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## SYLLABUS

M-242

### MANAGEMENT OF WORKING CAPITAL

#### UNIT-I

Introduction to Working Capital: Nature, Scope and Definition of Working Capital, Working Capital Cycle, Assessment and Computation of Working Capital Requirement, Probability—Liquidity trade-off, Working Capital Policy—Aggressive and Defensive. Overview of Working Capital Management.

#### UNIT-II

Management of Cash and Marketable Securities: Meaning of cash, Motives for holding cash, objectives of cash management, factors determining cash needs, Management Models, Cash Budget, Cash Management: basic strategies, techniques and processes, compensating balances; Marketable Securities: Concept, types, reasons for holding marketable securities, alternative strategies, choice of securities; Cash Management Practices in India.

#### UNIT-III

Management of Receivable and Inventory: Nature and cost of maintaining receivables, objectives of receivables management, factors affecting size of receivables, policies for managing accounts receivables, determination of potential credit policy including credit analysis, credit standards, credit period, credit terms, etc; Collection Policies; Credit Management in India.

Inventory: Need for monitoring and control of inventories, objectives of inventory management, benefits of holding inventory, risks and costs associated with inventories, Inventory Management: Minimizing cost in inventory, Techniques of Inventory Management—Classification, order quantity, order point etc.

#### UNIT-IV

Working Capital Financing: Need and objectives of financing of working capital, short term credit, mechanism and cost-benefit analysis of alternative strategies for financing working capital: accrued wages and taxes, accounts Payable, trade credit, bank loans overdrafts, bill discounting, commercial papers, certificates of deposits, factoring, secured term loan etc; Pattern and sources of Working Capital Financing in India, with reference to Government policies.

# UNIT I MANAGEMENT OF WORKING CAPITAL

Management of  
Working Capital

## NOTES

### ★ STRUCTURE ★

- 1.0 Learning Objectives
- 1.1 Introduction to Working Capital
- 1.2 Definition of Working Capital
- 1.3 Nature and Scope of Working Capital
- 1.4 Types of Working Capital
- 1.5 Needs of Working Capital
- 1.6 Computation (or Estimation) of Working Capital: Working Capital Cycle
- 1.7 Determining the Finance Mix
- 1.8 Assessment and Computation of Working Capital
- 1.9 Determination of Working Capital Needs: Different Approaches
- 1.10 Factors Influencing Determination
- 1.11 Liquidity Vs Profitability
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- 1.18 Profitability and Working Capital
- 1.19 Liquidity Vs. Profitability in Working Capital Decisions: (Trade Off)
- 1.20 Overview of Working Capital Management
- 1.21 Inventory Management
- 1.22 Techniques Based on the Classification of Inventories
- 1.23 Receivable Management
  - *Summary*
  - *Review Questions*
  - *Further Readings*

## 1.0 LEARNING OBJECTIVES

After going through this unit you should be able to:

- explain nature, scope and definition of working capital.
- illustrate working capital cycle.
- assess and compute the working capital management.
- describe profitability through liquidity trade-off and working capital policy.
- state overview of working capital management.

### NOTES

## 1.1 INTRODUCTION TO WORKING CAPITAL

Working capital management is also one of the important parts of the financial management. It is concerned with short-term finance of the business concern which is a closely related trade between profitability and liquidity. Efficient working capital management leads to improve the operating performance of the business concern and it helps to meet the shortterm liquidity. Hence, study of working capital management is not only an important part of financial management but also are overall management of the business concern.

Working capital is described as the capital which is not fixed but the more common uses of the working capital is to consider it as the difference between the book value of current assets and current liabilities. This unit deals with the following important aspects of the working capital management:

- Meaning of Working Capital
- Concept of Working Capital
- Types of Working Capital
- Needs of Working Capital
- Factors determining Working Capital
- Computation of Working Capital
- Sources of Working Capital
- Working Capital Management Policy
- Working Capital and Banking Committee

## 1.2 DEFINITION OF WORKING CAPITAL

Capital of the concern may be divided into two major headings.

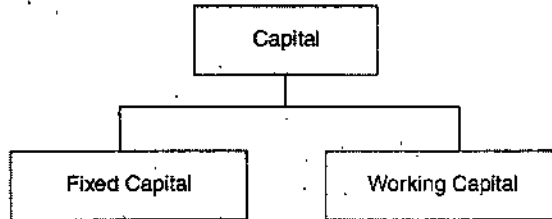


Fig. 1.1. Capital of the Business

Fixed capital means that capital, which is used for long-term investment of the business concern. For example, purchase of permanent assets. Normally it consists of non-recurring in nature.

Working Capital is another part of the capital which is needed for meeting day to day requirement of the business concern. For example, payment to creditors, salary paid to workers, purchase of raw materials etc., normally it consists of recurring in nature. It can be easily converted into cash. Hence, it is also known as short-term capital.

There are some definitions given by experts, such as:

According to the definition of **Mead, Baker and Malott**, "*Working Capital means Current Assets*". According to the definition of **J.S. Mill**, "*The sum of the current asset is the working capital of a business*".

According to the definition of **Weston and Brigham**, "*Working Capital refers to a firm's investment in short-term assets, cash, short-term securities, accounts receivables and inventories*".

According to the definition of **Bonneville**, "*Any acquisition of funds which increases the current assets, increase working capital also for they are one and the same*". According to the definition of **Shubin**, "*Working Capital is the amount of funds necessary to cover the cost of operating the enterprises*".

According to the definition of **Genestenberg**, "*Circulating capital means current assets of a company that are changed in the ordinary course of business from one form to another, for example, from cash to inventories, inventories to receivables, receivables to cash*".

## 1.3 NATURE AND SCOPE OF WORKING CAPITAL

Working capital can be classified or understood with the help of the following two important concepts.

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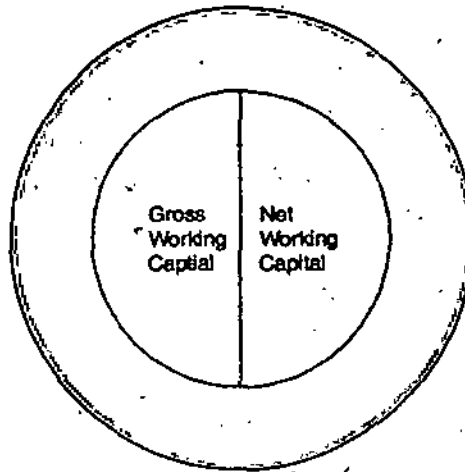


Fig. 1.2. Working Capital Concept

### Gross Working Capital

Gross Working Capital is the general concept which determines the working capital concept. Thus, the gross working capital is the capital invested in total current assets of the business concern.

Gross Working Capital is simply called as the total current assets of the concern.

$$\text{GWC} = \text{CA}$$

### Net Working Capital

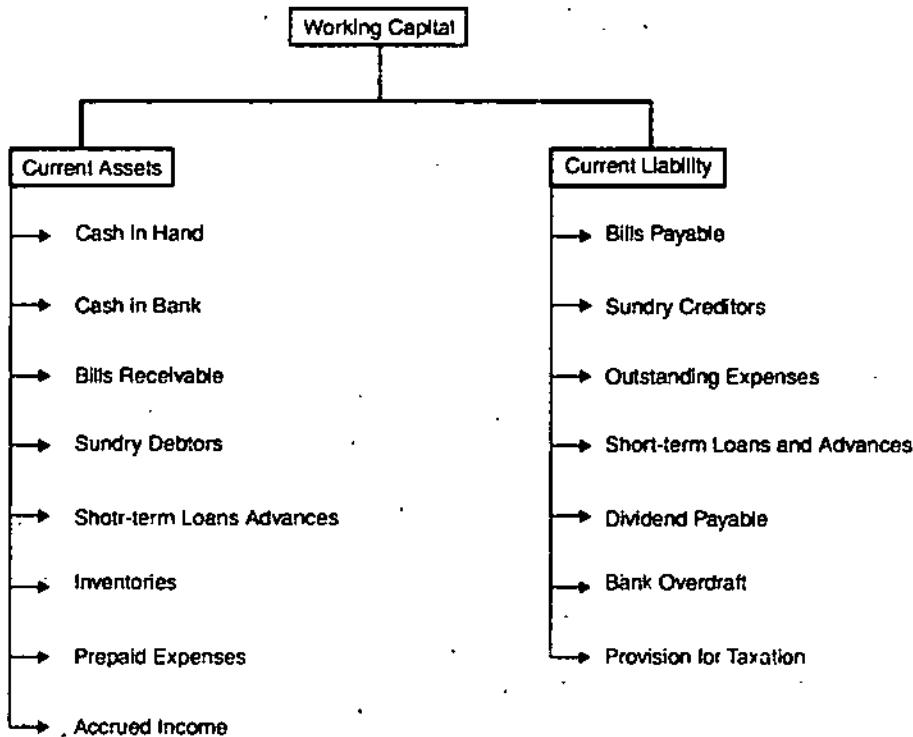
Net Working Capital is the specific concept, which, considers both current assets and current liability of the concern. Net Working Capital is the excess of current assets over the current liability of the concern during a particular period.

If the current assets exceed the current liabilities it is said to be positive working capital; it is reverse, it is said to be Negative working capital.

$$\text{NWC} = \text{CA} - \text{CL}$$

### Component of Working Capital

Working capital constitutes various current assets and current liabilities. This can be illustrated by the following chart.



**NOTES**

**1.4 TYPES OF WORKING CAPITAL**

Working Capital may be classified into three important types on the basis of time.

**Permanent Working Capital**

It is also known as Fixed Working Capital. It is the capital; the business concern must maintain certain amount of capital at minimum level at all times. The level of Permanent Capital depends upon the nature of the business. Permanent or Fixed Working Capital will not change irrespective of time or volume of sales.

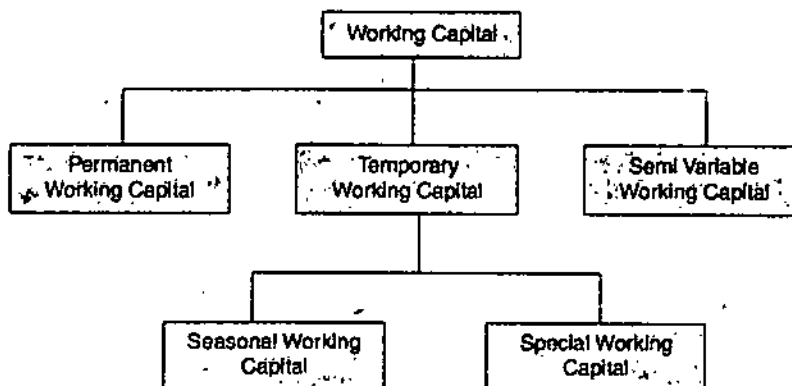


Fig. 1.3. Types of Working Capital.

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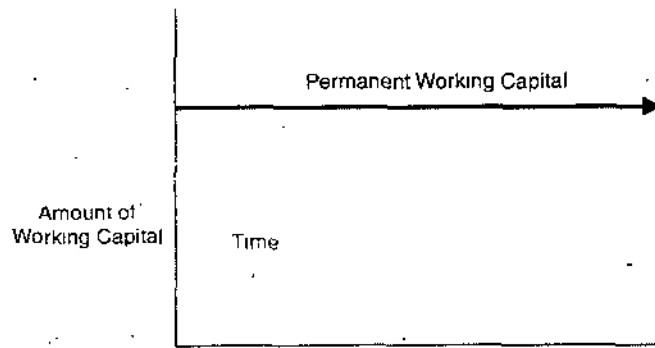


Fig. 1.4. Permanent Working Capital.

### Temporary Working Capital

It is also known as variable working capital. It is the amount of capital which is required to meet the Seasonal demands and some special purposes. It can be further classified into Seasonal Working Capital and Special Working Capital.

The capital required to meet the seasonal needs of the business concern is called as Seasonal Working Capital. The capital required to meet the special exigencies such as launching of extensive marketing campaigns for conducting research, etc.

### Semi Variable Working Capital

Certain amount of Working Capital is in the field level up to a certain stage and after that it will increase depending upon the change of sales or time.

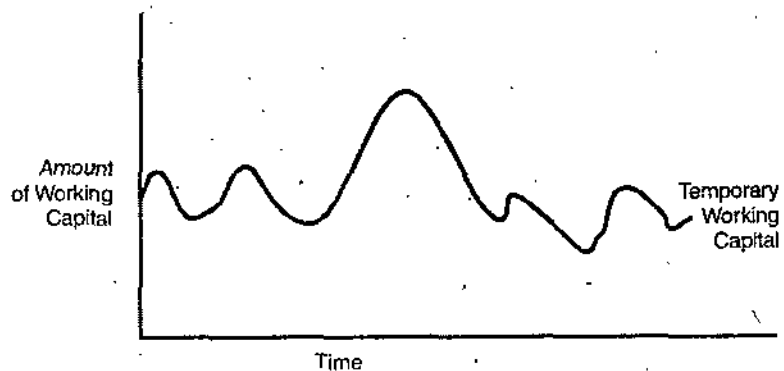


Fig. 1.5. Temporary Working Capital

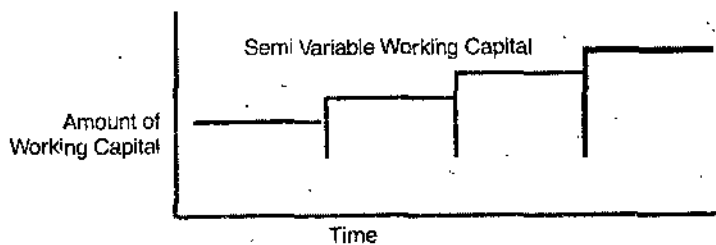


Fig. 1.6. Semi Variable Working Capital



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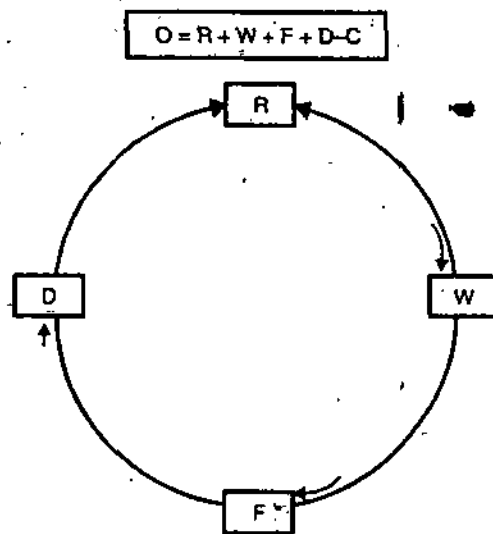


Fig. 1.7. Working Capital Cycle

Each component of the operating cycle can be calculated by the following formula:

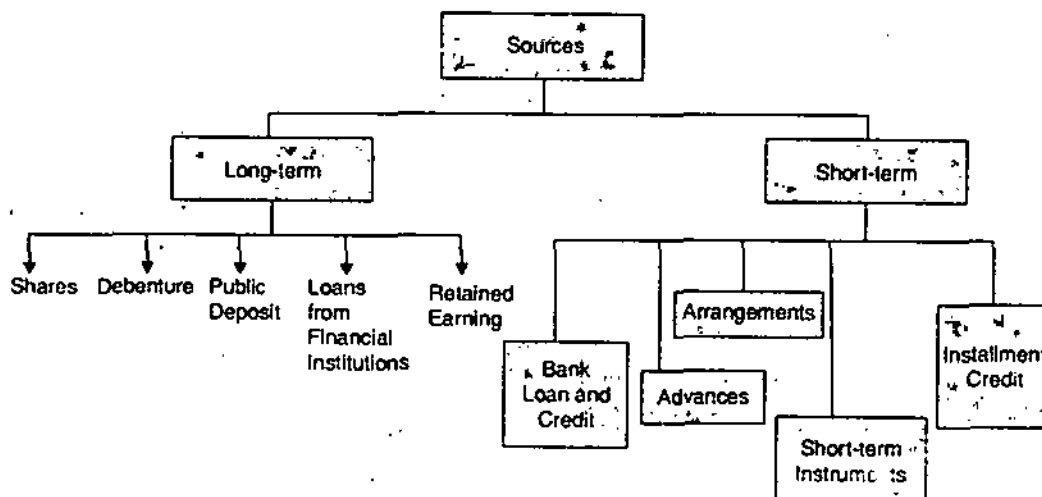
$$R = \frac{\text{Average Stock of Raw Material}}{\text{Average Raw Material Consumption Per Day}}$$

$$W = \frac{\text{Average Work in Process Inventory}}{\text{Average Cost of Production Per Day}}$$

$$F = \frac{\text{Average Finished Stock Inventory}}{\text{Average cost of Goods Sold Per Day}}$$

$$D = \frac{\text{Average Book Debts}}{\text{Average Credit Sales Per Day}}$$

$$C = \frac{\text{Average Trade Creditors}}{\text{Average Credit Purchase Per Day}}$$



The above sources are also classified into internal sources and external sources of working capital. Internal sources such as:

- Retained Earnings
- Reserve and Surplus
- Depreciation Funds etc.

External sources such as:

- Debentures and Public Deposits
- Loans from Banks and Financial Institutions
- Advances and Credit
- Financial arrangements like Factoring, etc.

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### 1.7 DETERMINING THE FINANCE MIX

Determining the finance mix is an important part of working capital management. Under this decision, the relationship among risk, return and liquidity are measured and also which type of financing is suitable to meet the Working Capital requirements of the business concern. There are three basic approaches for determining an appropriate Working Capital finance mix.

1. Hedging or matching approach
2. Conservative approach
3. Aggressive approach.

#### Hedging Approach

Hedging approach is also known as matching approach. Under this approach, the business concern can adopt a financial plan which matches the expected life of assets with the expected life of the sources of funds raised to finance assets.

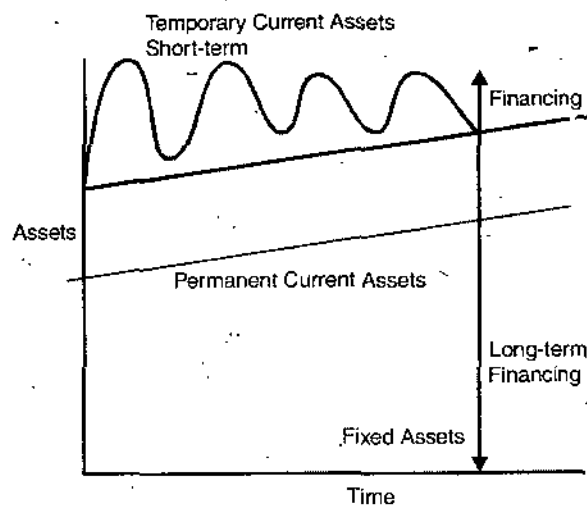


Fig. 1.9. Financing under Matching Approach

When the business follows matching approach, long-term finance shall be used to fixed assets and permanent current assets and short-term financing to finance temporary or variable assets.

### Conservative Approach

Under this approach, the entire estimated finance in current assets should be financed from long-term sources and the short-term sources should be used only for emergency requirements. This approach is called as "Low Profit-Low Risk" concept.

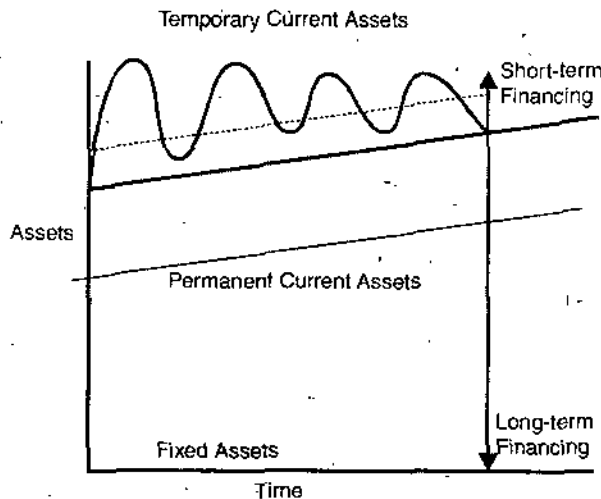


Fig. 1.10. Conservative Approach

### Aggressive Approach

Under this approach, the entire estimated requirement of current assets should be financed from short-term sources and even a part of fixed assets financing be financed from short-term sources. This approach makes the finance mix more risky, less costly and more profitable.

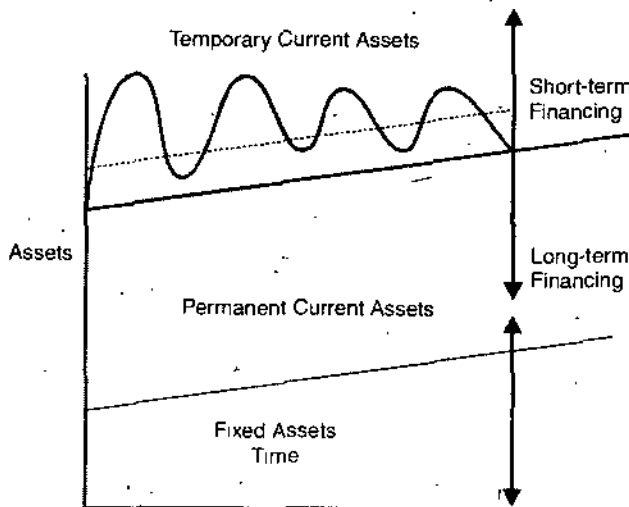


Fig. 1.11. Aggressive Approach.

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## 1.8 ASSESSMENT AND COMPUTATION OF WORKING CAPITAL

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### NOTES

In the previous text, we have learnt about the crucial issues affecting the working capital decisions. A survey of the policy aspects pertaining to monetary and credit policies has been attempted. These developments are considered to affect the quantum and availability of working capital in the country. More particularly, the recent changes in the economic liberalization of the country are expected to produce a tremendous impact on the working of Indian industries.

Indian Industries today have value maximization as the major objective and to achieve it one should be capable of estimating the requirements precisely. Both excessive and inadequate investment in working capital items may lead to unnecessary strain on the objective function. Therefore, the finance manager has to examine all the factors that determine the working capital requirements within the theoretical and practical points of view. For, the theoretical considerations sometimes dominate the methodology of assessment; while the firms are constrained to follow the restrictions imposed by the borrowers. The finance manager, therefore, should consider all the factors that have a bearing on the working capital including cash, receivables and inventories. Though certain models are developed to determine the optimum investment in each of the working capital items, an aggregate approach is yet to be formulated. In the mean time, firms are basing their computations on the concept of operating cycle. These and other related issues are discussed in detail in this unit.

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## 1.9 DETERMINATION OF WORKING CAPITAL NEEDS: DIFFERENT APPROACHES

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The question that what is the adequate amount of working capital required to run a business, is attempted to be answered in several ways. Theoreticians, by their natural inclination to construct models, have based their analogy on certain foundations and constructed models to estimate the optimum investment in working capital. Whereas, lenders such as banks, financial institutions have based their decisions on production schedules and industry practices. In between, a new point of view was developed calling for the adoption of a strategic approach to the decision-making. Let us now discuss these theoretical issues to further our understanding of the subject matter.

## Industry Norm Approach

This approach is based on the premise that every company is guided by the industry practice. If a majority of the units constituting a particular industry adopt a type of practice, other units may also follow suit. This may finally, turn out to be an industry practice. This practice decides the normal level of investment in different current asset items. As a matter of fact, optimum level of investment in receivables is to a great extent influenced by the industry practices. If majority of the firms of a particular industry have been granting say three months credit to a customer, others will have no other way except to follow the majority; due to the fear of losing customers. Though there is no basis for such a type of fear in fixing norms for other items of current assets, units generally prefer to follow majority.

- (a) However, the problems in following this type of an approach are obvious: The classification of units into a particular industry is not that easy. Firms may not be susceptible for such a neat classification; when the units are multi-product firms.
- (b) Deciding an average to represent a particular industry is highly difficult. The norms, thus, developed can be less of a reality and more of a myth.
- (c) Averages have no meaning to many firms, since the nature of firms differ.
- (d) Industry norm approach may result in imitative behaviour resulting in damage to innovation.
- (e) This approach may also promote 'hard mentality', thus limiting the scope for excellence. For example, if X unit is able to maintain its production schedule with only one month requirement of raw material, while the industry norm being 2 months, there is no wisdom as to why X should also keep 2 months. For the above reasons, industry norm approach is not suggested by many as a benchmark for making investment in current assets. Nevertheless, this has been a practice followed by many as a tradition, even the Tandon Committee has developed norms for maintenance of current assets on industry basis.

## Economic Modelling Approach

Model building, of late, has become a crucial exercise in many disciplines. Theoreticians are making efforts to be as much precise as possible. Widespread use of quantitative techniques has helped theoreticians to develop a framework to test their hypotheses. Models attempt to suggest an optimum solution to a given problem. As in the case of many disciplines, in the area of finance also model building has been attempted. As far as

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working capital is concerned, optimum investment in inventory is sought to be decided with the help of EOQ model. This has turned out to be an important concept in the purchase of raw materials and in the storage of finished goods and in-transit inventories. EOQ is given by a simple equation:

$$Q^* = \frac{\sqrt{2SO}}{C}$$

Where:  $Q^*$  = Optimum order quantity  
 $S$  = Annual usage of material  
 $O$  = Ordering costs per order  
 $C$  = Carrying costs per unit.

**William J. Baumol** has attempted to apply this inventory model to the determination of optimum cash balances that can be held by an enterprise. The transactions demand for money is sought to be analysed from this point of view. As per the model, the optimum level of cash is decided by the carrying cost of holding cash and the cost of transferring marketable securities to cash and viceversa. His equation is as follows:

$$C^* = \frac{\sqrt{2bT}}{i}$$

Where:  $C^*$  = Optimum cash balance  
 $b$  = Transaction costs per transaction  
 $T$  = Total demand for cash  
 $i$  = Interest rate

Similarly, the decision to sell to a particular account should be based objectively upon the application of profit maximising model. In this regard, Robert M. Soldofsky developed a model for Accounts receivable management. He has laid down the following formula for making a credit decision, leading to optimum investment in receivables.

$$\text{Sell, when } M - (b + Ti + c/O) \geq 0$$

where  $M$  = Profit margin

$b$  = Probability of a credit sale becoming a bad debt

$i$  = Interest rate

$c$  = Costs per order of selling on credit as an implicit function of risk,

$O$  = Order size

$T$  = Time period

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Though models are available to decide optimum investment in case of some important components of working capital, for many other items, no such modeling is attempted; nor is there an attempt at the aggregate level. Moreover, these models are subject to certain assumptions and conditions. Their utility comes under scrutiny for want of these assumptions turning out to be far from reality. For this and several other reasons, economic modelling is not much popular with Indian companies.

### **Strategic Choice Approach**

Unlike industry norm approach and economic modelling approach, this is not a standard method which suggests certain benchmarks to work with. The earlier methods suggest the use of certain yardsticks or guidelines, irrespective of the differences in size of the business units, nature of industry, business structure or competition. For example, optimum investment in inventory can be had by applying the equation and it is almost universal for every business unit. Similarly, industry norm approach suggests the same yardstick for every unit constituting that industry, in spite of variations in the size, nature of business, terms of sale and purchase, and competition.

In contrast, the strategic choice approach recognises the variations in business practice and advocates the use of 'strategy' in taking working capital decisions. The spirit behind this approach is to prepare the unit to face challenges of competition and take a strategic position in the market place. The emphasis is on the strategic behaviour of the business unit. The firm is independent in choosing its own course of action; not necessarily guided by the rules of the industry. This makes it obligatory on the part of the firm to set its own targets for achievement in the area of working capital. For instance, if the firm has set an objective like increasing market share from the present level of 20 percent to 40 percent, it can think of devising a suitable credit policy. Such a policy may involve variations in the terms followed at present such as extending the credit period, enhancing the credit limit or increasing the percentage of cash discount, etc.

Thus, the strategic choice approach presupposes a highly competitive environment and the willingness of the management to take risks. The success of the approach also depends on the ability of the management to set realistic goals and prepare suitable strategy to achieve them. Any wrong planning will lead the firm into trouble; much worse than what it was when either of the earlier methods were being followed.

## 1.10 FACTORS INFLUENCING DETERMINATION

### NOTES

The working capital requirements of a firm depend on a number of factors. It is a common proposition that the size of working capital is a function of sales. Sales alone will not determine the size of the working capital, but instead it is constantly affected by the criss-crossing economic currents flowing in a business. The nature of the firm's activities, the industrial health of the country, the availability of materials, the ease or tightness of the money market, are all parts of these shifting forces. Of them, the influence of operating cycle is considered paramount.

### Operating Cycle

Since working capital is represented by the sum of current assets, the investment in the same is determined by the level of each current asset item. To a large extent, the investment in current asset items is decided by the 'Operating Cycle' (OC) of the enterprise. The concept of operating cycle is very significant for computation of working capital requirements. The size of investment in each component of working capital is decided by the length of O.C. The term operating cycle can be understood to represent the length of time required for the completion of each of the stages of operation involved in respect of working capital items. This helps portray different stages of manufacturing activity in its various manifestations, such as peaks and troughs, along with the required supporting level of investment at each stage in working capital. The sum of these stage-wise investments is the total amount of working capital required to support the manufacturing activity at different stages of the cycle. The four important stages of that can be identified as:

- Raw materials and stores inventory stage
- Work-in-progress stage
- Finished goods inventory stage
- Book Debts stage

The following is the formula used to arrive at the OC period in an enterprise.

$$t = (r - c) + w + f + b$$

where

- 't' = stands for the total period of the operating cycle in number of days;
- 'r' = the number of days of raw materials and stores consumption requirements held in raw materials and stores inventory;
- 'c' = the number of days purchases, included in trade creditors;



- 'w' = the number of days of cost of production held in work-in-progress;  
'f' = the number of days cost of sales included in finished goods; and  
'b' = the number of days sales in book debts.

The computations involved are:

$$r = \frac{\text{Average inventory of raw materials and stores}}{\text{Average materials and stores consumption per day}}$$

$$c = \frac{\text{Average trade creditors}}{\text{Average purchase per day}}$$

$$w = \frac{\text{Average work in progress}}{\text{Average cost of production per day}}$$

$$f = \frac{\text{Average inventory of finished goods}}{\text{Average cost of sales per day}}$$

$$b = \frac{\text{Average book debts}}{\text{Average sales per day}}$$

The average inventory or book debts level can be arrived at by finding the mean between the relevant opening and closing balances for the year. The average consumption or output or cost of sales or sales per day can be obtained by dividing the respective annual figures by 365.

The first comprehensive and coherent exposition of the OC concept seems to be that of Park and Gladson. They attempted to establish how current assets and liabilities were—the two determinants of working capital. This search led them to the conclusion that the prevailing one-year temporal standard applied in classifying assets or liabilities as current' was not universally valid. What was current or non current depended on the nature of the core business activity. Thus, for a fruit processing business two to three months would be the correct criterion of currentness. For lumbering or wine-making business, however, a period of longer than one year would be the standard. Between such extremes, the currentness of period for each business would be a function of the nature of its basic activity as dictated by the technological requirements and trading conventions.

Instead they used the term 'natural business year' within which an activity cycle is completed. Later, the accounting principles board of the American Institute of the Certified Public Accountants while defining working capital used this concept.

### Determination of Working Capital Using O.C.

Now, we may attempt to determine the amount of working capital required for a firm using the above concept.

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**Illustration 1.1.** ABC company plans to achieve annual sales of 1,00,000 units for the year 2005. The following is the cost structure of the company as per the previous figures.

Materials — 50%

Labour — 20%

Overheads — 10%

The following further particulars are available from the records of the company.

- (a) Raw materials are expected to remain in stores for an average period of one month before issue to production.
- (b) Finished goods are to stay in the warehouse for two months on an average before being sold and sent to customers.
- (c) Each unit of production will be in process for one month on the average.
- (d) Credit allowed by the suppliers of raw material is one month from the date of delivery of materials.
- (e) Debtors are allowed credit for two months from the date of sale of goods.
- (f) Selling price per unit is ₹ 9 per unit.
- (g) Production and sales follow a consistent pattern and there are no wide fluctuations.

Determine the quantum of working capital required to finance the activity level of 1,00,000 units for the year 2005.

**Solution:**

**Statement of Working Capital Required**

**Current Assets:**

	Amount (₹)
1. Raw Materials Inventory (1 month)	
$\left(1,00,000 \times 9 \times \frac{1}{12} \times \frac{50}{100}\right)$	= 37,500
2. Work-in-progress Inventory (1 month)	
$\left(1,00,000 \times 9 \times \frac{1}{12} \times \frac{80}{100}\right)$	= 60,000
3. Finished Goods Inventory (2 months)	
$\left(1,00,000 \times 9 \times \frac{2}{12} \times \frac{80}{100}\right)$	= 1,20,000

$$4. \text{ Debtors (2 months)} \left( 1,00,000 \times 9 \times \frac{2}{12} \times \frac{100}{100} \right) = 1,50,000$$


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$$3,67,500$$

**Less: Current Liabilities:**

$$1. \text{ Creditors (1 month)} \left( 1,00,000 \times 9 \times \frac{1}{12} \times \frac{50}{100} \right) = 37,500$$


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$$\text{Working capital required} = 3,30,000$$


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**NOTES**

**Notes:**

1. Raw material inventory is expressed in raw material consumption.
2. Work-in-progress inventory is expressed in cost of production (COP) where, COP is deemed to include materials, labour and overheads.
3. Finished goods inventory is supposed to have been expressed in terms of cost of sales. Since separate details are not given, the figures are worked out on COP.
4. Debtors are expressed in terms of total sales value.
5. Creditors are expressed in terms of raw material consumption, since separate figures are not available for purchases.

**Other Factors**

In addition to the influence of operating cycle, there are a variety of factors that influence the determination of working capital. A brief explanation of the same is provided hereunder:

1. **Nature of Business.** A company's working capital requirements are directly related to the type of business operations. In some industries like public utility services the consumers are generally asked to make payments in advance and the money thus received is used for meeting the requirements of current assets. Such industries can carry on their business with comparatively less working capital. On the contrary, industries like cotton, jute etc. may have to purchase raw materials for the whole of the year only during the harvesting season, which obviously increases the working capital needs in that period.
2. **Management's Attitude Towards Risk.** Management's attitude towards risk also influences the size of working capital in an undertaking. It is, of course, difficult to give a very precise and determinable meaning to the management's attitude towards risk, but as suggested by Walker, the following principles involving risk may serve as the basis of policy formulation:

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- (a) If working capital is varied relative to sales the amount of risk that firm assumes also varies and the opportunity for gain or loss is increased;
- (b) Capital should be invested in each component of working capital as long as the equity position of the firm increases;
- (c) The type of capital used to finance working capital directly affects the amount of risk that a firm assumes as well as the opportunity for gain or loss and cost of capital; and
- (d) The greater the disparity between the maturities of a firm's short-term debt instruments and flow of internally generated funds, the greater the risk and vice-versa.

