

# CHAPTER - I

## **AN OVERVIEW OF THE THEORY**

## Chapter -1

### **An Overview of the Theory**

#### **Introduction**

Working Capital is necessary for all types of business organizations irrespective of their size and nature. Working capital is needed for day-to-day operations of the business. So it may be regarded as the life blood of business.

In simple words, Working – Capital refers to that part of total capital which is required for day-to-day working of the business. The funds are required by the business for conducting its regular operations such as purchase of raw materials or finished goods, payment of wages and manufacturing expenses, office and administrative expenses, selling and distribution expenses. Unless these routine expenses of business are paid on time the manufacture or trade cannot be conducted in a smooth manner.

The funds necessary for making such regular payments of business are called working capital. Working capital, therefore, has been defined as "the amount of funds necessary to cover cost of operating the enterprise". In short it is the capital with which the business is worked over. The working capital of a business enterprise is measured on the basis of it's funds locked up in various current assets such as, inventories, account receivables and cash and bank balance.

Working capital represents the excess of current assets over current liabilities. The current assets are cash in hand, cash at bank, bills receivable, sundry debtors, stock of goods etc. and current

liabilities are creditors, bills payable, short term loan, outstanding expenses.

## **2. Definitions :-**

1. "Working capital is the difference between the book value of the current assets and the current liabilities".

- Hoagland -

2. "Working capital is the amount of funds necessary to cover the cost of operating the business enterprise".

- Shuibn -

## **3. Need of Working Capital**

In order to earn sufficient profit a firm has to depend on its sales activities apart from other income. Sales are not always converted into cash immediately. i.e. there is a time-lag between sale of the product and realization of cash. So an adequate amount of working capital is required by a firm in the form of different current assets for its activities to continue uninterrupted and to tackle the problems that may arise because of the time-lag. Practically, this happens, due to the "operating cycle" or "cash cycle" or "operating cash cycle", which involves the following steps :-

- a. Conversion of cash into materials.
- b. Conversion of material into inventory.
- c. Conversion of inventory into receivable.
- d. Conversion of receivable into cash.

Working capital is needed in order to sustain the business activities during the operating cycle. Unless adequate working capital

is available it will not be in a position to purchase materials, pay wages and other expenses and produce goods required for sales. Hence, every enterprise requires sufficient working capital to run its business smoothly & successfully.

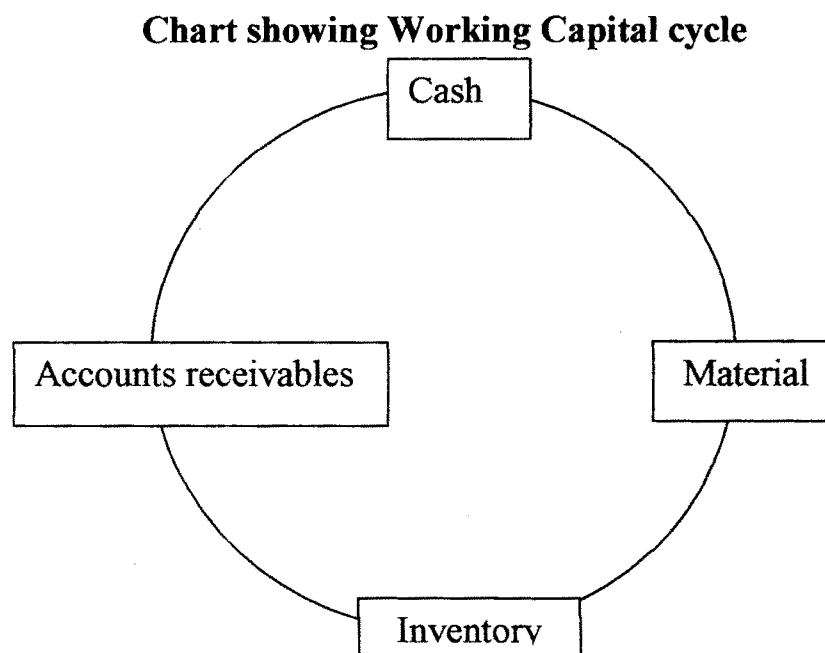
#### **4. Importance of Working Capital**

Working Capital Management is a significant part of the business and the objectives of the business cannot be attained in the absence of prudent working capital management. Adequacy of working capital offers several advantages to the business enterprise.

