividend Policy :** There is a well established relationship between dividend and working capital in companies. The payment of dividend reduces the cash and, thereby affect the working capital to that extent. On other hand, of company does not pay dividend but returns the profit, more would be the contribution of profits towards working capital pool.

(15) **Efficient Management :** Efficient management is also a significance factor to determine the level of working capital. Management can reduce the need for working capital by the efficient utilisation of resources. It can accelerate the base of cash cycle and thereby use of the same amount of working capital again and again very quickly.

ADVANTAGES OF ADEQUATE WORKING CAPITAL

Adequacy of the working capital is the lifeblood and controlling nerve center of a business. Inadequate as well as redundant working capital is dangerous for the health of industry. It is said, 'inadequate working capital is disastrous; whereas redundant working capital is a criminal waste'. Both situations are not warranted in a sound organization.

(1) **Cash discount :** If a proper cash balance is maintained, the business can avail the advantage of cash discount by paying cash for the purchase of raw materials and merchandise or making the payment before the due date. It will result in reducing the cost of production.

(2) **Creation of feeling of security and confidence :** The proprietor or officials or management of a concern are quite carefree, if they have proper working capital arrangements because they need not worry for the payment of business expenditure or creditors. Adequate working capital creates a sense of security, confidence and loyalty, not only throughout the business itself, but also among its customers, creditors and business associates.

(3) **Maintaining of solvency and continuing production :** In order to maintain the solvency of the business, it is but essential that the sufficient amount t of fund is available to make all the payments in time as and when they are due. Without ample working capital, production will suffer, particularly in the era of cut throat competition, and a business can never flourish in the absence of adequate working capital.

(4) **Sound goodwill and debt capacity :** It is common experience of all prudent businessmen that promptness of payment in business creates goodwill and increases the debt of the capacity of the business. A firm can raise funds from the market, purchase goods on credit and borrow short-term funds from bank, etc. If the investor and borrowers are confident that they will get their due interest and payment of principal in time.

(5) **Easy Loans from the Banks :** An adequate working capital helps the company to borrow unsecured loans from the bank because the excess of current assets over current liabilities itself is a good security to the unsecured loans, Banks favour in granting seasonal loans, if business has a good credit standing and trade reputation.

(6) **Facilitates distribution of dividend :** Generally, inspite of sufficient profits, the company faces difficulty in paying a proper rate of dividend to the shareholders because of shortage of cash. Adequacy of working capital facilitiates the payment of dividend.

(7) **Advantage of good opportunity :** In case of adequacy of capital in a concern, advantages of good business taken opportunities can be e.g., company may make off-season purchases resulting in substantial savings or it can fetch big supply orders resulting in good profits.

(8) **Meeting unseen contingency :** Depression shoots the demand of working capital because sock piling of finished goods become necessary. Certain other unseen contingencies e.g., financial crisis due to heavy losses, business oscillations, etc. can easily be overcome, if company maintains adequate working capital.

(9) **High Morale :** The provision of adequate working capital improves the morale of the executive because they have an environment of certainty, security and confidence, which is a great psychological factor in improving the overall efficiency of the business and of the person who is at the hell of fairs in the company.

(10) **Increased production efficiency :** A continuous supply of raw material, research programme, innovations and technical development and expansion programmes can successfully be carried out if adequate working capital is maintained in the business. It will increase the production efficiency, which will, in turn increases the efficiency and morale of the employees and lower costs and create image among the community.

☐ EXCESSIVE OR INADEQUATE OF WORKING CAPITAL

A firm must have adequate working capital according to the needs of its business operations. It should have neither be excessive nor inadequate. Excessive working capital is a situation where in the firm invests excessive funds in working capital. These excessive or idle funds earn no profit for the firm.

☐ DANGERS OF EXCESSIVE WORKING CAPITAL

(i) **Excessive inventory :** It may result in unnecessary accumulation of large inventory which may lead to increase in wastage due to mishandling, theft etc.