Briefly, these principles imply that the policies governing the size of the working capital are determined by the amount of risk, which the management is prepared to undertake.

3. **Growth and Expansion of Business.** It is logical to expect that larger amounts of working capital are needed to support the increasing operations of a business concern. But, there is no simple formula to establish the link between growth in the company's volume of business and the growth of working capital. The critical fact is that the need for increased working capital funds does not follow the growth in business activity but precedes it. *Ceteris paribus*, growth industries require more working capital than those that are static.
4. **Product Policies.** Depending upon the kind of items manufactured by adjusting its production schedules a company may be able to off-set the effects of seasonal fluctuations upon working capital. The choice rests between varying output in order to adjust inventories to seasonal requirements and maintaining a steady rate of production and permitting stocks of inventories to build up during off-season period. In the first instance, inventories are kept to minimum levels; in the second, the uniform manufacturing rate avoids high fluctuations of production schedules but enlarged inventory stocks create special risks and costs.
5. **Position of the Business Cycle.** Besides the nature of business, manufacturing process and production policies, cyclical and seasonal changes also influence the size and behaviour of working capital. During the upswing of the cycle and the busy season of the enterprise, there will be a need for a larger amount of working capital to cover the lag between increased need and the receipts. The cyclical and seasonal changes mainly influence the size of the working capital through the inventory stock. As regards the behaviour of inventory during the business cycles, there is no unanimity of opinion among economists. A

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few say that inventory moves in conformity with business activity. While others hold the view that business activity depends upon the behaviour of the inventory of finished goods which is determined by the credit mechanism and short-term rate of interest. Whatever be the view points, the fact remains that the cyclical changes do influence the size of the working capital.

6. **Terms of Purchase and Sale.** The magnitude of the working capital of a business is also affected by the terms of purchase and sale. If, for instance, an undertaking purchases its materials on credit basis and sells its finished goods on cash basis, it requires less working capital over an undertaking which is following the other way of purchasing on cash basis, and selling on credit basis. It all depends on the management's discretion to set credit terms in consideration with the prevailing market conditions and industry practices.
7. **Miscellaneous.** Apart from the above mentioned factors some others like the operating efficiency, profit levels, management's policies towards dividends, depreciation and other reserves, price level changes, shifts in demand for products competitive conditions, vagaries in supply of raw materials, import policy of the government, hazards and contingencies in the nature of business, etc., also determine the amount of working capital required by an undertaking.

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### 1.11 LIQUIDITY VS PROFITABILITY

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As per the accountants, working capital is a liquidation concept. Whether the firm will be able to pay off its debts using its cash flows is more important than what level of current or non-current assets it maintains. Viewed thus, the difference between current assets and current liabilities is more important than the size of investment either in current assets or current liabilities. The efficiency of working capital management finally depends upon the liquidity that is maintained by the firm. Though several other factors may decide the liquidity of a firm, changes in the cash flows consequent upon the changes in working capital items are highly pertinent. If cash flows were certain, less working capital would be required, usually, the problem stems from the difficulty in forecasting inflows, vis-à-vis outflows.

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### 1.12 CONCEPT OF LIQUIDITY

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By the term 'liquidity' it is meant the debt-repaying capacity of an undertaking. It refers to the firm's ability to meet the claims of suppliers

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of goods, services and capital. According to Archer and D'Ambrosio, liquidity means cash and cash availability, and it is from current operations and previous accumulations that cash is available, to take care of the claims of both the short-term suppliers of capital and the long-term ones. It has two dimensions; the short-term and the long-term liquidity. Short-term liquidity implies the capacity of the undertaking, to repay the short-term debt, which means the same as the ability of the firm in meeting the currently maturing obligations from out of the current assets. The purpose of the short-term analysis is to derive a picture of the capacity of the firm to meet its short-term obligations out of its short-term resources, that is, to estimate the risk of supplying short-term capital to the firm.

Analysis of the firm's long-term position has for its rationale, the delineation of the ability of a firm to meet its long-term financial obligations such as interest and dividend payment and repayment of principal. Long-term liquidity refers to the ability of the firm to retire long-term debt and interest and other long-run obligations. When relationships are established along these lines, it is assumed that in the long-run assets could be liquidated to meet the financial claims of the firm. Quite often the expression 'liquidity' is used to mean short-term liquidity of the companies.

In the present study, liquidity is taken to mean the short-term liquidity which refers to the ability of the undertakings to pay of current liabilities. This is chosen because the study is related to the management of short-term assets and liabilities. Further, the concept of short-term liquidity is more suited to enterprises that have a remote possibility of becoming insolvent. In other words, the long-run success of an undertaking lies in its ability to survive in the immediate future. Further, a company may have tremendous potential for profitability in the long-run, but may languish due to inadequate liquidity. It is, therefore, short-term liquidity that has been considered crucial to the very existence of an enterprise.

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### 1.13 MEASUREMENT OF LIQUIDITY

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Liquidity of an enterprise can be studied in two ways, namely (i) Technical liquidity, and (ii) operational liquidity. The difference between the two methods of liquidity measurement depends upon whether one assumes the 'liquidation concept' of business as in case of the technical liquidity or the 'going concern concept' of business as in the case of the operational liquidity. The first method of computation of liquidity is based on the assumption that the firm might become insolvent at any time and whether, in such an event, the current assets held by the undertakings would be sufficient to pay-off the current liabilities. On the other hand, the

computation of 'operational liquidity' attempts the measurement of the firm's potential to meet the current obligations on the basis of net cash flows originating from out of its own operations; with the view that a manufacturing enterprise cannot pay off current liabilities from its current assets when it is in the run. It is assumed under this approach the firms are going firms and hence the liabilities are met through the net cash flows arising out of their operations.

**Technical Liquidity:** Technical liquidity is normally evaluated on the basis of the following ratios in a business enterprise.

### Current Ratio

Current ratio expresses the precise relation between current assets and current liabilities. It is calculated by dividing current assets with current liabilities.

$$\text{Current Ratio} = \text{Current assets} / \text{Current liabilities.}$$

It indicates the availability of current assets in rupees for every one rupee of current liabilities. A high ratio means that the firm has more investment in current assets. While a low ratio indicates that the firm in question is unable to retire its current liabilities. In fact, a satisfactory current ratio for any given firm is difficult to judge.

For most manufacturing undertakings, a ratio of 2 : 1 is traditionally considered a bench-mark of adequate liquidity. However, in some of the undertakings like public utilities and service firms, this standard ratio is not particularly useful as they carry no inventories for sale.

Current ratio is equally useful to both the outsiders and the management. To an outsider, it is a measure of the firm's ability to meet its short-term claims. So far as the management is concerned, the ratio discloses the magnitude of the current assets that the firm carries in relation to its current liabilities. As regards the outsider, the larger the ratio, the more liquid is the firm. But, from the management point of view, a larger ratio indicates excess investment in less profit-generating assets. On the contrary, a low current ratio or downward trend in the ratio indicates the inefficient management of working capital.

Nevertheless, the current ratio is a crude and quick measure of the firm's liquidity as it is only a test of the quantity and not the quality. The limitation of this ratio as an indicator of liquidity lies in the size of the inventory of the enterprise. ~~If inventory forms a high proportion of current assets, the 2 :1 ratio might not be adequate, as a meaningful measure of liquidity.~~

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## Quick or Acid-test Ratio

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Recognising that inventory might not be very liquid or slow moving, this ratio takes the quickly realisable assets and measures them against current liabilities. This is a more refined of somewhat conservative estimate of the firm's liquidity, since it establishes a relation between quick or liquid assets and current liabilities. To be precise, a quick asset is one that can be converted into cash immediately or reasonably soon without loss of value, for instance, cash is the most liquid of all assets. The other assets which are considered to be relatively liquid and included in the quick category are accounts and bills receivable and marketable securities. Inventory and period expenses are considered to be less liquid. Inventories normally require some time for realising into cash. The quick ratio is, then, expressed as a relation between quick assets and current liabilities, as:

$$\begin{aligned}\text{Quick Ratio} &= \text{Quick assets/Current liabilities ; or} \\ &= \text{Current assets} - \text{Inventories/Current liabilities.}\end{aligned}$$

Conventionally, a quick ratio of 1 : 1 is considered to be a more satisfactory measure of liquidity position of an enterprise. In fact, this ratio does not entirely supplant the current ratio; rather, it partially supplements current ratio and when used in conjunction with it, tends to give a better picture of the firm's ability to meet its claims out of short-term assets.

## Absolute Liquidity Ratio

Absolute liquidity ratio is the refinement of the concept of eliminating inventory as liquid asset in the acid-test ratio, because of their uncertain value at the time of liquidation. Although receivables are generally much more liquid in nature than inventories, some doubt may exist concerning their liquidity as well. So, by eliminating receivables and inventories from the current assets, another measure of liquidity is derived by relating the sum of cash and marketable securities to the current liabilities. Generally, an absolute liquidity ratio of 0.5 : 1 is considered appropriate in evaluating liquidity.

## Operational Liquidity

Operational liquidity which is based on the going concern concept of business, is determined by expressing cash flows as a percentage of current liabilities. It is verified here whether the enterprises included in the study would be able to discharge its current liabilities from the cash flows generated from the operations.



## 1.14 DETERMINANTS OF LIQUIDITY

The measurement of liquidity was accomplished by comparing current assets with current liabilities. But, focus has not been thrown on the factors that determine liquidity. Several factors influence the liquidity position of an undertaking. Significant among them are:

1. the nature and volume of business;
2. the size and composition of current assets and current liabilities;
3. the method of financing current assets;
4. the level of investment in fixed assets in relation to the total long-term funds; and
5. the control over current assets and current liabilities.

Firstly, the nature and volume of business influence the liquidity of an enterprise. Depending upon the nature of the units, some firms require more of working capital than others. For some of the concerns like public utilities, less proportion of working capital is needed, vis-à-vis, manufacturing organizations. Besides, an increasing volume of business also enhances the funds needed to finance current assets. In these situations, if the firm does not divert some funds from the long-term sources, the liquidity ratios would be adversely affected.

Secondly, the size and the composition of current assets and current liabilities were the basic factors that determine the liquidity of an enterprise. If a higher investment is made in the current assets in relation to current liabilities, there would be a corresponding rise in the current ratio. While quick and other ratios depend on the composition of current assets.

Thirdly, the method of financing current assets causes changes in the liquidity ratios. If greater part of the current assets is financed from long-term sources, greater also would be the current ratio. On the other hand, if the concern depends much on the outside sources for financing current assets, the ratio would fall.

Fourthly, the absorption of funds by fixed assets is one of the major causes of low liquidity. As more and more of the firm's total funds are absorbed in this process, there will be little left to finance short-term needs and therefore liquidity ratios fall. Hence, the degree of liquidity is determined by the attitude of the management in the allocation of permanent funds between fixed and current assets.

Finally, stringent control over the current items causes fluctuations in the liquidity ratios. If investment in current assets is not taken care of

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properly, the firm may accumulate excess liquidity, which may adversely affect the profitability. On the contrary, unduly strict control of the investment in all types of current assets may eventually endanger the existence of the firm; owing to noncompliance of claims because of the shortage of funds. Similarly, control over current liabilities also plays an important role in determining liquidity of an enterprise by requiring the firm to contribute necessary funds from long-term sources to keep up the liquidity position.

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### 1.15 EFFECTS OF LIQUIDITY

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Liquidity of a business is one of the key factors determining its propensity to succeed or fail. Both excess and shortage of liquidity affect the interests of the firm. By excess liquidity in a business enterprise, it is meant that it is carrying higher current assets than are warranted by the requirements of production. Hence, it indicates the blocking up of funds in current assets without any return. Besides, the firm has to incur costs to carry them overtime. Further, the value of such assets would depreciate in times of inflation, if they are left idle. Owing to the cornering of capital, the firm may have to resort to additional borrowing even at a fancy price.

On the other hand, the impact of inadequate liquidity is more severe. The losses due to insufficient liquidity would be many. Production may have to be curtailed or stopped for want of necessary funds. As the firm will not be in a position to pay off the debts, the credit worthiness of the firm is badly affected. In general, the smaller the amount of default, the higher would be the damage done to the image of the unit. In addition, the firm will not be able to secure funds from outside sources, and the existing creditors may even force the firm into bankruptcy. Further, insufficient funds will not allow the concern to launch any profitable project or earn attractive rates of return on the existing investment. Between the excess and inadequate liquidity, the latter is considered to be more detrimental, since the lack of liquidity may endanger the very existence of the business enterprise. Besides, both the excess and inadequate liquidity adversely affect the profitability. If the firm is earning very low rates of return or incurring losses, there would be no funds generated by the operations of the company, which are essential to retire the debts. In fact, there is a tangle between liquidity and profitability, which eventually determines the optimum level of investment in current assets. Of the liquidity and profitability, the former assumes further importance since profits could be earned with ease in subsequent periods, once the image of the unit is maintained. But, if the firm loses its face in the market for want of

liquidity, it requires Herculean efforts to restore its position. Instances are not lacking of great industrial giants, with comfortable book profits coming to grief for want of liquidity.

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### 1.16 CONCEPT OF PROFIT

Ans - 2

Profits are essential for the working of a private free-enterprise economy. Unfortunately, there is no general agreement about the meaning of the term 'corporate profits', and this has led to diversity of opinions on the subject of profits. The controversy seems to be prevailing in respect of what constitutes 'profit'; how profit should be measured and how profit contributes towards a healthy and vigorous economy. As such it is not surprising to find people coming up with different interpretations of profits while analyzing the same set of financial data. These differences may arise simply because people apply different values to the data or bring different insights into their interpretations. One of the examples of this problem is the difference in the concept of the profits as per economists and accountants.

The differences get manifested in their concern for future and the past while viewing the profits. Like wise, the business manager and the trade union leader quite obviously emphasize interpretations of profits that represent their best interests. Academicians differ among themselves about theoretical concepts of profits and the process of decision-making. The term 'profits' can also be used by any of these people with respect to a single firm and to the aggregate of many firms.

The meaning attributed to the word 'profit' ranges from the view point that it is the entire return received by the business to the view that 'pure' profit is residual in nature as it is arrived at after deductions are made from total income for wages, interest and rent. Clark argued that profit results exclusively from dynamic change e.g., inventions, which yield temporary profit to entrepreneurs. Hawley holds that risk bearing is the essential function of the entrepreneur and is the basis for profit. While differing in their views about the causes of profits, proponents of both these views regard profit as residual. It is to be recalled that profit has been connected by F.H. Knight with uncertainty, by Schumpeter with innovations, by Hawley with riskbearing, and by Mrs. Robinson, Chamberlin and Kalecki with the degree of monopoly power.

The relationship between business, profit and economic growth is basically very simple. Profit determines investment and investment is essential to growth. Thus, a steep and continuing decline in profit is likely to mean a serious drop in the investment stances, higher profit would mean higher

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investment and faster growth. Further, it is by no accident that business profits, business investment, and unemployment form three important economic indicators that depict the level of economic activity. More business investment is needed to provide more jobs for the rapidly growing labour force and one of the very dependable ways to get more investment is to plough back adequately from the profits. The decline in profits during the postwar period has in fact been accompanied by a short decline in the business investment in many countries in the world. The idea that profit is good' is unacceptable to many people. The idea that higher profits are even better is still unpalatable. What the critics of profit erroneously perceive is that businessmen aim not at developing economic activities but on profiteering and fleecing the consumers. Probably their intention tells them that one man's profit is another man's loss and, as such the obvious conclusion is that profit means exploitation. But experience is a better guide than instinct and experience teaches that in a competitive economy business profit must accrue to those ventures that best serve the general economic welfare. The targets of private business are private profits. The great virtue of a free and competitive economy is that it stabilizes organic link between profits and economic welfare and therefore undermining one results in the undermining of both.

Profits may be increased by reducing corporate taxes. But tax cut is not a panacea and does not guarantee that profit will rise or the investment will continue to rise, Its benefits could be lost if rising business costs lead either to inflation or to the reduction of profits or both. Conversely, the benefit of tax reduction can be greatly enhanced if business costs can be reduced.

The responsibility for controlling the increase in the business costs rests on various agencies. It rests in part with the business management; in part with government, state, and local; in part with employees and their unions and in part with the public. Thus it must certainly be recognized that the profits are one of the principal engines of economic growth, and it must be seen that the prospect for profits is bright enough in this country to assure continued economic expansion. The profitability of an industry has obviously a direct bearing on its growth. This is principally due to the psychological incentives and the financial resources that the profitability provides. High profitability makes possible to plough back substantial resources, helps to raise equity capital in the investment market; and make it possible to raise loans. Thus, it is business confidence in the level of profitability which is the primary determinant of the decision to invest. Despite the vilification of profit by forces on the extreme left, a mixed economy will not undertake productive investment in plant and machinery unless management is reasonably assured of earning a rate of return at least commensurate with the risks involved.

## 1.17 MEASUREMENT OF PROFITABILITY

Profit is considered an indicator of operational efficiency of the firm. Profitability of a firm is measured on the following two bases:

1. Based on Sales
2. Based on Investment.

Basing on sales, the following three ratios can be considered important in judging the profitability of an enterprise.

1. Gross profit ratio
2. Operating profit ratio
3. Net profit ratio

**Gross Profit Ratio:** This is calculated by comparing the Gross profit (sales - cost of goods sold) with the Net Sales of a firm

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

This ratio indicates the profit generated by a firm for every one rupee of sale made. For example, a Gross profit ratio of 25 per cent indicates that for every one rupee sales, the firm makes a profit of 25 paise. Gross profit ratio depends upon the relationship between the selling price and the cost of production including direct expenses. The gross profit ratio reflects the efficiency with which the firm produces/purchases the goods. Given the constant level of selling price, cost price and raw material consumption per unit, the gross profit ratio would also remain same from one year to another. If there is a change in the gross profit ratio from one year to another then reasons must be looked for. If the efficiency of the firm is same then the change in gross profit ratio may result because of change in selling price or cost price or raw material consumption per unit.

The gross profit ratio should be analyzed and studied as a time series. For a single year, the gross profit ratio may not indicate much about the efficiency level of the firm. However, when studied as a time series, it may give the increasing or decreasing trend and hence an idea of the level of operating efficiency of the firm. A high gross profit ratio or a low gross profit ratio for a particular period does not have any meaning unless compared with some other firm operating in the same industry or compared with the industry average.

**Operating Profit Ratio (OP Ratio):** The operating profit refers to the pure operating profit of the firm *i.e.*, the profit generated by the operation of the firm and hence is calculated before considering any financial charge (such as interest payment), non-operating income/loss and tax liability,

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etc. The operating profit is also termed as the Earnings Before Interest and Taxes (EBIT). The OP ratio may be calculated as follows:

$$\text{OP Ratio} = \frac{\text{EBIT}}{\text{Net Sales}} \times 100$$

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The OP ratio shows the percentage of pure profit earned on every 1 rupee of sales made. The OP ratio will be less than the GP ratio as the indirect expenses such as general and administrative expenses, selling expenses and depreciation charge, etc. are deducted from the gross profit to arrive at the operating profits i.e., EBIT. Thus the OP ratio measures the efficiency with which the firm not only manufactures/ purchases the goods but also sells the goods. The OP ratio in conjunction with the GP ratio can depict whether changes in the profitability of the firm are caused by change in manufacturing efficiency or administrative efficiency. It can help to identify the corrective measures to improve the profitability.

**Net Profit Ratio (NP Ratio):** The NP ratio establishes the relationship between the net profit (after tax) of the firm and the net sales and may be calculated as follows:

$$\text{NP Ratio} = \frac{\text{Profit (After tax)}}{\text{Net Sales}} \times 100$$

The NP ratio measures the efficiency of the management in generating additional revenue over and above the total cost of operations. The NP ratio shows the overall efficiency in manufacturing, administration, selling and distribution of the product. This ratio also shows the net contributions made by every 1 rupee of sales to the owners funds. The NP ratio indicates the proportion of sales revenue available to the owners of the firm and the extent to which the sales revenue can decrease or the cost can increase without inflicting a loss on the owners. So, the NP ratio shows the firm's capacity to face the adverse economic situations.

The NP ratio can be meaningfully employed to study the profitability of the firm when this ratio is used together with the GP ratio and the OP ratio. A time series analysis of the GP ratio, OP ratio and the NP ratio can help to identify the reasons for variations in the profitability. Since the difference between the operating profit and the net profit arises only because of financial charges and the taxes, an insight into their comparison may show as to how efficiently the firm is financed and how well the finance manager is able to hold down taxes. Basing on Investment, the following **TWO** ratios may be considered significant.

1. Return on Assets
2. Return on Capital Employed

**Return on Assets (ROA):** This ratio measures the profitability of the firm in terms of assets employed in the firm. The ROA is calculated by establishing the relationship between the profits and the assets employed to earn that profit. Usually the profit of the firm is measured in terms of the net profit after tax and the assets are measured in term of total assets or total tangible assets or total fixed assets. Conceptually, the ROA is measured as follows:

$$\text{ROA} = \frac{\text{Net Profit After Taxes}}{\text{Average Total Assets}} \times 100$$

There are many other versions of the ROA to how much is the profit earned by the firm per rupee of assets used. Sometimes, the amount of financial charges (interest, etc.) is added back to the net profit figure to relate the net operating profit with the operating assets of the firm. By separating the financing effect form the operating effect, the ROA provides a cleaner measure of the profitability of these assets. In such a case, the ROA can be calculated as follows:

$$\text{ROA} = \frac{\text{EBIT} - \text{Interest}}{\text{Total Assets}} \times 100$$

Thus, the ROA measures the overall efficiency of the management in generating profits for a given level of assets. The ROA essentially relates the profits to the size of the firm (which is measured in terms of the assets). If a firm increases its size but is unable to increase its profits proportionately, then the ROA will decrease. In such a case increasing the size of the assets *i.e.*, the size of the firm will not by itself advance the financial welfare of the owners. The ROA of a particular firm should be compared with the industry average as the amount of assets required depends upon the nature and characteristics of the industry.

**Return on Capital Employed (RCE):** The profitability of the firm can also be analyzed from the point of view of the total funds employed in the firm. The term funds employed or the capital employed refers to the total long term sources of funds. It means that the capital employed comprises of shareholders funds plus long term debts. Alternatively, it can also be defined as fixed assets plus net working capital. This ratio may be calculated as shown below:

$$\text{RCE} = \frac{\text{Net Profit After Taxes}}{\text{Average Capital Employed}} \times 100$$

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## 1.18 PROFITABILITY AND WORKING CAPITAL

### NOTES

There has been an attempt made to highlight the nexus between liquidity, profitability and working capital. A further examination can be thought of with the following indicators.

- (i) **Net Working Capital:** As a general rule, current obligations or current liabilities are paid off by reducing current assets, which are assets that can be converted into cash on short notice. The arithmetic difference between current assets and current liabilities is called net working capital and it represents a cushion for creditors. Although this measure is not a ratio, it is commonly included in the liquidity ratios while analysing companies. It is widely used by creditors and credit rating agencies as a measure of liquidity. More working capital is preferred to less. In other words, creditors like a 'big' cushion to protect their interest. However, too much working capital can act to the detriment of the company because they may not be utilizing the funds effectively.

It has been found that in some cases, the net working capital turned out to be negative in some years. This implies the mobilization of more current liabilities compared to current assets. Judged from this point of view, the liquidity position and the consequent efficiency can be stated to be very low.

- (ii) **Working Capital Turnover:** The turnover of working capital, which indicates the frequency at which they were rotating is another measure of the efficiency of working capital management. Like any other turnover or activity ratio, a low ratio reflects a slow movement of the current assets, thereby implying a suboptimum utilization of working capital.
- (iii) **Rate of Return on Current Assets:** The return on current assets is yet another useful economic indicator of the profitability of the enterprises and thus indicates the efficiency or otherwise with which the current assets are put to use. The rate of net profit to current assets is calculated to under line the efficiency. In case where current assets form more than half, this ratio becomes significant.
- (iv) **PAT as Percentage of Sales:** One of the important profitability ratios calculated for the purpose of measuring management's efficiency is the profits after tax as percentage of sales. This is the overall measure of firms ability to turn each rupee of sales into profit. If the net margin is inadequate, the firm will fail to achieve satisfactory return on owners equity. This ratio also indicates the firms capacity to withstand adverse economic conditions. A firm



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with a high net margin ratio would be in an advantageous position to survive in the face of falling sales, prices, rising cost of production, or declining demand for the product. It would really be difficult for a low net margin firm to withstand these adversities. Similarly, a firm with high net profit margin can make better use of favorable conditions, such as rising sales prices, falling costs of production, or increasing demand for the product. Such a firm will be able to accelerate its profits at a faster rate than a firm with low net profit margin.

- (v) **Assets Turnover:** Usually the turnover ratios are employed to determine the efficiency with which a particular asset is managed and also to consider the relationship between sales and various items of assets for this purpose. These ratios which are called activity ratios, indicate the speed with which the investment in the assets is getting rotated or converted into sales. A proper balance between sales and assets generally reflects that assets are managed well. Although fixed assets may not maintain close relation with sales, they are taken as important because of their contribution to production. Hence total assets turnover is taken as an indicator to measure the extent of sales generated for one rupee investment in assets.
- (vi) **Collection Period:** Another indicator which is considered to be important in judging the working capital efficiency is the collection period. This ratio indicates the total number of days that was taken by the firms in collecting their debts. A comparison of the norms fixed with the results obtained would show the positive or negative tendencies.
- (vii) **Interest as Percentage of Profits before Interest and Tax:** One of the ratios that is used to determine the debt capacity of a firm is this coverage ratio. This ratio reveals the ability of the company in servicing the debt undertaken. A high ratio speaks about the interest burden of the company and consequently the adverse impact of the same on profitability. In the same way, a high ratio enhances the financial risk of the firm.

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### 1.19 LIQUIDITY VS. PROFITABILITY IN WORKING CAPITAL DECISIONS: (TRADE OFF)

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All decisions of the financial manager are assumed to be geared to maximization of shareholders wealth, and working capital decisions are no exception. Accordingly, risk-return trade-off characterizes each of the

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working capital decision. There are two types of risks inherent in working capital management, namely, liquidity risk and opportunity loss risk. Liquidity risk is the non-availability of cash to pay a liability that falls due. It may happen only on certain days. Even so, it can cause not only a loss of reputation but also make the work condition unfavorable for getting the best terms on transaction with the trade creditors. The other risk involved in working capital management is the risk of opportunity loss i.e., risk of having too little inventory to maintain production and sales, or the risk of not granting adequate credit for realizing the achievable level of sales. In other words, it is the risk of not being able to produce more or sell more or both, and, therefore, not being able to earn the potential profit, because there were not enough funds to support higher inventory and book debts. Thus, it would not be out of place to mention that it is only theoretical that the current assets could all take zero values. Indeed, it is neither practicable nor advisable. In practice, all current assets take positive values because firms seek to reduce working capital risks.

However, if more funds are deployed in current assets, the higher would be the cost of funds employed, and therefore, lesser the profit. If liquidity goes up, profitability goes down. The risk-return trade-off involved in managing the firm's liquidity via investing in marketable securities is illustrated in the following example. Firms A and B are identical in every respect but one Firm B has invested ₹ 5,000 in marketable securities, which has been financed with equity. That is, the firm sold equity shares and raised ₹ 5,000. The balance sheets and net incomes of the two firms are shown in Table 3.1. Note that Firm A has a current ratio of 2 : 5 (reflecting net working capital of ₹ 15,000) and earns a 10 per cent return on its total assets. Firm B, with its larger investment in marketable securities has a current ratio of 3 and has net working capital of ₹ 20,000. Since the marketable securities earn a return of only 9 per cent before taxes (4.5 per cent after taxes with a 50 per cent tax rate), Firm B earns only 9.7 per cent on its total investment. Thus, investing in current assets and in particular in marketable securities, does have a favorable effect on firms liquidity but it also has an unfavorable effect on the firm's rate of return earned on invested funds. The riskreturn trade-off involved in holding more cash and marketable securities, therefore, is one of added liquidity versus reduced profitability. In the use of current versus long-term debt for financing working capital needs also the firm faces a risk-return trade-off. Other things remaining the same, the greater its reliance upon short-term debt or current liabilities in financing its current asset investments, the lower will be its liquidity. On the other hand, the use of current liabilities offers some very real advantages to the user in that they can be less costly than long-term financing as they provide the firm with a flexible means of financing its fluctuating needs for current assets.

**Table 1.1: The Effects of Investing in Current Assets on Liquidity and Profitability**

Balance Sheets	A	B
Cash	₹ 500	₹ 500
Marketable securities	-	5,000
Accounts receivable	9,500	9,500
Inventories	15,000	15,000
<b>Current Assets</b>	<b>25,000</b>	<b>30,000</b>
Net fixed assets	50,000	50,000
<b>Total</b>	<b>75,000</b>	<b>80,000</b>
Current liabilities	10,000	10,000
Long-term debt	15,000	15,000
Capital Equity -	50,000	55,000
<b>Total</b>	<b>75,000</b>	<b>80,000</b>
Net Income	7,500	7,725
Current Ratio	$\frac{25,000}{10,000} = 2.5$ times	$\frac{30,000}{10,000} = 3.0$ times
Current assets/current liabilities)		
Net working capital (Current assets - current liabilities)	15,000	20,000
Return on total assets (net income/total assets)	$\frac{7,500}{75,000} = 10\%$	$\frac{7,725}{80,000} = 9.7\%$

**NOTES**

\* During the year Firm B held ₹ 5,000 in marketable securities, which earned a 9 per cent return or ₹ 450 for the year. After paying taxes at a rate of 50 per cent, the firm netted a ₹ 225 return on this investment.

If for example, a firm needs funds for a three-month period during each year to finance a seasonal expansion in inventories, then a three-month loan can provide substantial cost saving over a long-term loan (even if the interest rate on short-term financing should be higher). This results from the fact that the use of long term debt in this situation involves borrowing for the entire year rather than for the three month period when the funds are needed; this increases the interest cost for the firm. There exists a possibility for further saving because in general, interest rates on short-term debt are lower than on long-term debt for a given borrower. We may demonstrate the risk-return trade-off associated with the use of current versus long term liabilities with the help of an example given below: Consider the risk-return characteristics of Firm X and Firm Y, whose

**NOTES**

balance sheets and income statements are given in Table 1.2. Both firms had the same seasonal needs for financing throughout the past year. In December, they each required ₹ 20,000 to finance a seasonal expansion in accounts receivable. In addition, during the four-month period beginning with August and extending through November both firms needed ₹ 10,000 to support a seasonal buildup in inventories. Firm X financed its seasonal financing requirements using ₹ 20,000 in long-term debt carrying an annual interest rate of 10 per cent. Firm Y, on the other hand, satisfied its seasonal financing needs using short-term borrowing on which it paid 9 per cent interest. Since Firm Y borrowed only when it needed the funds and did so at the lower rate of interest on short-term debt, its interest expense for the year was only ₹ 450, whereas Firm X incurred ₹ 2,000 as annual interest expense.

The end result of the two firms financing policies is evidenced in their current ratio, net working capital, and return on total assets which appear at the bottom of Table 1.2. Firm X using long-term rather than short-term debt, has a current ratio of 3 times and ₹ 20,000 in net working capital. Whereas Firm Y's current ratio is only 1, which represents zero net working capital. However, owing to its lower interest expense, Firm Y was able to earn 10.8 per cent on its invested funds, whereas Firm X produced a 10 per cent return. Thus, a firm can reduce its risk of illiquidity through the use of long-term debt at the expense of a reduction of its return on invested funds. Once again we see that the risk-return trade-off involves an increased risk of illiquidity versus increased profitability.

**Table 1.2**  
**Balance Sheets**

	Firm X ₹	Firm Y ₹
Current assets	30,000	30,000
Net fixed assets	70,000	70,000
Total	1,00,000	1,00,000
Account payable	10,000	10,000
Notes payable	-	20,000
Current liabilities	10,000	30,000
Long-term debt	20,000	
Equity Capital	70,000	70,000
	1,00,000	1,00,000

## Income Statements

	Firm X ₹	Firm Y ₹
Net operating income	22,000	22,000
Less: Interest expense	2,000*	450**
	20,000	21,550
Earnings before taxes	20,000	21,550
Less: Taxes (50%)	10,000	10,775
	10,000	10,775
Net income	10,000	10,775

### NOTES

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}} = \frac{30,000}{10,000} = 3 \text{ times} \quad \frac{30,000}{30,000} = 1 \text{ times}$$

Net working capital

(current assets – current liabilities) 20,000      ₹ 0

$$\text{Return on total assets} = \frac{\text{Net income}}{\text{Total assets}} = \frac{10,000}{1,00,000} = 10\% \quad \frac{10,775}{1,00,000} = 10.8\%$$

\* Firm X paid interest during the entire year on 20,000 on long-term debt at a rate of 10 per cent. Its interest expenses for the year was  $10\% \times 20,000 = 2,000$ .

\*\* Firm Y paid interest on 20,000 for one month and on 10,000 for four months at 9 per cent interest during the year. Thus, Firm Y's interest expense for the year equals  $20,000 \times .09 \times 1/12$  plus  $10,000 \times .09 \times 4/12$  or  $150 + 300 = 450$ .

## 1.20 OVERVIEW OF WORKING CAPITAL MANAGEMENT

Management of Working Capital is also an important part of financial manager. The main objective of the Working Capital Management is managing the Current Asset and Current Liabilities effectively and maintaining adequate amount of both Current Asset and Current Liabilities. Simply it is called Administration of Current Asset and Current Liabilities of the business concern.

Management of key components of working capital like cash, inventories and receivables assumes paramount importance due to the fact the major portion of working capital gets blocked in these assets.

### Meaning

Working capital management is an act of planning, organizing and controlling the components of working capital like cash, bank balance inventory, receivables, payables, overdraft and short-term loans.

## Definition

According to **Smith K.V.**, "Working capital management is concerned with the problems that arise in attempting to manage the current asset, current liabilities and the interrelationship that exist between them".

According to **Weston and Brigham**, "Working capital generally stands for excess of current assets over current liabilities. Working capital management therefore refers to all aspects of the administration of both current assets and current liabilities".

## NOTES

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### 1.21 INVENTORY MANAGEMENT

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Inventories constitute the most significant part of current assets of the business concern. It is also essential for smooth running of the business activities. A proper planning of purchasing of raw material, handling, storing and recording is to be considered as a part of inventory management. Inventory management means, management of raw materials and related items. Inventory management considers what to purchase, how to purchase, how much to purchase, from where to purchase, where to store and when to use for production etc.

#### Meaning

The dictionary meaning of the inventory is stock of goods or a list of goods. In accounting language, inventory means stock of finished goods. In a manufacturing point of view, inventory includes, raw material, work in process, stores, etc.

#### Kinds of Inventories

Inventories can be classified into five major categories.