1. It is the life blood of the business organization. It keeps the business live and dynamic.
2. In the absence of working capital, a firm would be financially bankrupt or insolvent and it is sure to be closed down.
3. If the firm is financially sound, efficiency of the business is encouraged and management becomes more efficient.
4. It protects a business firm from the adverse effects of shrinkage in the values of current assets.
5. It enhances the credit standing of the firm in the market and it helps the company to enjoy better terms from the market.

## 5. Working Capital Cycle

A company buys raw material for cash, processes them into finished goods by spending money on wages, salaries, and other administrative and factory overheads. Goods are sold on credit which results in accounts receivables. When the customers pay their bills, the firm draws out its profit and restores the cash balance.



**Chart No. 1.1**

As seen in the chart operations of manufacturing / trading concern go through various segments of operating cycle. The total duration of the segment is known as "gross operating cycle period". Shorter the duration of operating cycle period, the faster will be the transformation of current assets into cash. The operating cycle approach is quite useful in both controlling and forecasting working capital.

## 6. Sources of Working Capital

The sources of working capital may be classified into two groups shown in the following chart

**Table No. 1.1**

### **Sources of Working Capital**

| A) | Short Term Sources         | B) | Long Term Sources              |
|----|----------------------------|----|--------------------------------|
| 1. | Trade Credit               | 1. | Trade finance                  |
| 2. | Bank Credit                | 2. | Public Deposits                |
| 3. | Customer Credit            | 3. | Redeemable Debentures          |
| 4. | Short - term public        | 4. | Redeemable Preference Shares   |
| 5. | Deposits                   | 5. | Ploughing Bank of profits      |
| 6. | Provision for taxation     | 6. | Equity shares                  |
| 7. | Provision for Depreciation | 7. | Issue of shares, debentures or |
|    |                            | 8. | Long term borrowing            |
|    |                            | 9. | Retention of profit            |

Short- term sources help the enterprise to meet its variable working capital requirements. While the long-term sources enable the enterprises to meet its permanent working capital requirements.

## **7. Determinants of Working Capital**

A business enterprise should maintain a satisfactory level of working capital. The working capital should be neither inadequate nor excessive. The factors influencing the level of working capital needs for firm can be categorized into two groups –

Viz. – (A) internal and (B) external factors

### **(A) Internal Factors**

#### **1. Nature of Business**

The nature of business influences the working capital requirements of a concern largely. Public utilities like railways, electricity companies etc. need very little working capital partly because of "cash nature" of their business and partly because of selling services instead of product. No funds are blocked in receivables and inventories. On the contrary, trading concerns need very little fixed assets, but they require large amount of working capital because of time lag involved in conversion of raw materials into finished products and finally into cash.

#### **2. Size of Business**

The concern carrying on its activities on a small scale needs less working capital compared to a concern carrying on its activities on a large scale. Hence, the size and scale of business has direct impact of working capital requirements.

### **3. Production Policy**

A firm following uniform production policy throughout the year irrespective of seasonal variations in the market will require large inventories. And hence large amount of working capital.

### **4. Credit Policy**

Firms which allow liberal credit to the customers have large receivables and require more working capital. On the other hand the firms which follow tight credit policy and have aggressive collection of accounts require less working capital as the funds locked in receivables are realized soon for further uses. Thus, credit policy of the firm influences the working capital requirements.

