## LESSON - 12

# WORKING CAPITAL MANAGEMENT AN OVER VIEW

## OBJECTIVES

The objectives of the lesson are to :

☆ **identify the need for working capital and eirls of excess and dangcrs of inadequate working captal**

☆ **identify the determinants of working capital**

☆ **explain the working capital financing and its policies**

☆ **highlight the importance of optiomal investment of current assets**

☆ **explain the liquidity Vs profitability and their Trade off**

☆ **illustrate the impact of working capital policies**

## Structure :

## 12.1 Introduction :

Both current assets and current liabilities constitute the components of working capital. Working capital management refers to the control of both current assets and current liabilities which is regarded as working capital management. It involves control of the components of current assets such as cash, inventories, accounts receivables, marketable securities and current liabilities such as short - term debt, creditors, bank loans, etc. Management and control of working capital has been treated as the vital function of financial management in modern business. It is highly flexible in nature and polices and to be framed depending upon the market conditions prevailing in the economy. If controlling of working capital components is improved or reduced by one percent, it will make so much difference and the firms making profits will turnout to be loosing and firms incurring losses will become profitable.

## 12.2 Concepts of working capital

### (i) Gross working capital

It refers to the investment in current assets such as inventories, cash, accounts receivables, debtors, etc., which can be converted into cash in short notice focuses attention on management of current assets. Investment in current assets should be adequate, since inadequate investment causes solvency problems.

Thus, working capital is necessary to run a business firm and to meet day - to - day expenses. Without current assets, it is not imaginable to make sales and maximise profits. Cash is generated throgh sales which is possible with the investment in inputs such as raw materials, consumables, labor etc., hence working capital is necessary for acquiring inputs.

### (ii) Net working Capital :

It refers to the difference between current assets and current liabilities. Net working capital can be positive or negative. It is conventional to maintain sufficiently excess current assets. It is a conventional rule to maintain the level of current assets twice that of current liabilities. Net working capital may be negative working capital which means negative liquidity. Net working capital refers to the judicious mix of long term and short term loans for financing current assets. However a minimum amount of net working capital is permanent and therefore it is necessary to finance with long term capital. Weak liquidity position is a threat to the solvency of the company.

Both gross and net working capital are necessary for a firm. Any size of current assets can be maintained by raising short term debts. So, a prudential management will see long term funds go into working capital, so as to be stable. Hence, a firm if maintains high net working capital is said to be sound. It does not mean that net working capital is to be too high. Too high net working capital i.e., if the difference between current assets and current liabilities is too high, it sounds idle current assets. Idle current assets may be in the form of bad debts, unmoving inventories, etc. Hence, too high net working capital is not a sound indication.

## 12.3 Operating cycle and its significance

The cash will not earn cash by magic unless invested in inputs such as labor, raw materials, consumables, etc. Thus, with cash initially the firm has to acquire raw materials and other imports. Secondly, the raw materials will have to be processed to become finished product. Thirdly, the finished

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goods cannot be immediately sold. Fourthly, the finished goods on credit shall collect cash after at a later date. Thus the cash invested in business will pass through various stages. This passage process is called operating cycle' which shows various phases of inputs before they are converted into cash. The time taken for the complection of the cycle duretion time is called operating cycle time. It is also called working capital cycle time as shown in the diagram 12.1