##### A. Raw Material

It is basic and important part of inventories. These are goods which have not yet been committed to production in a manufacturing business concern.

##### B. Work in Progress

These include those materials which have been committed to production process but have not yet been completed.

##### C. Consumables

These are the materials which are needed to smooth running of the manufacturing process.

#### *D. Finished Goods*

These are the final output of the production process of the business concern. It is ready for consumers.

#### *E. Spares*

It is also a part of inventories, which includes small spares and parts.

## NOTES

### **Objectives of Inventory Management**

Inventory occupy 30–80% of the total current assets of the business concern. It is also very essential part not only in the field of Financial Management but also it is closely associated with production management. Hence, in any working capital decision regarding the inventories, it will affect both financial and production function of the concern. Hence, efficient management of inventories is an essential part of any kind of manufacturing process concern. The major objectives of the inventory management are as follows:

- To efficient and smooth production process.
- To maintain optimum inventory to maximize the profitability.
- To meet the seasonal demand of the products.
- To avoid price increase in future.
- To ensure the level and site of inventories required.
- To plan when to purchase and where to purchase
- To avoid both over stock and under stock of inventory.

### **Techniques of Inventory Management**

Inventory management consists of effective control and administration of inventories. Inventory control refers to a system which ensures supply of required quantity and quality of inventories at the required time and at the same time prevent unnecessary investment in inventories. It needs the following important techniques. Inventory management techniques may be classified into various types:

#### **Techniques based on the order quantity of Inventories**

Order quantity of inventories can be determined with the help of the following techniques:

##### **Stock Level**

Stock level is the level of stock which is maintained by the business concern at all times. Therefore, the business concern must maintain optimum level of stock to smooth running of the business process. Different level of stock can be determined based on the volume of the stock.

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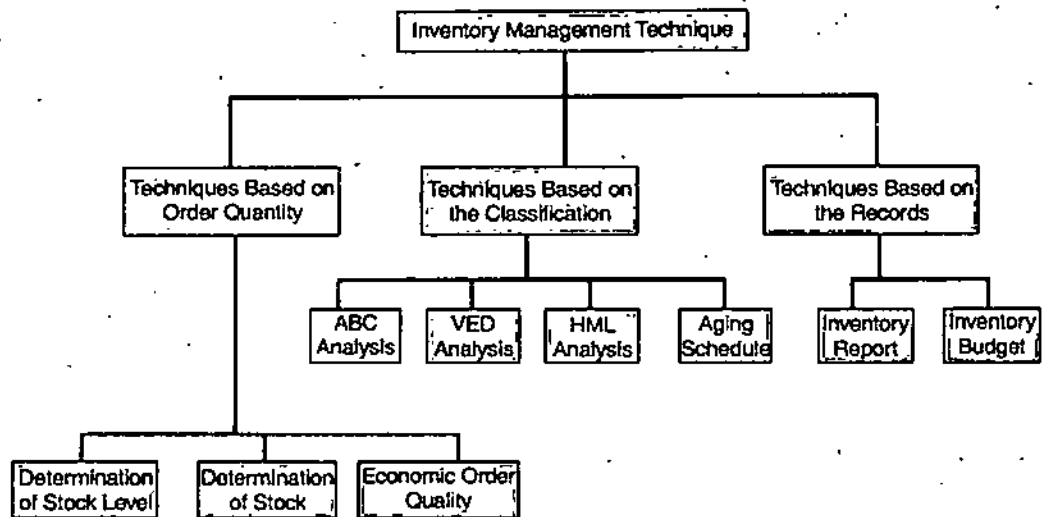


Fig. 1.12. Inventory Management Techniques

**Minimum Level**

The business concern must maintain minimum level of stock at all times. If the stocks are less than the minimum level, then the work will stop due to shortage of material.

**Re-order Level**

Re-ordering level is fixed between minimum level and maximum level. Re-order level is the level when the business concern makes fresh order at this level:

$$\text{Re-order level} = \text{maximum consumption} \times \text{maximum Re-order period.}$$

**Maximum Level**

It is the maximum limit of the quantity of inventories, the business concern must maintain. If the quantity exceeds maximum level limit then it will be overstocking.

$$\text{Maximum level} = \text{Re-order level} + \text{Re-order quantity}$$

$$- (\text{Minimum consumption} \times \text{Minimum delivery period})$$

**Danger Level**

It is the level below the minimum level. It leads to stoppage of the production process.

$$\text{Danger level} = \text{Average consumption} \times \text{Maximum re-order period for emergency purchase}$$

**Average Stock Level**

It is calculated such as,

$$\text{Average stock level} = \text{Minimum stock level} + \frac{1}{2} \text{ of re-order quantity maximum level}$$



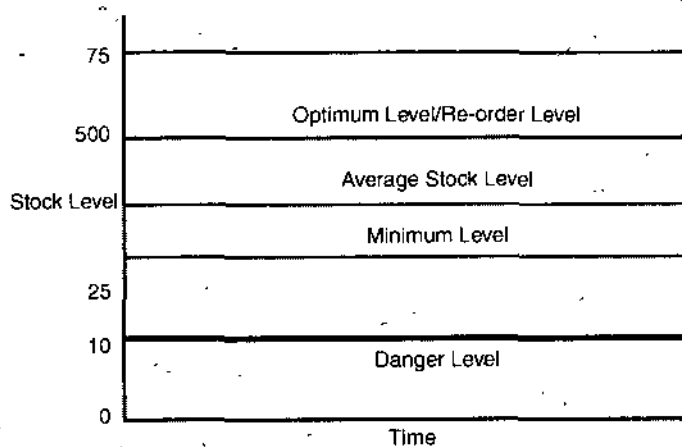


Fig. 1.13. Determining the Stock Level

**NOTES**

**Lead Time**

Lead time is the time normally taken in receiving delivery after placing orders with suppliers. The time taken in processing the order and then executing it is known as lead time.

**Safety Stock**

Safety stock implies extra inventories that can be drawn down when actual lead time and/or usage rates are greater than expected. Safety stocks are determined by opportunity cost and carrying cost of inventories. If the business concerns maintain low level of safety stock, it will lead to larger opportunity cost and the larger quantity of safety stock involves higher carrying costs.

**Economic Order Quantity (EOQ)**

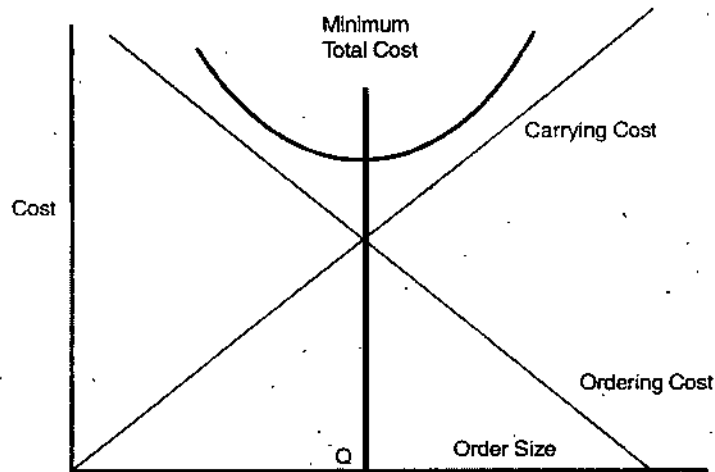
EOQ refers to the level of inventory at which the total cost of inventory comprising ordering cost and carrying cost. Determining an optimum level involves two types of cost such as ordering cost and carrying cost. The EOQ is that inventory level that minimizes the total of ordering of carrying cost. EOQ can be calculated with the help of the mathematical formula:

$$EOQ = \sqrt{2ab/c}$$

Where,

- a* = Annual usage of inventories (units)
- b* = Buying cost per order
- c* = Carrying cost per unit

**NOTES**



**Fig. 1.14. Economic Order Quantity**

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## 1.22 TECHNIQUES BASED ON THE CLASSIFICATION OF INVENTORIES

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### A-B-C Analysis

It is the inventory management techniques that divide inventory into three categories based on the value and volume of the inventories; 10% of the inventory's item contributes to 70% of value of consumption and this category is known as A category. About 20% of the inventory item contributes about 20% of value of consumption and this category is called category B and 70% of inventory item contributes only 10% of value of consumption and this category is called C category.

#### Inventory Breakdown Between Value and Volume

Category	Volume (%)	Value (%)
A	10	70
B	20	20
C	70	10
<b>Total</b>	<b>100</b>	<b>100</b>

ABC analysis can be explained with the help of the following Graphical presentation.

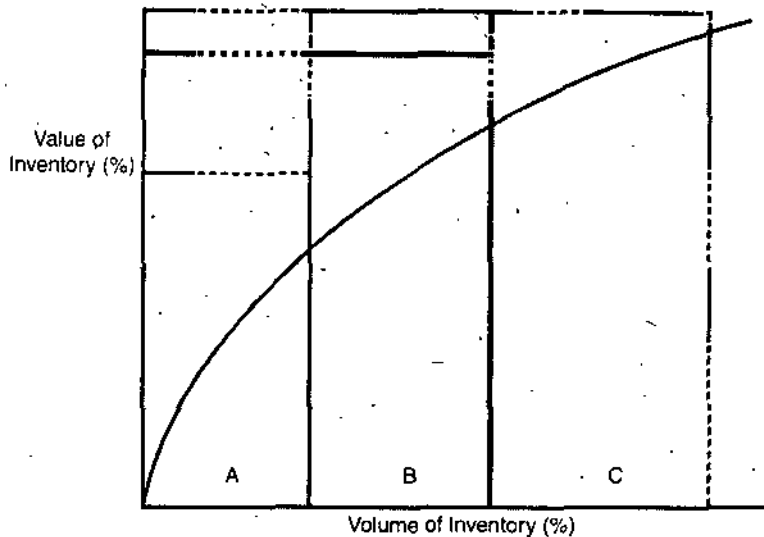


Fig. 1.15. ABC Analysis

## NOTES

### Aging Schedule of Inventories

Inventories are classified according to the period of their holding and also this method helps to identify the movement of the inventories. Hence, it is also called as, FNSD analysis— where,

F = Fast moving inventories

N = Normal moving inventories

S = Slow moving inventories

D = Dead moving inventories

This analysis is mainly calculated for the purpose of taking disposal decision of the inventories.

### VED Analysis

This technique is ideally suited for spare parts in the inventory management like ABC analysis. Inventories are classified into three categories on the basis of usage of the inventories.

V = Vital item of inventories

E = Essential item of inventories

D = Desirable item of inventories

### HML Analysis

Under this analysis, inventories are classified into three categories on the basis of the value of the inventories.

H = High value of inventories

M = Medium value of inventories

L = Low value of inventories

## 1.23 RECEIVABLE MANAGEMENT

### NOTES

The term receivable is defined as debt owed to the concern by customers arising from sale of goods or services in the ordinary course of business. Receivables are also one of the major parts of the current assets of the business concerns. It arises only due to credit sales to customers, hence, it is also known as Account Receivables or Bills Receivables.

Management of account receivable is defined as the process of making decision resulting to the investment of funds in these assets which will result in maximizing the overall return on the investment of the firm.

The objective of receivable management is to promote sales and profit until that point is reached where the return on investment in further funding receivables is less than the cost of funds raised to finance that additional credit.

The costs associated with the extension of credit and accounts receivables are identified as follows:

- A. Collection Cost
- B. Capital Cost
- C. Administrative Cost
- D. Default Cost.

### **Collection Cost**

This cost incurred in collecting the receivables from the customers to whom credit sales have been made.

### **Capital Cost**

This is the cost on the use of additional capital to support credit sales which alternatively could have been employed elsewhere.

### **Administrative Cost**

This is an additional administrative cost for maintaining account receivable in the form of salaries to the staff kept for maintaining accounting records relating to customers, cost of investigation etc.

### **Default Cost**

Default costs are the over dues that cannot be recovered. Business concern may not be able to recover the over dues because of the inability of the customers.

## Factors Considering the Receivable Size

Receivables size of the business concern depends upon various factors. Some of the important factors are as follows:

### 1. Sales Level

Sales level is one of the important factors which determines the size of receivable of the firm. If the firm wants to increase the sales level, they have to liberalise their credit policy and terms and conditions. When the firms maintain more sales, there will be a possibility of large size of receivable.

### 2. Credit Policy

Credit policy is the determination of credit standards and analysis. It may vary from firm to firm or even some times product to product in the same industry. Liberal credit policy leads to increase the sales volume and also increases the size of receivable. Stringent credit policy reduces the size of the receivable.

### 3. Credit Terms

Credit terms specify the repayment terms required of credit receivables, depend upon the credit terms, size of the receivables may increase or decrease. Hence, credit term is one of the factors which affects the size of receivable.

### 4. Credit Period

It is the time for which trade credit is extended to customer in the case of credit sales. Normally it is expressed in terms of 'Net days'.

### 5. Cash Discount

Cash discount is the incentive to the customers to make early payment of the due date. A special discount will be provided to the customer for his payment before the due date.

### 6. Management of Receivable

It is also one of the factors which affects the size of receivable in the firm. When the management involves systematic approaches to the receivable, the firm can reduce the size of receivable.

## NOTES

## SUMMARY

- Working capital is described as the capital which is not fixed but the more common uses of the working capital is to consider it as the difference between the book value of current assets and current liabilities.

NOTES

- "Working Capital means Current Assets".
- "The sum of the current asset is the working capital of a business".
- "Working Capital refers to a firm's investment in short-term assets, cash, short-term securities, accounts receivables and inventories".
- "Any acquisition of funds which increases the current assets, increase working capital also for they are one and the same".
- "Working Capital is the amount of funds necessary to cover the cost of operating the enterprises".
- "Circulating capital means current assets of a company that are changed in the ordinary course of business from one form to another, for example, from cash to inventories, inventories to receivables, receivables to cash".
- Determining the finance mix is an important part of working capital management. There are three basic approaches for determining an appropriate Working Capital finance mix:
  1. Hedging or matching approach
  2. Conservative approach
  3. Aggressive approach.
- The working capital requirements of a firm depend on a number of factors. Sales alone will not determine the size of the working capital, but instead it is constantly affected by the criss-crossing economic currents flowing in a business. The nature of the firm's activities, the industrial health of the country, the availability of materials, the ease or tightness of the money market, are all parts of these shifting forces.
- As per the accountants, working capital is a liquidation concept. The efficiency of working capital management finally depends upon the liquidity that is maintained by the firm. Though several other factors may decide the liquidity of a firm, changes in the cash flows consequent upon the changes in working capital items are highly pertinent.
- Profit is considered an indicator of operational efficiency of the firm. Profitability of a firm is measured on the following two bases:
  1. Based on Sales
  2. Based on Investment
- Management of Working Capital is also an important part of financial manager. The main objective of the Working Capital Management is managing the Current Asset and Current Liabilities effectively and maintaining adequate amount of both Current Asset and Current Liabilities. Simply it is called Administration of Current Asset and Current Liabilities of the business concern.

maintaining adequate amount of both Current Asset and Current Liabilities. Simply it is called Administration of Current Asset and Current Liabilities of the business concern.

- The dictionary meaning of the inventory is stock of goods or a list of goods. In accounting language, inventory means stock of finished goods. In a manufacturing point of view, inventory includes, raw material, work in process, stores, etc.
- Inventory management consists of effective control and administration of inventories. Inventory control refers to a system which ensures supply of required quantity and quality of inventories at the required time and at the same time prevent unnecessary investment in inventories.
- Management of account receivable is defined as the process of making decision resulting to the investment of funds in these assets which will result in maximizing the overall return on the investment of the firm.

## NOTES

### REVIEW QUESTIONS

1. What is working capital? Define it.
2. Discuss the concept of working capital?
3. What are the types of working capital?
4. Explain the needs of working capital.
5. Explain different approaches to the determination of working capital. As a new entrepreneur, which of the three broad approaches would you prefer and why?
6. What are the various factors influencing the determination of working capital?
7. Illustrate, using hypothetical data, how working capital requirements are assessed using operating cycle concept.
8. Explain the concepts of Liquidity and Profitability.
9. Bring out the effects of liquidity on the survival of a firm.
10. Is profit equivalent to exploitation? Argue.
11. Profitability and working capital are related in many ways; what are they?
12. Illustrate with examples the tradeoff between liquidity and profitability.
13. Discuss the objectives of inventories.
14. Explain various inventory control techniques.
15. What are the techniques of classification of inventory?
16. Explain the motives of holding cash.

## FURTHER READINGS

### NOTES

- *Working Capital Management*, Dr. M.K. Rastogi, University Science Press.
- *Capital Market and Investment Management*, Dr. M.S. Khan, S.M. Faisal, University Science Press.





# UNIT II MANAGEMENT OF CASH AND MARKETABLE SECURITIES

## NOTES

### ★ STRUCTURE ★

- 2.0 Learning Objectives
- 2.1 Introduction
- 2.2 Motives of Holding Cash
- 2.3 Determinants of Cash Flows
- 2.4 Objectives of Cash Management
- 2.5 Cash Management Model
- 2.6 Budgeting and Budgetary Control
- 2.7 Meaning and Nature of Budgetary Control
- 2.8 Objectives of Budgetary Control
- 2.9 Cash Management: Basic Strategy
- 2.10 Process of Cash Management
- 2.11 Advantages of Budgetary Control
- 2.12 Limitations of Budgetary Control
- 2.13 Classification of Budgets
- 2.14 Compensating Balances: Steps in Preparation of Flexible Budget
- 2.15 Preparation of Cash Budget
- 2.16 Zero Base Budgeting
- 2.17 Steps for Preparation of Zero Base Budgeting
- 2.18 Benefits of Zero Base Budgeting
- 2.19 Limitations of Zero Base Budgeting
- 2.20 Management of Marketable Securities
- 2.21 Need for Investment in Securities
- 2.22 Types of Marketable Securities
- 2.23 Options for Building Market Securities
- 2.24 Alternative Strategy
- 2.25 Choices of Securities
  - *Summary*
  - *Review Questions*
  - *Further Readings*

## 2.0 LEARNING OBJECTIVES

*After going through this unit you should be able to:*

- define meaning of cash and motives for holding cash.
- illustrate objectives of cash management and cash management models.
- describe about cash management through its strategies, techniques and processes.
- state market securities.
- explain cash management practices in India.

### NOTES

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## 2.1 INTRODUCTION

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Cash is basic input to start a business unit. Cash is initially invested in fixed assets like plant and machinery, which enable the firm to produce products and generate cash by selling them. Cash is also required and invested in working capital. Investments in working capital are required because firms have to store certain quantity of raw materials and finished goods and provide credit terms to the customers. The cash invested in raw materials at the beginning of working capital cycle goes through several stages (work-in-progress, finished goods and sundry debtors) and gets released at the end of cycle to the fund fresh investment needs of raw materials. The firm needs additional cash during its life whenever it needs to buy more fixed assets, increase the level of operations and any change in working capital cycle such as extending credit period to the customers. In other words, the demand for cash is affected by several factors and some of them are within the control of the managers and others are outside the control of the managers. Cash management thus, in a broader sense is managing the entire business.

In the context of working capital management, cash management refers to optimising the benefits and costs associated with holding cash. As described earlier, unless the cash is put into use, there is no benefit derived out just by holding it. Further, holding cash without a purpose also costs firm either directly in the form of interest or opportunity income that could be earned out of the cash. At the same time, it is not possible to operate the business without holding cash. Many of us take cash while going to office though we have bought the tickets earlier and taking lunch with us or have a credit facility to take lunch.

Though no major demand for cash is expected, we feel uncertain without cash. Firms also feel uncertain without holding cash for various reasons. For instance, any delay in collection will force the firm to delay the salary to employees or payment to creditors or bankers which in turn affects long-

**NOTES**

term relationship with them. Firms, which are experiencing volatile price behaviour in some of the critical raw materials, would like to have more cash to buy the material, whenever the price is low. There are several other motives of holding cash and we will shortly discuss these motives in detail.

The objective of cash management is to balance the cost associated with holding cash and benefits derived out of holding the cash. The objective is best achieved by speeding up the working capital cycle, particularly the collection process and investing surplus cash in short-term assets in most profitable avenues. The term 'cash' under cash management thus refers to both cash and credit balance in the bank and short-term investments in marketable securities. Table 2.1 shows total amount invested in cash and marketable securities of few industries. The figures in the Table shows that investment in cash and marketable securities is huge and has gone up several times in reflection to growth of operations. Investments in cash and marketable securities also show significant differences between industries even after taking into account the differences in the number of firms in different industries.

**Table 2.1: Investments in Cash and Marketable Securities of Manufacturing Industries (Rupees in Crores)**

Industry	1999	2000	2001	2002	2003
Food and Beverages	2306.34	2424.03	2372.82	2585.53	3014.78
Textile	2460.09	1884.74	2489.38	2506.74	2625.73
Chemicals	12287.85	13337.33	13618.50	17504.49	18334.49
Non-metallic	1289.58	1135.09	1369.33	1349.02	1449.67
Minerals Products					
Metals and Products	5143.03	5188.58	6362.79	6050.11	7325.18
Machinery	8926.23	9986.02	11714.53	15334.53	18197.25
Transport Equipment	5998.40	5419.28	5744.91	5871.66	7933.06
Diversified	9852.56	9242.45	7208.94	7467.43	6849.64
Miscellaneous	721.01	1040.25	948.77	953.74	1617.11
Total	48985.09	49657.77	51829.97	59623.25	67346.91

*Note: Figures given indicate the number of companies of the industry used to compile industry aggregates. Thus, while structuring cash management policy, the firm has to consider the internal business process and external environment. The important issues relating to management of cash are:*

- *Understanding the motives behind holding the cash;*
- *Quantifying the cash needs of the firms to achieve the above motives; and*
- *Developing a cash management model to enable operating managers to take decisions on investing surplus cash and selling investment to fund shortage.*

## 2.2 MOTIVES OF HOLDING CASH

### NOTES

Fixed assets are used to convert the raw materials into finished goods. Investments in current assets cannot be avoided due to constraints in technology, manufacturing process and customers behaviour of demanding different models at a point close to her/his house and at the point of consumption. Inventory and bills receivables have become essential to continue business operations more fruitfully.

Emphasis is always given to reduce the investments in these assets and thus reduce the working capital cycle. Investment in cash and marketable securities are the least productive assets. Often, firm is not dependent on this asset in the manufacturing process nor is required for creating inventory or selling. Thus, the basic question is why firms hold cash and marketable securities? Some of the reasons for holding cash are listed below.

**Transaction Motive:** Money is required to settle customers' bills, pay salary and wages to workers, pay duties and taxes, etc. Some cash balance is to be maintained to complete these transactions. The amount to be maintained for the transaction motive depends on the cash inflows and outflows. Often, firms prepare a cash budget by incorporating the estimates of inflows and outflows to know whether the cash balance would be adequate to meet the transactions.

**Precautionary or Hedging Motive:** The transaction motive takes into account the routine cash needs of the firm. It is also based on the assumption that inflows are as per estimation. However, the future cash needs for transaction purposes are uncertain. The uncertainty arises on account of sudden increase in expenditure or delay in cash collection or inability to source the materials and other supplies on credit basis. The firm has to protect itself from such contingencies by holding additional cash. This is called as precautionary motive of holding cash balance. Precautionary cash balance is also maintained to meet the non-routine needs. Generally, cash required for precautionary motive is held in the form of short-term securities with the objective to earn atleast some positive return. The securities are sold and cash is realised as and when such emergency demand for cash arises.

**Speculative Motive:** If the firm intends to exploit the opportunities that may arise in the future suddenly, it has to keep some cash balance. The term "speculative motive" to some extent is a misnomer since cash is not kept to conduct any speculation but merely to exploit opportunity. This is particularly relevant in commodity sector, where the prices of material fluctuate widely in different periods and the firm's business success depends on its the ability to source the material at the right time. Some of the materials, whose prices

show significant volatility, are cotton, aluminium, steel, chemicals, etc. Surplus cash is also used for taking over of other firms. Firms that intend to take advantage on the above counts keep large cash balances with them, though the same are not required either for transactions or as a precaution.

**Managing uneven supply and demand for cash:** Firms generally experience some seasonality in sales, which leads to excess cash flows in certain period of the year. This is not permanent surplus and cash is required at different points of time. One possible solution to address this mismatch of cash flows is to pay off bank loans whenever there is excess cash and negotiate fresh loan to meet the subsequent demands. Since firms are exposed to some amount of uncertainty in getting the loan proposal sanctioned in time, the surplus cash is retained and invested in short-term securities.

In a competitive environment, firms also felt the desire of holding cash to get flexibility in meeting competition. For instance, when a competitor suddenly resort to massive advertisement and other product promotion, it forces other firms to increase advertisement cost or some other sales promotion such as "free gift" for every purchase or lottery scheme, etc.

## NOTES

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### 2.3 DETERMINANTS OF CASH FLOWS

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Investments in cash and marketable securities depend on the cash flow of the firm. Firms, which primarily sell the product against cash (e.g., petroleum products, gold, etc.) may not require much cash balance to be maintained since there is always cash inflows to the firm. Banks and insurance companies, which receive cash on regular intervals, can work with smaller cash balance at branch level. On the other hand, firms in a competitive industry which have to extend credit to the customers need to maintain large amount of cash to meet different motives of holding cash. Cash flows are also affected by several other factors, which can be broadly classified into internal and external factors.

#### Internal Factors

Internal factors relate to policies of management relating to working capital components and future growth plan. These factors are determined by the firm and arising out of management decisions. The internal factors that affect the cash flows of firms are discussed below.

*Production-related policies:* Production-related policies determine production plan, which in turn affect, purchase of material and other components and level of finished goods. For example, firms that follow production policy of manufacturing for inventory and then selling the product in the market will normally carry high volume of material and other inventory in order to

## NOTES

ensure smooth production process. The increase in purchase activity will demand more cash compared to other firms, which follow order-based production policy. Similarly, if production process is automated, then the demand for cash to pay wages to workers will come down significantly. Firms following JIT, MRP, FMS, etc., could reduce the general level of inventory and they also favourably contribute to the demand for cash.

*Policies on Discretionary Expenses:* Expenses not directly connected to the manufacturing process, which have some amount of flexibility in timing the expenditure are called discretionary expenses. Examples of discretionary expenses are Research & Development cost, advertisement, replacement of a machine before its life, etc. Some of the discretionary expenditure is planned in advance whereas in other cases, the need arises suddenly. The management policy on sanctioning discretionary expenses has a bearing on the cash flow. If management follows a flexible policy and allows the expenses after seeing the current cash position, the pressure on cash will come down significantly.

*Policies on Receivables:* The policies on trade receivable, which is last stage of operating cycle, affect the cash flow. The credit period and cash discount together determine the flow of cash. While liberal credit policy delays cash flow, attractive discount policy speeds up the collection process.

*Financial Policies:* Firms, which pursue active capital expenditure programme in the form of new projects or expansion, need cash. While part of resources is raised externally in the form of fresh debt or equity, the balance is expected from the internal surplus. The financing policy of the firm determines the cash flow. Internal funding is also expected to meet any delay in raising external sources. These firms may require more cash to meet such eventuality. Similarly, the dividend policy of the firm affects the cash flow. Firms, which follow liberal dividend policy, will put pressure on internal cash flows.

*Payment Policies:* The ability to get credit terms for purchases of materials and other products and services also affects the cash flow. If the firm maintains creditworthiness, it could always find it easy to source material and other items on credit basis. On the other hand, if materials and other items are to be bought on cash basis or only limited credit period is available, the demand for cash increases.

### External Factors

External factors can be broadly classified into monetary and fiscal factors and industry-related factors. These are discussed below.

*Monetary and Fiscal Factors:* The central bank (Reserve Bank of India) periodically spells out monetary policies and through which influences the availability of money. The monetary policy in turn is affected by the fiscal factors of the country. In a liberal monetary policy regime, it will not be

difficult to get credit from banks as well as from suppliers of material and services. Thus, the need for holding cash is thus limited to transaction motive. Cash required for precautionary and speculative motives can be easily raised.

*Industry-related factors:* Industry-related factors affect the cash flow in the form of practices followed by other firms in the industry on terms of sale and nature of material and services required. Cash flow will be positive in retail industry. Cash flow will be cyclical for industries such as plantation and agrobased products. Cash flow is volatile in certain industries like entertainment and hospitality industry. Cash flow is generally negative for manufacturing industries. Depending on the nature of cash flow relating to the industry, the demand for holding cash is determined.

## NOTES

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## 2.4 OBJECTIVES OF CASH MANAGEMENT

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Cash flow forecast is crucial in cash management. Thus, the efficiency of cash management is directly related to the ability to accurately forecast cash flows. Unfortunately, two important cash flow variables namely sales and collection carry a lot of uncertainty and thus affects the cash flow forecast. It is also difficult to adjust the production and purchasing activity immediately in reaction to the lower sales and there is always some time lag between decline in sales and actual adjustment in manufacturing activities. Sales and collection pattern are affected by several variables and most of them are external factors such as competition from internal and external market, seasonality, changes in consumers' taste, recession in the market, government policy, etc. Firms have little control on these variables. Recognising and managing cash flow variation is thus another important issue in cash management. There are several methods through which firms recognise and manage the uncertainty associated with cash flow variation.

**Sensitivity Analysis:** The impact of changes in cash flow variables on cash balance is examined through sensitivity analysis. The objective of the analysis is to determine the most sensitive cash flow variables that will place the cash management in a difficult position. This information is useful to evaluate the possibility of cash flow variable affected to that extent, plan to ensure that the cash flow variable is within the normal limit and prepare a contingency plan.

**Scenario Analysis:** Here cash flows are forecasted under different assumptions and cash requirement under different scenarios is worked out. Depending on the level of risk taking capability, firm selects a scenario and uses it for cash management.

**Simulation Analysis:** It is an extension of scenario analysis. In scenario analysis, the user defines possible scenarios and the computer generates the

cash forecast. In simulation, the computer is allowed to generate various scenarios based on random numbers. Since a large number of scenarios are generated, it is possible to define the distribution of cash flow forecast and uncertainty associated with the forecast. This is discussed in more detail in the previous section.

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**Holding a Stock of Extra Cash or Near-Cash Asset:** This is the simplest solution to manage the uncertainty associated with the forecasting of cash flow. This is relied upon when the level of uncertainty is high.

**Extra Borrowing Capacity:** If the uncertainty analysis model helps to figure out the period in which the firm is likely to face serious problem of cash management, then it is worth to negotiate with bankers or other financing agencies well in advance for additional temporary credit. It is possible to have a standby arrangement with the bank or financial intermediaries.

**Using Interest-Rate Derivatives:** If uncertainty in cash flows is on account of expected changes in the interest rate affecting the interest income or interest payments, the interest-rate derivatives such as interest rates futures and interest rate options are useful to manage this part of risk.

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## 2.5 CASH MANAGEMENT MODEL

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The preparation of cash budget based on forecast of cash flows is only the starting point of cash management. It is the planning part of cash management. The forecast of cash flows and budget exercises help the management to locate cash deficient and surplus periods. Managers decide on dealing with the deficit and surplus, which is decision-making part of cash management. The exercise is completed, if the control element is also brought into the cash management system. The control element is required since the operations of the business enterprise may often deviate from the plan. It is very common that wide deviation arises between planned and actual cash flows, which keeps the financial managers always under severe pressure. Often, attention of the managers is drawn after the problem developed to a full level. Thus, the crucial issue in cash management is continuous information on actual cash flows and reporting of deviation. Minor deviation can be tackled by postponing certain discretionary payments or speedy collection of book debts by offering cash discounts. If the deviation is expanding, it requires major corrections in the form of negotiating fresh loan with bankers and improving the collection mechanism. Such corrective actions are possible by developing a good reporting system that highlights such deviations without loss of time. The daily cash report is the best vehicle for obtaining a running comparison between the forecast and actual cash flows.



Daily cash reporting is useful even if cash budget and forecast are not available on daily basis. It helps the managers to understand the flow of cash on daily basis and a comparison of cumulative figures with the budget indicates the target still to be achieved to keep the budget in force. In addition, the reporting on daily basis to top management forces the operating people to work efficiently. This is very useful since accounting profit cannot be computed on daily basis and available only at the end of quarter.

Meaningful analysis can be done by consolidating cash flows on daily basis into two documents namely Cash Flow Budget-Actual Variance Analysis and Cumulative Cash Flow Statement for the year to date. The formats for the two reporting documents are given below.

**NOTES**

**Table 2.2: Cash Flow Budget-Actual Variance Analysis from  
..... to .....**

Cash Flow Item	Budget	Actual	Variance	Remarks
Begining cash balance				
Collection from sales/receivables				
Total				
Disbursements				
Suppliers				
Payment of Salaries and Wages				
Other Overhead Rxpenses				
S and A Expenses				
Total				
Excess/-Inadequacy				
Minimum Balance				
Cash available/-				
Needed(A)				
Financing				
Borrowing/-Repayment				
Fresh Equity Issue				
Sell/Acquire Investments				
Payment to Fixed Assets				
Receive/pay interest				
Dividend				
Total of Financing plan (B)				
Closing Cash Balance (A-B)				

**Table 2.3: Cumulative Cash Flow Statement For the  
Year-to-Date**

**NOTES**

Cash Flow Item	Budget for the year	Performance till Date	Target for the Remaining Period
Collection from sales/ receivables			
Total			
Disbursements			
Suppliers			
Payment of Salaries and Wages			
Other Overhead Rxpenses			
S and A Expenses			
Total			
Excess/-Inadequacy			
Financing			
Borrowing/-Repayment			
Fresh Equity Issue			
Sell/Acquire Investments			
Payment to Fixed Assets			
Receive/-pay interest			
Dividend			
Total of Financing plan.			

A variety of cash reports designed for specific needs of individual companies are in vogue for checking cash flows and ensuring constant availability of adequate cash. For example, if the firm has only a few large customers, the top management would like to have customer-wise cash collection reporting to speed up the process of collection at the highest level. The information collected from these statements is useful to fix responsible centres for variance and initiate corrective steps, which are essential steps in control exercise. The corrective steps include short-term efforts such as speeding up the collections by chasing a few large customers and long-term policy changes such as revising credit period or credit-granting decision.

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## 2.6 BUDGETING AND BUDGETARY CONTROL

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Planning is a management function. In this competitive environment, the business enterprise becomes successful only with planning. Plans are framed to achieve better results. However, planning for the sake of it is of no use.

Plans should work to achieve the results planned. This is possible through co-ordination, as all the tasks cannot be performed, in isolation. Where more than one individual is involved; only co-ordination can bring the required results. For it, control is needed. Management is termed efficient, if maximum results are achieved with minimum costs and efforts. To achieve the anticipated targets, planning, co-ordination and control are the important main tasks of management, achieved through budgeting and budgetary control.

