CHAPTER 4

CONCEPT OF WORKING CAPITAL

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4.1. INTRODUCTION

4.1.1 "In Economics, capital is often used to capital goods consisting of a great variety of things namely, machines of various kinds, plants, houses, tools, raw materials and goods-in-process". A manufacturing concern is sure to collapse without an adequate supply of raw materials to process or, without cash to meet the wage bill or, without the capacity to wait for the market for its finished products or, without the ability to grant credit to its customers. The same is the case with a commercial enterprise, which without merchandise to sell, is virtually good for nothing. Working capital, thus, is the life-blood and controlling nerve-centre of a business. The adequacy of working capital contributes a lot in raising the credit-standing of a corporation because of better terms on goods purchased, reduced cost of production on account of the receipt of cash discounts, favourable rates of interest on bank loans etc. "A company with sufficient working capital is always in a position to take the advantage of any favourable opportunity either to purchase raw-materials or to execute a special order or to wait for better market position. Therefore, it is important for the management to pay particular attention to the planning and control of working capital".

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4.2 CONCEPT OF WORKING CAPITAL

4.2.1 Working capital refers to the funds required for day-to-day operations of the firm. It also refers to a firm’s investment in short-term assets, viz. cash, short-term securities, amount receivables (debtors) and inventories of raw-materials, work-in-process and finished goods.

4.2.2 Working capital may be classified in two ways: (a) on the basis of concept and (b) on the basis of time.

4.2.3 On the basis of concept, working capital is classified as gross working capital and net working capital. Gross working capital is the amount of funds invested in current assets. On the otherhand, “the net working capital is the excess of current assets over current liabilities. If current liabilities were larger than the current assets, the difference would be called a working capital deficit”\(^3\).

4.2.4 On the basis of time, working capital may be classified as permanent or fixed working capital and temporary or variable working capital. Permanent or fixed working capital is the minimum amount, which is required to ensure effective utilisation of fixed facilities and for maintaining the circulation of current assets. The permanent working capital can further be classified as regular working capital and reserve
working capital. Regular working capital is the minimum amount of working capital, which is required to ensure circulation of current assets from cash to inventories, from inventories to receivables and from receivables to cash and so on. Reserve working capital is the excess amount of working capital over and above the regular working capital. It may be provided for contingencies that may arise at unstated periods such as strikes, rise in prices, depression, etc. Temporary or variable working capital is the amount of working capital, which is required to meet the seasonal demands and some special exigencies. In other words, “any amount over and above the permanent level of working capital is temporary or variable working capital”. It can be further classified as seasonal working capital and special working capital. The capital required to meet the seasonal needs of the enterprise is called seasonal working capital. Special working capital is that part of working capital which is required to meet special exigencies such as launching of extensive marketing companies for conducting research etc.

4.3 COMPONENTS OF WORKING CAPITAL

4.3.1 The working capital has two components: current assets and current liabilities. Current assets comprising all those assets, which can be converted into cash within the short period. Short period refers to the same accounting period. Current assets include:
1. Cash in hand and cash at bank.
2. Marketable securities and temporary investments.
3. Investments in deferred accounts and notes receivables.
4. Accrued revenue receivables.
5. Prepaid insurance and unused royalties.
6. Inventory of
   i) raw materials, stores, supplies and spares,
   ii) work-in-process, and
   iii) finished goods.
7. Sundry trade debtors.

4.3.2 A part of the need for funds to finance the current assets may be met from supply of goods on credit and deferment, because of custom, usage or arrangement of payment for expenses. The remaining part of the need for working capital may be met from short-term borrowing from financiers like banks, financial institutions and other agencies. These items are collectively called current liabilities.

4.3.3 Current liabilities are those liabilities, which become due in the same operating periods. “A current liability is an obligation that rarely will require within approximately one year of balance sheet date”\(^5\). It includes:

1. Trade creditors (Goods purchased on credit)
2. Expenses incurred in the course of business for the
organisation, which are not yet paid for.
3. Temporary or short-term borrowing from banks, financial institutions or other parties.
4. Advances received from parties against goods to be sold or delivered, or as short-term deposits.
5. Other current liabilities such as tax and dividend payable.

4.4 DETERMINANTS OF WORKING CAPITAL

4.4.1 There are no rules or formulae to determine the amount of working capital requirements of a firm. Numerous factors have their influence on the composition of working capital. The nature of business itself, governmental influences, credit control, the bank rate and supply of money, all have their effect from time to time in varying degrees. Therefore, an analysis of the relevant factors should be made in order to determine the total investment in working capital. The following are the important factors that generally influence the working capital requirements.

