# CHAPTER THREE

## Working Capital Management- Concepts and Techniques

### 3.1 Introduction

This chapter gives an insight into the key definitions and concepts relevant to working capital management. The structure of this chapter is as follows. Section 3.2 deals with the meaning of the term working capital and its management. Section 3.3 explains the significant elements or components of working capital management; next section, i.e. 3.4 looks at the factors affecting the size of working capital. Section 3.5 deliberates upon the techniques for exercising sound level of each of the components of working capital management. Finally, it ends with the conclusion of this chapter in section 3.6.There are, however, sub-sections under most of the sections as mentioned above.

### 3.2 Working Capital and Working Capital Management

Working capital means the amount required to meet the daily operations of the business. It refers to the firm's investment in short-term assets i.e., cash, accounts receivable, inventory, and short-term securities (Ramana and Rao, 2015). A portion of total capital invested in the current assets i.e., short-term assets to carry on day to day activities of the organization is known as "Gross Working Capital". Two concepts are associated with the working capital; one is gross working capital and the other is net working capital. As stated by Chhapra and Naqvi (2010), the working capital concepts include both current assets and current liabilities; firm's aggregate investment in short-term assets represents gross circulating capital or working capital and the difference between the two i.e., current assets and current liabilities means net working capital. Working capital remains positive as long as the aggregate value of current assets is greater than the amount of current liabilities whereas it turns into a negative when there is an excess of short-term obligations over the current assets. Negative working capital could affect the liquidity and profitability as the current assets may fail to pay off the short-term debts, thereby the firm looks for external financing of its current assets, which may include the expensive cost of borrowing that directly affects the earnings and liquidity of the company.Therefore, the proper management of working capital is felt necessary.

Working Capital Management (WCM) refers to the administration of the short-term financing requirement of the firm. It relates to frame an appropriate investment decision in respect of the elements of WCM i.e., inventory, cash, and accounts receivable so that it is able to maintain a trade-off between liquidity and profitability. The main objective of WCM is to ensure an optimum balance in all the above ingredients of WCM in order to cover its short-term obligations of the business as well as increasing the value of the firm. A firm's value could be created by designing and implementing a suitable working capital policy (Karim, Al-Mamun, and Miah, 2017). Profit of the organization could be affected by the investment in working capital; excess of investment in current assets may generate lower earnings and lesser investment in it may result in poor liquidity position (Panigrahi, 2014a). Inefficient management of working capital may lead to harm the financial stability which may result in the insolvency of the concern. A company with poor management of working capital moves towards the stage of bankruptcy. Therefore, its decent management of working capital is essential for the survival of the business as it affects the earnings and value of the firm.

### 3.3 An Overview of Working Capital Management Ingredients or Elements

The vital elements of working capital management involve the short-term investment in cash, inventory, accounts receivable, and accounts payable. Investment in these components depends on a number of factors such as operating level and its efficiency, policies related to inventory and debtors, and the technology employed in the business. A proper strike off between earning and liquidity is to be maintained to achieve optimal working capital management in the business; these typical ingredients have been discussed as follows:

### 3.3.1 Cash Management

Cash is a liquid asset of a business; due to its liquidity feature it is a vital element of working capital in the form of cash in hand or at bank. Every firm maintains the required amount of cash for the business activity; however, keeping cash in the business doesn’t mean adding return to the firm. Keeping excess cash retains a part of working capital futile. Whereas maintaining insufficient cash may put the firm in danger as it may be unable to meet the short-term debts, as a result of which the goodwill of the company may be affected. Therefore, the proper administration of cash is an important duty of a finance manager in order to avoid the risk of liquidity. Cash management is the technique of planning and monitoring of cash flows i.e., inflow into and outflow of the business. Owolabi and Obida,2012,opine that cash management acts as a method for short-term liquidity administration with the aim of increasing liquidity and profitability of the company. The prime objective of cash management is to estimate an optimum level of cash balance keeping its cost and liquidity in view so that it could be able to pay off current debts in due time and required cash can be arranged in case of emergency. Thus, it is confined to making decision on cash to be invested in purchasing fixed assets and current assets. However, ineffective and inefficient management of cash may put the assets of the firm under pledge resulting in large strain on the profitability of the business.

### 3.3.2 Inventory Management

Inventory forms a major component of current assets and plays a significant role in the business activities i.e., from purchasing of raw materials to the selling of goods. Administration of inventory refers to a systematic control on each stage of inventory handling including its cost. The need for inventory control is to cut the possibility of disruption in the production schedule for the raw materials, spares, and stocks (Ganorkar, Rode, and Godse,2016). The prime goal of inventory management is to maintain the desired level of stock with minimum cost. Cost related to inventory management includes ordering, holding or carrying, and stock-out costs. Ordering cost refers to all those costs incurred in the entire process of bringing the inventory from the supplier to the godown,such as cost of placing the order,follow up actions,quality inspection cost, etc. Carrying cost is an amount spent in holding or storing the items of inventory in the warehouse for a certain period of time. Holding cost may differ depending on the investment in stock (i.e. the average quantity of stock maintained in the godown and the period during which the stocks are maintained before being issued to production);the higher the amount of stock, higher the carrying cost. Stock-out cost or shortage cost arises due to lack of inventory in the warehouse interfering with the production flow, which results in loss of sales; these costs are more relevant to the expensive items since they need more handling costs (Shardeo, 2015) and low or zero level of stocks are attempted to avoid high handling cost.