(ii) **Excessive debtors :** It is an indication of liberal credit policy which, in turn, will result in higher amount tied up in debtors. Thus, there is the possibility of higher incidence of bad debts.

(iii) **Adverse effect on profitability :** It may lead to complacency in managing day-to-day expenses of the firm due to idle funds in the business which ads to the cost of capital but earns no profit for the firm. So, it has a bad effect on profitability of the firm.

(iv) **Inefficiency in management :** Executives may be tempted to spend more due to excessive resources at their command.

☐ DANGERS OF INADEQUATE WORKING CAPITAL

(i) **Management of Working CapitalDifficulty in availability of raw material :** In adequacy of working capital results in non-payment of creditors on time. As a result, the credit purchase of goods on favourable terms becomes increasingly difficult. Also, the firm cannot avoid the cash discount.

(ii) **No proper utilisation of fixed assets :** Due to the frequent interruption in the supply of raw materials and paucity of stock, the firm cannot make full utilisation of its machines etc.

(iii) **Difficulty in the maintenance of machinery :** Due to the inadequacy of working capital, machines are not cared adn maintained properly which results in the closure of production on many occassions.

(iv) **Decrease in credit rating :** Because of inadequacy of working capital, firm is unable to pay its short-term obligations on time. It decays the firm's relations with its bankers and it becomes difficult for the firm to borrow in case of need.

(v) **Non Utilisation of favourable opportunities :** For example, a firm cannot purchase sufficient quantity of raw materials in case of sudden decrease in the prices. Similarly, if the firm receives a big order, it cannot execute it due to shortage of working capital.

(vi) **Decrease in sales :** Due to the shortage of working capital, the firm cannot keep sufficient stock of finished goods. it results in the decrease in sales. Also, the firm will be forced to restrict its credit sales. This will further reduce the sales.

(vii) **Difficult in the Distribution of Dividends :** Because of paucity of cash resources, firm will not be able to pay the dividend to its shareholders.

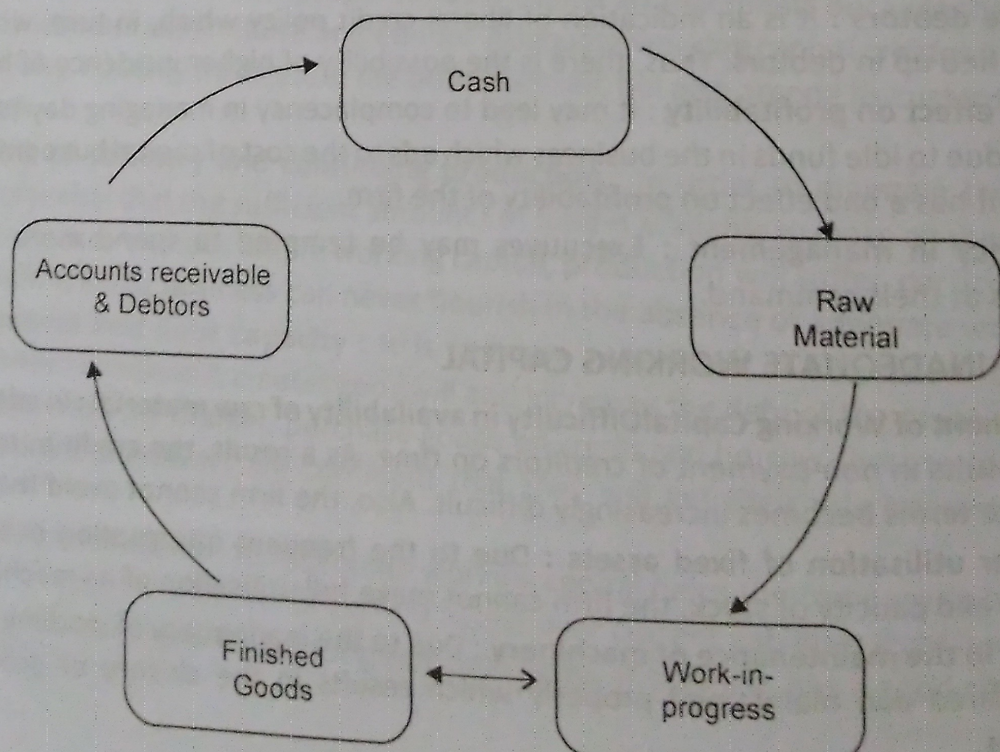
(viii) **Decrese in the efficiency of management :** It will become increasingly difficult for the management to pay its creditors on time and pay its day-to-day expenses. It will also be difficult to pay the wages regularly which will have an adverse effect on the morale of managers.