### **5. Term of purchase and sales**

Period of credit availed from the suppliers and the period of credit granted to the customers influences the working capital needs of the business. If the period of credit allowed by the suppliers is greater than the one given to the customers, the firm will require lesser working capital. On the other hand, if the period of credit allowed by the supplier is lesser than that given to the customer the firm will need more working capital, as it will have to finance to customers credit out its own resources.

The length of period of credit secured from the suppliers and given to the customers depends upon the prevailing trade practices and degree of competition involves in the line.



## **6. Growth and Expansion of Business**

Every business concern trends to grow and diversify over the period of time and with the increase in the size and the scale of the operations and entry into new field the working capital requirements increase.

## **7. Profit Margin and Dividend Policy**

A high profit margin reduces the working capital requirements of the business as it becomes the sources of working capital. But the distribution of high proportion of profit in the form of dividend drains the cash resources and reduces the working capital in a significant manner. Where profit margin is high and management follows conservative dividend policy and ploughs back a bulk of profits in the business, the company's working capital position will be sound.

## **8. Access to Money Market**

A firm with easy access to credit from banks and from trade suppliers on liberal terms will be able to get sufficient loan than the firms without such facilities. Hence, access to money market and trade credit affects the working capital requirements of business.

## **9. Depreciation Policy**

Depreciation at higher rate reduces the divisible profit and checks the out flow of cash (i.e. working capital) by way of dividend. Thus, it improves the working capital position. Lower depreciation policy, on the other hand, reduces the working capital.

## **10. Co-ordination of Activities in Business**

A perfect co-ordination of the production and distribution activities will result in lower working capital requirements. In absence of such co-ordination the working capital requirements will increase.

## **11. Operating efficiency**

Higher operating efficiency minimizes the expenses and the costs and releases greater funds for working capital. A lower operating efficiency on the contrary results in higher costs and more pressure on working capital.

## **12. Rapidity of Turn over**

There is a high degree of correlation between the speed of turn over and amount of working capital. A firm with high rate of turn over needs lower amount of working capital. For example, a grocery firm which has a high rate of turn over releases more fund as compared to a business of a jewellery shop or shop of electrical appliances.

## **(B) External Factors**

### **1. Trade Cycle**

The general economic conditions prevailing in the economy also affect the working capital requirement of the business. During inflation, the general demand for goods and services tends to shoot up, As a result production and trade increase, requiring more working capital. On the contrary, if the economy is caught in recession, the demand for goods and services is lowered, reducing the working capital need of the business.

### **2. Technological Developments**

The technological developments in the production line have their effect on the working capital requirements of the business. If the business house adopts new production technology, it may speed up the production process, minimize the wage bill and cut down the working capital requirements.

### **3. Seasonal Fluctuations**

Seasonal nature of business affects the working capital requirements. For example, rainy products like umbrella, rain suits, are produced throughout the year but sold during specific season. Similarly, sugar, fruit pulp etc. are produced during few months of the year and sold throughout the year. Such industries have to hold large inventory through out the year. Hence, they need more working capital compared to non-seasonal industries.

#### **4. Transport and Communication System**

If the means of transport and communication are inadequate, the industries have to stock more materials and finished goods. Hence, they need more working capital which would otherwise not be needed if the transport and communication system were well developed.

#### **5. Taxation Policy**

If the government imposes heavy tax burden on business enterprises and leaves very little profit for reinvestment in business the working capital requirement increases. On the contrary, if liberal tax policy is followed, the burden on working capital is reduced.

### **(8) Concepts of Working Capital**

Working Capital can be classified as follows

#### **1. Gross Working Capital**

According to gross concept the term working capital refers to the total of all current assets of business.

**Gross Working Capital = Total Current Assets.**

It is the amount of funds invested in the various components of current Assets.

## **2. Net working capital**

According to net concept the term working capital means net current assets i.e. the excess of current assets over current liabilities.

**Net Working Capital = Current Assets - Current Liabilities.**

The concept of net working capital enables a firm to determine how much amount is left for operational requirements.