Inefficient inventory management may directly affect the performance of working capital. Maintaining lower level of inventory could harm the firm’s profitability as it fails to meet the market demand resulting in loss of sales opportunity and thereby declining the profitability.On the other hand, holding excessive items of stock leads to high inventory related costs. Therefore, it is necessary to maintain optimum balance of inventory in order to just meet the market demand. Fulfilling the market requirement on time depends on how efficiently the inventories are managed and how quickly the delivery of stocks is received from the suppliers i.e. at a minimized lead time. Thus, a close relationship with the suppliers is to be maintained by the firms to endure with the change in the market demand.

### 3.3.3 Accounts Receivable Management

Account receivable is the result of credit sales to the customers in the ordinary course of business. Generally, credit sale constitutes a major part of the total sales which include granting of credit period to debtors to pay their dues in future date; these future cash flows are the receivables of the business. The cash inflow is affected by the credit policy and collection procedure of the business. A change in the credit policy may have an effect on the working capital. Liberal credit term attracts more customers and increases the turnover but at the same time, it involves a cost for the firm as it blocks the capital for a certain period of time. On the other hand, strict credit policy may reduce the chance of bad debt, but it loses the potential customer which results in lower profitability. Therefore, a thorough analysis must be performed of cost, benefit, and risk involved in the credit policy which can be done by receivable management.

### 3.3.4 Accounts Payables Management

Another significant component of working capital is accounts payable which implies that an amount is due to suppliers for the purchase of goods and services from them on credit. Such outstanding amounts to creditors are termed as payable. Accounts payable management refers to the set of guidelines adopted by the company to administer the trade credit for purchases from the vendors. A trade credit for purchase involves consideration of a credit period vis-à-vis a discount rate that allows a company to pay their dues to the outsiders or suppliers within a specified period of time. The requirement of working capital of the business may be affected by the short term dues and the credit period provided by the vendors. A long credit period and high discount rate bring down the size of working capital. However, availing of more credit amount for a long time may impact the interest rate which forces the firm to undertake adverse terms as a result of which the cost may rise and revenue may come down. Therefore, a vital function of the finance manager is to bargain for more credit period without hampering the relationship with suppliers and accepting other unfavorable terms.

### 3.4 Factors / Determinants affecting Working Capital Management

No single set of rules is discussed or mentioned anywhere in regard to the determination of working capital requirement. The requirement of working capital in a firm depends on several factors; the significance of these determinants changes for the firm over time. Therefore, scrutiny of relevant factors shall be conducted in order to ascertain the aggregate amount required for working capital. Here are the following factors which affect the size of working capital; these are discussed below.

**Nature of Business**

The requirement of working capital of a firm is influenced by the nature of the business. Manufacturing concerns like iron and steel industry which has a long operating cycle and which sells the stock on credit basis, require a large amount of working capital. On the other hand, service enterprises like electricity distribution, which has a shorter operating cycle and sell largely on a cash basis, need a lower amount of working capital. Therefore, the type of business shall be taken into consideration before investing the amount in working capital.

**Market Conditions**

The degree of competition prevailing in the market affects the size of the working capital requirement. Cut-throat competition in the market place compels the firm to keep a large amount of inventory to serve customers promptly as the customer may not wait because other firms are ready to fulfill their requirements. Along with quick service, liberal credit terms may have to be offered to tempt the customers in such a highly competitive market. Thus, more amount of working capital is needed because of the high investment in inventory and trade receivables.

Weak competition in the market may ask the firm to maintain itself with a smaller amount of stock as a customer could be served with some delay; the firm can force on cash payment which leads to block the lower amount of funds in accounts receivable which leads to requirement of lesser amount of working capital.

**Production Process**

The production process determines the level of working capital in the business. A company which is more labour intensive in the manufacturing of the product needs a higher amount of working capital as the production process is longer. In the case of capital-intensive industries, the production process takes lesser time, which results in the requirement of a lower amount of working capital. Thus, working capital is influenced by the pace of the production process.

**Credit Policy**

Credit policy of a company affects the working capital requirement by influencing the size of accounts receivable. It includes to whom, when, and at what extent credit may be granted. A firm following strict credit policy would reduce the investment in debtors / receivables as a result of which the firm requires lesser amount of working capital. On the other hand, a liberal credit policy would lock-up an amount of money in accounts receivable that results in increase the working capital requirement. Therefore, the firm may adopt a rationalized credit policy based on the credit standing of the debtors in order to avoid unnecessary funds blocked in trade debtors.