### Meaning of Budget and Budgeting

A budget is a monetary and/or quantitative expression of business plans and policies, prepared in advance, to be pursued in the future period of time. According to Certified Institute of Management Accountants, Budget is defined as "A budget is a financial and/or quantitative statement prepared prior to a defined period of time, of the policy to be pursued during that period for the purpose of attaining the objective". In brief, it is a systematic plan for utilisation of manpower and other resources. It acts as a barometer of a business as it measures the success from time to time, against the standard set for achievement. Budgeting is a technique for formulating budgets.

**Characteristics of a Budget:** The main characteristics of a budget are:

1. A comprehensive business plan showing what the enterprise wants to achieve
2. Prepared in advance
3. For a definite period of time
4. Expressed in quantitative form, physical or monetary terms, or both
5. For achieving a given objective
6. A proper system of accounting is essential
7. System of proper fixation of authority and responsibility has to be in place.

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## 2.7 MEANING AND NATURE OF BUDGETARY CONTROL

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Budgetary control is the process of determining various budgeted figures for the enterprise and then comparing the actual performance with the budgeted

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figures for calculating the variances, if any. In this process, first budgets are to be prepared. Second, actual results are to be recorded. Third, comparison is to be made between the actual with the planned action for calculating the variances. Once the discrepancies are known, remedial measures are to be taken, at proper time. Then only, planned results can be achieved. A budget is a means and budgetary control gives the end result.

**Definition of Budgetary Control:** The Chartered Institute of Management Accountants, London, defines the Budgetary Control as *"The establishment of budgets relating to the responsibilities of executives to the requirements of a policy, and the continuous comparison of the actual with the budgeted result, either to secure by individual action the objective of the policy or to provide a basis for its revision"*. Thus, establishment of budgetary control involves the following:

1. Establishment of budgets.
2. Continuous comparison of actual with the budgets for achievement of targets and fixing the responsibility for failure to achieve the budget figures.
3. Revision of budgets in the light of changed circumstances.

The position of budgetary control can be likened or compared to the navigation of a ship, across the seas. The navigating officer works out the course ahead and records the happening of the position of the ship from hour to hour in a log-book. To navigate the ship across the seven seas, safely, the captain wants the navigating officer to check his ship's position, constantly, against the predetermined one. If the ship is off its course, the navigating officer must report, immediately, to the captain for prompt action to regain the course. Valuable lessons are learnt by the captain of the ship from a study of the factors that have caused misadventure in the past.

Exactly, so it is with the industrial ship. What the modern management requires for day to operating purposes is detailed forecasts and immediate reporting of variances, with explanations of the reasons for variations. This facilitates the management to take the required corrective action by the persons who are made responsible, but contributed for the failure.

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## 2.8 OBJECTIVES OF BUDGETARY CONTROL

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The main objectives of budgetary control are as under:

1. To co-ordinate the activities of different departments.
2. To operate various cost centres and departments with efficiency and economy.

3. Fixation of responsibility of various individuals in the organisation.
4. To ensure a system for correction of deviations from established standards.
5. To centralise the control system and
6. To ensure planning for future by setting up various budgets.

## NOTES

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### 2.9 CASH MANAGEMENT: BASIC STRATEGY

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The following requisites are essential for effective budgetary control system.

1. **Determination of the Objectives:** There should be clear perspective of the objectives to be achieved through the budgetary control system. In most of the cases, the basic objective is to achieve desired/increased profits. To achieve, the following problems are to be sorted out:

- (A) Laying down the Plan for implementation to achieve the objectives,
- (B) Bringing co-ordination amongst the different departments and
- (C) Controlling each function so as to bring the best possible results.

The steps needed to be followed to achieve the above are explained further here.

2. **Proper Delegation of Authority and Responsibility:** The first step is to have clear organisation chart explaining the authority and responsibility of each individual executive. Gement There should be no uncertainty regarding the point when the jurisdiction of one authority ends and that of another begins.
3. **Proper Communication System:** The flow of information should be quick so that the budgets are implemented. Two way communications is important. What is required to be achieved and how it is to be achieved should reach the lowest level. Similarly, upward communication in respect of implementation difficulties should reach the top level to sort out, without loss of time. The performance reports at the various levels help the management in monitoring and leading to the achievement of the budgeted goals.
4. **Participation of All Employees:** Budget preparation and control are done at the top level. However, involvement of all persons, including at the lower level, is necessary in framing the budget and its implementation for the success of budgetary control. In practice, budgets are executed at the lower level. With experience, they can offer practical suggestions that can lead to success. The success depends more on the active participation of all employees of the organisation.
5. **Flexibility:** Future is uncertain, despite the best planning and foresight, still there may be occurrences that may require adjustments. Budgets

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should work in the changed circumstances. Flexibility in budgets is required to make them work under changed circumstances.

- 6. Motivation:** Budgets are executed by human beings. There should be incentive in achieving the required targets. All persons should be motivated to improve their working to achieve the goals set in the budgets.

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## 2.10 PROCESS OF CASH MANAGEMENT

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In order to have effective budgetary control system, it is appropriate to take the following steps:

- 1. Budget Manual:** This is a written document specifying the objectives and procedures of budgetary control. It spells out the duties and responsibilities of executives. The budget manual defines the sanctioning powers of the various authorities.
- 2. Budget Centres:** A budget centre is that part of organisation for which the budget is prepared. Budget centre can be a department, section of a department or any other part of department. Budget centres are necessary for the purpose of ascertaining cost, performance and its control.
- 3. Budget Committee:** In a large concern, all the functional heads are the members of the budget committee. They discuss their respective budgets and finalise the budget, after collective decisions. The committee is responsible for its execution and achievement of the goals set.
- 4. Budget Officer:** The chief executive appoints some person as the budget officer. He is conversant with the functioning of the various departments. All budgets are presented to him who places before the budget committee, after making the necessary changes, for its approval. The actual performance of each department is communicated to the budget officer. He determines the variances, analyses the reasons and reports to the top management to take the necessary steps to remove the deviations. As the convenor of the budget committee, his function is co-ordination to ensure achievement of the budgeted targets.
- 5. Budget Period:** A budget period is the length of the period for which budget is prepared. Normally, budgets like purchases and sales budgets are prepared for one year. However, a capital expenditure budget is prepared for a longer period i.e., 3 to 5 years.
- 6. Determination of Key Factor:** Budgets are prepared for all the functional areas such as production, sales, purchases, finance, human resources and research and development. These activities are inter-connected and inter-dependent and so the budgets are. For example, raw material supply may be limited. So, production and sales budgets are

prepared based on the purchase budget. To some of the firms, finance may be a constraint. Then, all other budgets are prepared based on the availability of finance. A factor, which influences all other budgets, is known as key factor or principal factor. A better co-ordination brings better performance, even while facing constraints.

The influence of key factor may neither be permanent nor the same factor may be constant. Limited supply of raw materials may be the key factor till an alternative source of supply for that material is found. When the raw material supply problem is cleared, another factor may create the problem and assume the role of key factor. After raw materials problem is eased, sales may become a problem and turn to be a key factor, due to change in trends. The management would be constantly endeavouring to remove the problems associated with key factor for better performance.

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### 2.11 ADVANTAGES OF BUDGETARY CONTROL

Ans - 4

Budgetary control acts as an important tool for the management to economise costs and maximize profits. The system helps the management to set the goals. The current performance is compared with the pre-planned performance to ascertain deviations so that corrective measures are taken, well at the right time. In this way, budgetary control system acts as a friend, philosopher and guide to the management. The following are the advantages of budgetary control system.

- 1. Profit Maximisation:** The resources are put to best possible use, eliminating wastage. Proper control is exercised both on revenue and capital expenditure. To achieve this, proper planning and co-ordination of various functions is undertaken. So, the system helps in reducing losses and increasing profits.
- 2. Co-ordination:** The budgets of various departments have a bearing with each other, as activities are inter-related. As the size of operations increases, co-ordination amongst the different departments for achieving a common goal assumes more importance. This is possible through budgetary control system.
- 3. Communication:** A budget serves as a means of communicating information through out the organisation. A sales manager for a district knows what is expected of his performance. Similarly, production manager knows the amount of material, labour and other expenses that can be incurred by him to achieve the goal set to him. So, every department knows the performance expectation and authority for achieving the same.

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4. **Tool for Measuring Performance:** Budgetary control system provides a tool for measuring the performance of various departments. The performance of each department is reported to the top management.
5. **Economy:** Planning at each level brings efficiency and economy in the working of the business enterprise. Resources are put to optimum use to achieve economy. All this leads to elimination of wastage and achievement of overall efficiency.
6. **Determining Weaknesses:** Actual performance is compared with the planned performance, periodically, and deviations are found out. This shows the variances highlighting the weaknesses, where concentration for action is needed.
7. **Consciousness:** Budgets are prepared in advance. So, every employee knows what is expected of him and they are made aware of their responsibility. So, they do their job uninterrupted for achieving what is set to him to do.
8. **Timely Corrective Action:** The deviations will be reported to the attention of the top management as well as functional heads for suitable corrective action, in time. In the absence of budgetary control, deviations would be known, at the end of the period, and there is no time and opportunity for necessary corrective action.
9. **Motivation:** Success is measured by comparing the actual performance with the planned performance. Suitable recognition and reward system can be introduced to motivate the employees, at all levels, provided the budgets are prepared with adequate planning and foresight.
10. **Management by Exception:** The management is required to exercise action only when there are deviations. So long as the plans are achieved, management need not be alerted. This system enables the introduction of 'Management by Exception' for effective delegation and control.

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## 2.12 LIMITATIONS OF BUDGETARY CONTROL

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Budgetary control is a sound technique of control but is not a perfect tool. Despite many good points, it suffers from the following limitations:

1. **Uncertainty of Future:** The budgets are prepared for the future periods. So, budgets are prepared with certain assumptions. There is no certainty that all the assumptions prevail in future. With the change in assumptions, the situation in future changes. Due to this, the utility of budgetary control reduces.
2. **Problem of Co-ordination:** The success of budgetary control, largely, depends upon effective co-ordination. The performance of one department



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- depends on the performance of the other department. To ensure necessary co-ordination, organisation appoints a budget officer. All organisations can not afford the additional expenditure involved with the appointment of a budget officer, separately. In case, budget officer is not appointed, lack of co-ordination results in poor performance.
3. **Not a Substitute for Management:** Budgetary control helps in decision-making, but is not a substitute for management. A budgetary programme can be successful, if there is proper administration and supervision.
  4. **Discourages Efficiency:** Every person is given a target to achieve. So, every one is concerned only achieving the target of his own. This is the common tendency. Even capable and competent people too would concentrate just to achieve their individual targets. So, budgets may serve as managerial constraints, unless suitable award or incentive system is introduced. In the absence of award system to recognise efficiency and exceptional talents, budgets dampen the people with initiative and enthusiasm.
  5. **Timely Revision Required:** Budgets are prepared on certain assumptions. When those conditions do not prevail, it becomes inevitable to revise the budget. Such frequent revision of budgets reduces the reliability and value. Revision of budgets involves additional expenditure too.
  6. **Conflict among Different Departments:** For the success of budgetary control, coordination of the different departments is essential. Every department is concerned with the achievement of the individual department's goal, not concerned with the final goal of the enterprise. In this process, each department tries to secure maximum fund allocation and this creates conflict among the different departments.
  7. **Depends upon Support of Top Management:** The success of budgetary control depends upon the support of top management. If the top management is not enthusiastic for its success, the budgetary control will collapse. So, the whole-hearted interest of top management is highly essential for its implementation, in its true spirit, to make it workable and succeed.

Ans-4

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## 2.13 CLASSIFICATION OF BUDGETS

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Budgets can be classified on the basis of time, function and flexibility.

1. **Classification on the basis of Time:** Budgets can be long-term and short-term. Long-term budgets relate to a period ranging from 5 to 10 years. Only the top level knows these budgets and lower level would not be aware of. These budgets are prepared for certain areas of the

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enterprise such as capital expenditure and research and development. Short-term budgets are for one or two years. Generally, budgets are prepared to coincide with the financial year so that comparison of the actual performance with budgeted estimates would facilitate better interpretation and understanding.

2. **Classification on the basis of Function:** Budgets are divided on the basis of different functions performed in the organisation. They are sales budget, production budget, purchase Budget, Direct Labour Budget, Overheads Budget, cash budget and, finally, master budget. The master or final budget is a summary budget, which incorporates all functional budgets, in a summarised form.
3. **Classification on the basis of Flexibility:** There are two types of budgets on the basis of flexibility.
  - **Fixed Budgets:** The budget is prepared on the basis of fixed level of activity. In other words, a fixed budget remains unchanged irrespective of the change in volume or level of activity. It is presumed that the forecast and the actual level of activity, both production and sales, would be one and the same. In other words, if the budget is prepared for a particular quantity of production and sales, at a particular cost, and selling price, the same should happen. Then only, this type of budgeting would be useful. Where static conditions occur, this is useful. In practical life, it does not happen on account of changes that cannot be anticipated or foreseen. It is not practically possible to anticipate the likely production and sales, accurately. Due to this limitation, fixed budgets are not followed, where the forecast cannot be done, accurately, both for production and sales.
  - **Flexible Budgets:** Flexible budget is a good budgeting technique as well as tool of control. Flexible budgets are prepared where the level of activity cannot be estimated with accuracy. This type of budget is prepared for a range of production activity say 15,000 to 25,000 units. A flexible budget recognises the difference between fixed, semi-fixed and variable cost and is designed to change in relation to the change in level of activity.

The flexible budgets will be useful where the level of activity changes and cannot be estimated at the time of preparation of budget.

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### 2.14 COMPENSATING BALANCES: STEPS IN PREPARATION OF FLEXIBLE BUDGET

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1. Decide the range of activity (say 15,000 to 25,000 units) to which the budget is to be prepared.

2. Decide the behaviour of each element of cost, which are included in the budget, into fixed, semi-fixed and variable cost.
3. Select the activity levels (say 15,000, 18,000, 20,000, 22,000 and 25,000 units) in terms of production.
4. Prepare the budget for each level of activity by associating the corresponding cost with each level of activity.

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### Differences between Fixed and Flexible Budget

Base of Difference	Fixed Budget	Flexible Budget
1. Level of activity	It is based on single level of activity.	It is based on more than one level of activity.
2. Assumptions	Assumes that conditions and level of activity remain constant.	Assumes that level of activity may change.
3. Cost classification	Costs are not classified according to their nature.	Costs are classified as per their nature i.e., fixed, semi-fixed and variable.
4. Comparison	If the level of activity changes, budget and actual cannot be compared.	If there is a change in the level of activity, budget can be recast to make it possible for comparison.
5. Adjustment	Fixed budget is not able to provide any automatic adjustment when the volume changes.	Flexible budget is automatically geared to changes in production activity.
6. Utility	A fixed budget has limited utility and it may give misleading results when level of activity changes.	Flexible budget provides wider acceptance to several organisations as it provides a reliable basis for changed level of activity.

## 2.15 PREPARATION OF CASH BUDGET

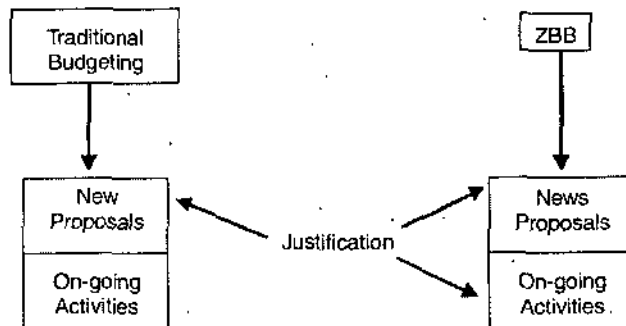
A cash budget is an estimate of cash receipts and disbursements during a future period. The anticipated cash receipts from various sources are taken into account. Similarly, the amount to be spent on various heads, both revenue and capital, are taken into cash budget. In short, it is a summary of cash intake and outlay.

## 2.16 ZERO BASE BUDGETING

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**Meaning of Zero Base Budgeting:** Zero base budgeting is the latest technique of budgeting. Initially, the former President of America, Jimmy Carter, has developed this technique when he was working as the Governor of Gorgia for controlling state expenditure.

**The term 'Zero Base Budgeting' means starting from the scratch.** In zero base budgeting, justification of expenditure is to be made for the past as well as new projects. In the traditional budgeting, the figures of the previous years are taken as base and additions are made for the current year. But, in zero base budgeting, even the running projects are to be justified for continuation. If the past projects were allowed to continue, without justification, the past inefficiencies would continue, automatically. So, the manager has to justify why he wants to spend. The manager has to justify the essentiality of the new projects for their starting and continuation of previous projects, every year. Equally, the concerned manager has to justify the amount of spending there on is reasonable.



Zero-Base Budgetingh

### Differences between Traditional Budgeting and Zero Base Budgeting

The differences between the two are as under:

Base of Difference	Fixed Budget	Flexible Budget
1. Emphasis	Lays emphasis on 'How much'	Lays emphasis pn 'Why'
2. Focus	Focus is on increase or decrease in expenditure.	Focus is on cost benefit analysis.
3. Communication	Communication is usually vertical.	Communication is, usually, both vertical and horizontal.
4. Approach	Past is taken for granted and never questioned for continuation.	Past is questioned and justification needed for continuation and fund allocation.

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## 2.17 STEPS FOR PREPARATION OF ZERO BASE BUDGETING

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The following steps are involved in Zero Base Budgeting:

- (A) **Determining the Objectives:** Determination of the objectives is the first step. The objective can be cost reduction in staff overheads or dropping those projects that do not fit in the organisational objectives.
- (B) **Extent of Coverage:** It relates to the decision whether Zero Base Budgeting is to be introduced in all areas or certain select areas on trial basis.
- (C) **Developing Decision Units:** Decision can be a functional department, a programme, a product-line or sub-line. Each decision unit must be independent. Then only, they come under consideration. Cost benefit analysis is to be done to the decision units. Decision is to be taken whether the units are to be continued or dropped. If the cost benefit analysis is favourable, the decision unit can be implemented, otherwise can be dropped. If the decision unit is dropped, no further thinking is needed for those decisions.
- (D) **Developing Decision Packages:** This is the most important step involved in the ZBB process. After decision for selection of the units, the concerned manager of the activity is given the freedom to come out with the alternatives to achieve. He summarises the plans and resources required to achieve.
- (E) **Preparation of Budgets:** This is the last stage involved in ZBB process. Once the top management has ranked the various decision packages keeping in view of the cost benefit analysis and availability of funds, a cut-off point is established. All packages (programmes, products etc) which come within the cut-off point are accepted and others rejected. The resources are then allocated to the different decision units and budgets relating to units are approved.

The above analysis shows that the Zero Base Budgeting is simply extension of the Cost Benefit Analysis method to the area of corporate budgeting.

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## 2.18 BENEFITS OF ZERO BASE BUDGETING

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ZBB is a revolutionary concept. The benefits are as under:

1. **Proper Allocation of Funds:** Priority in allocation of funds is made on cost-benefit analysis.

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2. **Systematic Evaluation:** Every manager has to justify the demand for resources. So, it provides the organisation a systematic way to evaluate different programmes and operations undertaken.
3. **Links Budgets with Goals of Enterprise:** Those projects that do not fit in within the overall goals of the enterprise are not continued, even if they were commenced. Goal oriented approach of the enterprise would be developed.
4. **Improvement of Efficiency:** Only those activities and programmes that are essential only will be undertaken which improves the efficiency of the enterprise. Alternative courses of action will be studied and economies would be achieved, eliminating wastage.
5. **Optimum use of Resources:** As cost-benefit analysis is the guiding principle in fixing priorities, resources are used to the optimum advantage of the organisation.

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## 2.19 LIMITATIONS OF ZERO BASE BUDGETING

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In spite of the many advantages, it suffers from the following limitations:

1. Computation of cost-benefit analysis is essential for ZBB. This is not possible in respect of non-financial matters.
2. The system of ZBB has no scope to adjust for changes and so flexible budgeting is not possible.
3. ZBB involves lot of time and cost of operating is also high.
4. Formulation of decision package is a difficult process and all the managers may not have the necessary expertise.
5. ZBB has no scope in flexible budgeting.

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## 2.20 MANAGEMENT OF MARKETABLE SECURITIES

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Cash and marketable securities are normally treated as one item in any analysis of current assets. Holding cash in excess of immediate requirement means the firm is missing out an opportunity income. Excess cash thus is normally invested in marketable securities, which serves two purposes namely, provide liquidity and also earn a return. Marketable securities form a major component of cash and marketable securities. In Table 2.4, the investment in marketable securities of different industries along with its composition as a percentage of cash and marketable securities is given.

## NOTES

The table 2.4 shows that the marketable securities constitute around 50% of the total, and ranges from 25% to 81% in certain industries. Because of this importance, the management of marketable securities is discussed separately in this unit. Investing surplus cash in marketable securities is normally a part of overall cash management. It becomes a separate activity of the firm, if the investments in marketable securities form a major part of the current assets. Many firms in India today are very active in money and capital markets, where marketable securities are traded. An analysis of investments in marketable securities by 92 non-financial companies of BSE-100 index companies shows an investment of ₹ 9754.73 cr. as on March 31, 1998. These companies have earned an income of ₹ 3622.89 cr. through dividend, interest and profit from sale of investments for the year, which is approximately equal to 19% of the profit before tax of these companies. In several companies of the group like Ashok Leyland, MRPL, SAIL, ACC, etc. the income from market activities for the year 1997-98 was more than income for operations. Though this gives a positive outlook for investing in marketable securities, there are many companies, which have lost heavily by investing in marketable securities.

In the international financial markets, companies such as Procter & Gamble (US), Gibson Greetings (US), Showa Shell (Japan), Metallgesellschaft (Germany), Allied Lyons (UK), Orange Country (US), British Councils (UK), etc., have lost millions of dollars heavily by entering into financial transactions of wrong types. In the domestic markets too, several firms have incurred huge loss during the last few years and many of them have taken a public stand in the companies annual general body meeting that they will not excessively deal in the securities market.

In 1992 securities scam, many companies, particularly public sector companies had incurred huge loss in their dealings in government securities. Nevertheless, many companies are willing to deal in marketable securities at different levels. While some of them have an active treasury management and willing to take risk, others have restricted themselves in investing their short-term surplus money for a limited period. Managers need to acquire some basic knowledge on the nature of marketable securities, operation of markets where such securities are traded and finally the models used in recognising short-term surplus and managing such surplus to improve overall profitability of the firm.

**Table 2.4: Investments in Marketable Securities**

**NOTES**

Industry	1999	2000	2001	2002	2003
Food and Beverages (% of cash and market securities)	1008.18 43.7%	1031.91 42.6%	1243.27 52.4%	1328.16 51.4%	1436.88 47.7%
Textile (% of cash and market securities)	1383.2 56.2%	784.79 41.6%	1417.11 56.9%	1171.42 46.7%	1430.52 54.5%
Chemicals (% of cash and market securities)	4879.7 39.7%	5499.95 41.2%	6166.91 45.3%	9143.7 52.2%	10968.15 59.8%
Non-metallic Minerals (% of cash and market securities)	424.55 32.9%	380.4 33.5%	526.92 38.5%	577 42.8%	611.39 42.2%
Metals and Products (% of cash and market securities)	2104.04 40.9%	1931.48 37.2%	3126.04 49.1%	2965.45 49.0%	3249.91 44.4%
Machinery (% of cash and market securities)	3098.35 34.7%	1961.95 19.6%	2321.46 19.8%	4496.66 29.3%	5075.51 27.9%
Transport Equipment (% of cash and market securities)	2725.89 45.4%	2988.6 55.1%	2530.94 44.1%	2943.1 50.1%	3719.29 46.9%
Diversified (% of cash and market securities)	3415.51 34.7%	6602.6 71.4%	5764.81 80.0%	3776.73 50.6%	4591.72 67.0%
Miscellaneous (% of cash and market securities)	168.78 23.4%	358.43 34.5%	215.75 22.7%	254.71 26.7%	606.53 37.5%
Total (% of cash and market securities)	19208.2 39.2%	21540.11 43.4%	23313.21 45.0%	26656.93 44.7%	31689.9 47.1%

**2.21 NEED FOR INVESTMENT IN SECURITIES**

Marketable securities result from investment decisions that really are not the main part of the firm's business. But marketable securities cannot be ignored, as they constitute a part of the value of the firm that is entrusted to management. For some firms, investments in marketable securities extend



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to lakhs or even crores of rupees. Table 2.5, gives the investments in marketable securities of few well known companies in India. The firms were chosen because of their familiarity and also because of the differences between them. Investments in marketable securities of these ten sample firms show not only a wide variation among them but also wide variation between the two points of time. Reliance Industries maintained the top position in both years. Marketable securities share in the current assets has also gone up from 29.6% to 41.8% whereas on the total assets, the percentage shows a marginal change. A similar change is also seen in the case of Bajaj Auto and Hindalco Industries. In case of HPCL and Tata Iron & Steel Industries, the Investments in marketable securities as a percentage of current assets remained stable. The share of Wipro and Grasim industries, which was very low in 1998-99 has gone up steeply by 2002-2003. In Tata Power the trend was reverse over the five year period.

**Table 2.5: Holding in Marketable Securities of Select Indian Companies**

Companies	For the Year Holding ₹ in Cr.	Ending % Current Assets	1998-99 % Total Assets	For the Holding ₹ in Cr.	Ending % Current Assets	2002-03 % Total Assets
Bajaj Auto	1096.03	36.98%	23.93%	2329.13	54.97%	36.91%
Hindalco Industries	820.52	56.11%	13.94%	1468.74	53.85%	14.26%
Grasim Industries	417.04	25.93%	7.30%	1158.91	47.09%	17.54%
Gujarat Ambuja Cem.	144.85	27.64%	6.41%	205.23	42.19%	5.32%
Tata Power	530.01	56.29%	16.02%	828.71	31.10%	9.45%
Wipro	0.38	0.06%	0.03%	781.34	28.97%	19.16%
Hindustan Lever	370.50	13.46%	8.44%	909.56	22.16%	12.07%
HPCL	633.52	18.04%	6.85%	1702.71	17.51%	9.77%
Tata Iron & Steel	399.51	12.38%	3.33%	441.87%	11.77%	3.33%
Tata Motors	435.41	11.96%	4.25%	278.39	9.29%	3.36%

There are several reasons for such difference in the investments in marketable securities between the firms and between the years. For instance, companies like Lakshmi Machine Works Ltd. (LMW) and NEPC Micon, leading manufacturers of textile machinery and windmill power equipments, used to have an order booking for one to three years. Companies, which place the order with LMW and NEPC pay advances along with the order. Most companies in the auto-cars segment like Maruti Udyog Ltd (MUL) and Telco that entered the small car segment collect advances when they launch new models. However they cannot use these short-term surplus cash flows for any long-term purposes.

## NOTES

***Surplus cash is thus invested in marketable securities primarily to earn an income, which otherwise remains idle within the firm.***

Companies may not always have an opportunity to demand advances from the customers. For instance, the recession in textile industry and general economic recession has affected the order flow of LMW and NEPC. Intensive competition between the car manufacturers forces many of them to sell the cars without demanding any initial amount from the customers. Thus, companies, which were flushed with money at one point of time and investing heavily in marketable securities, may issue short-term securities to others and borrow money at another point of time.

Another prominent reason for holding marketable securities is on account of mismatch between the borrowing and investment programme. Companies like Reliance Industries, which are presently executing several projects, are constant borrowers of money in both domestic and international markets. These projects are executed over a period of time. It is often difficult to borrow money exactly for the requirement of the year or month since the cost of borrowing, sentiment of the market and regulatory requirements are to be taken into account in deciding the amount to be borrowed. Companies thus borrow more than their current requirement. It not only applies to borrowing but also applies to equity financing. Money raised in the form of debt or equity has a cost and it cannot be immediately put into use for any long-term purpose. ***They are invested in short-term securities with an intention to recover atleast a part of the cost of borrowing.***

Many companies, which adopted the profit centre concepts, have made the finance department as one of the profit centres. It means the finance department has to add revenue to the firm. Top management wants financial department to show how they helped the company to improve the bottomline.

By dealing with marketable securities in the form of securities and foreign exchange derivatives, financial managers' ought to demonstrate their ability to cut down the cost or increase the benefit. ***Investments in marketable securities also depend on the aggressiveness of the financial managers' in dealing with such assets.***

Many companies today have a separate treasury division that operates in marketable securities and other financial products. But aggressive dealings in marketable securities will increase the risk of financial operations. For instance, Procter and Gamble (US), which bought leveraged interest rate swaps for \$ 200 million from Bankers Trust in 1994, to cut down the interest cost of their commercial paper borrowing, had finally incurred a loss of \$100 million. The task of financial managers, who become involved with marketable securities either full-time or part-time, consists of three issues. First, managers must understand the detailed characteristics of different short-term investment opportunities. Second, managers must understand the markets

in which those investment opportunities are bought and sold. Third, managers must develop a strategy for deciding when to buy and sell marketable securities, which securities to hold, and how much to buy or sell in each transaction. We will discuss these issues in the next few sections.

## NOTES

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## 2.22 TYPES OF MARKETABLE SECURITIES

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Marketable securities available for investments can be grouped under several ways. They can be classified under three broad heads namely debt securities, equity securities and contingent claim securities, which in turn can be grouped under several heads. We will give an overview of these securities below.

### Debt Securities

All debt securities represent a promise to pay a specific amount of money (the principal amount) to the holder of the security on a specific date (the maturity date). In exchange for investing in security, the investor or holder of the security, receives interest. This interest may be paid upon maturity of the security (as with most short term debt instruments) or in periodic instalments (as with most long term debt instruments). Different types of debt securities are discussed below.

#### 1. Money market instruments

The market for debt securities of relatively short maturity (generally one year or less) is called money market. The money market gives a considerable amount of liquidity to all participants in financial market. Companies and government entities that find themselves temporarily short of cash can raise funds quickly by issuing money market instruments. Investors who have cash to invest for short periods of time can invest in money market instruments that will provide them with a return while not committing their funds for long periods.

- (i) **Call money.** The demand and time liabilities (DTL) of a bank are evaluated every fortnight on a Friday called the 'Reporting Friday'. During the first fortnight following the Reporting Friday, the bank is expected to maintain daily 15 % of its DTLs (as on the Reporting Friday) in cash with RBI. This is known as cash reserve ratio CRR. The banks are expected to maintain this balance in such a way that the average daily balances is within the stipulated requirement. The market that arises as a result of borrowing and lending by banks in order to maintain their CRR is known as the call market. Theoretically call money is money that is literally on call, *i.e.*, it can be called back at short notice. In the case of inter bank market, the notice period can be as short as one day.

## NOTES

- (ii) **Certificates of Deposit.** A certificate of deposit (CD) is an instrument issued by a bank or other depository institution representing funds placed on deposit at the bank for a certain period of time. They are called negotiable certificates of deposit. Negotiable CDs are generally not redeemable before maturity, but an investor who purchases, for example, a six-month CD may sell it to another investor one month later rather than wait until the CD matures. The interest on CDs is calculated on the face amount of the CD. It is a nondiscount instrument and pays the face amount plus accrued interest at maturity. The rates available to investors in CDs are typically somewhat higher (averaging about 1 per cent higher) than those on T-bills of equal maturity. This yield differential can be attributed to several factors: (a) the somewhat thinner market for CDs, (b) the tax differential, (c) the risk factor of the issuing financial institution.
- (iii) **Commercial paper.** Commercial paper (CP) is the term, for the short-term promissory notes issued by large corporations with high credit ratings. Commercial paper usually carries no stated interest rate and sells at a discount from its face value as T-bills. The objective of the RBI introducing CP as an instrument to finance working capital needs was to reduce the dependence of corporates on banks. Also, by pricing the CP at market rates, the financial efficiency of corporates was coveted to increase. Also, this instrument securitises the working capital limits. The companies can now issue CP for a maturity period ranging from 3 months to less than a year. Minimum networth of issuer is also reduced from ₹ 5 crores to ₹ 4 crores and the minimum working capital (fund-based) limit is also being reduced from ₹ 5 crores to ₹ 4 crores.
- (iv) **Bankers Acceptances.** Bankers' Acceptances are time drafts drawn on a commercial bank for which the bank guarantees payment of the face value upon maturity. They are commonly used to finance international transactions for the short term. For e.g., a jewellery retailer in India might purchase watches from a manufacturer in Switzerland, paying for the goods by sending a time draft (a draft payable at some future date) drawn upon the jeweller's bank. When the bank accepts the draft, it stamps "accepted" on the reverse side of the draft, meaning that the bank guarantees payment of the draft upon maturity. In effect, the bank is guaranteeing the credit of the jeweller. Since the credit behind the draft is now on the bank, the draft can be traded in the money market along with other short-term debt instruments. Although bankers' acceptances are available to individual investors, they are typically most popular with commercial banks and foreign investors.

(v) **Government Securities or Securities Guaranteed by the Government.** Government securities are public debt instruments issued by the Government of India, State Governments or Financial Institutions, Electricity boards, Municipal Corporation etc. guaranteed by the governments to finance their projects. The default risk of these securities is perceived to be lower than that of corporate bonds or equity shares since they are issued on account of Sovereign risk. These securities are therefore termed as Giltedged securities. Government securities traded in the money markets fall within 5 distinct categories.

## NOTES

- (a) Treasury bills
- (b) Central loans
- (c) State loans
- (d) Central guaranteed loans
- (e) State guaranteed loans

The order of these securities ranges from most liquid to less liquid and also safest to less safe. All these securities are of different maturities and coupon rates. Currently, the highest coupon rate of a government security is 13.40% (in 59 State loan 13.50 %). The longest maturity available is 21 years. You may refer money market page of economic dailies such as The Economic Times or The Hindu Business Line, where you get indicative rates for many of these securities for different maturity periods. Treasury bills have of late started attracting good response, especially since the introduction of 364 days T Bill in April 1992. Presently, there are 2 maturities—91 days and 364 days. A third category of T-Bills that was for 182 days has been withdrawn since April 1993. Government securities are one of the lowest yielding securities that one can invest in. Most investments in these securities are made due to regulatory reasons. During the second fortnight following the Reporting Friday, the banks have to maintain 34.5 % of DTL up to 17/09/93 and 25 % on incremental DTL since that date, in Government securities. This is known as Statutory Liquidity Ratio (SLR).

## 2. Capital Market Debt Instruments

The capital market supplies long-term funds to corporations, government entities and other users of capital. The general type of debt instrument of the capital market is the bond. Bonds usually pay interest to the holder once every six months (semi-annually) and pay the principal or face amount upon maturity. Although the face amounts of bonds do vary, the typical bond has a face value of ₹ 1000. The market value of the bond, the price for which it trades in the market, can be greater or less than par depending on interest rates and other market factors.