1. *Nature of the business:* Depending on the nature of business, the requirements of working capital differs from company to company. For manufacturing company, larger amount of working capital is required, whereas public utility companies like Electricity, Water Supply and Railways need very limited amount of working capital.
2. **Size of the business:** The size of a business also has important impact on its working capital needs. Size may be measured in terms of scale of operations. A firm with larger scale of operation, needs more working capital than a small one. However, in some cases, a smaller concern may need more working capital due to higher overhead charges.

3. **Manufacturing cycle:** - The manufacturing cycle starts with the purchase and use of raw-materials and completes with the production of finished goods. The higher is the time required for manufacture of goods, the larger is the requirement of working capital. This is so, because till the goods are manufactured, investment in materials and other expenses continues to be incurred.

4. **Credit policy:** - The level of working capital is also determined by the credit policy, which relates to sales and purchases. The credit policy influences the requirement of working capital in two ways: - i) through credit terms granted by the firm to its customers or buyers of the goods, ii) credit terms available to the firm from its creditors. A firm with liberal credit terms requires more working capital. A firm making purchases on credit basis and selling its finished goods on cash basis requires lower amount of working capital. Similarly, a firm, which enjoys greater credit with banks need less working capital.
5. Production policy: - In certain industries, the demand is subject to wide fluctuations due to seasonal variations. In such cases, the requirement of working capital depends upon the production policy. The production could be kept either steady by accumulating inventories during slack periods with a view to meet high demand during the peak season or the production could be curtailed during the slack season and increased during the peak season. If the policy is to keep the production steady by accumulating inventories, it requires higher working capital.

6. Business fluctuations: - Seasonal and cyclical fluctuations in demand for a product affect the working capital requirement considerably. An upward swing in the economy leads to increased sales, resulting in an increasing in the firm’s investment in inventory and receivables or book debts. On the other hand, a decline in the economy may register a fall in sales and fall in the levels of stocks and book debts.

7. Operating efficiency: - Operating efficiency means the optimum utilisation of resources. The operational efficiency of a concern is judged from the turnover of inventory and receivables. The lower the turnover, the larger will be the working capital requirement and vice-versa.
8. **Growth and expansion activities:** As a company grows, the requirement of working capital becomes larger. It is difficult to state the rules regarding the relationship between growth in the volume of firm's business and its working capital needs. So growing industries require more working capital than those that are static.

9. **Price level changes:** Generally, rising price level requires a higher investment in working capital as more funds required to maintain the same level of current assets. However, firms, which can immediately revise prices of their products, may not face a severe working capital problem in the period of rising price levels.

10. **Turnover of Circulating capital:** The speed with which operating cycle completes its round plays a decisive role for influencing the working capital needs. With a better control over inventory and book debts, a firm is able to reduce its working capital requirements. A prompt collection of receivables and good facilities for settling payables result into low working capital requirements.
11. **Competitive conditions** - The degree of competition prevailing in market has an important bearing on working capital need. If the market is strong and competition is weak, a firm can manage with smaller working capital as customers can be served after a delay. When competition is keen, a larger amount of working capital is required as customers may not inclined to wait and must be served promptly because other firms are ready to meet their needs sooner.

12. **Dividend policy** - Dividend policy of a concern also influences the requirements of its working capital. A firm, that maintains a steady high rate of cash dividend irrespective of its generation of profits, needs more working capital than the firm that retains larger part of its profits and does not pay so high rate of cash dividend.

### 4.5 Techniques of Forecasting Working Capital

4.5.1 After taking into consideration the different factors, which influence the working capital needs of a firm, the finance manager prepares a working capital forecast. For preparing such forecast, first of all, estimation of all the current assets is made. Thus, estimation of raw materials and finished goods to be held in stock, amount of materials that will remain in process and outstanding receipts from different parties and other receipts will have to be
made. This should be followed by estimating the current liabilities comprising outstanding payment of wages, stores, materials, rent, administrative and other expenses. Difference between forecasted amount of current assets and current liabilities give net working capital requirement of the firm. A flat percentage would be added to this amount, as provision for contingencies. The rationale of this provision lies in the fact that, most of the figures required to build up a composite figure of working capital can only be guess estimates even with the provision for contingencies providing a caution to the management with which they can withstand any business odds. For preparing the working capital forecast, the following information is required.

1. Costs to be defrayed on materials, wages and overheads.
2. Length of the time during which raw materials are to remain in stock before they are put to production.
3. Length of the production cycle.
4. Length of sale-cycle denoting the period of time-finished products has to stay in the warehouse before sale.
5. Period of credit allowed to debtors.
6. Period of credit availed from creditors.
7. Time lag involved in the payment of wages and overhead expenses.