**Manufacturing Cycle**

The production cycle has an impact on the requirement of working capital. Time period needed for converting raw-materials into final products is a block period. This block period is also involved in determining the requirement of working capital. A company having a long production cycle needs higher amount of funds to meet its daily operation of the business. A lower amount of working capital is needed for the industries which take lesser number of days in the manufacturing cycle. Thus, the production cycle demands the amount to be invested in working capital.

**Availability of Credit from Creditors**

Availing credit from suppliers also influences the working capital requirement of an organization. A liberal credit term from suppliers enables firms to maintain lower working capital as creditors finance the inventories and in effect, reduces the cash conversion cycle. The firm would seek the short-term loan from the bank in the absence of such easy credit terms. However, borrowing short-term loan at a reasonable rate of interest from the bank is a difficult task for the firm which may affect the working capital policy.

## 3.5 Techniques for optimum working capital management

In order to attain the objective of working capital management i.e., a proper strike between profitability and liquidity, the different composition of current assets (cash, inventory, and debtors) need to be managed by employing effective tools such as cash budgeting and inventory management techniques like economic order quantity, just-in-time,ABC analysis. Basically, these techniques are deployed to administer the various components of working capital to determine an optimum level or it; some of the relevant techniques have been discussed below.

### 3.5.1 Cash Budgeting

Cash budget means anticipation of cash required for the business activities by estimating all the future cash flows i.e., cash inflows and outflows. A minimum cash balance is needed to meet the business obligations; insufficient cash balance may result in poor liquidity and earnings. A balance is to be maintained between excess and shortage of cash as keeping excess cash may block the amount in the unproductive areas, which may not generate further earnings for the business whereas holding too little cash may invite danger for the company in respect of liquidity, solvency, and earnings. Therefore, for effective cash management, faster collection of outstanding amount and availing of easy credit terms from suppliers may reduce the cash requirement, thereby assisting companies to hold appropriate cash which may improve the working capital management.

### 3.5.2 Inventory Management

Inventory is one of the significant components of working capital or of current assets consisting of raw materials, working in progress, and finished goods. A firm keeps stock of items to meet the customer requirements in time but at the same time, it includes certain costs related to inventory. The cost in holding inventory could be minimized by applying inventory control techniques such as just-in-time, economic order quantity, etc. Just-in-Time refers to buying the stock at the moment when it is demanded by the customer; this results in cutting down the inventory cost. Another technique is economic order quantity which assists the firm in ascertaining the right amount of stock to be ordered annually considering cost related to it such as carrying cost and ordering cost; thereby it helps the firms to maintain an optimum level of inventory which not only saves cost but also revamp the working capital management.

### 3.5.3 Working Capital Financing Policy

Working capital financing policy refers to the methods of financing the level of current assets maintained by companies (Thakur and Mukit, 2017). Financing working capital of the business by current liabilities is cheaper than any other alternative means as the costs in the forms of interest / dividend rates on long term sources such as equity shares, long term bank loan, and preference shares are high. Financing the components of working capital through short-term liabilities are categorized into two parts - one is spontaneous financing and the other is non-spontaneous financing. The former means funds arising from the sales volume during normal business operation that requires no special financial assistance from outsiders; examples of such financing are trade credit and outstanding expenses. And the later i.e., non-spontaneous financing means funds that do not arise from the daily operation of the business such as short-term bank loans, money market instruments, etc., which involves a cost of capital.

The cost of capital could be minimized by employing an appropriate financing mix; three strategies may be used by companies with respect to working capital financing and these are the Matching, Conservative and Aggressive methods. Matching principle suggests that short term debt may be used for financing current assets while long term borrowed funds are to be used for financing permanent assets in the business. Under the conservative practice, the company finances its requirement for working capital by borrowing from long term sources such as equity shares, preference shares,and term debts. Panigrahi (2014b) states that the use of short term funds is restricted to only emergency situation. Therefore, applying this strategy leads to low risks and lower earnings. Herdinata (2017) defines an aggressive method as financing the entire current assets of the company by short-term debts; even the permanent assets may also be financed through short-term funds, which results in less costly and more profitable opportunities.

However, adopting an appropriate financing mix for working capital depends on the decision of the company's management.

### 3.6 Conclusion

As the present research work is conducted on the theme 'working capital management of the selected public sector steel companies', the theoretical concepts relating to it have been presented to give a basic idea about the working capital management. It commenced with defining working capital including its administration; management of various components of working capital justified the requirement of investing an optimum balance in cash, inventory, and accounts receivable in order to maintain a proper tangle between liquidity and profitability so that adequate liquidity enables the firm to operate the business smoothly. The various determinants affecting working capital have rationalized the need for optimum working capital in the organization as holding too little or excess working capital may adversely affect the profitability and solvency of the business. In the end, three relevant techniques (Cash Budgeting, Inventory Management, and Working Capital Financing Policy) of exercising optimum working capital management have explained the need for an efficient administration of working capital to ensure sound liquidity and financial stability as to keep the business afloat.