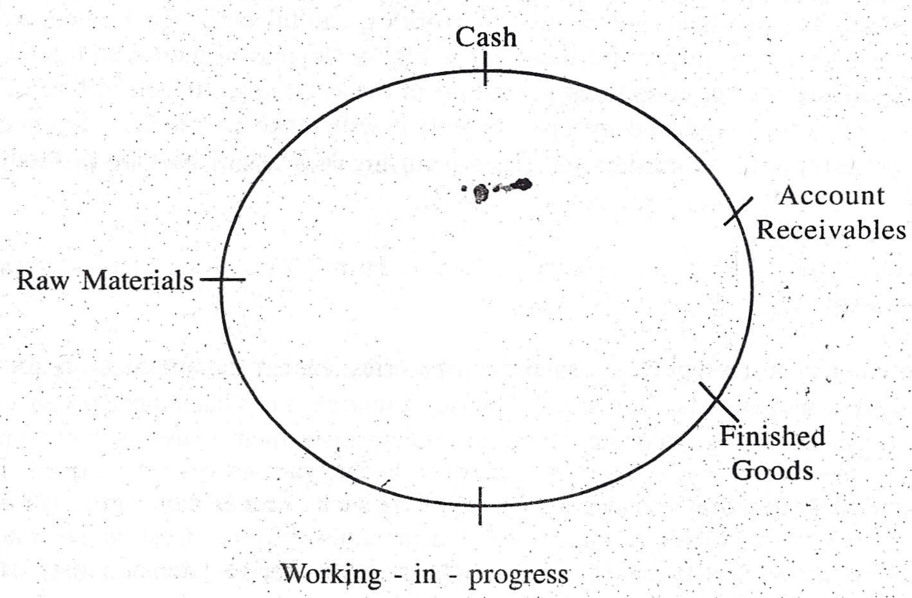



Diagram 12.1. working capital cycle / operating cycle

The operating cycle involves 4 stages. They are : Acquisition of inputs,Conversion of raw materials into finished goods, Conversion of goods into sales (Accounts receivables), and Collection of funds from the debtors.

Length of operating cycle period varies from industry to industry. Longer the period less the number of cycles in a year, the cash is more rotated. A firm which takes more time to complete a cycle implies that it will take more time to pay its bills and vice versa. Suppliers, financiers look into the operating cycle before lending cash or extend credit. In other words, firms taking less time will be quick in payments to its creditors. Thus, liquidity of a firm lies in the operating cycle and its length. If the length of the operating cycle increases, it means the firm requires huge amount of working capital. So, adequate amount of working capital is to be invested in current assets for smooth and uninterrupted production and sales activity of the business.

## 12.4 Evils of excess working capital :

The size of working capital should be always optimum and should be neither low nor excess. But arriving of optimum level of current assets depends upon experience and expert knowledge. The excess working capital refers to the idle working capital or idle funds in business which causes losses to the firm.

The following are the consequences of the excess working capital in any organisation :

i) excess cash yields no returns and results in miss use of funds and the interest what the firm incurs on excess cash is a direct loss,

ii) excess inventories cause deterioration in quality, sometimes fall in prices followed by wastage and mishandling, and

iii) excess debtors are likely turned out-to-bad debts.

Thus, firms do experience risks without optimum working capital and therefore, every firm should have optimum level of working capital only.

## 12.5 Dangers of inadequate working capital :

Investment in current assets may some times be inadequate i.e., less than what is required. This inadequate working capital causes various financial problems. They are :

i) cash shortage causes cash - out and liquidity problems. Further firms losses business opportunities and at times forego discounts on bulk purchases.

ii) lack of maintenance of adequate levels of raw material inhibit the production activities and thereby firms forego sales.

iii) inability to maintain sufficient levels of finished goods for want of working capital limits sales opportunities and thereby, firm's profits will be poor as such firms will not grow further.

iv) firms may feel great inconvenience to implement projects due to lake of sufficient working capital.

v) firms do not pay bills and dues timely, thereby looses reputation and goodwill.

Thus, firms do undergo dangers without optimum working Capital. Hence it is neither desirable to imagine short of working capital nor excess working capital and therefore, a firm should have optimum size of working capital which minimises the cost of production and maximises the probits of the organisation.

## 12.6 Determinants of working capital :

It is understood that working capital is the vital component for future growth of the firm. Financial manager has to maintain adequate level of working capital. There are several factors influence the determinants of working capital. It is necessary to know those factors which identifying the optimum size of working capital.

### i) Nature of business :

The size of working capital depends upon the nature of business such as trading or manufacturing. The manufaccturing forms need relatively more working capital for maintaining current assets and firms do need more i.e., 60 to 70 per cent working capital than trading firms. Thus, working capital requirement depends upon the nature of the industry. en case of banking and financial institutions also need large amount of working capital to meet the needs of the custems where as public utilities such as railways, transportation, hotels, resorts need less working capital relatively

**ii) Capacity :**

The extent of working requirement of a firm also depends upon its plant capacity. Larger the capacity, higher the scale of operations and huge the goods and services are sold, hence the working capital required is heavy.

**iii) Market coverage :**

Working capital requirement largely depends upon the market size which names the extent of a market coverage decides the requirement of working capital. Larger the market, higher the requirement and vice - versa. Firms with state level market, national market and global market need working capital requirment requirment.

**iv) Manufacturing cycle :**

Every product requires some technology to be used for converting the its inputs into finished product. Length of the process depends upon the type of technology used. Lengthy processes consume huge amount of working capital and vice - vera. For example, ship building industry requires more working capital as it takes more time to construct ships. Since, manufacturing process differs from product to product the size of the working capital also varies based on its manufacturing cycle.