4.5.2 Mainly, there are two methods for forecasting the working capital, i.e. "Cash Cost Method" and "Balance Sheet Method".
### A. CASH-COST METHOD

The mechanism of estimation of working capital requirement on “cash-cost” basis can be better understood with the help of following chart.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Operating cycle</th>
<th>Period (Months)</th>
<th>Working capital requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Raw-material storage period</td>
<td>2</td>
<td>2 x Cost of monthly consumption of raw materials.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 ½ x Cost of monthly consumption of raw materials +</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 ½ x Monthly wages +</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>½ x Monthly overheads</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Work-in-progress manufacturing time</td>
<td>1 ½</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a) Raw materials</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>+ b) Wages</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>+ c) Overheads</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Finished goods storage period</td>
<td>2</td>
<td>2 x Cost of monthly consumption of raw materials +</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 x Monthly wages +</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 x Monthly overheads</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Sales on credit (debtors) : credit period allowed to debtors</td>
<td>1 ½</td>
<td>1 ½ x Amount of monthly credit sales</td>
</tr>
</tbody>
</table>

| Stage 1+2+3+4 Less (1) Creditors - Credit period allowed by suppliers of raw materials (2) Outstanding expenses: | 2   | 2 x Cost of monthly consumption of raw materials |
| Wages | 1 ½ | 1 ½ x Monthly wages |
| Salaries | 1 | 1 x Monthly salary |

**Estimated Working Capital requirements**
B. BALANCE SHEET METHOD:

The Balance Sheet method for forecasting financial needs of the enterprise is built around a forecast of the magnitude of current assets and current liabilities for future periods. Thus, preparation of pro-forma balance sheet involves the following three steps.

1. Forecast of the current assets level required to carry out operations at the level planned on the date involved.
2. Estimate the current liability that can be counted on without negotiation.
3. By comparing the current asset and current liabilities, we get the deficiency or surplus of cash. If total of current assets is more than the total current liabilities, it is the case of surplus, otherwise, the case of deficiency.

4.6 ESTIMATING NEEDS FOR WORKING CAPITAL

4.6.1 Prudent principle of financial management calls for holding as small amount of working capital as possible, so long as the firm is not exposed to undue solvency risks. It is difficult on the part of the finance manager, to determine precisely the level of working capital requirements particularly under conditions of uncertainty. However, he must consider all the factors that have bearing on working capital in aggregate and on individual constituents of working capital including cash, receivables and inventories to arrive at the tentative amount of working capital requirement.
A) Estimating cash requirements:

"A firm's requirement for cash centres on the transaction, precautionary and speculation motives." Holding cash for transaction motive refers to the need of the firm to hold cash to meet cash obligations arising in the ordinary course of business such as purchases of materials, payment of wages, taxes and dividends. With the help of cash budget, cash inflows and cash outflows of the firm are assessed and accordingly amount of cash requirement to cover the excess of cash payment over cash receipt is determined.

Holding cash for precautionary motive refers to the need of the firm to hold cash for the occurrence of unexpected events, viz. fires, strikes and the failure of important customers. The firm therefore, requires cash reserves to meet unexpected discrepancies. Holding cash for speculative motive refers to holding cash for probable changes in security prices. When security prices show a rising tendency and the same tendency is very likely to persist in future, it would be advantageous on the part of the enterprise to invest cash in securities.

Terms of purchases and sales, collection period of receivables, credit position of the firm, production policy of firm, nature of demand of firm's product, amount of current liabilities and their
maturity period are the determinant of cash requirement for transaction motive. "The firms' ability to borrow at short notice in the event of any emergency, the philosophy of management regarding liquidity and risk of insolvency are the determinant of cash requirement for precautionary motive."

B) Estimating Receivable Requirements:

Receivable represents extension of an open credit by a firm to individuals and business enterprise. The book debts or receivables arise out of credit sale. It has three characteristics. First, it involves the elements of risk, which should be carefully analysed. Second, it is based on economic value. To the buyer, the economic value in goods or services passes at the time of sale, while the seller expects an equivalent value to be received later on. Third, it implies futurity. The cash payment for goods or services received by the buyer will be made by him in the future period.

While planning working capital requirement for the firm, the Finance Manager must decide the amount of funds that the firm will require to carry receivables. For that matter, firms' receivable turnover has to be determined. Receivable turnover refers to the number of times the receivables turnover during a year. The higher the turnover of receivable, the shorter would be the collection period. A shorter collection period implies the locking up of working capital.
for a short period and the requirement of working capital is to be reduced. Firms credit policy and effectiveness of credit department of the firm are two determinants of receivable turnover.