## NOTES

- (i) **Treasury notes and treasury bonds.** The long-term bond issues of the treasury that are available to investors are the Treasury notes and the Treasury bonds. Treasury notes have original fixed maturities of not less than one and not more than ten years from the date of issue. They are available in denominations as small as \$ 1000, except that the T.notes of less than four years are usually not issued for less than \$ 5000. Treasury bonds are like notes in every respect in that their original maturities are from more than ten years to come as long as thirty years.
- (ii) **Municipal Bonds.** Municipal bond, in spite of the word municipal, includes all bond issues of states, countries, cities, and other political subdivisions of the United States. An important distinguishing feature of municipal bonds is that all interest payments are exempt from U.S. income taxes. They are also exempt from any state or city income taxes within the issuing municipality. Though couple of corporations in the states of Gujarat and Maharashtra, have issued bonds of this kind, this market is less active in India.
- (iii) **Public Sector Undertaking (PSU) Bonds.** PSU bonds are issued to finance projects of various public sector undertakings like NTPC (National Thermal Power Corporation), IRFC (Indian Railways Finance Corporation), etc. There are two kinds of bonds Tax free with a coupon of 9 % or 10 % or 10.5 %, and taxable with a coupon of 13 % to 18 %. Since 1985-86, the public sector undertakings have been raising resources from the capital markets, through the issue of bonds, termed as PSU bonds. With just ₹ 354 crores in 1985-86, the amount of bonds issued has increased to ₹ 4,625 crores in 1991-92. This was inevitable, as the gilt-edged market could not be enlarged further, without putting up the SLR ratio. Also, the dependence of the PSUs on central and state budgets could be progressively reduced. With the divestiture programme somewhat going slow, the reliance of PSUs on bond segment will increase.

### 3. Corporate Bonds

Debt securities of corporations with maturity of longer than one year are corporate bonds. The usual par value of a corporate bond is ₹ 100 and sometimes ₹ 10,000, and maturities range from about two to as many as thirty years. In recent years, however, corporate bond issues have been of shorter maturities as inflation and economic uncertainties have caused investors to be less willing to commit their funds for longer periods of time.

### Equity Investments

Equity securities represent the residual ownership of the firm. Residual ownership means that the debt holders must first be paid off, before the

company belongs completely to the equity holders. The two types of equity securities are common stock and preferred stock.

### **1. Common Stock**

The common stockholders are the risk takers; they own a portion of the firm that is not guaranteed, and they are last in line with claims on the company's assets in the event of a bankruptcy. In return for taking this risk, they share in the growth of the firm because the growth in the value of the company accrues to the common shareholders. The company may make a periodic cash payment called a cash dividend to the common stockholders. Cash dividends are commonly paid to shareholders on a quarterly basis, but they may be paid annually, irregularly, or even not at all. The common shareholder has no guarantee of receiving a dividend payment. Common stockholders usually have voting rights that allow them to vote on the corporation's board of directors. Since the board of directors hires the top management of the company, the stockholders indirectly determine the company's management.

### **2. Preferred Stock**

Preferred stock is technically an equity interest in the company, but its characteristics are more like those of bonds. Preferred means that this type of stock has a stated par value that represents a claim against corporate assets that supersedes the claims of the common stockholders, but is subordinate to the claims of bondholders. Preferred stock also carries a fixed cash dividend to the common shareholders. Like debt, preferred stock is often systematically retired through a sinking fund. It also does not represent true residual ownership because preferred shareholders usually do not participate in earnings growth by receiving higher dividends, as common shareholders do.

## **Contingent Claim Securities**

Contingent claim securities are securities that give the holder a claim upon another asset, contingent upon the holder's meeting certain contract conditions. Although there are many types of contingent claim securities, the three most popular kinds of investments today are options, warrants, and convertible securities.

### **1. Options Management of Inventory**

An option is a contract giving its holder the right to buy or sell an asset or security at a fixed price. All options are valid only for a specified time period, after which they expire. A call option gives its holder the right to buy the underlying asset and thereby guarantees the purchase price of the asset for the duration of the option. A put option carries the right to sell and guarantees the selling price of the underlying security.

## **NOTES**

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## 2. Warrants

Warrants are like call options that are issued by the corporation. They give their holders the right to purchase the common stock from the corporation at a fixed price. Warrants usually have longer life than options (typically five to seven years), although a few perpetual warrants do exist. Corporations usually issue warrants in conjunction with another issue of securities and offer a "package deal." For example, the purchase of one share of preferred stock might entitle the investor to receive one warrant to purchase common stock of the company. Companies offer such packages to sweeten the deal and make the other security easier to sell.

## 3. Convertible Securities

Convertible securities are securities that may be converted into common stock. A convertible bond is a bond that the holder may exchange for common stock of the corporation. The other common type of convertible security is the convertible preferred stock, which is simply a preferred stock that the holder can exchange for a certain number of shares of common stock of the corporation.

## 4. Futures Contracts

A contract that arranges for delivery and payment of an asset at a future date is a futures contract. Futures contracts are traded publicly on the futures exchanges, and these exchanges have developed contracts on a number of assets, such as corn, wheat, soybeans, and frozen pork bellies. These contracts, often called commodity futures because of the nature of the underlying asset, allow producers and consumers of the commodities to plan their production and sales in advance as well as allow speculators to enter the market. A second group of futures, on such assets as U.S. Treasury bills, negotiable CDs, and stock markets indexes, is called financial futures. These futures allow investors in such securities to spread some of the risk to speculators and aid in the investment process. There is still one more security in the list, called units of mutual funds, which is not a separate security on its own but backed by an investment in the above securities. Indian companies traditionally prefer mutual funds units, particularly Unit-64 of Unit Trust of India, to invest their surplus money for short period because of reasonable return, high liquidity and tax concession (tax provisions governing mutual funds investments have seen significant changes during the last few years). Since many private sector mutual funds have also started offering a reasonable return in their debt-oriented schemes, corporate attention is slowly moving towards the units of private sector funds. Another instrument similar to mutual funds units that is likely to emerge in the future is the unit arising out of securitisation process. These are units backed by mortgages of housing loan or any other receivables. A few securitisation deals have already taken



place in the Indian market but they were restricted to financial institutions. This market is the second largest segment of the market, immediately next to government securities market, and is also very active.

## NOTES

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### 2.23 OPTIONS FOR BUILDING MARKET SECURITIES

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Securities market can be broadly classified into short-term securities market (also called money market) and long-term securities market. These markets along with banking and financial institutions are called capital markets, where different needs for money are exchanged. Financial managers, though interested in investing their surplus assets for a short period, are not bound to restrict their investments in short-term securities. What is important is liquidity of investments. It is quite possible to invest in long-term securities such as 20-year government bond and sell it after a week, which is essentially a short-term investment in a long-term bond. Similarly investment can be made for a short period in equity or derivative securities. An understanding of different markets is important for the financial managers in this context. We will discuss some of the major characteristics of the market under three broad heads namely money market, market for long-term capital and market for derivative securities.

#### Money Market

Money market is a place where borrower meets the lender to trade in money and other liquid assets that are close substitutes for money. A developed money market will have large number of instruments, both in terms of variety and volume, presence of large number of traders and existence of requisite infrastructure to facilitate efficient settlement of transactions. Till 1991, money market in India was in a dormant state. It was operating in a closely regulated environment, where interest rates are fixed and regulated. The operations were also restricted in a few securities involving commercial banks. The conditions of the money market improved after the Reserve Bank of India initiated many changes on the basis of the recommendation of the Vaghul Committee, which recommended deregulation of interest rates, introduction of new instruments and increase in the number of participants. As a result, India now has fairly developed money market with a number of instruments and active trading. The establishment of institutions like, Discount and Finance House of India Ltd. (DFHL), SBI Guild, etc., and arrival of several whole sale dealers has provided liquidity to the market. Mutual funds have also started actively investing in short-term securities along with banks and other institutional investors.

## NOTES

Investing short-term surplus in short-term securities has an advantage over other securities because short-term securities will reflect the interest accrued on a day-to-day basis. For instance, if a company has ₹ 50 lakhs surplus money for a short period, it can invest in a commercial paper or treasury bill or a long-term government bond. If the prices of all the three instruments are observed at the end of the week, the first two securities will reflect the interest earned and thus move upward whereas there is no guarantee that the prices of long-term securities reflect the interest earned part for such small interval. Also, the short-term securities are less affected by the interest rate changes (called interest rate risk). For example, if the central bank increases the interest rate during the week, the prices of long-term bond will decline more than short-term bonds. Before investing in money market securities, it is better to look into yield curve of securities traded in the market. A yield curve is the one, which shows the return available for securities having different maturities. This curve is useful to managers to trade-off between return and interest rate risk. Further, the yield curve will show the expectation of the market on the future interest rate scenario, which is a vital input for any treasury managers. Interest rate is the one which affects almost every aspect of the economy like business performance, stock market, money market, foreign exchange market and derivatives market.

### Market for Long-term Securities

Market for long-term securities is a place where the borrowers raise capital for longer term. Due to active secondary market for many of the long-term securities, there is no need that only investors having long-term surplus alone enter into the market. For instance, a significant percentage of volume of trading (more than 75%) in stocks, which are long-term instruments, are settled within a trading cycle of five days. Now 'T + 2' trading is going on in the market. Long-term securities - debt, equity and other types of securities - are actively traded in the stock exchanges like National Stock Exchange, Mumbai Stock Exchange. These exchanges deal in corporate securities, government securities PSU securities and units of mutual funds. Stock exchanges are more organised than the money market, which primarily operates over phones. Now trading is mostly on-line.

The objective of investing in marketable securities need not always be for short-term purpose. If the surplus money is available for fairly longer period, investment in long-term securities can be considered because the return will be more. Due to active secondary market, there is no liquidity risk in the event of sudden need of funds. Of course, investment in equity oriented securities has some amount of investment risk. Investing in portfolio of stocks or investing through mutual funds can reduce a part of investment risk.

Market for derivative securities is less developed in India. A few commodity futures exchanges like Pepper and Coffee exchanges have been established. Banks are allowed to offer foreign exchange related derivative products. Derivative trading is taking place now on Indian stock exchanges in a limited way. Since all derivatives are also marketable securities, traded actively in the secondary market, they qualify for investing surplus cash. Derivatives are available for different levels of risk takers. It is possible by entering into two transactions - one in the normal market and the other in derivative market, it is possible to create a low risk investment. Since derivative transactions require only margin, which is normally 5% to 20% depending on the nature of underlying assets, it is possible to create a leverage (borrowing through the market) and attempt to maximise the return provided the company is willing to assume the additional risk.

## NOTES

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### 2.24 ALTERNATIVE STRATEGY

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At the beginning of this unit, we have observed that holding cash in excess of immediate requirement means missing out an opportunity to earn an income. However, it is necessary to find the cost associated with investing activity before taking investment decision. For example, if ₹ 5,00,000 is surplus available for one-week and it can earn an interest income of ₹ 750 for one week, the interest income is to be compared with cost associated with buying and selling of securities. Suppose, the security dealer charges 0.1% commission. The firm will incur ₹ 500 when it buys the security and another ₹ 500 when it sells the security. The total cost of ₹ 1000 is greater than ₹ 750 and thus, the net effect of the investment is loss. The investment decision is feasible, if the surplus money is available for two weeks or more. Thus, the decision on investing surplus money needs a careful analysis of cost and benefit. A few models are available to balance the cost and benefit and five of such models are discussed below:

**Bierman-McAdams Model:** This model is different from other models because it assumes that the investment in marketable securities is on account of raising excess funds from long-term sources. The reason for raising excess capital from long-term sources is due to high cost of raising capital from the long-term sources and thus, the cost is to be optimised. An example will be useful to understand the concept. Suppose a firm requires ₹ 10,00,000 every year from long-term resources for next four years for certain capital expenditure. The interest cost prevailing for long-term funds is 14% and flotation cost (cost of brokerage or processing and legal fee paid to bankers or financial institutions, stamp duty, etc.) is ₹ 50000. The flotation cost is one

time cost and not always proportional to amount raised. It is a fixed cost at least for a range of capital raised from the market. Assume if the firm raises more than ₹ 10 lakhs, the excess amount can be invested at 11.5% in marketable securities. With this set of information, assess the impact of the following two alternatives.

**NOTES**

1. ₹ 10 lakhs every year and;
2. ₹ 20.00 lakhs in the first year and another ₹ 20 lakhs in the third year.

In the table given below, the yearly cash outflow under the two conditions is given.

**Table 2.6**

Year	Loan	Floatation Cost	Interest Outflow	Interest Income	Net Cost
<b>(A) Interest Outflow in Option 1 (Raising ₹ 10 lakhs every year)</b>					
0	1000000	50000	0	0	50000
1	1000000	50000	140000	0	190000
2	1000000	50000	280000	0	330000
3	1000000	50000	420000	0	470000
4	0	0	560000	0	560000
<b>(B) Interest Outflow in Option 2 (Raising ₹ 20 Lakhs Year 1 and Year 3)</b>					
0	2000000	50000	0	0	50000
1	0	0	280000	115000	165000
2	2000000	50000	280000	0	330000
3	0	0	560000	115000	445000
4	0	0	560000	0	560000
<b>(C) Comparison of Interest Outflow under Two Options</b>					
	<b>Net Cash in Option 1</b>	<b>Net Cash in Option 2</b>	<b>Difference</b>		
0	50000	50000	0		
1	190000	165000	25000		
2	330000	330000	0		
3	470000	445000	25000		
4	560000	560000	0		
<b>Option 2 is preferable because Net Cost is lower than Option 1</b>					

The net interest outflow in Option 2 is lower than the interest outflow of Option 1. Thus, the firm benefits by raising ₹ 20 lakhs at the beginning of year 1 (Year 0 in the Table), spends ₹ 10 lakhs and invests the balance in marketable securities at 11.5% for a year. The marketable securities are sold at the end of year 1 and the value is used for capital expenditure of year 2.

There is no need to raise fresh funds in year 2 because the required amount is already raised. The process is repeated again in year 3. This strategy leads to reduction of overall cost of funds because the total amount spent on flotation is only ₹ 1,00,000 against ₹ 2,00,000 under Option 1. What about other options like raising ₹ 30 lakhs in year 1 and ₹ 10 lakhs in Year 4 or ₹ 40 lakhs in year 1? None of these options give you a lower cost than raising ₹ 20 lakhs in year 1 and ₹ 20 lakhs in year 3. Bierman and McAdams showed the way to get the optimal financing through the following equation.

$$Q = \sqrt{(2FD)/i - Y}$$

Where, F = the fixed flotation cost of obtaining new financing

D = the firm's total net outlay of cash for the next period

i = the percentage of interest rate on new financing

Y = the percentage yield on marketable securities

Substituting the value of funds required (₹ 10 lakhs), flotation cost of ₹ 50000, interest rate of 14% on new financing and 11.5% interest income on marketable securities in the above equation, we get the following:

$$Q = \sqrt{(2 \times 50000 \times 1000000)/(0.14 - 0.115)} = ₹ 20,00,000$$

The model basically optimise the flotation cost with the difference between interest outflow and interest income on marketable securities. This model helps the financial managers to decide on how much to be raised from the market given the requirement of funds and how much to be invested in marketable securities. On the other hand, the remaining four models guide the finance managers on how to switch funds from marketable securities to cash and vice versa.

**Baumol Model:** This model assumes that the demand for cash is continuous and frequent withdrawal of cash from investment will cost more. Thus, the model gives an approach to find the optimal withdrawal of cash from investments. An example will be useful to understand the concept. Colleges or Universities like IGNOU collect fee from the students at the beginning of the year or term.

Assume the receipt for the year is ₹ 12 lakhs. There is no major cash inflow during the year or term. However, the institution requires cash continuously to meet various operational expenses during the year or term. Assume the total demand for the cash during the year is ₹ 10 lakhs. Suppose the initial receipt of ₹ 12,00,000 is invested in marketable securities. The issue before us is how much worth of marketable securities is to be sold and cash be realised. If there is no transaction cost of selling securities, the amount could be as low as possible. If the cost of each transaction is ₹ 575, how much money is to be withdrawn every time. The cost affects our decision because

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if we withdraw too many times, it will cost more. At the same time if we withdraw a large amount, then the cash is idle and we lose an opportunity to earn a return. Baumol resolves the problem using the following equation, which gives an optimal withdrawal quantity.

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$$C = \sqrt{(2bD)/Y}$$

Where,  $b$  = cost of each transaction

$D$  = total amount required during the period

$Y$  = the percentage of yield on marketable securities

Substituting the value of funds required (₹ 10 lakhs), transaction cost (₹ 575) and interest on marketable securities (11.5%) in the above equation, we get the following:

$$C = \sqrt{(2 \times 575 \times 1000000)/.115} = ₹ 1,00,000$$

The institution has to sell securities worth of ₹ 1,00,000 every time to optimize the transaction cost and interest income on marketable securities. That means, the sale will be effected at the end of every fifth week.

**Beranek Model:** Beranek's model is similar to Baumol's model but the assumption here is different. Beranek's model assume that the firms disbursement takes place periodically whereas the inflows are continuous. Since buying of the securities has also costs the firm, it is not desirable to invest on daily basis. The inflows are accumulated to a level and then invested with an objective of minimising the cost of buying of the securities. Since any delay in investment will affect the opportunity income, the two are to be balanced. We will give a different example to illustrate this model. Suppose a supermarket requires cash at the end of every month to pay salaries, rent and settle the dues of suppliers. The firm on the other hand receives the cash of ₹ 1 lakh daily from the sale of provision and other items and the total amount collected during the month is ₹ 30 lakhs. Assume the entire collection is required at the end of month. That means whatever purchases has been made during the month in marketable securities, they have to be liquidated at the end of the month. The interest on marketable securities per month and transaction cost of purchasing securities are 0.95833% (11.5% per year) and ₹ 255 respectively. The issue before the finance manager of the super market is whether the investment is to be done on daily basis or the receipts are accumulated upto a point before investment. Substituting the values in the Baumol's equation, we get the optimal investment as approximately ₹ 4.00 lakhs. That means, funds are to be accumulated for four days before buying marketable securities and optimal ordering lot is ₹ 4.00 lakhs. We will see similar concepts in the next unit also when we deal with inventory management.

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**Miller and Orr Model:** The earlier two models assume that one of the two cash flow variables namely cash inflow or cash outflow is constant and thus come out with a solution on optimal withdrawal value or investment value. In a situation where both inflow and outflow are not constant, Miller and Orr model is useful. The model is based on control-limit approach. According to the approach, the optimum level is first derived based on certain assumptions and this optimum level needs to be disturbed only when the assumptions are violated. Miller and Orr model using the interest rate on marketable securities, transaction cost and minimum desired level of cash, derive the optimal cash holding for the firm with the use of following equation

$$Z = [(4b\sigma^2)/(4Y)]^{1/3} + L$$

Where, Z = Optimum cash holding

b = the fixed transaction cost per transfer

Y = the daily yield on marketable securities

$\sigma^2$  = Variance of daily changes in the cash balance

L = Minimum desirable cash prescribed by the management

Using the minimum desirable cash limit called Lower Limit (L), Miller and Orr model gives the Upper Limit of cash holding (H), which is equal to

$$H = 3Z - 2L$$

As long as cash is within upper limit (H) and lower limit (L), no action is required. The moment the cash balance breached one of these two limits, an action is required. If the cash balance touched the upper limit (H), then all the excess cash above the optimal holding (Z) is invested in marketable securities. Similarly, if the cash balance touched the lower limit (L), the firm sells marketable securities to an extent that brings the cash balance back to optimal cash holding (Z). The following example shows how the three values given in the Miller and Orr model are derived.

The Treasurer of Blue Diamond Hotel wants to develop a cash management model for investing surplus cash in marketable securities. Since the cash flows show a volatile behaviour, the Treasurer feels the Miller and Orr model is the most suitable for the situation. An analysis of last three-year daily cash flows shows a standard deviation of ₹ 12,200. Investment in marketable securities currently offers a return of 12% per annum. The transaction cost per transaction is ₹ 300. The Treasurer believes the hotel should have minimum cash balance of ₹ 20,000. What is the optimal cash holding? When an investment or disinvestment action is to be taken? Substituting the above values in the Miller and Orr model, we get the following:

$$Z = [(4 \times 300 \times 12200^2)/(4 \times (.12/365))]^{1/3} + 20000 = 46702$$

$$H = (3 \times 46702) - (2 \times 20000) = 100107$$

$$L = 20000$$

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Thus, the cash management policy is when the cash balance goes below ₹ 20,000, marketable securities are sold and cash balance is brought back to ₹ 46702. If the cash balance exceeds ₹ 100107, the cash value above ₹ 46702 is invested in marketable securities. The cash balance is allowed to move between ₹ 20000 and ₹ 100107 and occasionally brought down to the optimum level.

**Stone Model:** Bernell Stone suggested that instead of mechanically taking action on the basis of Miller and Orr model whenever the cash balance is breached the upper or lower limit, the treasurer can forecast the behaviour of future cash flows of two or more days and use this information in taking investment decision. Under this model, the firm sets out two inner limits. For instance in the above example, if the firm sets an inner limit for minimum balance at ₹ 30,000 and another inner limit for maximum balance at ₹ 90,000, the treasurer evaluates the cash flows for the next two days whenever the cash balance hits the previously defined Miller and Orr model. Assume the cash balance touched ₹ 20000. The firm evaluates whether the next two days inflows will bring back the cash position at ₹ 30000 or more. If the forecast fails to show such an improvement, the securities are sold and cash balance is brought towards the optimum level. On the other hand, if the cash balance is likely to move above ₹ 30000, no action is required at this stage. Investment in marketable securities will also be taken on the same line. The two inner limits are provided mainly to avoid unwanted transaction.

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## 2.25 CHOICES OF SECURITIES

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As indicated at the beginning of this unit, the financial managers need to have an understanding on different types of securities and the markets in which the securities are traded before venturing into investments in securities. In addition to giving a fair amount of overview on the above two, we have also discussed different models useful in taking decision on investments in marketable securities.

Using this set of information and knowledge, the financial manager has to design a strategy in managing securities. In developing a strategy, the first and foremost issue is an understanding of the firm's cash flow behaviour. This is essential because the model, which is useful for managing the securities, depends on the cash flow behaviour. An analysis of historical cash flows and volatility measures such as variance or cash out positions will be useful to set control limits. In other words, the first set of actions in developing



a strategy is to come out with a reasonable cash management model for the firm.

The second step in the process of designing the strategy is the extent to which the firm should take risk while investing in securities. In other words, in stage one, we have identified the amount available for investments but we haven't specified the nature of investments. A set of guidelines needs to be developed that will direct the operational managers while taking investment decisions. For instance, many banks have a clearly defined investment policy that lists the kind of securities where the surplus cash can be invested. It is advisable to prescribe the proportion of investments in different securities like government securities 60%, corporate securities 20%, etc. The firm should have a clear mechanism to get the risk of the portfolio and this information should be made available to chief of treasury operations. If the level of operation is very high, it is worth to implement the concepts like Value-at-Risk (VAR) to avoid major losses on such transactions.

The last step is to develop systems in continuous monitoring of this activity and improving the reporting system. Many companies during the securities scam period have suffered because of lack of monitoring and faulty system.

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### SUMMARY

- Cash is basic input to start a business unit: Cash is initially invested in fixed assets like plant and machinery, which enable the firm to produce products and generate cash by selling them.
- The objective of cash management is to balance the cost associated with holding cash and benefits derived out of holding the cash. The objective is best achieved by speeding up the working capital cycle, particularly the collection process and investing surplus cash in short-term assets in most profitable avenues.
- Investments in cash and marketable securities depend on the cash flow of the firm. Firms, which primarily sell the product against cash (e.g., petroleum products, gold, etc.) may not require much cash balance to be maintained since there is always cash inflows to the firm. Cash flows are also affected by several other factors, which can be broadly classified into internal and external factors.
- Cash flow forecast is crucial in cash management. Thus, the efficiency of cash management is directly related to the ability to accurately forecast cash flows.
- According to Certified Institute of Management Accountants, Budget is defined as "A budget is a financial and/or quantitative statement prepared

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prior to a defined period of time, of the policy to be pursued during that period for the purpose of attaining the objective”.

- Budgetary control is the process of determining various budgeted figures for the enterprise and then comparing the actual performance with the budgeted figures for calculating the variances, if any.
- In order to have effective budgetary control system, it is appropriate to take the following steps:
  1. Budget Manual, 2. Budget Centres, 3. Budget Committee, 4. Budget Officer, 5. Budget Period, 6. Determination of Key Factor.
- Budgetary control acts as an important tool for the management to economise costs and maximize profits. The system helps the management to set the goals. The current performance is compared with the pre-planned performance to ascertain deviations so that corrective measures are taken, well at the right time.
- A cash budget is an estimate of cash receipts and disbursements during a future period.
- Marketable securities available for investments can be grouped under several ways. They can be classified under three broad heads namely debt securities, equity securities and contingent claim securities.
- Securities market can be broadly classified into short-term securities market (also called money market) and long-term securities market. These markets along with banking and financial institutions are called capital markets, where different needs for money are exchanged.

## REVIEW QUESTIONS

1. Explain the objective of cash management system. How do you deal with the conflicting nature of the objectives?
2. What are the principal motives of holding cash in a business despite its unproductive nature?
3. Discuss internal and external determinants that affect the flow of cash.
4. How do you measure the uncertainty associated with cash flows? Discuss the products available to manage the uncertainty of cash flows?
5. What is Budget? Discuss, in brief, the objectives and advantages of budgetary control?
6. Discuss the essentials of a good budgetary control system. Explain briefly the steps in setting up of a budgetary control system so that its working efficiency is ensured?
7. Define 'Flexible Budget' and explain its importance as a budgeting technique and tool of control? Detail the steps for introducing flexible budget?

8. Explain the classification of budgets?
9. Detail the advantages and limitations of budgetary control?
10. What does zero-base budgeting mean? What are the different steps involved in it and how is it useful to the business? Explain its limitations?
11. Write short notes on:
  - (i) Budget and budgeting
  - (ii) Differences between fixed and flexible budget
  - (iii) Zero-Base Budgeting
12. Explain the objective of management of marketable securities system. How do you deal with the conflicting nature of the objectives?
13. What is the primary cause of interest rate risk?
14. Discuss the important features of the Miller-Orr model.
15. What are bond call provision and why are they used?
16. What are the advantages and disadvantages of floating rate securities for both issuer and the investor?
17. What are liquid assets? Why do firms hold cash and cash equivalents?
18. What are commonly used money market instruments?

## NOTES

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### FURTHER READINGS

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- '*Cost and Financial Management*', Dr. Mohd. Arif, University Science Press.
- '*Working Capital Management*', Dr. M.K. Rastogi, University Science Press.



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## UNIT III MANAGEMENT OF RECEIVABLES AND INVENTORY

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### ★ STRUCTURE ★

- 3.0 Learning Objectives
- 3.1 Introduction: Management of Receivables
- 3.2 Factors Influencing the Receivables
- 3.3 Credit Policy
- 3.4 Credit Analysis Models
- 3.5 Monitoring and Managing Receivables
- 3.6 Collection Policy
- 3.7 Credit Management in India
- 3.8 Introduction to Inventory Management
- 3.9 Meaning and Nature of Inventory
- 3.10 Benefits of Holding Inventories
- 3.11 Risk and Cost of Holding Inventories
- 3.12 Objectives of Inventory Management
- 3.13 Tools and Techniques of Inventory Management
- 3.14 Determination of Stock Levels
- 3.15 Determination of Economic Order Quantity
- 3.16 A.B.C Analysis
- 3.17 VED Analysis
  - *Summary*
  - *Review Questions*
  - *Further Readings*

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### 3.0 LEARNING OBJECTIVES

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*After going through this unit, you should be able to:*

- explain receivable, its needs and objectives of receivable management.
- enumerate factors affecting receivables, and policies for managing accounts receivables.
- determine potential credit policy including credit analysis.
- define inventory, needs for monitoring and control of inventories.
- illustrate benefits of holding inventory.
- describe techniques of inventory management.

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### 3.1 INTRODUCTION: MANAGEMENT OF RECEIVABLES

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*"Buy now, pay later"* philosophy is increasingly gaining importance in the way of living of the Indian Families. In other words, consumer credit has become a major selling factor. When consumers expect credit, business units in turn expect credit from their suppliers to match their investment in credit extended to consumers. If you ask a practising manager why her/his firm offers credit for the purchases, the manager is likely to be perplexed. The use of credit in the purchase of goods and services is so common that it is taken for granted. The granting of credit from one business firm to another, for purchase of goods and services popularly known as trade credit, has been part of the business scene for several years. Trade credit provided the major means of obtaining debt financing by businesses before the existence of banks. Though commercial banks provide a significant part of requirements for working capital, trade credit continues to be a major source of funds for firms and accounts receivables that result from granting trade credit are major investment for the firm. The importance of accounts receivables can be seen from Table 3.1, which presents investments in accounts receivables for different industries over the years. This is expected to provide an idea of the size of investment in receivables in the Indian Industry.

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**Table 3.1: Industry-wise Investments in Trade Credit Receivables**  
Rupees in Crores

Industry	1999	2000	2001	2002	2003
Chemicals	3502.22	3561.63	3412.65	3768.37	3614.45
Food and beverages	7171.87	7195.32	7369.03	7172.42	6046.75
Machinery	21101.05	27928.26	28818.50	28980.45	28796.07
Metals and metal products	3513.62	3885.98	4252.64	4606.84	3907.31
Non-metallic mineral products	12944.11	13147.85	13456.84	12196.30	11923.14
Textiles	21912.86	24989.77	28720.10	29095.38	28889.75
Transport equipment	7003.26	7304.55	7652.69	7622.18	7199.14
Diversified	5888.22	6631.51	6945.93	8620.85	8891.48
Miscellaneous manufacturing	2146.93	2478.04	2751.78	2953.06	2745.85
All Manufacturing	85184.14	97122.91	103380.16	105015.85	102013.94

**NOTES**

Two important conclusions emerge from the analysis of Table 3.1:

- Investment in accounts receivable is high and shows a positive growth over the years; and
- Value of accounts receivable differs significantly between industries even after adjusting the differences in number of companies between industries.

### 3.2 FACTORS INFLUENCING THE RECEIVABLES

The investment in accounts receivable is an important aspect which requires careful management. Besides the cost of investment, there are two types of risks which are associated with the accounts receivable management. One is the risk of OPPORTUNITY LOSS and the other LIQUIDITY risk. The firm has to extend credit to its customers to generate enough sales. The grant of credit is an important tool to realize the operating plans and budgets of the company. But at the same time management has to see that the company has not extended too much of credit to its customers which has resulted in high degree of liquidity risk.

By liquidity risk we mean the ability to collect back the amounts due from the customers. This would happen if the company extends the credit to customers whose financial position is doubtful or weak and subsequently the funds tied up with them are recovered after a long period or they are not at all realised. If this happens it would result in the companies ability to meet

its own obligations and thus affecting short term and long term solvency of the company. The decision to extend the credit to its customers also determines the timing and amount of cash flows accruing to the company.

At the same time minimisation of liquidity risk would imply the risk of opportunity loss. The opportunity loss here means loss of sales by refusing the credits to its potential customers. This would further affect the loss of revenue and the loss of profits. Thus the objective of accounts receivable management is to arrive at an optimum balance of these two risks and help the company to realize its operating plans. This balancing is not a static but a dynamic one. To arrive at the balancing of these two risk, the company would frequently require to adjust their credit standards, credit terms and credit policies. Management of the company would also be required to consider general economic conditions while making such adjustments.

While high investments in accounts receivable warrant efficient management, significant differences between industries call for proper structuring of credit policy that match the industry norms. These two are essential issues in management of receivables. The receivables management system thus involves the following:

Terms of credit

Assessing customers' credit worthiness to grant credit

Monitoring the level of accounts receivables and improving collection efficiency.

Setting of *terms of credit* is first step in the receivables management. It is corporate policy and thus has a close interrelationship with other corporate policies. For example, if a company pursues a policy of market leadership, then it requires aggressive credit policy to achieve maximum sales volume. Terms of credit requires management to decide period of credit, a broad guideline on the eligibility of credit, credit limit for different customers and discount rate offered to customers who settles the bill within a predetermined period. Credit policy is determined by trading off risk associated with granting credit and additional revenue available from granting credit. The credit policy once determined is fixed in the short-run and may warrant periodic adjustment depending on the changes in environment and corporate policies.

Determining creditworthiness of customers, first, requires a system to collect basic information about the customers and then fit the data into a Model that determines the suitability of the customer in granting credit and other credit terms. Once credit is granted, the focus is shifted to collection of dues on time. The efficiency of receivables management is measured by comparing the extent to which collection flows are in line with credit terms. The objectives that drive the above issues of receivables management are:

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1. Obtain maximum (optimum) volume of sales.
2. Maintain proper control over the quantum or amount of investment debtors.
3. Exercise control over the cost of credit and collections.

Ans-6  
**3.3 CREDIT POLICY**

Designing credit policy is the first step in receivables management. designing credit policy, the management can follow two broad approaches. Firstly, the policy can be designed under the assumption of unlimited production/sales and funds available for investment in receivables. If credit policy is designed under this assumption and subsequently some constraints are experienced on sales or funds available for receivables, then management have to restrict the credit at the time of implementing the credit policy. But this may cause certain difficulties to customers because of deviation from the announced credit policy. For example, if a company announces that credit will be unlimited to certain categories of customers based on unlimited funds assumption and subsequently refuse to grant credit due to limited funds available for investment in receivables, it will create hardship to the customer. Under the second approach, the credit policy could be designed keeping in mind the limitations on production/sales volume and funds available for investment in receivables. This is aimed to achieve optimum utilisation of production capacity and funds available for receivables. It also ensures consistency of credit policy.

The credit policy consists of the following components:

- Credit Period
- Discount
- Credit Eligibility
- Credit Limit

**(a) Credit Period**

Decision on credit period is determined by several factors. It is important to check the credit period given by other firms in the industry. It would be difficult to sustain by adopting a completely different credit policy as compared to that of industry. For example, if the industry practice is 30 days of credit period, a firm which offers 120 days credit would certainly attract more business but the cost associated with managing longer credit period also increases simultaneously. On the other hand, if the firm reduces the credit period to 10 days, it would certainly reduce the cost of carrying receivables but volume would also decline because many customers would prefer other



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rms, which offer 30 days credit. In other words, granting trade credit is an aspect of price.

The time that the buyer gets before payment is due, is one of the dimensions of the product (like quality, service, etc.) which determine the attractiveness of the product. Like other aspects of price, the firm's terms of credit affect its volume. All other things being equal, longer credit period and more liberal credit-granting policies increase sales, while shorter credit period and more stringent credit-granting policies decrease sales. These policies also affect the level and timing of certain costs. Evaluation of credit policy changes must compare with the changes in sales and additional revenues generated by the sales as a result of this policy change and costs effects. While additional volume and revenue associated with such additional volume are clear and measurable, the cost effects require further analysis.