**v) Advances :**

Infact some firms while booking order itself ask for advances by which they want to reduce the working capital pressures. Where as, the firms without such policy do need more working capital. Similarly, while making purchases also, the firms who have to give advances for supply of materials, consumables, services and laborers require more amount of working capital.

**vi) Technology :**

Technology refers to how-to and why-to in making a product or sesuce. This processing technology may be manual or mechanized or computerized. Higher the technology lesser the time taken to produce the goods or services. Hi - techs though required huge capital for acquring assets, but take, less time to finish the processing, thus require less working capital funds. Whereas, the production processes with manual methods require huge working capital as they use more number of workers and maintainance of work-in-process material.

**vii) Growth of the firm :**

Growing firms need more working capital as their sales tend to increases. The from time to time Sunrise industry do make more sales from year to year. Such firms need to plan for more working capital and it in order to arrange more inputs to meet the increasing demands.

**viii) Seasonal fluctuations :**

Generall, the demand for goods is of two kinds. One is seasonal and the other is permanent. The seasonal industries usvally produce goods only in the selected months, and in the off-season, they stop production. Industries such as sugar, tobacco, cotton, chilies etc., are such industries which need working capital during season times only. These firms should arrange the working capital funds more in size during the seasons and produce the products even for meeting the customers dimand during the non - seasonal period.

**ix) Production Policy :**

Some firms undertake production activity through-out the year, since they sell in several markets. Such firms require working capital all the twelve months in the year to suply their products in different monts. Thus, these companies with continuous production require working capital continuously in the year.

**x) Credit policy :**

Firms sell goods always not for cash. offer some sales on credit to their customers for maximizing sales. The firms have to be flexible in their credit terms to enable sales. Such firms do require more amount of working capital than the firms which sell for cash always. Now a days credit has become common and necessary in the wake of competition. The firms selling on credit should review credit worthiness of their customers from time to time, so as to reduce the delay in collections. The collection department has to be alert and see that collections are made promptly. Therfore, the firms with efficient collection departments do require less working capital than the firms with liberal collection / credit policy.

**xi) Availability of supplies on credit lines :**

Firms buy goods, services and other inputs both for cash and credit. Normally, a firm is reluctant to commit cash and wish to get goods on credit. Hence, firms searching for supplies on credit require less amount of working capital than otherwise.

**xii) Operational efficiency :**

The operational efficiency firms will reduce their cost of production and provide more profit margin. Such firms can generate financial resources from within and they require less of working capital requirement.

**xiii) Experienced personal :**

The operational efficiency of the firm depends upon experienced personnel who take decisions effectively and implement them the efficiently. This caliber among employees enable the firm to function with minimum inputs thereby, reduces the pressure for more working capital requirments.

**xiv) Expansion chances :**

Firms having opportunities to expand or divessification will need more and more working capital. Whereas the firms which have reached saturation will not warrant more amount of working capital as their opportunities of expansion are sealed.

## 12.7 Types of working capital :

The working capital can be divded into Fixed and varible working capital. The diagram 12.2 shows the graphical presentation of these two types of working capital.

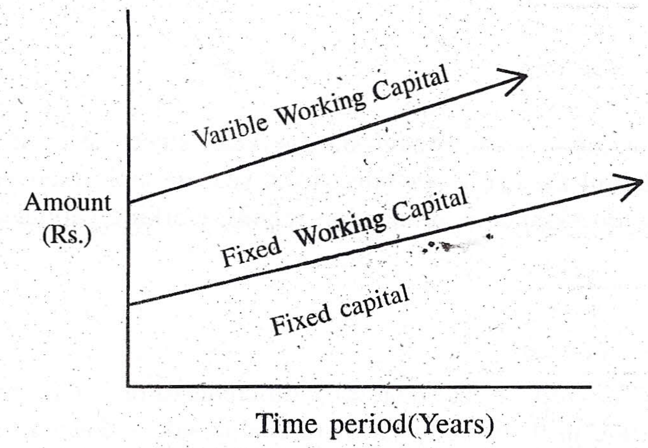



Diagram 12.2 Type of working capital

The size of fixed component in the total working capital rises from year to year in case of a growing enterprise. But it is not so in respect of variable component. It rises and falls depending upon the season, demand, competition, etc. however it increases over a period of time. Thus the line moves upwards in fluctuating manner. Whereas the fixed component of working capital steadily rises as years pass.