C) Estimating inventory requirements:

Inventories constitute the most significant part of current assets. On an average, inventories are approximately 60 percent of current assets. Inventories are stock of the product of a company in manufacturing for sale and components that make up the product. The various forms in which inventories exists in manufacturing company are: raw materials, work-in-process and finished goods.

4.6.2 “There are three general motives for holding inventories”:

a) Transaction motive: - It emphasizes the need to maintain inventories to facilitate smooth production and sales operations.

b) Precautionary motive: - This motive necessitates holding of inventories to guard against the risk and unpredictable changes in demand and supply forces and other factors.

c) Speculation motive: - It influences the decision to increase or reduce inventory level to take advantage of price fluctuations.
4.6.3 Nature of business activity, inventory turnover, method of inventory valuation, management ability to predict disruption, nature or arrangement with supplier of goods, quantum of anticipated production, business cycles, management policy, period of production cycle, operational efficiency of the firm, need to store raw materials and finished goods etc. are the determinants of inventory.

4.7 IMPORTANCE OF WORKING CAPITAL

4.7.1 Working capital is the lifeblood and nerve-centre of a business. Just as circulation of blood is essential in human body for maintaining life, working capital is very essential to maintain the smooth running of a business. It is being increasingly realised that inadequacy or mismanagement of working capital is the leading cause of business failure. Negligence of management of working capital may result in technical insolvency even liquidation of business unit. The main advantages of maintaining adequate amount of working capital are:

1. **Solvency of the business**: Adequate working capital helps in maintaining solvency of the business by providing uninterrupted flow of production.

2. **Goodwill**: Sufficient working capital increases the goodwill as it enables a business concern to make prompt payment to its creditors.
3. *Easy loans:* A concern having adequate working capital can arrange loans from banks and other financial institutions on easy and favourable terms.

4. *Regular supply of materials:* Continuous production is possible as sufficient working capital ensures regular supply of raw-materials.

5. *Cash discounts:* Adequate working capital also enables a concern to avail cash discount on the purchase of raw-materials.

6. *Regular payment of salaries and wages:* Sufficient working capital can make regular payment of salaries, wages and other day-to-day commitments, which raises the morale of its employees and increasing their efficiency.

7. *Ability to face crisis:* Adequate working capital enables a concern to face business crisis in emergencies such as depression. Because, during such periods, there is much pressure on working capital.

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

1. Growth may become difficult for the firm to undertake profitable projects due to non-availability of funds.

2. Implementation of operating plans may become difficult.

3. Fixed assets may not be efficiently utilised due to lack of working funds.
4. Attractive credit opportunities may have to be lost due to paucity of working capital.

5. The firm looses reputation, when it is not in a position to honour its sort-term obligations.

6. Excess of working capital may result in unnecessary accumulation of inventories.

7. Excessive working capital may make management complacent leading to managerial inefficiency.

4.8 SUMMARY

4.8.1 Every enterprise needs funds to operate profitably. The working capital reflects the short-term use of funds in an organisation. Apart from the investment in long-term assets like plant and machinery, office equipments, land and building, the funds are also required for day-to-day operations of the business, which is known as working capital.

4.8.2 The term ‘working capital’ may be defined in two ways. Firstly, on the basis of the gross concept, working capital refers to the total amount of current assets in an organisation. Secondly, on the basis of net concept, the working capital refers to the deduction of current liabilities from the total current assets. Current assets include cash in hand and at bank, sundry debtors, bills receivables,
prepaid expenses, accrued income, closing stock and marketable securities, etc. Current liabilities include sundry creditors, bills payable, outstanding expenses, income received in advance and short-term loans.

4.8.3 The amount needed to be invested in current assets is affected by some factors and may vary over a period of time. Nature of the business, manufacturing cycle, credit policy, production policies, growth and expansion activities and inventory turnover are some of the important factors influencing the determination of working capital.

4.8.4 For forecasting the working capital, two methods are followed, viz. cash-cost method and balance sheet method. For estimating the needs for working capital the estimation of cash, receivables and inventory is required.

4.8.5 From the discussion made above, we can conclude that working capital is very essential to maintain the smooth running of a business just as circulation of blood is essential in human body. Negligence of management of working capital may result in technical insolvency even liquidation of business unit.
REFERENCES


5. AICPA, Accounting Bulleting No.43, Final Edition, Chapter - 3, Section 4, para 78.