## **3. Permanent or Regular Working Capital**

Permanent Working Capital is the minimum amount of current assets needed to conduct a business even during the dullest season of the year. It is the amount of funds required to produce the goods and services which are necessary to satisfy demand at a particular point. It represent the current assets which are required on a continuing basis over the entire year.

Permanent Working Capital has the following characteristics

- a. It is classified on the basis of time factor.
- b. It constantly changes from one assets to another and continues to remain in the business process.
- c. Its size increases with the growth of business operations.

#### **4. Temporary or variable working capital**

In addition to permanent working capital the firm may need additional current assets temporarily to satisfy seasonal or cyclical demands. For example, extra cash may be needed to pay for the additional supplies following expansion in business activity.

This additional amount of working capital represents variable or temporary working capital, size of which depends upon changes in the levels of production and sales resulting from changes in market conditions. Funds requirement for this purpose is of short duration.

#### **5. Negative Working Capital**

Negative Working Capital means the excess of current Liabilities over the current Assets.

**Negative Working Capital**

**= Current Liabilities – Current Assets.**

Negative Working capital is also called working capital deficit. It is an indication of some crises in the firm.

## **6. Balance Sheet Working Capital**

The working capital ascertained on the basis of the book values of current assets and current liabilities, shown in the closing balance sheet of a concern is called balance sheet working capital.

This concept facilitates in judging the liquidity and solvency of a concern.

## **7. Cash Working Capital**

The cash working capital refers to the working capital which is available in cash. The sum total of receipt side of cash flow statements represents gross cash working capital. It is determined on the basis of opening balance sheet, closing balance sheets and income statement in between two balance sheets.

## **9. Effects of Excess Working Capital**

- a. It increases cost of capital, overall rate of return is reduced.
- b. Surplus working capital may be utilized by the firm for hoarding stock, which is not desirable.
- c. Collection from customers may not be given due attention. This may increase bad debts.
- d. Unnecessary accumulation of stock may be made by the firm.

## **10. Effects of Inadequate Working Capital**

- a. Due to shortage of funds for working capital, day – to - day operational activities may suffer.
- b. Market opportunities (e.g. bulk purchase at lower prices benefits of cash discount etc) may not be availed of.
- c. Due to lack of funds a firm may lose credit worthiness since it cannot pay off its maturing obligations as soon as it's become due.
- d. It cannot avail of profitable investment opportunities due to insufficient working capital.
- e. The firm cannot utilize its fixed assets properly.

## **11. Estimation or Forecasting of working capital requirements**

In forecasting the working capital requirements, first of all the estimates of all current assets should be made. The estimate should be followed by estimate of current liabilities. Difference between the estimated amount of current assets and current liabilities gives net working capital requirements of a business.

### **Techniques or Methods**

The following techniques or methods are used for estimating working capital requirements.

#### **1. Estimation of components Methods**

Since the working capital is the excess of current assets over current liabilities, on assessment of working capital can be made by



estimating the amount of different components or constituents of working capital.

## **2. Operating cycle Method**

The length of the operating cycle is a function of nature of business. The cycle starts with free capital in the form of cash and credit followed by investment in materials, manpower and services, then moves to production phase, storage phase and finally cash or accounts receivable phase as its end point. New free capital then becomes available for productive reinvestment. When new liquid capital becomes available for commitment to productive activity, a new operating cycle begins.

This method is more dynamic and refers to working capital in a realistic way.

## **3. Ratio Method of estimation**

The ratio method of estimating working capital requirement consists of breaking down the individual items on the balance sheet into their fixed and variable elements and determining the ratio of each valuable element to given amount of sales. Once the ratios are known, the working capital needs for any larger or smaller amount of sales could be predicted.

#### **4. Cash budget method**

Under this method the estimates of working capital requirements are obtained either by actually forecasting cash requirement or by developing balance sheet changes.