### 12.8 Financing and Polies of Working capital, and their impact

After arriving the estimation of working capital for any firm, the next step is how to finance the working capital requirement. It is of two sources of financing :

i) short - term

ii) long - term

Short - term financing refers to borrowing funds or raising credit for a maximum of 1 year period i.e., the debt is payable within a year at the most. Whereas, the Long - term financing refers to the borrowing of funds or raising credit for one year or more. The finance manager has to mix funds from these two sources optimally to ensure profitability and liquidity. The mixing of finances from long - term and short term should be such that the firm not face either short of funds or idle funds. Thus, the financing of working capital should not result in either idle or shortage of cash funds.

Policy is a guideline in taking decisions of business. In working capital financing, the manager has to take a decision of mixing the two components i.e., long term component of debt and short term component of debt. The policies for financing or working capital are divided into three categories. Firstly, conservative financing policy in which the manager depends more on long term funds. Secondly, aggressive financing policy in which the manager depends more on short term funds, and third, are is a moderate policy which suggests that the manager depends moderately on both long term and short-term funds while financing. The working capital these policies are shown diagrammatically here under.

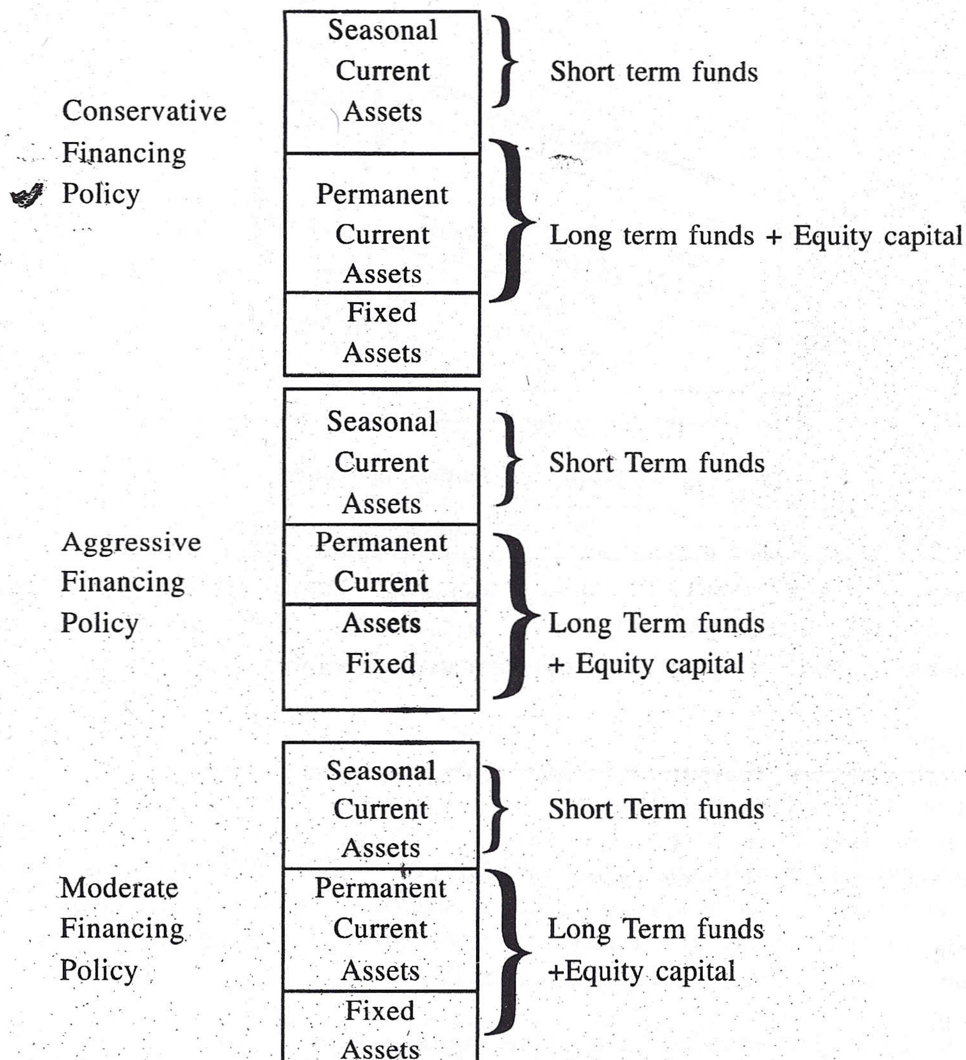



Diagram 12.4 ... Working capital policies

### 12.8.1. Matching Approach :

The question arising here is how to mix both short term and long term funds while financing required working capital. The guiding approach is known as 'matching approach'. It suggests that if the need is short term purpose, raise short - term loan or credit and if the need is for a long term, one should raise long term loan or credit. Thus, maturity period of the loan is to be matched with the purpose and for how long. This is called matching approach. Which matches the maturity period of the loan with the period for how long working capital requires. The following diagram 12.3 shows the graphic presentation of the matching approach.