### Cost of Extending Credit Period

Lengthening credit period delays the cash inflows. For example, suppose a firm increases the credit period from 30 days to 90 days. Customers, old as well as new, will now pay at the end of 90 days and the cash inflows from these sales would occur further into the future. That means, the firm has to delay in settling its dues to others or resort to short-term borrowing if the payments cannot be delayed. The **interest cost** of short-term borrowing rises mainly on account of extending the credit period.

Changes in credit period also affect the **cost of carrying inventory**. This rises mainly on account of increased volume attracted by the extended credit period, which in turn requires more inventory to support increased volume. For example, if expected additional sales is ₹ 5 cr. and the firm's present operating cycle requires an inventory at 20% of its sales value, the additional inventory requirement is ₹ 1 cr. Again, inventory is a idle investment and consumes cost in the form of cost of storage and cost of carrying inventory. If the two costs together amount to 17%, the changes in credit policy has caused an additional cost of ₹ 17 lakhs.

Another cost associated with extending credit term and increase in sales volume on account of extended credit term is **discount and bad debts expenses**. Increase in credit sales and period would prompt firms to announce attractive discount policy for prompt payment. Similarly, bad debts will also go up due to increased volume of credit sales.

The **cost of collection** also goes up when the credit period is increased and more credit volume is done. The cost of collection includes cost of maintaining records of credit sales, telephone calls, letters, personal visits to customers, etc. These costs tend to show an uptrend with increased volume and credit sales.

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(b) Discount

When a firm pursues aggressive credit policy, it affects cash flows in the form of delayed collection and bad debts. Discounts are offered to the customers, who purchased the goods on credit, as an incentive to give up the credit period and pay much earlier. For example, suppose the terms of credit is "3/10 net 60". It means if the customer, who gets 60 days credit period can pay within 10 days from the date of purchase and get a discount of 3% on the value of order. Since the customer uses the opportunity cost of funds and availability of cash in taking decision, the cash discount should be so attractive. The discount quantum should be greater than interest rate on short-term borrowings.

(c) Credit Eligibility

Having designed credit period and discount rate, the next logical step is to define the customers, who are eligible for the credit terms. The credit-granting decision is critical for the seller since credit-granting has economic value to buyers and buyers decision on purchase is directly affected by this policy. For instance, if the credit eligibility terms reject a particular customer and requires the customer to make cash purchase, the customer may not buy the product from the company and may look forward to someone who is agreeable to grant credit. Nevertheless, it may not be desirable to grant credit to all customers. It may instead analyse each potential buyer before deciding whether to grant credit or not based on the attributes of that particular buyer. While the earlier two terms of credit policy viz. credit period and discount rate are not changed frequently in order to maintain consistency in the policy, credit eligibility is periodically reviewed. For instance, an entry of new customer would warrant a review of credit eligibility of existing customers.

The decision whether a particular customer is eligible for credit terms generally involves a detailed analysis of some of the attributes of the customer. Credit analysis normally group the attributes in order to assess the credit worthiness of customers. One traditional way of organising the information is by characterizing the applicant along five dimensions namely, Capital, Character, Collateral, Capacity and Conditions. These five dimensions are also popularly called **Five Cs** of credit analysis.

**Capital:** The term capital here refers to financial position of the applicant firm. It requires an analysis of financial strength and weakness of the firm in relation to other firms in the industry to assess the credit worthiness of the firm. Financial information is normally derived from the financial statements of the firm and analysed through ratio analysis. The liquidity ratios like current ratio, debt-service coverage ratio, etc. are often used to get a preliminary idea on the financial strength of the firm. Further analysis

includes trend analysis and comparison with the other industry norm or other firms in the industry.

**Character:** A prospective customer may have high liquidity but delay payment to their suppliers. The character thus relates to willingness to pay the debts. Some relevant questions relating to character are:

- What is the applicant's history of payments to the trade?
- Has the firm defaulted to other trade suppliers?
- Does the applicant's management make a good-faith effort to honour debts as they become due?

Information on these areas are useful to assess the applicant's character.

**Collateral:** If a debt is supported by collateral, then the debt enjoys lower risk because in the event of default, the debt holder can liquidate the collateral to recover the dues. The collateral causes hardship to other debt holders. Thus, the analysts should look into both the availability of collateral for the debt and the amount of collateral the firm has given to others. In computing the liquidity of the firm, the analysts should remove the assets used for collateral and take into account only the free assets. The credit worthiness improves if the customer is willing to offer collateral assets or the value of collateral asset backed loan is low.

**Capacity:** The capacity has two dimension-management's capacity to run the business and applicant firm's plant capacity. The future of the firm depends on the management's ability to meet the challenges. Similarly, the facility should exist to exploit the opportunity. Since the assessment of capacity is a judgement on the part of analysts, a lot of care should be taken in assessing this feature.

**Conditions:** These are the economic conditions in the applicant's industry and in the economy in general. Scope for failure and default is high when the industry and economy are in contraction phase. Credit policy is required to be modified when the conditions are not favourable. The policy changes include liberal discount for payment within a stipulated period and imposing lower credit limit.

The information collected under *five Cs* can be analysed in general to decide whether the customer is eligible for credit or fit into a statistical model to get an unbiased credit rating of the customer. Discussion on credit evaluation model is presented in the next section.

#### (d) Credit Limit

If a customer falls within the desired limit of credit worthiness, the next issue is fixing the credit amount. This is some thing similar to banks fixing overdraft limit for the account holders. If a customer is new, normally the

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credit limit is fixed at the lowest level initially and expanded over the period based on the performance of the customer in meeting the liability. Credit limit may undergo a change depending on the changes in the credit worthiness of the customer and changes in the performance of customer's industry.

There are several reasons for limiting the credit facility to the customers. Some of the important reasons are:

- reduce the impact of deficiencies in credit-granting decision;
- reduce the scope for overbuying by the customers;
- rationally allocate the limited funds available for investment in bills receivable; and
- mitigate agency problem.

The last reason, mitigating agency problem, requires further discussion. Agency problem arises on account of conflict of interest between the managers (agents) and equity shareholders (owners or principal). Agents will always try to maximise their return even if it is at the cost of principal. Two types of agency problems arise in credit-granting decision. Firstly, managers may collude with some of the customers and grant credit even to undesirable customers. Credit limit puts a cap on the potential loss. Secondly, managers may hesitate to give credit to even creditworthy customers when the performance of the managers is assessed on the basis of collection efficiency. Recently, many public sector banks were criticised for not granting fresh loan despite comfortable monetary position and funds are simply used to buy government securities. The fear of default and delay in collection would prevent in granting credit even to good customers and thus, take away the opportunity to maximise the profit. Credit limit would to some extent take away this fear of managers since default is restricted and thus would encourage them to accept credit proposals. The situation will improve further if credit limits are built into the system of performance evaluation and managers are not penalised as long as they have restricted the credit.

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### 3.4 CREDIT ANALYSIS MODELS

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In the previous section, how the credit analysts collect the information required for processing credit application under five Cs was discussed. Credit evaluation models are useful for the analysts to process the information to decide credit worthiness of the customer. It is possible to structure credit evaluation model in different ways. An experienced credit analyst can evaluate the credit worthiness by simply scanning the information received or collected for the credit proposal. When the credit transactions increase or number of customer increases, it may be difficult to apply this methodology. It will also

cause delay in processing credit proposals and lead to inconsistent decision. Thus, it is always useful to create a credit evaluation system and standardise the appraisal. Decision-tree model and multivariate statistical model are generally used to create credit evaluation system.

**Decision Tree Model:** Under decision-tree model, credit applications are rated under different parameters. For instance, if a company uses five Cs factors, the analysts rate the credit applicant under each of the five Cs. Decision-tree is initially created for all possible routes and decisions at the end of each route are indicated. Fig. 3.1 illustrates decision-tree model using three credit information namely capital, character and collateral. If a character, capital and collateral are strong, then the applicant firm is granted large amount of credit. On the other hand, if the first two are strong but the collateral is weak, a limited credit could be granted.

If character is weak but capital and collateral are strong, then credit is limited to collateral value. On the other hand, if all the three are weak, it is a dangerous credit proposal and hence to be rejected. In Fig. 3.1, we have taken two broad ratings, which can be further divided into three or five scale rating. Increasing the credit variable and rating scale will lead to more branches and credit limit can be prescribed for each branch separately.

It is also possible to use the above decision-tree to decide whether a detailed credit evaluation has to be conducted. For example, if character, capacity and conditions are good but capacity and collateral are weak, it may require a detailed credit evaluation. That means, the information collected is inadequate and a rigorous analysis is required.

**Multivariate Statistical Model:** Many firms have started using sophisticated statistical techniques in conducting their credit analysis. Multiple Discriminant Analysis (MDA) employs a series of variables to categorise people or objects into two or more distinct groups. A **credit scoring system** utilises multiple discriminant analysis to categorise potential credit customers into two groups: good credit risk and bad credit risk. An important advantage of credit scoring system is that all of the variables are considered simultaneously, rather than individually as in the decision tree analysis. The model is capable of handling both numerical measures such as debt-equity ratio, current ratio, profit margin, etc., as well as non-numerical measures like character of the customer as good, bad, average. When a credit scoring model is constructed with historical data of a few customers, the model would produce a equation as given below:

$$\text{MDA Score } Y = b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_nX_n$$

Where.  $b_1, b_2, b_3, \dots, b_n$  are co-efficient values of variables  $X_1, X_2, X_3, \dots, X_n$ .

$X_1, X_2, \dots$  are variables such as debt-equity, current ratio, etc.

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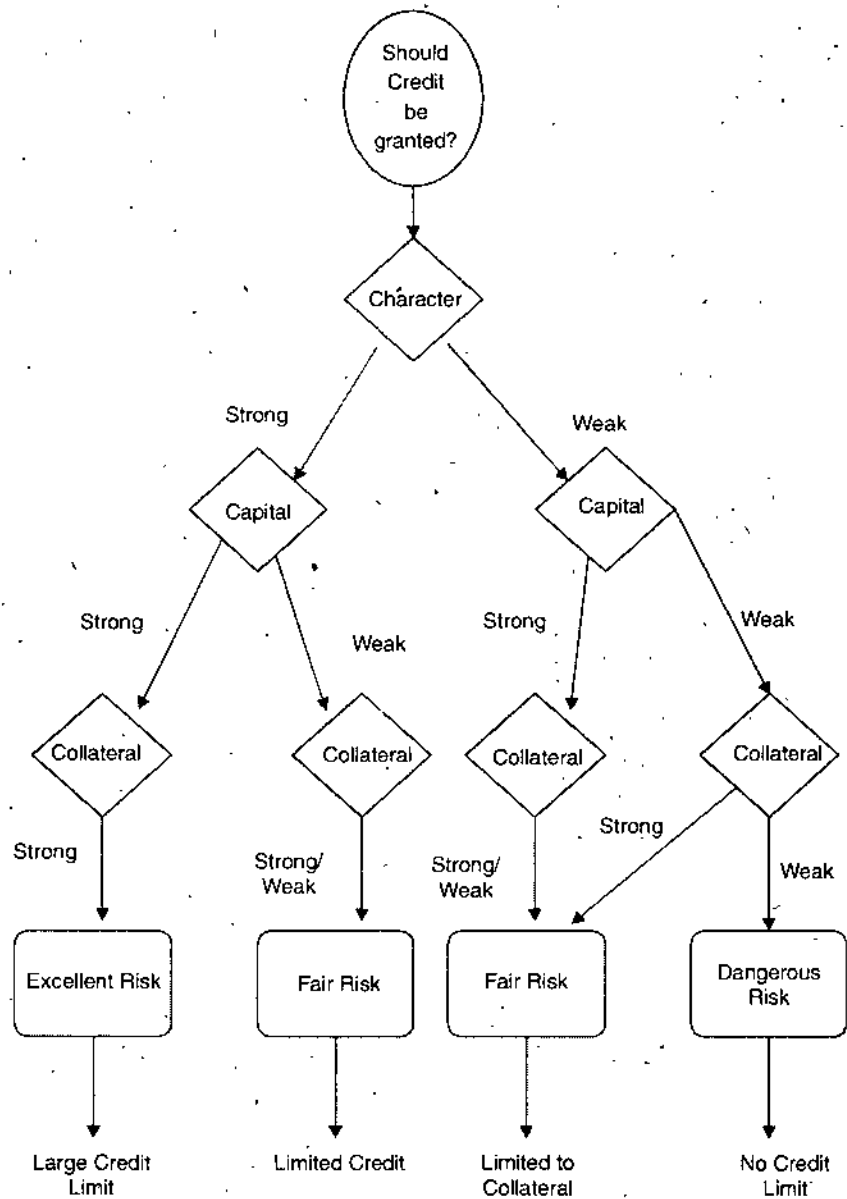


Fig. 3.1. Decision Tree Credit Evaluation Model.

The model produces the coefficient values and when a new application is received for credit scoring, the values of Xs are to be measured and substituted in the model equation to get the discriminant score. The discriminant is then compared with the point of separation to place the applicant in one of the two groups. For example, if the point of separation is 3.80, when the applicant's score is above 3.80, then the applicant is placed in fair or excellent-risk group. If the score is below 3.80, then it is risky proposal. Thus, it is possible to evaluate where a particular customer stands in terms of credit worthiness. No difficulty is felt when the scores are much above or below the separation point but credit worthiness of customers, whose scores are close to separation point, are difficult to assess. In such cases, further analysis is made to

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understand the credit worthiness of the customers. It is also possible to outsource credit rating evaluation from specialised credit rating agencies.

Credit scoring models are periodically updated to take into account changes in the environment and also reassess the credit worthiness of the customers. An outdated model may wrongly classify the customers and lead to heavy losses. Further, while developing the system, it is necessary to ensure good sample for developing the model. It is equally important that the model is validated before employing it. Many foreign banks and credit card agencies extensively use credit rating schemes and found them useful in taking credit decision.

### **Rating Methodologies of Credit Rating Institutions**

Credit rating has become one of the professionalised services in the recent past. Though rating is more common with different securities offered by industrial units, there is also focus on the rating of individuals and institutions as credit applicants. For instance, CRISIL's rating methodology includes the following key factors for deciding the credit worthiness of a borrowing company.

#### **A. Business Analysis**

- Industry Risk (nature and basis of competition, key success factors, demand supply position, structure of industry, cyclical/seasonal factors. Government policies etc.).
- Market position of the company within the industry (market share, competitive advantages, selling and distribution arrangements product and customer diversity, etc.).
- Operating efficiency of the company (locational advantages, labour relationships, cost structure, technological advantages and manufacturing efficiency as compared to those of competitors etc.).
- Legal position (terms of prospectus, trustees and their responsibilities: systems for timely payment and for protection against forgery/fraud; etc.).

#### **B. Financial Analysis**

- Accounting quality (overstatement/understatement of profits; auditors qualifications; method of income recognition; inventory valuation and depreciation policies; off balance sheet liabilities; etc.).
- Earnings protection (sources of future earnings growth; profitability ratios; earnings in relation to fixed income charges; etc.).
- Adequacy of cash flows (in relation to debt and fixed and working capital needs; sustainability of cash flow; capital spending flexibility; working capital management etc.).

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- Financial flexibility (alternative financing plans in times of stress; ability to raise funds; asset redeployment potential; etc.).

**C. Management Evaluation**

- Track record of the management; planning and control systems; depth of managerial talent; succession plans.
- Evaluation of capacity to overcome adverse situations
- Goals, philosophy and strategies

The above factors are considered for companies with manufacturing activities. The assessment of finance companies lays emphasis on the following factors in addition to the financial analysis and management evaluation as outlined above.

**D. Regulatory and Competitive Environment**

- Structure and regulatory framework of the financial system
- Trends in regulation/deregulation and their impact on the company.

**E. Fundamental Analysis**

- Capital Adequacy (assessment of true net worth of the company, its adequacy in relation to the volume of business and the risk profile of the assets.)
- Asset Quality (quality of the company's credit-risk management systems for monitoring credit; sector risk; exposure to individual borrowers; management of problem credits; etc.).
- Liquidity Management (capital structure; term matching of assets and liabilities; policy on liquid assets in relation to financing commitments and maturing deposits.)
- Profitability and Financial Position (historic profits; spreads on fund deployment; revenues on non-fund based services; accretion to reserves; etc.).
- Interest and Tax Sensitivity (exposure to interest rate changes; tax law changes and hedge against interest rate; etc.).

**Individual Credit Rating:** As indicated earlier, credit rating has become more popular now, with financial instruments than individuals. Nevertheless, there are now costing institutions like the Onida Individual credit Rating Agency (ONICRA), developing specific methodology to help in rating individuals as consumers. The ONICRA model considers the following three parametres as important:

**I. Individual Considerations**

- (i) Personal strength
- Qualification Occupation



(ii) Stability

- Job Tenure  
Duration of stay in personal  
place of residence

(iii) Capability

- Income  
Future Job Prospects

(iv) Strength

- Financial aspects  
Discipline  
Willingness to pay

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### II. Transaction Considerations

(i) Risk

- Security  
Ownership of the asset  
Control over end use of the  
product collateral  
Exposure

(ii) Modalities of payment

- Direct deduction from salary  
Advance post dated cheques  
Automated debiting of bank  
account  
Payment on due date  
Payment on demand

### III. Environmental Considerations - Economy

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## 3.5 MONITORING AND MANAGING RECEIVABLES

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Managing receivables does not end with granting of credit as dictated by the credit policy. It is necessary to ensure that customers make payment as per the credit term and in the event of any deviation, corrective actions are required.

Thus, monitoring the payment behaviour of the customers assumes importance. There are several possible reasons for customers to deviate from the payment terms. Three of these possible reasons and their implications in credit management are discussed below:

**Changing Customer Business Characteristics:** The customers, who have earlier agreed to make payment within a certain period of time, may deviate

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from their acceptance and delay the payment. For example, economic slow down or slow down in the industry of the customers business may force the customers to delay the payment. In fact, the bills payable become discretionary cash outflow item in economic recession. Thus, a close watch on the performance of customer's industry is required.

**Inaccurate Policy Forecasts:** A wide deviation from the credit terms and actual flow of cash flows show inaccurate forecast and defective credit policy. It is quiet possible that a firm uses defective credit rating model or wrongly assesses the credit variable. For example, it is quiet possible to overestimate the collateral value and then lend more credit. If this is the reason for wide deviation, it requires updating the model or training the employees.

**Improper Policy Implementation:** Often wide deviation is noticed in practice while implementing credit policy. This may not be intentional but frequently in the form of accommodating special requests of the customers. For example, a customer may not be eligible for credit or higher credit as per the model in force. The customer may personally see the concerned manager and request her/him to relax the credit restriction. If there is no policy in place to deal with these types of request and ad hoc decisions are made, then wide deviation is possible. Often these deviations become costly for the firm. Intervention of top officials and ad hoc decisions are cited as major reasons for widespread defaults in many public financial institutions. Thus, it is necessary to ensure that policies are implemented in letter and spirit. Monitoring provides signals of deviation from expectations. There are several monitoring techniques available to the credit managers. The monitoring system begins with aggregate analysis and then move down to account-specific analysis.

**Investments in Receivables:** The decision to supply on credit basis leads to investments in receivables. Credit policy is designed in such a way that investment needs of receivables are optimised *i.e.*, return is greater than cost associated with investments. Credit monitoring starts with an assessment of investment in receivables as a percentage of total assets. The investments in receivables are then compared with the budget. Any deviation from budgeted value shows delay in collection or managers deviating form the credit policy. For example, if a firm based on credit policy worked out that investments in receivables is 12%, the actual value for the last three months is around 18%, there are two possible reasons. Firstly, some of the customers are not paying and thus, the receivables value has gone up. Secondly, the managers would be giving more credit than the prescribed limit or extend the credit period. In either case, it requires an investigation and explanation from managers for the increased investment in receivables.

**Collection Period:** Receivables can be related to sales in different ways. The simplest form of analysis is comparing sales and receivables for different

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periods to know the trend. While this analysis gives a reasonable understanding on how the receivables have moved over the period, it fails to give an implication of the changes in the trend. For example, if sales and receivables of two periods are ₹ 90 lakhs, ₹ 120 lakhs and ₹120 lakhs, ₹ 140 lakhs respectively, the figures show (i) the sales value has gone up during the period, and (ii) receivables have also gone up along with sales. A sharper focus on changes in the trend can be obtained by computing the collection period of the two periods. The collection period is computed as follows:

$$\text{Collection Period} = \frac{\text{Accounts Receivable}}{\text{Credit Sales per day}}$$

Credit sales per day is computed by dividing the total credit sale of the period by the number of days of the period. If the sales value given above are related to quarterly sales value, then sales per day for the two quarters are ₹ 1 lakh (₹ 90 lakhs/90 days) and ₹ 1.33 lakh (₹ 120 lakhs/90 days) respectively.

The collection period for the two quarters are:

$$\text{Period 1 : } 120/1 = 120 \text{ days} \quad \text{Period 2 : } 140/1.33 = 105 \text{ days}$$

The collection period shows a decline and thus improved performance, which was not visible earlier in simple comparison. If the sales value for the second period is ₹ 100 lakhs instead of 120 lakhs, then average credit sales per day is ₹ 1.11 lakh and collection period is 126 days. The collection performance in this case has marginally come down.

If customers are granted different credit periods, then customers of similar nature are to be grouped separately and then sales, receivables and collection period relating to each group of customers are to be computed separately. Otherwise, it will give a distorted figure. In addition to comparing collection period of one period with other periods, they are also compared with credit terms. Any abnormal deviation warrants customer-wise analysis. That is, all these three values for two periods can be computed for each customer to know the trends in collection period of different customers. Such an analysis will help to narrow down the customers who take longer time for paying the dues.

**Decomposing Receivables Outstanding at the End of Month:** Another way to spot changes in customer behaviour is to decompose outstanding receivables at the end of each month. This is achieved by preparing a schedule of the percentage portions of each month's sales that are still outstanding at the end of successive months.

**Receivables Variance Analysis:** Receivables budget can be prepared from sales budget and credit policy. This information is anyway required to prepare cash budget. In receivables variance analysis, the actual reason for actual value of receivables varying with budgeted value. Actual receivables vary

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created to achieve economics of sale will be idle. In fact, the additional cost of investments in receivables need to be considered while computing the benefit arising out of economies of scale. Firms pursuing strategies to acquire product differentiation have limited customer base. In order to gain access to this segment, the firm may have to pursue liberal credit term but once the brand acquired the desired value, credit terms can be made tight. For instance, many established multinational firms now require the dealers and distributors to deposit the entire amount of the consignment before lifting the delivery. Similarly, firms pursuing market penetration may have to work with low profit margin or selling just above the variable cost. Liberal credit terms would add cost and increase bad debts value. Firms may be reluctant to have liberal policy at this stage unless it is essential to achieve penetration. Firms with a large market share in a low growth industry would not invest additional capital in receivables since the strategy is to harvest the benefit. In other words, instead of allowing the market to decide the credit terms of the company, it is possible for the firm to influence the market through credit policy. Credit policy can also be used to change the product life cycle and investment pattern. For instance, the life cycle of a product X is 10 years, which is worked out on the basis of existing credit terms and volume of turnover. Assume the total sales during the period is 2,50,000 units. The volume achieved is initially low, then it increases to reach a peak at the end of 4th year and then declines over the remaining 6 years. Based on different capacity options, it is found that a capacity of 20,000 units for six-year period is optimum and offers highest net present value. The firm now found that by increasing the credit period, it can sell more units and thus can go for a capacity of 30,000 units and achieve same NPV in four-year period. The second option may be suitable on account of increased uncertainty on the product as the product moves into the latter part of the life cycle and also getting economies of scale, which was not possible with lower turnover in the first case. Shortening product life cycle has certain advantages as well as disadvantages. The advantages are obvious. It increases NPV and removes uncertainty. At the same time, it requires more R&D to come out with a new and improved product and additional investment much earlier than originally visualised. If competitors are able to come out with better product version, the firm has to suffer higher loss because of higher capacity.

The firm has to develop various scenarios and study their impact on the overall organisation goal. Credit policy and its terms assume strategic importance if a firm is primarily supplying its products or services to select firms. Suppose company R is one of the ten customers of Company L. Company R is now going for massive expansion and found it difficult to borrow to meet the normal credit terms of Company R since the debt-capacity remaining is not adequate. If Company L has reasonable borrowing capacity or internal generation, it can extend the terms of credit. L&T had come out with a major

issue some years back to provide suppliers credit to Reliance Industries for their expansion projects. Such kind of suppliers credit may also be feasible when the interest cost of a domestic firm is much higher than the interest cost of supplier firm located in a different country. A firm dealing with a large number of customers may find it difficult to manage the receivables within the existing organisational set up. If a few other group companies also face similar problems, it may start a separate subsidiary to manage the receivables of all group companies. Many companies have started their subsidiary to manage share transfer jobs of group companies. It is also equally possible to centralise the credit rating service of the customers through subsidiaries. Instead of starting their own subsidiaries, it is also possible to go in for factoring services and credit rating agencies to outsource these services. Many foreign banks outsource the services not directly related to their core activities in order to keep the organisation lean. It is a way to convert many of the fixed costs into variable costs. All these decisions have strategic implications and thus, it is difficult to visualise the receivables management as a operational issues of management in the modern business environment.

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Ans-5.

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### 3.8 INTRODUCTION TO INVENTORY MANAGEMENT

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Inventories constitute a major component in current assets. It constitutes around 60% in the public limited companies, in India. For the smooth running, every enterprise needs inventory. Inventories serve as a link between production and distribution processes. Due to its major composition in current assets, the management of inventories occupies a key role in working capital management. Excessive investment affects the liquidity. Inadequate investment makes the firm to loose the business opportunities, otherwise available. Profitability would be affected with excessive or inadequate investment. So, inventory management is essential to allow the firm to avail the opportunities to improve profitability and at the same time does not impair its liquidity, with excessive or unproductive investment. A firm, which neglects the inventory management, jeopardizes its longterm profitability. So, it is absolutely imperative to control and manage inventory holding, both efficiently and effectively, to avoid unnecessary investment.

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### 3.9 MEANING AND NATURE OF INVENTORY

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Inventory means only stock of finished goods, in accounting language. However, it includes raw materials, work-in-process, finished goods and stores in a manufacturing organisation.

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**Raw Materials:** Raw materials are the basic inputs, which are converted into finished products in the manufacturing process. They are needed to carry out the production, smoothly, uninterrupted. Holding period of raw materials depends on the length of conversion cycle and time needed to replenish them.

**Work-in-progress:** Work-in-progress is the semi-finished products. To become finished products, still, they are to undergo further process. They are in the intervening stage, between raw materials and finished products. The quantum of work-in-progress depends upon time that is needed for completing the manufacturing process. Longer the manufacturing process, more amount would be blocked in the form of work-in-progress.

**Finished Goods:** Finished goods are those, which are completely manufactured and ready for sale. When a firm manufactures, on receipt of order only, to suit the individual specific needs of the buyer, there will be no finished stock. Firms, which produce goods, without waiting for any formal order, have to maintain the finished goods. Finished goods are a buffer between production and market. Adequate stock, with full range, is necessary for marketing. Stocks of raw materials and work-in-progress are necessary for the smooth production, while finished stocks are important for marketing operations.

**Nature of Business:** The levels of the above inventories depend upon the nature of business. If the activity is manufacturing, large quantity is always blocked up in raw materials, finished goods and work-in-process. If the business is retail or wholesale, the inventory holding lies only in the form of finished goods only.

**Supplies:** Stores and spares are called as 'supplies', the last category of inventories. They do not enter into production, but are necessary for the purpose of production. Examples are brooms, soap, oil, fuel, light bulbs etc. The consumption pattern of spares is different from the normal consumption pattern of raw materials, work-in-progress and finished goods. They do not require, normally, any sophisticated system of inventory control technique for maintaining them, unless the spares are highly expensive.

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### 3.10 BENEFITS OF HOLDING INVENTORIES

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Holding of inventories is expensive in the form of storage costs, interest charges, deterioration of quality in holding stocks, theft and pilferage. Firms hold inventories, basically, for the following reasons:

**Transaction Motive:** Sufficient stocks of raw materials are to be maintained to facilitate uninterrupted production. There is always a time lag between the date of placing the order and its actual receipt. There could be delays due

to strikes, lock out and transport problems. Transaction motive takes care of these contingencies.

**Precautionary Motive:** Holding of inventories is necessary to safeguard the unforeseen changes in demand and supply forces and other factors, which cannot be anticipated. Production is dependent on demand of the finished product. If there is more demand for the product, more raw materials would be consumed. Consumption of raw materials cannot be forecast, with absolute accuracy. Sufficient stocks are to be maintained to suit the fluctuations in demand. Similarly, problems in supply may arise. Here, stocks are to be kept to guard against the changes in demand and supply, which are not foreseen. Forces, which could be foreseen, are taken care by the transaction motive, while forces that cannot be foreseen are guarded by precautionary motive.

**Speculative Motive:** When the firm anticipates increase in prices of raw materials, in future, it stocks to take the advantage. Firm takes suitable decisions to change the stock holding pattern depending on the increase or decrease in prices. Bulk order discounts may be offered to attract higher purchases. Reordering costs may be another factor in holding more quantity of inventories, than needed.

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### 3.11 RISK AND COST OF HOLDING INVENTORIES

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The following are the risks and costs associated in holding inventories:

- 1. Capital Costs:** Holding inventories involves funds. Funds may be used from own sources or borrowings. If own sources are not blocked up in inventories, they can be used elsewhere, profitably. This is the opportunity cost, the firm has incurred. If funds have been borrowed, interest has to be paid. So, in both the cases, firm incurs cost. In case of own funds, it is opportunity cost and in case of borrowings, it is interest cost.
- 2. Recurring Costs:** Firm incurs recurring costs, in the form of storage and insurance charges. Storage costs can be rent for the godown or warehousing charges, if stored in outsiders' godowns.
- 3. Risk of Deterioration:** Stocks may deteriorate in quality, due to long storage. Once goods lose their quality, they may not be in saleable condition.
- 4. Risk of Obsolescence:** Goods may cease to be useful, due to technological changes, changes in requirements and tastes etc. Now, we do not see floppy drive in the new computers coming into the market, as floppy drive has given place to CD drive.

## 3.12 OBJECTIVES OF INVENTORY MANAGEMENT

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The primary objective of inventory management is to maintain the right quantity of stocks, in right location, at right time to ensure the uninterrupted production and, at the same time, minimize the investment in stock holding. Every firm is faced with two conflicting issues:

- Maximise investment, by maintaining excessive quantity so that production is not affected and business opportunities are not lost, for want of stocks.
- Minimise investment in inventories as they involve costs and affect profitability, adversely.

### Optimum Stock Holding

Both the issues- excessive and inadequate stocks-are conflicting. Both are undesirable. Excessive stocks result in additional costs due to storage charges, interest cost, and deterioration loss and obsolescence risk. Above all, funds are tied up in inventories and this creates liquidity problem. Inadequate stocks result in stock-out situations and cause loss in profits. In other words, excessive and inadequate stocks move in opposite directions. Both the extreme situations are unacceptable. Firm has to maintain that much stock, just enough to meet the production needs so that there is no interruption in production and no customer goes back disappointed for lack of stocks. This situation can be achieved by maintaining optimum stock level, which is in between the excessive stocks and inadequate stocks. So, every firm tries to achieve that optimum stock holding. The level of optimum stock holding is not static. The optimum level changes due to changes in demand and problems of supply. Demand for the product varies and supply constraints crop up, which are not anticipated. The finance manager has to ensure the optimum stock holding to achieve the conflicting objectives of profitability and liquidity, at the same time. To sum up, the objectives of inventory management can be summarized:

- Maintain continuous supply of raw materials so that production is not affected,
- Minimise the carrying costs and lead-time in supplies,
- Maintain sufficient stocks of finished goods for smooth sales operations and business opportunities are not lost,
- Ensure perpetual inventory control so that physical stocks are always in agreement, with stocks shown in records and
- Facilitate furnishing of data for short-term and long-term planning and inventory control.



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## 3.13 TOOLS AND TECHNIQUES OF INVENTORY MANAGEMENT

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### NOTES

Efficient inventory management requires effective control system. A proper inventory control system helps the enterprise in solving the problems of liquidity, eliminating excessive stocks and achieving increased profits, with substantial reduction in working capital. The following are the techniques of inventory management and control:

1. Determination of stock levels
2. Determination of Economic Order Quantity
3. A.B.C Analysis
4. V E D Analysis
5. Perpetual Inventory System
6. JIT Control System
7. Inventory Turnover Ratios

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## 3.14 DETERMINATION OF STOCK LEVELS

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Carrying too much stock and too little stocks, both are detrimental to the firm. If stock is too little, frequent stock-out situations firm faces. Due to inadequacy of stocks, firm misses business opportunities. If it is too high, profitability will be affected due to increased cost of stock holding. In this context, it is relevant to discuss various types of stock levels.

### (a) Minimum Level

This is the minimum quantity that must be maintained, at all times. If the stock holding falls below this level, production stops, due to shortage of materials. This level is fixed, considering the following factors:

**Lead-time:** After placing the requisition for materials, some time is needed to process and place the order. After receipt of the order, supplier too takes some time to execute the order. So, raw material holding is needed, during the process time and execution time, so that production does not suffer, which is called 'Lead Time'.

**Rate of Consumption:** It is the average rate of consumption of raw materials in a factory. This rate of consumption can be calculated based on the earlier period's consumption rate, past experience and future plans. If the capacity of the factory enhances to match the increased production plans, the consumption rate also enhances.

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**Nature of Materials:** The nature of materials affects the minimum level. If the firm produces, soon after the receipt of the order, no minimum stock is needed. The formula for computation of minimum stock is as under:

$$\text{Minimum Stock Level} = \text{Re-ordering level} - (\text{Normal Consumption} \times \text{Maximum Re-order Period})$$

**(b) Re-ordering Level**

When the stock level reaches the re-ordering level, the order is placed for replenishment of stocks. This level is fixed in between the maximum stock and minimum stock. This level is decided after consideration of the following factors, such as maximum consumption per day and maximum number of days required to supply the stocks. It is difficult to foresee the consumption pattern, with full accuracy. Days that may be required to get the supply of stocks may vary depending on the unforeseen problems of transportation, bottlenecks and other factors. To be on safe side, maximum consideration is given for both the factors. Supply of materials would be received when the stock position reaches the minimum level; even when materials are consumed at the maximum requirement.