#### **12. Planning of working capital**

The successful planning of working capital involves –

1. Preparation of budgeted trading, profit and loss accounts. This shows the required quantum of purchases, productions, sales and other expenses.
2. Preparation of budgeted balance sheet. This shows components of assets and liabilities. This lays more importance on gross and net working capital.
3. Preparation of cash budget.

#### **13. Control of Working Capital**

The control of working capital involves the following techniques and these will help smooth functioning of the business cycles.

**The techniques include -**

1. Budgetary control.
2. Cost control.
3. Ratio analysis.
4. Fund flow statement.
5. Internal Audit.

#### **14. Measuring working capital**

It is measured from the financial data of firm's Balance Sheet. Working capital analysis can be done by comparing current assets with current liabilities over a period.

#### **15. Ratio Analysis of Working Capital**

##### **Ratio analysis**

Relation between two figures expressed arithmetically is called as ratio. Mainly ratio are based upon the figures in Balance Sheet, Trading Account and Profit and Loss Account.

This is used as a means of understanding the efficiency of working capital. Behavior of ratios over a period of years determine the trends. These trends indicate the rise, decline or stability of working capital.

The following ratios have relevance to the working capital.

1. Liquidity ratios.
2. Profitability ratios
3. Turnover ratios.
4. Working Capital ratios.

##### **1. Liquidity Ratios**

Liquidity Ratios Measure the firm's ability to meet current obligations. It is essential for a firm to be able to meet it's obligations as they become due. A firm should ensure that,

it does not suffer from lack of liquidity and also that it does not have excess liquidity.

Therefore, it is necessary to strike a proper balance between high liquidity and lack of Liquidity.

The most common ratios which indicate the extent of liquidity or lack of it are

- I) Current Ratio or
- II) Quick Ratio or acid test Ratio.

### **1. Current Ratio -**

The current ration is also known as working capital ratio and it may be expressed either in times or in percent. It is expressing the proportion of current assets to current liabilities. This basic point underlying the computation of this ratio to judge the ability of a business to meet its current obligations with a margin of safety i.e. after making allowance for a possible shrinkage in the value of current assets such as inventories and receivables. Keeping in the view possibility of 50 percent shrinkage the value of current assets. The rule of thumb about the current ratio has been set at 2:1 that is the current assets of the firm should be the twice amount of current liabilities in order to call the firm as technically solvent.

The significance of the current ratio is that is not only a measures of solvency but is an index of the working capital available to the enterprise. A good current ratio means a good umbrella for creditors against the rainy day.

The current ratio is calculated by using the following formula.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

This ratio tries to measure adequacy of the current assets to meet the current liabilities which are to be met within a year.

The standard current ratio suggested is 2:1

## 2. Quick Ratio or Acid Test Ratio –

Quick Ratio is designed to show the amount of cash available for meeting immediate payment. The standard properties of this ratio is 1:1. A high current ratio by itself is not sufficient indicator of soundness of the Liquidity of a firm. Generally, there are two dimensions for Liquidity namely –

1. The time required to convert the asset into money and
2. The certainty of price realized.

This ratio calculated by using following formula -

$$\text{Quick ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

This ratio measures the liquidity and gives emphasis on the ability of immediate conversion of assets into cash. This gives a better picture of a firm ability to meet its short term debt out of short term assets.

## 2. Profitability Ratios

Profitability ratio measures the overall performance and effectiveness of the firm. The profitability of any business is very essential to achieve efficiency. The profitability ratios are designed to measure the profitability of any organization. Generally, two major types of profitability ratios are calculated.

1. Profitability in relation to sales
2. Profitability in relation to investment

### 1. Gross Profit Ratio

Gross Profit ratio indicates the efficiency of production as well as pricing policy. The gross profit ratio shows the relationship between gross profit and sales. Gross profit is the difference between net sales of the firm and cost of goods sold. Gross profit should be sufficient to meet the administrative cost make provision for sufficient depreciation and leave surplus to the shareholders.