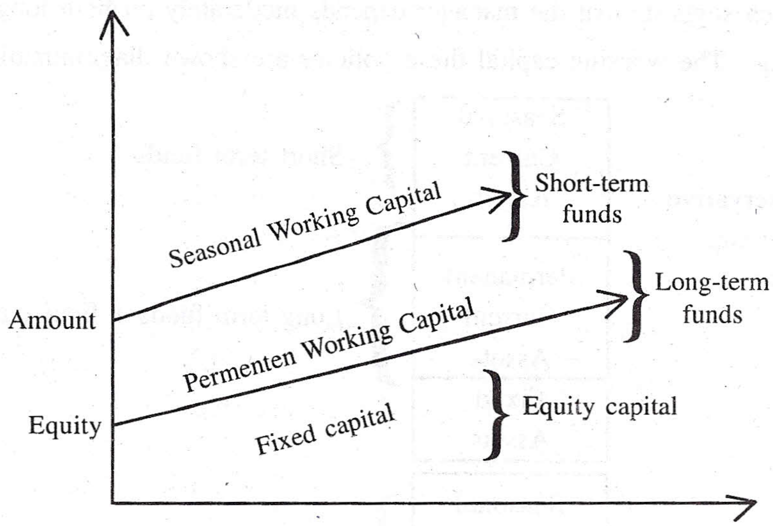



Diagram 12.3 Matching approach

| Type of Funds | | Working capital requirement |
|---|---|---|
| Short - term | - | Seasonal working capital |
| Long - term | - | Permanent working capital |
| Equity capital | - | Fixed assets |

**12.8.2. Impact of working capital policies :**

A firm's sales are Rs. 25 lakhs, and having an EBIT - Rs. 3 lakhs. It has fixed assets of Rs. 8 lakhs. The firm is thinking to hold current assets of different size of Rs. 5 lakhs; Rs. 6 lakhs or Rs. 8 lakhs. Assuming profits and fixed assets do not vary, the impact of these working capital policies are in the following manner which is explained is a hypothetical illustration :

**Illustration 12.1 Impact of different working capital polices**

| | Types of Policy | | (Rs. in lakhs) |
|---|---|---|---|
| | Aggressive | Moderate | Conservatory |
| Sales | 25 | 25 | 25 |
| EBIT | 3 | 3 | 3 |
| Current Assets | 5 | 6 | 8 |
| Fixed Assets | 8 | 8 | 8 |
| Total Assets | 13 | 14 | 16 |
| Return on Assets% (EBIT / total assets) | 23.07 | 21.42 | 18.75 |

Lower the level of current assets (aggressive) higher the returns (23.07 percent) higher the level of current assets (conservative) lower the returns (18.75 percent).

### 12.9 Optimal size of current Assets :

As we have discussed in the earlier paragraphs, current assets and their size depends upon several factors. Arriving appropriate size of current assets such as cash, raw materials, finished goods and debtors is a challenge to the financial manager of a firm. It happens some times excess or shortage. We have also discussed in the fore - gone paragraphs about the evils of excess working capital and inadequate working capital. Activety very few firms arrive optimum level of working capital by their sheer experience and scientific approach. The ratio of current assets to fixed assets helps in measuring the performance of working capital management. The higher the ratio, conservative the firm is in maintaining its current assets and lower the ratio, conservative the firm is in maintaining its current assets. Lower the ratio aggressive the firm is in maintaining its current assets. So every firm should balance their level of current assets and make it optimum.