An enlightened management should, therefore, maintain an adequate amount of working capital on a continuous basis.

WORKING CAPITAL CYCLE

When a business is started, working capital is needed for purchasing raw materials. The raw materials is then converted into finished goods by incurring some additional costs on it. Now goods are sold. Sales do not convert into cash instantly because there is invariably some credit sales. These exists a time lag between sales of goods and receipt of cash. The time period which is realised to convert raw materials into finished goods and then into cash is known as working capital cycle.

The Working Capital Cycle is also known as operating cycle or cash cycle. It refers to the duration between the firm's payment of cash for raw materials, entering into production and inflow of cash from debtors and realization of receivables. Simply speaking, operating cycle is the duration between outflow of cash and this may be evidenced from the working capital cycle.



The operating cycle consists of the following events which continue throughout the life of a firm remaining engaged in commercial activities:

(a) Conversion of cash into raw materials.

(b) Conversion of raw materials into work-in-progress

(c) Conversion of work-in-progress into finished goods.

(d) Conversion of finished goods into accounts receivable (or Debtors and B/R) through credit sales.

(e) Conversion of Accounts receivable into cash by realising cash from them.

Thus, the working capital cycle starts from cash, finishes at cash and then again restarts from cash.

CALCULATION OF WORKING CAPITAL CYCLE

The finance manager must be prepared to know the exact period of operating cycle as because he has to plan for ensuring liquidity and profitability of the concern. Component wise working capital cycle-period can be ascertained as below :

I. Raw material holding period $= \dfrac{\text{Average stock of Raw Material}}{\text{Average Cost of Consumption per day}}$

II. WIP holding period $= \dfrac{\text{Average WIP}}{\text{Average Cost of Production per day}}$

III. Finished Goods holding $= \dfrac{\text{Average stock of Finished Goods}}{\text{Average Cost of Finished oods per day}}$

IV. Receivable and Debtors $= \dfrac{\text{Average Book Credit}}{\text{Average credit sale per day}}$

V. Credit period allowed by Sundry Creditors $= \dfrac{\text{Average Trade Creditors}}{\text{Average credit purchase per day}}$

In the form of a simple equation, working capital cycle can be represented as below:

$$WWC = R + W + F + D + B - C$$

Where, WWC= Working Capital Cycle

R= Raw Materials

W= Work in progress

F= Finished Stock

B=Cash at Bank

D= Debtors and Receivable collection period

C= Credit period available

FORECAST OR ESTIMATION OF WORKING CAPITAL REQUIREMENT

Working capital represents funds required to meet short-term commercial operation of a business. It is an important task of management accountant to forecast the requirement of working capital in judicious and prudent manner. Working capital forecast in the process of determining an optimum level of investment in working capital. It is to keep in mind that working capital is forecast on an average basis and not on any specific points of line. Working capital forecast involves estimation of current assets and current liabilities. It is important to note that no component of current assets remain idle in the business and similarily short term loan like bank overdraft, commercial paper, sundry creditors as well as outstanding liabilities should not be kept very high level but they should be kept at such level which is just required to match demand of the firm.

Following are the suggested performas for estimating the working Capital Requirements :