The Gross profit ratio is calculated by using the following formula –

$$\text{Gross Profit ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

This ratio reflects the efficiency with which the management produces each unit of product.

## **2. Net Profit Ratio**

Net Profit ratio indicate the overall profitability of the business. Net profit ratio establishes a relationship between net profit and net sales. It reveals the net margin as sales.

This ratio is calculated by using following formula

$$\text{Net Profit ratio} = \frac{\text{Net Profit}}{\text{Sales}} \times 100$$

Net profit is the proportion of net sales. The ratio is widely used as a measure of overall profitability and is very useful to the proprietors.

## **3. Turnover Ratios**

Turnover ratio are also called as “Activity ratio”. Activity ratio reflect the firm’s efficiency in utilizing it’s assets. Activity ratio are employed to evaluate the efficiency with which the firm manages and utilizes its assets. Activity ratio, thus involve a relationship between sales and assets. A proper balance between sales and assets generally reflects that assets are managed well

### **1. Inventory Turnover Ratio**

This ratio indicates the efficiency of inventory management. A high ratio is desirable showing efficient management of inventories. It is calculated by dividing the cost of goods sold by the average inventory.

This ratio is calculated by using the following formula

$$\text{Inventory Turnover Ratio} = \frac{\text{Net sales (cost of goods sold)}}{\text{Inventory (Average)}}$$

## 2. Net Assets Turnover ratio

It measures the firms ability to, produce a large volume of sales for a given amount if net assets.

Net asset turnover ratio is calculated by using the following formula

$$\text{Net Assets Turnover ratio} = \frac{\text{sales}}{\text{Net Assets}}$$

## 3. Debtors Turnover Ratio

Every company sells goods and services on cash and credit. Debtors are created whenever the firm sells its goods on credit. Debtors are expected to be converted in to cash over a short period and therefore , are included in current assets.

Debtors turnover ratio indicates the number of times debtors turnover each year. Generally , the higher the value of debtors turnover ratio , the more efficient is the management of credit.

Debtors turnover ratio is calculated by using the following formula.

$$\text{Debtors turn over Ratios} = \frac{\text{Sales}}{\text{Debtors}}$$



#### 4. Average collection period

This find out how many day's average sales are held up in receivables and the average collection period. A low collection period is a desirable one and it depends on firm credit terms.

$$\text{Average collection period} = \frac{360}{\text{Debtors Turn over ratio}}$$

#### 4. Working capital Ratios

##### 1. Working capital Turnover Ratio –

It establishes a relation between cost of sales and working capital. Working capital turnover ratio indicates the velocity of the utilization of net working capital. Higher working capital ratio indicates efficient utilization indicates less efficient utilization of working capital. A low working capital ratio indicates less efficient utilization of working capital.

This ratio is calculated by using following formula –

$$\text{Working capital Turnover Ratio} = \frac{\text{Cost of Sales ( Net Sales )}}{\text{Net Working Capital}}$$

##### 2. Current Assets Turnover Ratio

In current assets turnover ratio current assets of the company and it's net sales are considered. Net sales are cash sales as well as credit sales. Current assets include cash in hand and at bank, inventories, sundry debtors, bills receivable, prepaid expenses and short term loans and advances. A higher current asset turn over ratio

indicates the efficiency of the company to gear up maximum sales with minimum investments in the current assets.

Current assets turnover ratio is calculated by using following formula –

$$\text{Current Assets Turnover Ratio} = \frac{\text{Net Sales}}{\text{Current Assets}}$$

### 3. Cash to current Assets Ratio

This depicts the percentage of ready cash being kept in the business to meet the day to day needs. Desirable percentage is 5 to 10 in a comfortable financed business.

This ratio is calculated by using following formula

$$\text{Cash to current Assets Ratio} = \frac{\text{Cash}}{\text{Current Assets}} \times 100$$