The formula for calculation is

$$\text{Re-ordering Stock Level: Maximum Consumption per day} \times \text{Maximum Re-order Period}$$

**Maximum Level:** It is the level, beyond which the stock level should not exceed. If this level is exceeded, there would be blockage of working capital, loss due to wastages, risk of obsolescence and more rent for storage space etc. The formula is as under:

$$\text{Maximum Stock Level} = \text{Re-Ordering Level} + \text{Re-ordering Quantity} \\ (\text{Minimum Consumption} \times \text{Minimum Re-ordering Period})$$

**Average Stock Level:** The formula for calculating average stock is as under:

$$\text{Average Stock Level} = \text{Minimum Stock Level} + \frac{1}{2} \text{ of re-order Quantity}$$

**Safety Stock:** Consumption of raw materials depends upon production level. Production changes on the demand for the finished products. The demand for the finished product is not always constant due to varying conditions. So, consumption of raw materials is not, always, constant. There should be safety stock to take care of fluctuations in consumption pattern of raw materials. The time taken for getting replenishment of stocks may also vary, due to unforeseen problems of strikes or lockouts. So, every firm has to maintain certain amount of stock as safety stock to take care of unforeseen consumption

pattern as well as time for procurement of materials. Basically, safety stock, is to meet unforeseen contingencies.

**Danger Level:** This is the absolute minimum level, below which the stocks should not fall. When the stock reaches this level, stock would be issued only to the emergency requirements and just to maintain the machinery working, to avoid dry out situation. The formula for calculating danger level is as under:

$$\text{Danger Level} = \text{Average Consumption} \times \text{Maximum re-order Period for Emergency Purchases}$$

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**3.15 DETERMINATION OF ECONOMIC ORDER QUANTITY**

For effective inventory management, it is necessary to determine what should be the quantity of stock that has to be ordered for replenishment, periodically. The stock that is ordered should be neither more nor less. To avoid accumulation of stocks, if frequent ordering of stock is made, more handling costs ordering costs would be incurred. On the other hand, lesser number of stock orders results in accumulation of stocks, which result in higher carrying costs.

**Ordering Costs:** The costs that are associated with purchasing and placing an order is called ordering costs. These are also known as buying costs as they are incurred, at the time of purchase only.

**Carrying Costs:** These are the costs for holding inventories. Higher the stock holding, larger would be carrying costs and they would be lower if the stocks are lower. Inventory may be high sometimes and low other times. So, the carrying cost is calculated on the average inventory. The components of costs for both the categories are as under:

Components of Ordering Costs and Carrying Costs	
Ordering Costs	Carrying Costs
<ul style="list-style-type: none"> <li>• Requisitioning costs (Indent for Materials)</li> <li>• Processing and placing order</li> <li>• Transportation of goods</li> <li>• Receiving and inspecting costs for incoming materials</li> <li>• Cost of stationery, typing, postage and telephone etc.</li> <li>• Clerical and staff costs for rendering the above services</li> </ul>	<ul style="list-style-type: none"> <li>• Interest on cost of capital, invested in inventories.</li> <li>• Rent for storing</li> <li>• Handling costs</li> <li>• Clerical and staff costs for recording receipts and issues</li> <li>• Insurance</li> <li>• Deterioration and obsolescence loss</li> <li>• Cost of spoilage, in handling materials.</li> </ul>

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**Ordering costs and carrying costs constitute the total cost of stock holding.** Ordering costs and carrying costs behave in an opposite direction. In other words, they have an inverse relationship.

Determination of economic order is important, from the viewpoint of achieving a compromise between handling costs and carrying costs. To avoid stock-outs, frequent re-orders have to be made. More orders result in more ordering costs. By holding lesser stocks than required, enterprise misses business opportunities and, in consequence, profitability is affected. To avoid frequent orders, the other alternative is to maintain higher size of stock holding. A higher size of stocks involves loss of liquidity, as more funds would be tied up. More so, too much stocks result in more carrying costs. Carrying costs are incurred for maintaining a given level of inventory.

Carrying costs vary with the size of the inventory. If the size of inventory holding is more, more costs will be incurred. So, a higher level of stocks mean liquidity problem and also cause reduced profitability too. This is also not an acceptable situation. In other words, if ordering costs are to be reduced, carrying costs become more. If carrying costs are to be reduced, ordering costs become more. The economic order size of inventory brings a trade off between carrying costs and ordering costs.

The formula for determining Economic Order Quantity is:

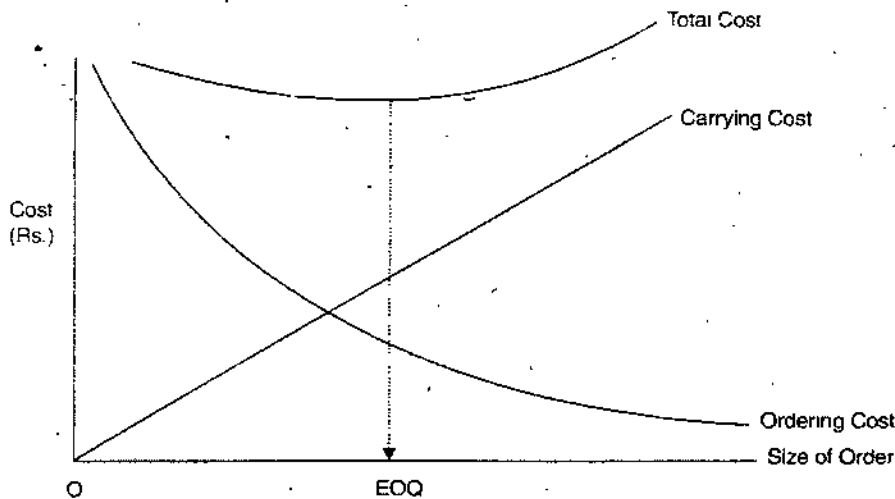
$$EOQ = \sqrt{\frac{2AO}{C}}$$

Where,    A = Annual consumption of unit, in rupees  
          O = Cost of placing an order  
          C = Inventory carrying costs, per one unit

**Assumptions:** While calculating EOQ, the following assumptions are made:

1. The total usage of a particular material is known and the usage is even through out the year,
2. Material is readily available and there is no time lag between placing an order and receiving the supplies,
3. Cost of carrying inventory is also fixed and uniform though out the period,
4. There are only two costs associated with the cost of holding, i.e., cost of ordering and cost of carrying and
5. The prices of the goods are stable.

**NOTES**



**Fig. 3.2.** Graphical representation of EOQ.

### 3.16 A.B.C ANALYSIS

A.B.C Analysis is concerned with selective control of inventory management. An analytical survey of the composition of inventory in most of the manufacturing organizations has revealed that 10% of the materials contribute for 70% of the cost of materials, while 70% of the materials constitute 10% of the total cost. The first category is classified as 'A' category while the later is 'C' category. In between falls the 'B' category, this contains 20% of cost as well as materials. If same importance is given in respect of control for all materials, equally, result would not be effective. The essence of selective control of inventory management is to allocate the importance of control to goods based on the cost composition. So, organization has to give more concentration for 'A' category of items due to higher cost composition in the total inventory cost. As concentration is on the fewer items, result would be effective. The ABC analysis is based on the following presumptions:

- Managerial time and effort is scarce and limited and
- Some items of inventory are more important than others

Under ABC analysis, the item is allocated to the group, depending on the amount of attention it deserves. "A" group requires the maximum concentration of the finance manger. This group constitutes a higher % in terms of value, while it occupies lesser significance, in terms of number of units. "B" group requires lesser attention, compared to "A" group. The last group "C" has to be given the least attention, as it constitutes less value in the total annual consumption. In other words, the procedure is to divide the total inventory into three groups, based on the total cost of each group. The first group should cover 70% of the total cost of inventory, where closer

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concentration has to be given to achieve better control on a selective basis. The second group should cover 20% while the last group falls into the category of 10% cost.

**Method of Preparation:** The method of preparation is as under:

- Calculate the annual consumption of each item in the year.
- Arrange the annual consumption of the different items of materials, in the descending order *i.e.*, highest value first and the next like that.
- Calculate consumption of each item, as a per cent of total consumption of all materials.
- Calculate the cumulative consumption, in terms of per cent.
- When the total touches around 70%, the first group where concentration is needed, is arrived at.
- The following groups are to be calculated for 20% and 10%, accordingly.

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### 3.17 VED ANALYSIS

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The V E D Analysis is used for control of spare parts. A-B-C analysis is concerned with materials and is not totally and properly suitable for spares. So, the spares are divided into three categories, Vital, Desirable and Essential. Here, the cost is not of importance but its necessity for the smooth production assumes importance. If the spares are vital, a must for the smooth running, they are to be stored in adequate quantity. Highest importance is to be accorded for this category of spares. If the vital spares, required for uninterrupted production, are not available there would be havoc in production. The classification has to be done by the technical staff depending on the necessity of spares for smooth running of the production. It is important that no interference is to be made with the classification, made by the technical department. Vital items have to be kept in high quantity, while essential items are to be kept, in reasonable limits. If the desirable items are readily available on placing the order; no need to keep those items, except a small quantity just to fill in the occasional need.

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### SUMMARY

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- The investment in accounts receivable is an important aspect which requires careful management. Besides the cost of investment, there are two types of risks which are associated with the accounts receivable management. One is the risk of OPPORTUNITY LOSS and the other LIQUIDITY risk.

- Designing credit policy is the first step in receivables management. In designing credit policy, the management can follow two broad approaches. Firstly, the policy can be designed under the assumption of unlimited production/sales and funds available for investment in receivables.
- Under the second approach, the credit policy could be designed keeping in mind the limitations on production/sales volume and funds available for investment in receivables.
- Credit evaluation models are useful for the analysts to process the information to decide credit worthiness of the customer.
- Collecting receivables begins with timely mailing of invoices. There are several procedures available to credit managers, who must judiciously decide when, where and to what extent pressure should be applied to delinquent customers. Management of collection activity should be based on careful comparison of likely benefits and costs.
- Inventories constitute a major component in current assets. It constitutes around 60% in the public limited companies, in India. For the smooth running, every enterprise needs inventory. Inventories serve as a link between production and distribution processes.
- The primary objective of inventory management is to maintain the right quantity of stocks, in right location, at right time to ensure the uninterrupted production and, at the same time, minimize the investment in stock holding.

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### REVIEW QUESTIONS

1. Explain important components of receivables management system?
2. Why do we need a credit policy? How do you evaluate credit policy?
3. How do you assess the credit worthiness of customers?
4. Discuss a few important financial ratios and analysis used in managing receivables.
5. What is the importance of inventory management? Describe the objectives of inventory management?
6. "There are two dangerous situations that management should avoid in controlling the inventories". Elaborate?
7. Explain the nature, meaning and benefits of holding inventory?
8. Describe the risk and cost of holding inventories?
9. Define the economic order quantity? How it is computed?
10. "The management of inventories must meet two opposing needs". What are they? How a balance is brought between the opposing needs?

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11. Define the term inventory control? What are the inventory control systems?
12. Explain the various tools and techniques used for inventory management?
13. What is meant by 'Economic order quantity'? What are the various costs, which affect economic order quantity?
14. What is a selective control of inventory? Why is it needed?
15. "In inventory management, economic order quantity is achieved, when the total cost is at its minimum for the enterprise". Explain the concept, with suitable pictorial presentation?
16. Write short notes on the following:
  - (i) A.B.C. Analysis
  - (ii) V E D Analysis

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## FURTHER READINGS

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- '*Capital Market and Investment Management*', Dr. M.S. Khan, S.M. Faisal, University Science Press.
- '*Cost and Financial Management*', Dr. Mohd. Arif, University Science Press.





# UNIT IV WORKING CAPITAL FINANCING

Working Capital  
Financing

NOTES

## ★ STRUCTURE ★

- 4.0 Learning Objectives
- 4.1 Introduction to Working Capital Financing
- 4.2 Finance Function—Importance
- 4.3 Liquidity Vs Profitability (Risk–Return Trade-off)
- 4.4 Objectives of Financial Management
- 4.5 Organisation of Finance Function In a Multi-divisional Indian Company
- 4.6 Cost Benefit Analysis
- 4.7 CVP Analysis
- 4.8 Break-even Analysis
- 4.9 Short-term Financing and Investment
- 4.10 Trade Credit
- 4.11 Bank Loans for Working Capital
- 4.12 Funds Flow Statement
- 4.13 Financial System of India and Indian Government
- 4.14 Banking Institutions
- 4.15 Non-banking Institutions
- 4.16 Non-banking Financial Institutions
- 4.17 Insurance Sector in India
- 4.18 Mibor and Mibid
- 4.19 Public Issue
- 4.20 Securities and Exchange Board of India (SEBI)
  - *Summary*
  - *Review Questions*
  - *Further Readings*

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## 4.0 LEARNING OBJECTIVES

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*After going through this unit, you should be able to:*

- explain needs and objectives of working capital.
- describe mechanism and cost-benefit analysis of alternative strategies for financing working capital.
- state pattern and sources of working capital financing in India with reference to government policies.

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### 4.1 INTRODUCTION TO WORKING CAPITAL FINANCING

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Financial Management is nothing but management of the limited financial resources the organisation has, to its utmost advantage. Resources are always limited, compared to its demands or needs.

This is the case with every type of organisation. Proprietorship or limited company, be it public or private, profit oriented or even non-profitable organisation.

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### 4.2 FINANCE FUNCTION—IMPORTANCE

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In general, the term "Finance" is understood as provision of funds as and when needed. Finance is the essential requirement —*sine qua non*— of every organisation.

**Required Everywhere:** All activities, be it production, marketing, human resources development, purchases and even research and development, depend on the adequate and timely availability of finance both for commencement and their smooth continuation to completion. Finance is regarded as the life-blood of every business enterprise.

**Efficient Utilisation More Important:** Finance function is the most important function of all business activities. The efficient management of business enterprise is closely linked with the efficient management of its finances. The need of finance starts with the setting up of business. Its growth and expansion require more funds. The funds have to be raised from various sources. The sources have to be selected keeping in relation to the implications, in particular, risk attached. Raising of money, alone, is not important. Terms and conditions while raising money are more important. Cost of funds is an important element. Its utilisation is rather more important. If funds are utilised properly, repayment would be possible and easier, too.

Care has to be exercised to match the inflow and outflow of funds. Needless to say, profitability of any firm is dependent on its cost as well as its efficient utilisation.

## Concept of Financial Management

As already discussed, the general meaning of finance refers to providing funds, as and when needed. However, as management function, the term 'Financial Management' has a distinct meaning. Financial management deals with the study of procuring funds and its effective and judicious utilisation, in terms of the overall objectives of the firm, and expectations of the providers of funds. The basic objective is to maximise the value of the firm. The purpose is to achieve maximisation of share value to the owners i.e., equity shareholders. The term financial management has been defined, differently, by various authors. Some of the authoritative definitions are given below:

1. "Financial Management is concerned with the efficient use of an important economic resource, namely, Capital Funds" —Solomon
2. "Financial Management is concerned with the managerial decisions that result in the acquisition and financing of short-term and long-term credits for the firm" — Phillioppatus
3. "Business finance is that business activity which is concerned with the conservation and acquisition of capital funds in meeting financial needs and overall objectives of a business enterprise". —Wheeler
4. "Financial Management deals with procurement of funds and their effective utilisation in the business". —S.C. Kuchhal

The definition provided by Kuchhal is most acceptable as it focuses, clearly, the Basic requirements of financial management. From his definition, two basic aspects emerge:

- Procurement of funds.
- Effective and judicious utilisation of funds.

Financial management has become so important that it has given birth to Financial Management as a separate subject.

## Nature of Financial Management

Financial management refers to that part of management activity, which is concerned with the planning and controlling of firm's financial resources. Financial management is a part of overall management. All business decisions involve finance. Where finance is needed, role of finance manager is inevitable. Financial management deals with raising of funds from various sources, dependant on availability and existing capital structure of the organisation. The sources must be suitable and economical to the organisation. Emphasis

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of financial management is more on its efficient utilisation, rather than raising of funds, alone. The scope and complexity of financial management has been widening, with the growth of business in different diverse directions. As business competition has been increasing, with a greater pace; support of financial management is more needed, in a more innovative way, to make the business grow, ahead of others.

### **Scope of Financial Management**

Financial management is concerned with optimum utilisation of resources. Resources are limited, particularly in developing countries like India. So, the focus, everywhere, is to take maximum benefit, in the form of output, from the limited inputs. Financial management is needed in every type of organisation, be it public or private sector. Equally, its importance exists in both profit oriented and non-profit organisations. In fact, need of financial management is more in loss-making organisations to turn them to profitable enterprises. Study reveals many organisations have sustained losses, due to absence of professional financial management. Financial management has undergone significant changes, over the years in its scope and coverage.

### **Approaches of Financial Management**

Broadly, financial management has two approaches:

- Traditional Approach—Procurement of Funds
- Modern Approach—Effective Utilisation of Funds

#### **Traditional Approach**

The scope of finance function was treated, in the narrow sense of procurement or arrangement of funds. The finance manager was treated as just provider of funds, when organisation was in need of them. The utilisation or administering resources was considered outside the purview of the finance function. It was felt that the finance manager had no role to play in decisionmaking for its utilisation. Others used to take decisions regarding its application in the organisation, without the involvement of finance personnel. Finance manager had been treated, in fact, as an outsider with a very specific and limited function, supplier of funds, to perform when the need of funds was felt by the organisation.

As per this approach, the following aspects only were included in the scope of financial management:

- Estimation of requirements of finance,
- Arrangement of funds from financial institutions,
- Arrangement of funds through financial instruments such as shares, debentures, bonds and loans, and

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- Looking after the accounting and legal work connected with the raising of funds.

### Limitations

The traditional approach was evolved during the 1920s and 1930s period and continued till 1950. The approach had been discarded due to the following limitations:

- 1. No Involvement in Application of Funds:** The finance manager had not been involved in decision-making in allocation of funds. He had been treated as an outsider. He had been ignored in internal decision making process and considered as an outsider.
- 2. No Involvement in day to day Management:** The focus was on providing long-term funds from a combination of sources. This process was more of one time happening. The finance manager was not involved in day to day administration of working capital management. Smooth functioning depends on working capital management, where the finance manager was not involved and allowed to play any role.
- 3. Not Associated in Decision-Making Allocation of Funds:** The issue of allocation of funds was kept outside his functioning. He had not been involved in decision-making for its judicious utilisation.

Raising finance was an infrequent event. Its natural implication was that the issues involved in working capital management were not in the purview of the finance function. In a nutshell, during the traditional phase, the finance manager was called upon, in particular, when his speciality was required to locate new sources of funds and as and when the requirement of funds was felt.

The following issues, as pointed by Solomon, were ignored in the scope of financial management, under this approach:

1. Should an enterprise commit capital funds to a certain purpose?
2. Do the expected returns meet financial standards of performance?
3. How does the cost vary with the mixture of financing methods used?

The traditional approach has outlived its utility in the changed business situation. The scope of finance function has undergone a sea change with the emergence of different capital instruments.

### Modern Approach

Since 1950s, the approach and utility of financial management has started changing in a revolutionary manner. Financial management is considered as vital and an integral part of overall management. The emphasis of Financial Management has been shifted from raising of funds to the effective and judicious utilisation of funds. The modern approach is analytical way of

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looking into the financial problems of the firm. Advice of finance manager is required at every moment, whenever any decision with involvement of funds is taken. Hardly, there is an activity that does not involve funds. In the words of Solomon "The central issue of financial policy is the use of funds. It is helpful in achieving the broad financial goals which an enterprise sets for itself".

Nowadays, the finance manager is required to look into the financial implications of every decision to be taken by the firm. His involvement of finance manager has been before taking the decision, during its review and, finally, when the final outcome is judged. In other words, his association has been continuous in every decision-making process from the inception till its end.

### Aims of Finance Function

The following are the aims of finance function:

- 1. Acquiring Sufficient and Suitable Funds:** The primary aim of finance function is to assess the needs of the enterprise, properly, and procure funds, in time. Time is also an important element in meeting the needs of the organisation. If the funds are not available as and when required, the firm may become sick or, at least, the profitability of the firm would be, definitely, affected. It is necessary that the funds should be, reasonably, adequate to the demands of the firm. The funds should be raised from different sources, commensurate to the nature of business and risk profile of the organisation. When the nature of business is such that the production does not commence, immediately, and requires long gestation period, it is necessary to have the long-term sources like share capital, debentures and long term loan etc. A concern with longer gestation period does not have profits for some years. So, the firm should rely more on the permanent capital like share capital to avoid interest burden on the borrowing component.
- 2. Proper Utilisation of Funds:** Raising funds is important, more than that is its proper utilisation. If proper utilisation of funds were not made, there would be no revenue generation. Benefits should always exceed cost of funds so that the organisation can be profitable. Beneficial projects only are to be undertaken. So, it is all the more necessary that careful planning and cost-benefit analysis should be made before the actual commencement of projects.
- 3. Increasing Profitability:** Profitability is necessary for every organisation. The planning and control functions of finance aim at increasing profitability of the firm. To achieve profitability, the cost of funds should be low. Idle funds do not yield any return, but incur cost. So, the organisation should

avoid idle funds. Finance function also requires matching of cost and returns of funds. If funds are used efficiently, profitability gets a boost.

**4. Maximising Firm's Value:** The ultimate aim of finance function is maximising the value of the firm, which is reflected in wealth maximisation of shareholders. The market value of the equity shares is an indicator of the wealth maximisation.

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### 4.3 LIQUIDITY VS PROFITABILITY (RISK-RETURN TRADE-OFF)

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In the course of performance of duties, a finance manager has to take various types of financial decisions – Investment Decision, Finance Decision, Liquidity Decision and Dividend Decision, as detailed above, from time to time. In every area of financial management, the finance manager is always faced with the dilemma of liquidity vs profitability. He has to strike a balance between the two.

Liquidity means that the firm has:

- (A) Adequate cash to pay bills as and when they fall due and
- (B) Sufficient cash reserves to meet emergencies and unforeseen demands, at all time.

**Profitability goal**, on the other hand, requires that the funds of the firm be so utilised as to yield the highest return.

**Liquidity and profitability are conflicting decisions.** When one increases, the other decreases. More liquidity results in less profitability and vice versa. This conflict finance manager has to face as all the financial decisions involve both liquidity and profitability.

**Example:** Firm may borrow more, beyond the risk-free limit, to take the advantage of cheap interest rate. This decision increases the liquidity to meet the requirements of firm. Firm has to pay committed fixed rate of interest, at fixed time, irrespective of the return the liquidity (funds) gives.

Profitability suffers, in this process of decision, if the expected return does not materialise. This is the risk the organisation faces by this financial decision.

**Risk:** Risk is defined as the variability of the expected return from the investment.

**Return:** Return is measured as a gain or profit expected to be made, over a period, at the time of making the investment.

**Example:** If an investor makes a deposit in a nationalised bank, carrying an interest of 7% p.a., virtually, the investment is risk free for repayment, both

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principal and interest. However, if a similar amount is invested in the equity shares, there is no certainty for the amount of dividend or even for getting back initial investment as market price may fall, subsequently, at the time of sale.

The expected dividend may or may not materialise. In other words, the dividend amount may vary or the company may not declare dividend, at all. A bank deposit is a safe investment, while equity shares are not so. So, risk is associated with the quality of investment. The relationship between risk and return can be expressed as follows:

$$\text{Return} = \text{Risk free rate} + \text{Risk premium}$$

Risk free rate is a compensation or reward for time and risk premium for risk. Risk and return go hand in hand. Higher the risk, higher the required return expected. It is only an expectation, at the time of investment. There is no guarantee that the return would be, definitely, higher. If one wants to make an investment, without risk, the return is always lower. For this reason only, deposit in a bank and post office carry lower returns, compared to equity shares. So, every financial decision involves liquidity and profitability implications, which carries risk as well as return. However, the quantum of risk differs from one decision to another. Equally, the return from all the decisions is not uniform and also varies, even from time to time.

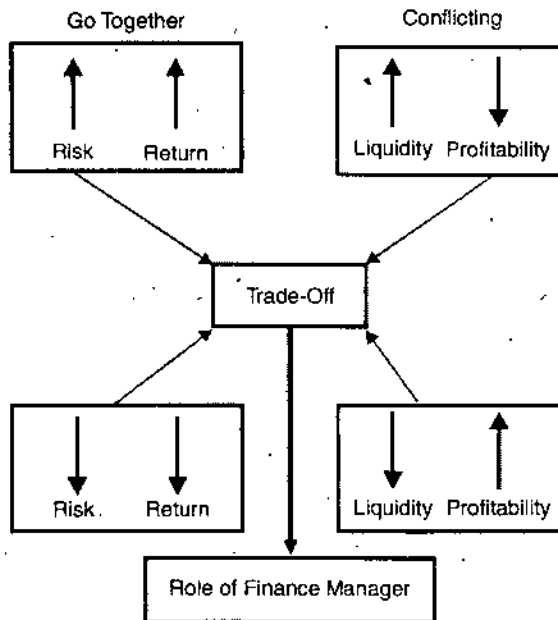
### **Relationship between Liquidity & Profitability and Risk & Return:**

**Example:** If higher inventories are built, in anticipation of an increase in price, more funds are locked in inventories. So, organisation may experience problems in making other payments, in time. If the expected price increase materialises, firm enjoys a boost in profits due to the windfall return the decision yields. The expected increase in price is a contingent event. In other words, the increase in price may or may not happen. But, firm suffers liquidity problems, immediately. This is the price firm has to pay, which otherwise is the risk the firm carries.

It may be emphasised risk and return always go together, hand in hand. More risk, chances of higher return exist. One thing must be remembered, there is no guarantee of higher returns, with higher risk. The classical example is lottery. There is a great risk, if one invests amount in a lottery. There is no guarantee that you would win the lottery. However, liquidity and profitability are conflicting decisions. There is a direct relationship between higher risk and higher return. In the above example, building higher inventories, more than required, is a higher risk decision. This higher risk has created liquidity problem. But, the benefit of higher return is also available. Higher risk, on the one hand, endangers liquidity and higher returns, on the other hand, increases profitability.



Liquidity and Profitability are conflicting while Risk and Return go together. The pictorial presentation is as under:



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**Fig. 4.1.** Role of Finance Manager Relationship between Risk-Return and Liquidity Vs. Profitability

**Balanced Approach:** A finance manager can not avoid the risk, altogether, in his decisionmaking. At the same time, he should not take decisions, considering the returns aspect only. At the time of taking any financial decision, the finance manager has to weigh both the risks and returns in the proposed decision and optimise the risk and returns, at the same time. A proper balance between risk and return should be maintained by the finance manager to maximise the market value of shares. A particular combination where both risk and return are optimised is known as Risk-Return Trade-off.

**Basic objective of Finance Manager:** An efficient finance manager fixes that level of operations, where he can achieve maximisation of the shareholders' wealth. Such a level is termed as risk-return trade off. Every finance manager attempts to achieve that trade-off in every finance decision. At this level, the market value of the company's shares would be maximum. To achieve maximum return, funds flowing in and out of the firm are to be constantly monitored to ensure their safety and proper utilisation.

## 4.4 OBJECTIVES OF FINANCIAL MANAGEMENT

Financial management is concerned with the procurement and judicious use of funds. Its main aim is to maximise the earnings and value of the equity share, in the best interests of the firm. Every firm should have a goal or

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objective to achieve. In the context of that objective, the finance manager evaluates the decisions to be taken. A goal of the firm may be defined as 'a target against which its performance can be measured'. Several goals of financial management have been cited. The goals are maximisation of sales revenue, net profit, return on investment, size of the firm, percentage of market share etc. The problem is to identify one of these several goals. **It is, generally, agreed that the financial goal of the firm should be the maximisation of owners' economic welfare. Owners' economic welfare can be maximised with the Shareholders' Wealth Maximisation (SWM) as reflected in the market value of the equity shares.**

The above objective of financial management can be achieved, by the following widely accepted approaches:

- (A) Profit maximisation
- (B) Wealth maximisation

### **Characteristics of a Good Operational Decision Criterion**

An appropriate operational (financial) decision criterion should have the following concepts:

1. **Precision Concept** – Be precise and exact.
2. **Time Concept** – Recognise the Time value of Money
3. **Quantity Concept** – Be based on 'Bigger the Better' principle.
4. **Quality Concept** – Consider both Quantity and Quality dimensions.

Now, let us examine which approach, profit maximisation or wealth maximisation, would comply with all the characteristics of a good operational decision criterion.

### **Profit Maximisation**

Profit earning is the main aim of every economic activity. Business is also an economic activity. So, every business seeks profit. Profit earning is the real barometer to measure the efficiency of business firm.

The term 'profit' refers to the amount of income, which is due to the owners of business, whether distributed in the form of dividend or not. Profitability is an operational concept. In other words, profitability refers to a situation where output exceeds input *i.e.*, the value created by the use of resources is more than the total of input resources. Profitability refers to Earnings Before Interest and Taxes (E.B.I.T).

### **Arguments in Support**

1. **Aim of Business:** According to this approach, actions that increase profit should be undertaken and those that decrease profit are to be avoided.

- The approach is, indeed, simple. It implies that all the financial management decisions, the investment, finance and dividend decisions – should be oriented towards maximisation of profits.
2. **Barometer for Measuring Efficiency:** Real test for measuring comparative performance of firms is profit. So, this is the ground of rationality.
  3. **Economic Conditions Change:** Business may undergo recession, depression and severe competition, as economic conditions do not remain the same, always. When conditions are favourable, firm has to make more profits to withstand the unfavourable situations, later. Firm can rely on the past earnings, if it sustains loss. So, every firm has to concentrate to make more money, when the going is good.
  4. **Growth:** Firm can accumulate profits, which could be a supporting or main source of finance for expansion and growth, in future years.
  5. **Social Goals:** Personal objectives are primary to every-one. If profits are high, a business firm can meet its personal objectives and also can help the society for socio-economic welfare. If profits are small, who allocates funds for social benefits? So, profitability is essential for fulfilling social goals.

In view of the above, it is argued that every firm should be guided by the aim of profit maximisation.

**Criticism:** The arguments against profit maximisation and main technical flaws of this criterion are as follows:

- (i) **Ambiguity-Vague:** The term 'profit' is vague and has different interpretations. It means different things to different people. It can be pre-tax or post-tax profit. It is not clear whether it is short-term profit or long-term profit. Does it mean operating profit or profit available for shareholders? The other equivalent term, often used, is 'Return'. Return can be on total capital employed or total assets or shareholders equity and so on. Further, it is also possible that the net profits may increase, but earning per share may decline. To illustrate, a firm has issued 1,000 equity shares and has made a net profit of ₹ 10,000. So, the Earnings Per Share (EPS) are ₹10 per share. Later, the firm has increased the number of equity shares, further by 2,000. After increase of share capital, the net profit of the firm has been ₹ 15,000. The net profit has increased by 50% from ₹ 10,000 to ₹ 15,000 but EPS has declined from ₹ 10 to ₹ 5. In such a situation, the market value of the share does not increase, despite more profits. In fact, there would be a fall in market price of equity share, due to reduction in EPS.

The above explains maximising profits does not maximise economic welfare of the owners. Profit maximisation concept is neither precise

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nor exact. A loose expression like profit can not be the basis for operational financial management.

- (ii) *Timing and Value of Money-Ignored*: The concept of profit maximisation does not help in making a choice between projects, giving different benefits, spread over a period of time. It ignores the difference in time in respect of benefits arising from the similar amount of investment. The fact that a rupee received today is more valuable than the rupee received later is ignored in this concept. The following illustration explains how time value of money is ignored.

Time pattern of Benefit (Profits)		
	Alternative A (₹)	Alternative B (₹)
First Year	5,000	Nil
Second year	10,000	10,000
Third year	5,000	10,000
Total	20,000	20,000

If profit maximisation were the decision criterion, both the alternatives would be ranked, equally, as the amount of profit is same in both the alternatives. 'A' provides higher returns in earlier years. In case of 'B', the returns are in later years. The returns, arising in the earlier years, can always be reinvested to earn extra returns. The basic dictum in financial planning is "The Earlier-The Better". This is referred to as time value of money.

Profit maximisation criterion does not differentiate the returns received at different periods. Costs and benefits, received over a period, are treated alike, irrespective of their timings. The second and third characteristics of a good operational decision criterion – Recognition of time value of money and 'Bigger the Better' principle are not complied by profit maximization concept.

- (iii) *Quality (Certainty) of Benefits*: The term 'Quality' refers to certainty, with which benefit can be expected to materialise. Profit maximisation gives weight to the size of returns, but not to the certainty of the returns. Basically, investors are risk averse *i.e.*, they want to avoid or at least minimise risk. So, the investors give preference to those returns, which are certain even with small variations, over the years. This concept can be understood well with the following example:

Uncertainty about Expected Benefits (Profits)		
State of Economy	Alternative A (₹)	Alternative B (₹)
RECESSION (Period I)	900	Nil
NORMAL (Period II)	1,000	1,000
BOOM (Period III)	1,100	2,000
Total	3,000	3,000

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Returns are identical in the normal situation, in both the cases. However, the returns vary, widely, during recession and boom, in both the alternatives, and fluctuate depending on the state of economy.

To put it differently, earnings associated with alternative 'B' are more uncertain and risky, with no returns during the recession period and highest returns in the boom period. In recession period, it is difficult to make money and every firm can make profits during boom. Obviously, alternative 'A' is better from the point of risk and certainty. Profit maximisation criterion is inappropriate and unsustainable as operational objective in the financial management decisions of different kinds – investment, finance and dividend decisions of a firm. It ignores two important dimensions, namely, (i) risk and (ii) time value of money. So, the last characteristic of a good operational decision criterion, 'quantity and quality' is also ignored by profit maximisation theory.

- (iv) *Change in Organisation Structure:* Principle of profit maximisation was, earlier, accepted when the structure of the business was sole proprietorship. In this type of structure, sole proprietor managed the business, individually, and was the recipient of total profits. As total profit belonged to him, his wealth maximised. This was the picture in 19th century, when the business was, totally, self-managed. Over a period, the sole proprietorship concept has changed to Joint stock company. In this changed structure, there is divorcee between ownership and management. Shareholders own the company while professional managers manage the business. There are several stakeholders in the joint stock company-shareholders, customers, employees, government and society. Due to varied stakeholders, their interests are diverse and so finance manager has to reconcile their divergent and conflicting interests. In the changed scenario, the concept of 'Profit Maximisation' is unrealistic and inappropriate.
- (v) *Social Welfare may be Ignored:* Due to profit maximisation objective, business may produce goods and services, which may not be necessary and beneficial to the society. So, it is, indeed, doubtful how far the profit maximisation objective serves or promotes social welfare, let alone optimises social welfare.

(vi) *Ignores Financing and Dividend Aspects:* The profit maximisation concept concentrates on profitability aspect alone and impact of financing and dividend decisions on the market value of shares are, totally, ignored.