### 12.10 Liquidity Vs. Profitability

Any exercise in working capital management will influence either liquidity or profitability. The working capital management is a razor edge exercise for financial manager of an enterprise. In this context the financial manager has to take several decisions of routine and non - routine such as :

snffcent cash balance to be maintained;

to raise longterm or shortterm loans decide the rate of interest and the time of repayment ;

decide the purchase policy to buy or not to buy materials ;

to determine the economic order quantaty for inputs,

to fix the price at which to buy the puts if any ;

to sell for credit or not and terms of credit

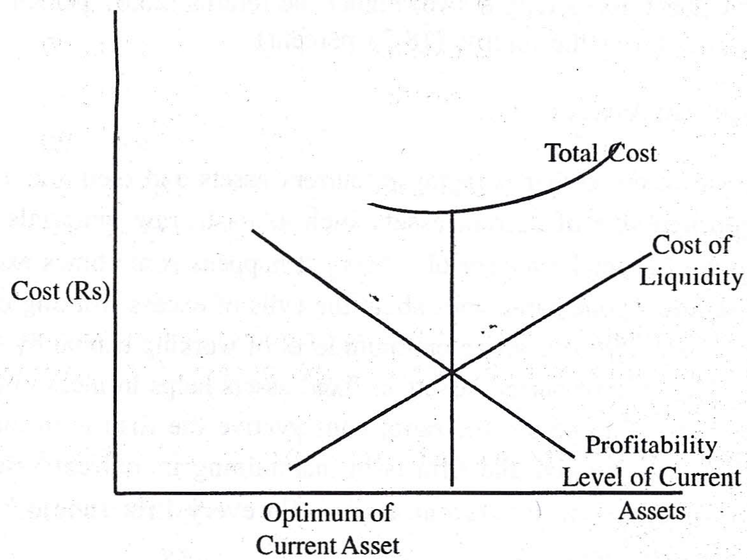
to decide the terms of purchase ;

to decide the credit period and extent of credit

In all these aspects the financial manager has to take decisions carefully so that the firm's twin objectives such as profitability and solvency are not affected.

#### 12.10.1. Trade off between liquidity and profitability :

If a firm maintains huge amount of current assets its profitability will be affected though it protects liquidity. Here, it has to sacrifice the profitability. If a firm maintains low current assets, its liquidity is ofcourse weak but the firm's profitability will be high. The trade off between liquidity and illiquidity are shown in the diagram...12.5




Dragram 12.5. A trade off between propitability and liquidity.

**12.13 Self assessment questions Exercises :**

1. Explain the concept of working capital ?
2. Discuss the importance of working capital for a manufacturing firm ?
3. Explain the dangers of excess and shortage of working capital ?
5. Brief by out line the determinants of working capital of a firm ?
6. Compare and contrast the twin objectives of profitability and liquidity ?
7. How do you decide the optimum level of working capital ? Explain the cost of illiquidity ?
8. Discuss the merits of matching approach
9. What are the financing schemes available to working capital ?

1. XYZ company is about to commence new business and finance has been provided in respect of fixed assets. They have however asked you to advise the additional amount which they should make available for working capital.

They provide you with the following estimates for their first year and inform you that they have arranged an overdraft limit with their banker of Rs. 5,50,000.

| Perticulers. | Average period of credit | Estimate for the first year (Rs.) |
|---|---|---|
| Purchase of materials | 16 weeks | 56,00,000 |
| Wages | 2.5 weeks | 29,50,000 |
| Overheads | 3 months | 2,00,000 |
| Directors & Managers salaries | 2 months | 5,60,000 |

| | | |
|---|---|---|
| Travelers and office salaries | 4 weeks | 6,55,000 |
| Travelers commission | 2 months | 3,00,000 |
| Other overheads | 1 month | 8,00,000 |
| Sales : Cash | — | 2,40,000 |
| Credit | 17 weeks | 185,00,000 |
| Average amount of stock work - in - progress | | 13,00,000 |

Sales are made at an even rate for the year. You are required to prepare from the above figures an information table for submission to your clients giving an estimate of the average amount of working capital which they should provide.

11. ABC Ltd., plans to sell 130,000 units next year. The expected cost of goods sold is as follows.

| | Rs. (Per unit) |
|---|---|
| Raw materials | 250 |
| Manufacturing expenses | 130 |
| Selling, administration & finance expenses | 50 |
| Selling price | 3000 |

The duration at various stages of the operating cycle is expected to be as follows :

| | |
|---|---|
| Raw material stage | 3 months |
| Work in process | 2 months |
| Finished goods stage | 1 month |
| Debtors stage | 2 months |

Assuming a monthly level of 12,500 units of production calculate the investment in various current assets.

## 12.14 Futher Readings


Van Horne, James C. : Financial Management

Khan M.Y. and Jain P.K. : Financial Management

Prasanna Chandra : Financial Management

Bhalla : Financial Management