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Let us explain the point further. A firm may borrow, beyond its capacity, to finance the projects on hand. The firm's main concern is to maximise the profit alone, ignoring the financial risk- risk of insolvency due to non-payment of interest and repayment of principal. Totally ignoring risks associated with the huge borrowing is not in the interests of organisation. So, it can not be said that such type of borrowing is to promote economic welfare of shareholders as risk aspect has been ignored. More so, this heavy risk is likely to dampen the market price of shares. Normally, dividend decision influences market price of equity shares. Even if the firm declares a higher rate of dividend than the preceding year, still, market price of the equity share may decline if the market expectations are not fulfilled. In such a situation, even if the firm makes more profit and ignores the expectations of shareholders in respect of dividend, it is unlikely the market value of share would improve. The logic is simple. The real owners, equity shareholders may not appreciate this type of working.

So, profit maximisation is not a proper objective of financial management. Let us examine whether wealth maximisation is a better objective of Financial Management, compared to Profit Maximisation.

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## 4.5 ORGANISATION OF FINANCE FUNCTION IN A MULTI-DIVISIONAL INDIAN COMPANY

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**Structure not standardised:** The finance function is very vital for every business firm. A firm should give proper attention to the structure and organisation of its finance department. However, the structure of the finance department is not standardised. The structure depends upon the nature, size of the business and requirements and, in particular, expectations of the top management. When sole proprietor conducts the business, he performs even the finance function. With the increase in size of business, joint stock companies have been formed. As there is a divorce in ownership and management, professionals handle this important function.

**Freedom with Accountability:** Due to development of corporate functioning, the finance function is centralised due to its importance. Organisation of the finance function differs from company to company, dependent upon their respective needs and financial philosophy. More so, the role of finance has been increasing as the realisation has been gaining ground, gradually, that the survival and growth of business are more dependent on the finance function. The finance function is delegated to a top management executive who is designated as General Manager (Finance), Executive Director

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(Finance), Chief Financial Officer (CFO) or even Vice- President (Finance). The finance chief is a member of top management and closely associated with the formulation of policy and decision- making. Below the top head, various functions are described and responsibilities assigned to avoid overlapping and at the same time given freedom of functioning, with the necessary accountability.

**Structure Chart:** Basically, there are two most important functions – the accounting and finance functions. The accounting functions are performed by Controller while the Treasurer performs the finance functions. Both these functionaries work under the close supervision of vice-president (Finance).

An illustrative organisation chart of finance function of management in a large, multi-divisional Indian company is shown, diagrammatically, below:

The organisation chart shows that the Vice-President (Finance) is supported by two deputies known as:

1. Controller or Comptroller (Accounts Manager)
2. Treasurer (Finance Manager)

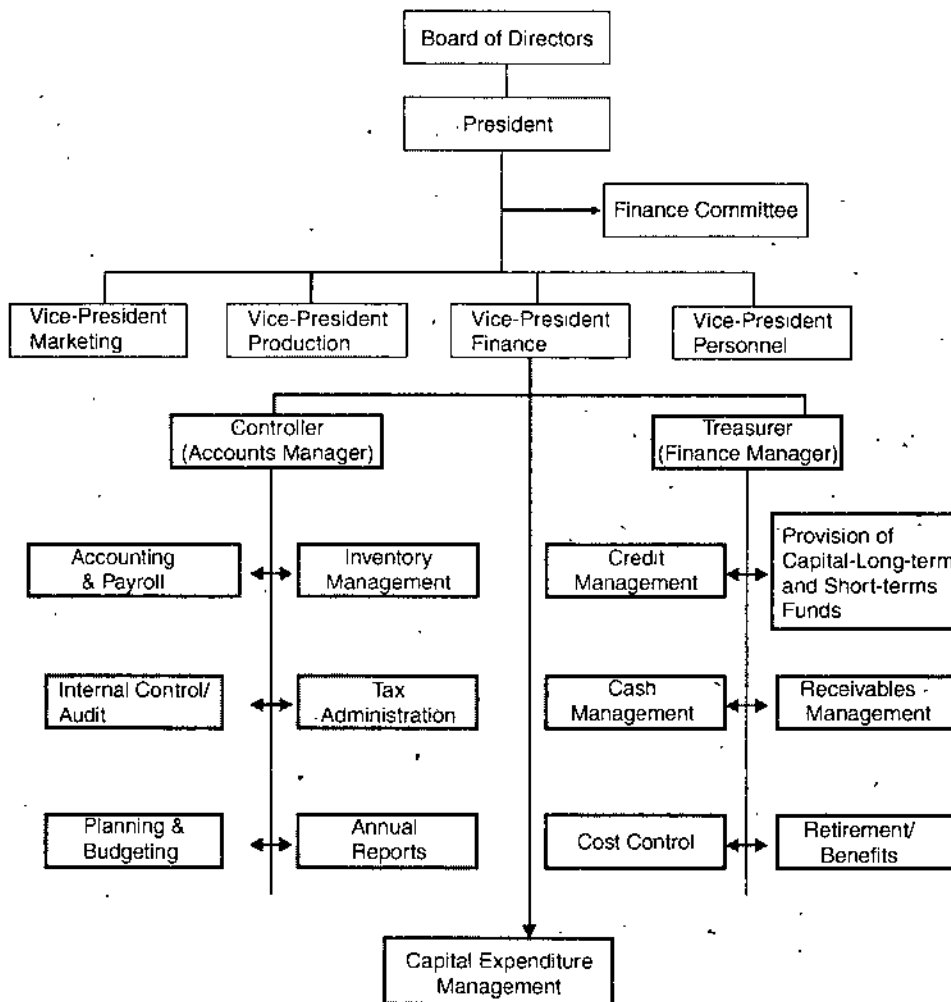


Fig. 4.2. Organisation of Finance Function in a Multi-Division Indian Company

## NOTES

**Controller's Functions:** Controller's functions, basically, include accounting function, inventory management, planning and budgeting, payroll, all types of tax administration, statutory and internal audit, preparation of annual and financial reports, economic appraisal and reporting and internal control. In some organisations, he is designated as Accounts Manager.

**Treasurer's Functions:** The major duties of Treasurer include forecasting of financial needs, present and future, both long-term and short-term and arranging required funds, at economic cost, in time. The main function of treasurer is to plan, provide the needed capital and working capital funds and their management. Additionally, he assumes responsibility for cash management and administering the flow of cash, management of receivables, retirement benefits, cost control and protecting funds and securities. He is to coordinate with banks and financial institutions. The treasurer is also designated as Finance Manager.

It may be stated that controller's functions are concerned with the assets side of the balance sheet, while treasurer's functions relate to the liability side in a firm.

**Capital Expenditure Decisions:** Looking to the importance of capital expenditure, the function is in direct control of Vice-President (Finance). Decisions relating to capital expenditure are taken through Finance Committee, presided by the President, where all the functional heads are the members.

It is interesting to note that the controller does not control the finances. He utilises the information relating to finance for planning and management control. The routine functions are always delegated to the officers, working under their supervision.

Additional functions may be assigned to the finance division. But, the culture, of late, has been to allow the finance chief to concentrate on the finance functions, alone, as finance has been considered a very important function, demanding full time attention to maintain the efficiency of the organisation. Earlier, Government reporting and insurance functions used to be handled by the finance. Now, they are handled by the Company Secretary to enable the Vice-President (Finance) to concentrate on the management of the financial resources. His duties are not compounded with the other duties, generally, in large companies.



Treasurer	Controller
1. Provision of capital (Both long-term and short-term funds)	1. Accounting function
2. Maintaining relationship with banks and financial institutions	2. Preparation of Annual Report and financial reports.
3. Credit Management	3. Planning and Budgetary control
4. Cash Management	4. Statutory Audit and Internal Audit
5. Receivables Management	5. Tax Administration
6. Protection of funds and securities	6. Internal Control
7. Cost Control.	7. Economic Appraisal

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**Controller Vs Treasurer:** Both the terms 'Controller' and 'Treasurer' are used in the United States of America, where the total finance functions are divided between them. Many a time, their functions overlap with each other. Both these designations have not become popular in India and these functions are performed by the Manager (Accounts) and Manager (Finance). However, in private sector, with modern management, there is always a trend to give the designations, in a phasionable manner.

The functions of finance depend, largely, on the size of the organisation and the competence and professional background of the person who handles the functions.

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## 4.6 COST BENEFIT ANALYSIS

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A firm's performance is measured by the profit it makes. Profits of a firm depend upon a large number of factors. But, the most important factors are costs of manufacture, volume of sales and selling price of the products. The analytical technique employed to study the interrelationship of cost, volume and price and its impact on the behaviour of profit is known as 'Cost-Volume Profit Analysis'. In the short-run, profit planning can be made with the use of CVP analysis. It helps the management to achieve an ideal combination of costs and volume.

This becomes possible with the understanding of the implications of variable cost, fixed costs and volume. CVP analysis helps the management in deciding the quantum of sales required to be made to avoid losses as well as reaching a particular level of sales to achieve the targeted amount of profit.

## 4.7 CVP ANALYSIS

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**Utility of CVP Analysis:** CVP analysis studies the relationship of cost-volume-profit at different levels of output. This analysis is an important tool for profit planning. The three factors of CVP analysis—costs, volume and profit are interconnected and dependent on one another. For example, profits depend upon the selling price. Selling price largely depends upon cost of production. Cost of production, in turn, depends upon volume of production. It is only the variable costs that vary directly with production, whereas fixed costs remain constant regardless of the volume of production, in the short-run.

In some quarters, there is an opinion that business firms rarely operate at their break-even points. Therefore, the break-even analysis is of very limited use to the management. This is incorrect. Reason is many people consider CVP analysis and break-even point are one and the same. It is not so. The scope of CVP analysis is quite wide while BEP is only a part of CVP analysis. Break-even analysis provides answer how much sales are to be made to avoid losses. CVP analysis provides not only this answer as BEP is a part of it, but provides answers in many areas to the management. Understanding CVP relationship is important in financial decision making to a dynamic management. It provides right answers to the following questions such as:

- How much sales are required to avoid losses?
- What level of sales is required to achieve a targeted amount of profit?
- What will be the effect of change in prices, costs and volume on profits?
- What will be the effect of change in sales mix on profits?
- What will be the new break-even point if there is change in prices, costs, volume or sales mix?
- Should we buy or manufacture some products or components?
- What will be the impact of plant expansion on the relationship of cost-volume-profit?
- Which product or product mix is most profitable and which one is least profitable?
- Should the sale of a product or operation of a plant be discontinued?
- Is it desirable to shut down the plant, temporarily?

These are some of the intricate questions for which management can find answers with the help of CVP analysis. All the above aspects have immense influence on the profitability of the firm. CVP analysis is concerned with entire profit planning, as management's main thrust is to build a good level

of profit, at all times. This analysis provides the necessary insight to the management to take suitable decisions for necessary and timely action. It is of great use for profit planning, cost control and decision-making.

## Behaviour of Fixed and Variable Costs

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### Fixed Costs

When a cost does not change with increase in volume, it is called Fixed Cost. Fixed costs are constant. Fixed costs do not change irrespective of the level of production. Examples are rent, insurance, depreciation and repairs. The total fixed cost is one and the same whether one unit is produced or one hundred units are produced till the production does not exceed the capacity of machine. However, the unit fixed cost decreases as the volume of production increases. In the pictorial presentation of behaviour of fixed costs, unit fixed cost curve descends while total fixed cost is constant at all levels of production. In other words, unit cost decreases as and when volume increases. But, there is no change in fixed costs at different volume levels. The graphical presentation of total fixed cost and unit fixed costs show as under:

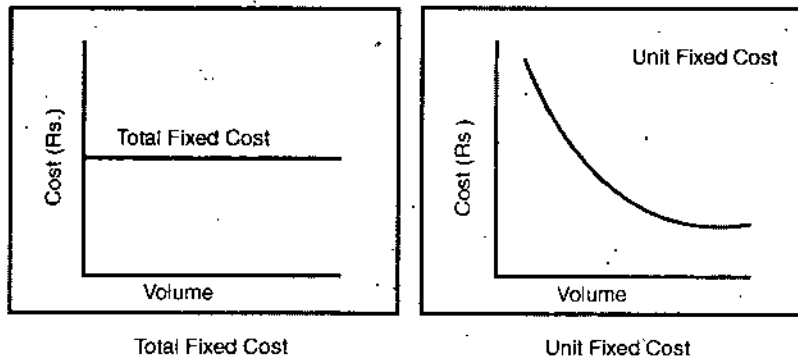


Fig. 4.3. Behaviour of Fixed Costs

### Variable Costs

When a cost changes in proportion to the change in volume, it is called Variable Cost. The typical example is raw materials. If production increases, total cost of raw materials increases in the same proportion of level of production. If production is suspended or closed, cost of raw materials becomes zero. Mathematically, a linear relationship exists between a variable cost and volume. If volume increases or decreases by 20%, in the same proportion, the cost of production varies. So, unit cost is constant and total cost changes, proportionately, to volume. The graphical presentation of total variable cost and unit variable cost shows:

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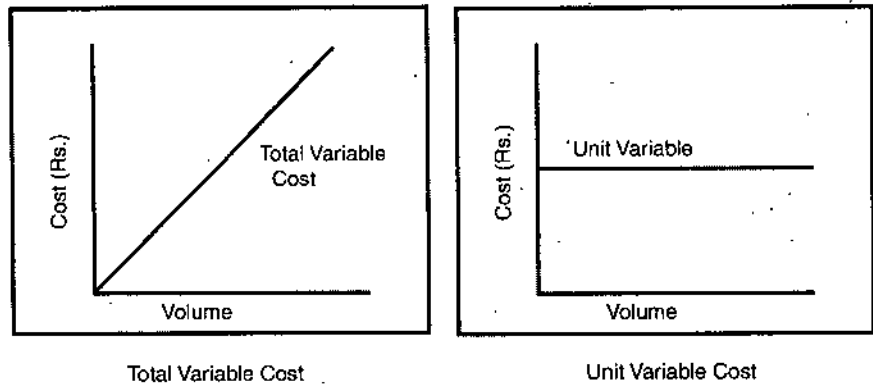


Fig. 4.4. Behaviour of Variable Costs

In CVP analysis, the presumption is fixed cost and variable cost can be separated.

## 4.8 BREAK-EVEN ANALYSIS

Break-even analysis establishes the relationship between revenues and costs with respect to volume. It indicates the level of sales at which total costs are equal to total revenues. Break-even analysis is a specific way of presenting information to management in a precise manner. Many a time, CVP analysis is popularly designated as break-even analysis. But, there is a narrow difference between the two. CVP analysis is concerned with the entire profit planning while the break-even analysis is one of the techniques used in that process.

### Break-even Point

Break-even point is the point at which the firm makes no profit or loss. At this point, the firm is in the stage of equilibrium. So, the equilibrium point is commonly known as break-even point. Break even point is the point where the revenue is just equal to total costs, means where the firm makes neither profit nor loss and this position is called zero position. After this level, if the firm makes production and sells above the variable cost, it earns profit, while if the sales fall below this level, firm sustains loss. There are two approaches to calculate the break-even point. They are:

1. Break-even Formula Approach and
2. Break-even Chart or Graphic Method break-even Analysis

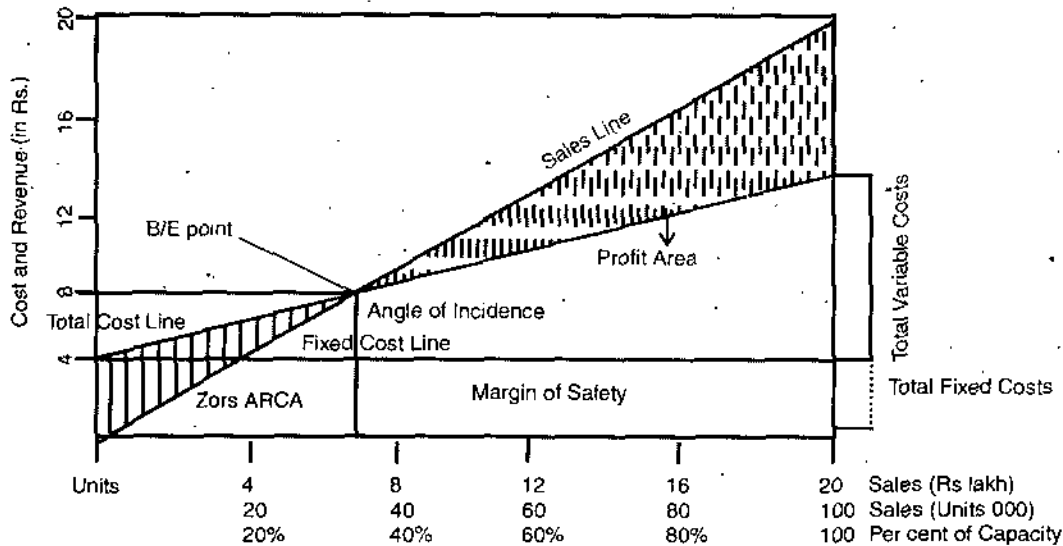
### Break-even Formula Approach

In which the break-even point can be calculated in terms of units, in terms of money value of sales volume or as a percentage of estimated capacity.

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**Break-even Chart or Graphic Method of Break-even Analysis**

The break-even point can be presented graphically. The pictorial presentation gives a better view of the relationship of cost, volume and profit. Graphical presentation gives immediate and clear understanding of the picture. This type of presentation always impresses the management as it gives instantaneous understanding of the situation. The graphical chart of break-even analysis looks like this:



**Fig. 4.5. Break-even Chart**

Following are the steps involved in preparing break-even chart:

1. Sales volume is plotted on the horizontal line *i.e.*, X-axis. Sales volume may be expressed in terms of units, rupees or as a percentage of capacity.
2. Vertical line *i.e.*, Y-axis is used to represent revenue, fixed costs and variable costs.
3. Both horizontal and vertical lines are spaced equally with the same distances.
4. The fixed cost line can be drawn parallel to the horizontal line.
5. A parallel line should be drawn to the vertical line.
6. Total sales line and Total cost line are drawn by plotting on the right hand vertical line.
7. As the vertical and horizontal lines are spaced equally, Total sales line and Total cost line intersect forming an angle of 45 degree.

**Advantages or Uses of Break-even Chart**

Following are the advantages or uses of break-even chart:

1. It is simple to form. Even a layman can understand, clearly.

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2. It helps the management to take managerial decisions because the effects of changes in fixed cost and variable cost at various levels of output can be depicted, in a meaningful manner. The effect of changes in selling price on profits can be better explained by graphical presentation.
3. It is used to study the comparative profitability of various products.
4. The break-even chart is a better managerial tool for forecasting, planning and control.
5. Besides determining the break-even point, profit at various levels of output can be determined with the help of break-even charts.

### Limitations of Break-even Analysis and Break-even Charts

Despite many advantages, break-even analysis and charts suffer from the following limitations:

1. **Number of Assumptions:** Break-even analysis is based on several assumptions and they may not hold well under all circumstances. Fixed costs are presumed to be constant, irrespective of the level of output. It does not happen. When the production increases above the installed capacity, fixed costs change as new plant and machinery has to be installed for increased production. Variable costs do not vary in direct proportion to the change in volume of output due to the laws of diminishing and increasing returns. Selling price that is supposed to be constant, changes due to increased competition.
2. **Application in Short run:** Break-even analysis is a short run analysis. In long run, the cost analysis may not hold good as the assumptions may vary and situation may be totally different.
3. **Applicable in Single Product line:** This analysis is applicable for a single product only. If break-even point for each product is to be calculated, fixed costs have to be allocated to different products, which is a practical problem in the real life. Otherwise, BEP for the overall firm only is possible to calculate.
4. **No Remedial Action:** It does not suggest any remedy or action to the management for solving the problem.
5. **Other Factors Ignored:** Other important factors such as amount of investment, problems of marketing and policies of Government influence the problem. Break-even analysis does not consider them. This analysis focuses only on cost-profit relationship.
6. **Limited Information:** Break-even charts provide limited information. If we want to study the effects of changes in fixed costs, variable costs and selling prices on profitability, a number of charts have to be drawn. It becomes rather more complicated and difficult to understand.

**7. Static View:** More often, a break-even chart presents a static view of the problem under consideration. Despite the limitations, it has great application for the basic problem of understanding the inter relationship of cost, volume and price on profits.

### Cash Break-even Point

Many a time, it is difficult for the industrial units to become break-even in the initial years. From that environment, the concept of cash-break even point has emerged. The Cash break-even point may be defined as that point of sales volume where revenues are equal to cash costs.

Depreciation is, generally, a fixed cost. However, when plant and machinery is used for additional shifts, the additional depreciation is a variable cost. Reason for treating the additional depreciation as variable cost is the firm can avoid additional shift, at any time, and in such circumstances this cost would not be incurred. To calculate the cash-break even point, depreciation element (Additional depreciation component) is to be excluded from the fixed cost as well as variable cost. Similarly, deferred expenses are to be excluded from the fixed cost. Thus, cash-break even point may be calculated as below:

$$\text{Cash break-even Point (in terms of units)} = \frac{\text{Cash Fixed Cost}}{\text{Cash Contribution per unit}}$$

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## 4.9 SHORT-TERM FINANCING AND INVESTMENT

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Short-term finance means availability of funds for a period of one year or less than that period. The basic purpose of short-term financing is to meet the working capital requirements of the company. There are two main types of short-term financing: Trade credit and Bank borrowing. Here, we will discuss in detail.

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### 4.10 TRADE CREDIT

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**Meaning:** Trade credit refers to the credit received by a customer from the supplier of goods, in the normal course of business. When a retailer buys goods from a wholesaler, retailer is the customer to whom credit is extended by the wholesaler. In India, buying goods on credit is a normal feature. In India, this is a major source of short-term financing. In many areas of business, unless credit is extended business can not be made. Very few trades are lucky not to extend credit and make a good business. In that trade, there are no credit sales and all sales are made on cash basis.

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In trade credit, payments are deferred. Small traders heavily depend on the trade credit as they still experience difficulty in securing borrowing from banks, though credit is made liberal by the banks. Small traders cannot raise the needed finance by other means. Trade credit is mostly an informal arrangement and is granted on open account basis. Normal procedure is supplier sends the goods, with an agreed understanding, that the payment is to be made after a certain credit period. Buyer accepts the invoice and so, in effect, he acknowledges the debt. There is no other formal legal document. Once a link is established between the supplier and buyer and payment is regularly made as per the terms of the invoice, the wholesaler supplies the goods for an increased amount, as and when the business of the retailer increases. To a wholesaler, credit extended to the retailers appears as 'Sundry debtors' in its balance sheet. In the balance sheet of the buyer (retailer), the trade credit is shown in the form of sundry creditors. In U.S.A., trade creditors are called accounts payable.

**Bills Payable:** Bills payable may take the form of trade credit. When the supplier of the goods is less sure of receiving the payment on the due date, supplier draws the bill of exchange on the buyer and buyer accepts for payment on the due date. In other words, trade credit is documented in the form of bills payable. Bills payable take the place of sundry creditors in the accounts of the retailer. In the accounts of the wholesaler, bills receivable appears in the place of sundry debtors.

Supplier would be in a position to discount these bills with his banker and can raise the finance. Even when there is no doubt of creditworthiness of the buyer, seller may adopt the mode of payment through bill of exchange when he wants to have the option of raising finance through discounting the bills of exchange.

**Credit Terms:** Credit terms refer to those terms under which the supplier sells on credit to the buyer. There are two important terms and they are due date and cash discount. Due date is the date on which the buyer has to make the payment for the goods supplied. On the due date, supplier can expect the payment. Credit terms refer to the length of credit period and the date of commencement of credit. Cash discount is the incentive provided by the supplier to the buyer for early payment, before the due date. The typical way of expressing credit in an invoice is 2/15, net 30 days. This means 2% cash discount would be given, if the buyer makes the payment within 15 days from the date of invoice. If the buyer does not want to avail the cash discount, payment can be made at the end of 30 days from the date of invoice.

**Benefits and Costs of Trade Credit:** Trade credit is a spontaneous source of financing. As the volume of business grows, the amount of credit also, automatically, increases. Suppose, the buyer is in the habit of receiving credit for 30 days and his daily purchases are ₹10,000 per day. If his business



increases and makes purchases for ₹ 15,000 per day, his trade credit has increased from ₹ 3,00,000 (30X 10,000) to ₹ 4,50,000 (30X 15,000). In an informal way, the buyer receives the extra credit as he makes the prompt payment at the end of 30 days.

**Advantages:** The major advantages of trade credit are as under:

- 1. Easy Availability:** Unlike other sources of finance, trade credit is easier to obtain. Trade credit is automatic and no negotiation is needed to obtain. On this credit, many small firms survive. In many trades, it is an accepted way of conducting business. Even a new shop gets trade credit, after a couple of transactions. It is not possible to secure borrowing from the banks in the initial periods. Even for a new company, trade credit is easier to secure and is highly difficult to raise finance in the capital market.
  - 2. Flexibility:** Flexibility is the unique feature of trade credit. If business expands, more purchases are made and with higher purchases, more trade credit is received. In contrast, when the business declines, automatically, firm makes lower purchases and with it, lesser trade credit is received.
  - 3. Informality:** Trade credit is informal. No legal documents are involved. Generally, even a formal agreement is not entered into, while extending trade credit.
- Cost of Trade Credit:** Is trade credit a free source of finance? Many think, trade credit does not have any additional cost. It is wrong. Supplier of trade credit has to borrow more funds, paying interest, if trade credit is to be extended. This cost of credit is passed on by the supplier via increased price to the buyer. It is common knowledge cash purchase attracts a lower price, compared to purchase on credit.

### Accrued Expenses and Deferred Income

**Accrued Expenses:** Accrued expenses represent a liability for the services already received, yet to be paid. They permit payment after the services are received. The classical examples are salaries, rent and electricity where services are received first and payments are made at the end of the specified duration, normally, at the end of the month. In case of salaries and wages, employees render their services and so benefit of the services is received by the firm, immediately, while payments are made at the end of the month. So, even employees too provide a source of spontaneous short-term finance to the organisation they work! In case of corporate taxes, they are paid, quarterly, while the profits are made as and when sales are made. When payment is not made and accounts are to be finalised, provision for accrued expenses is made in accounts. Accrued expenses represent spontaneous and interest-free source of financing. The longer the period of payment, higher the benefit firm derives. However, due to legal constraints and practical difficulties,

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firm cannot postpone their payment. Till their payment, firm enjoys the benefit as short-term financing.

**Deferred Income:** Deferred income represents funds received, in advance, for the services to be rendered, in future. The receipts improve liquidity of the firm. In turn key projects or where goods are to be made for a specific requirement, advance payments are insisted. This avoids the possibility for the cancellation of the sale, after the commencement of the execution of the order. Normally, clause remains in those contracts that the advance payment would be forfeited on cancellation of the contract. These advances are adjusted when the goods and services are supplied. Till the date of supply of services, the amount stands as liability.

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### 4.11 BANK LOANS FOR WORKING CAPITAL

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Banks are the main institutions that provide working capital, which is a short-term source of financing. Bank credit is the most important source for working capital. There are various forms of bank finance for short-term requirements. They are discussed here under:

#### Short-Term Credit

Cash credit is the common form of financing for meeting working capital requirements, with greatest flexibility, to the borrower in conducting the account. Bank considers the firm's sales and production plans to sanction a particular working capital limit, which is called sanctioned limit in cash credit account. In case of seasonal industries, bank sanctions peak credit limit to meet the working capital requirements during the season which is always higher in comparison to the limit sanctioned for non-peak period. So, bank sanctions separate limits for peak and non-peak periods as working capital requirement is maximum during peak season. These cash credit limits are against the security of current assets such as stocks and book-debts.

**Margin:** Bank does not finance 100% of current assets. Banks stipulate the required margin. The drawing power (amount that can be drawn) is calculated, after deducting the required margin from the value of stocks. Borrower has to submit the stock statement, monthly, as per the terms of sanction, declaring the physical stocks and value on the specified date. If the margin requirement is 30%, bank lends only up to 70% of the value of stocks. The amount so calculated is called drawing power and the borrower is allowed to draw to the extent of the drawing power. Based on the value of stocks, drawing power is fixed, not exceeding the sanctioned limit. Against the stocks of ₹ 80,000, borrower can avail the drawing power of ₹ 56,000 (80,000 - 30% of 80,000).

**Additional Temporary over Drawings:** Bank allows the borrower to draw, beyond the sanctioned limit, for temporary periods. This would be allowed, if stocks cover the borrowing, with the stipulated margin. An example would clarify the picture, better.

Sanctioned limit	1,00,000
Stocks	1,50,000
Margin	20%
Drawing power	1,20,000
Outstanding balance	90,000

In the above situation, borrower has approached the bank for temporary over drawings of ₹ 20,000. Normally, bank allows ₹ 10,000, up to the sanctioned limit only. As the stocks cover the additional drawings, with the required margin, bank can permit the over drawings for a temporary period, normally, not exceeding 30 days. Once the over drawings are allowed, the outstanding balance becomes ₹ 1,10,000 (90,000 + 20,000), which is in excess of sanctioned limit, but covered by the drawing power.

**Ideal Form for Business:** The greatest convenience of cash credit account is its flexibility. Borrower can deposit the sale proceeds, daily, to reduce the outstanding balance in the cash credit account and can draw as and when needed, to the maximum extent of drawing power or cash credit limit, which ever is lower. Interest is charged on the outstanding balance only. In other words, borrower is required to pay interest for the amount utilised only and not on the total sanctioned limit. In the loan account, this facility of withdrawing money, again, does not exist. Once deposited in the loan account, the amount is not available for withdrawal as the money is deemed towards the closure of the loan account. This feature in the cash credit account is the greatest convenience to the borrower. On account of this convenience, the actual rate of interest on the sanctioned limit would work out lower than the rate offered by the bank as no borrower requires money on a continuous basis. Moreover, there is no commitment charge for the limit not utilised. By virtue of margin, bank is secured even if the value of the stocks falls to the extent of the margin.

**Period of Sanction:** Cash credit limits are, normally, sanctioned for one year. At the end of the year, the limits are reviewed. Technically, the advances are repayable on demand. However, bank recalls the advance only when the conduct of the account is not satisfactory.

**Pledge/Hypothecation:** Cash credit facility can be sanctioned either in the form of pledge or hypothecation of goods. In case of pledge, goods are kept in the godowns, under lock and key of the bank. So, the possession of goods and control thereon is not with the borrower. As and when payment is made, goods are released, even proportionately, to the customer. Normally, banks

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sanction this facility to new borrowers or when their credit worthiness is not fully known. However, Borrower does not enjoy total convenience with the pledge facility. In case of hypothecation, possession of goods is with the borrower and can deal with the goods in the manner he likes, even selling the goods, without the bank's prior approval. However, borrower is required to deposit sale proceeds of the goods into the cash credit-hypothecation account. So bank assumes more risk while sanctioning the hypothecation limit. So, hypothecation facility is extended to such borrowers whose creditworthiness is well known to the bank.

### Over Drafting

Bank sanctions overdraft in the current account of the customer as and when cheques are received, in excess of the balance in the current account. This is a temporary arrangement. Banks also sanction regular overdraft limits, normally, against the security of fixed deposit receipts, shares, life insurance policy, postal certificates etc. Interest is charged on the amount utilised. Cheque facility is made available in the overdraft account. Cash credit is a normal feature in business and overdraft facility is, normally, availed by professionals for their working capital requirements.

### Purchase or Discounting of Bills

This category of finance is a self-liquidating character, with greater control for the bank to monitor the utilisation of the finances, sanctioned by the bank, for working capital requirements. Banks often experience difficulty to check and control diversion of funds *i.e.*, utilisation for purposes other than the sanctioned. In that context, this form of finance is ideal as banks can control better in respect of utilisation as well as monitoring the end use of funds. Banks sanction limit against the bills of exchange drawn by the suppliers on its customer. Supplier can avail the limit for the bills drawn on the buyers. If the bill of exchange is payable on demand, the bill is purchased by the bank. If the bill of exchange is drawn on acceptance basis, bank discounts the bill, after acceptance by the buyer of the goods. Buyer has to make the payment, only on the due date. In both the cases, working capital is provided by the bank by purchasing or discounting the bills, as the case may be. Banks credit the customer's account, after deducting their commission.

The greatest convenient feature of the advance is its self-liquidating character. Once, the buyer makes the payment, the advance sanctioned against the bill is recovered. The amount sanctioned for working capital is, normally, divided between the stocks and bills. Banks can monitor the utilisation of the limit in this scheme, better as chances for abuse of the cash credit limit are more. Diversion of funds for other purposes is difficult in the bill scheme. To

encourage bills as an instrument of working capital, Reserve Bank of India had introduced the new bill market scheme in 1970. However, the scheme has failed to work.

## **Certificate of Deposit**

The purpose of letter of credit is that the payment is assured to the supplier of goods or services by the bank. Here, responsibility for payment is assumed by the bank and so supplier is not concerned with the credit worthiness of the buyer. In case, payment is not made by the customer, bank makes payment to the party in whose favour the letter of credit is opened. So, bank assumes the risk. Simply, credit worthiness of the buyer is not relevant to the supplier, once letter of credit is opened. In other words, credit worthiness of the borrower is substituted by the creditworthiness of the bank. Letter of credit is a non-fund based limit. It means there is no outgo of funds, when the letter of credit is opened by the bank in favour of the customer. Bank opens the letter of credit in favour of financially sound customers. While sanctioning letter of credit limit, banks, normally, insist on margin from the customers.

## **Additional Working Capital through Letter of Credit**

Borrower may face a difficult situation, when its cash credit limit for working capital is exhausted and suppliers are unwilling to give further trade credit. This situation, occasionally, happens in practical life. Many a time, sanctioned letter of credit limit may remain unutilised. In such circumstances, borrower can utilise the letter of credit limit for working capital purposes by requesting bank to open letters of credit in favour of suppliers. Even an unwilling supplier would gladly accept to supply goods on credit, if letter of credit is opened in his favour. Supplier is confident with the letter of credit as there would be no default in payment by bank. So, buyer can negotiate with the supplier for the length of credit and open letter of credit on 'Documents against Acceptance' basis. Once bill of exchange is accepted, buyer can get possession of RR/LR, as the case may be. Taking delivery of goods, buyer can sell the goods and make payment on the due date of bill of exchange. This is an ingenious way of utilising a non-fund based limit for working capital purposes.

**Margin-Earmarking from Cash Credit Account:** Normally, banks insist on cash margin for opening letter of credit. This margin amount is kept in short term deposit and it attracts low interest rate while the funds, drawn from cash credit, bear a higher interest rate. Instead of cash margin, one can intelligently request the bank to earmark the margin amount from the cash credit limit. Bank reduces the cash credit drawing power to the extent of margin on letter of credit and allows only reduced drawing power for operations of the business. By this exercise, interest can be saved. This is

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one more way for the finance manager to boost up profitability. The author, humbly, submits that he had successfully negotiated with the suppliers in working capital crunch situations to accept letter of credit with documents on acceptance basis and could overcome working capital constraints. To improve profitability, earmarking of cash credit limit towards margin was also accepted by the bank.

**Secured Term Loan**

Working capital loan is, normally, sanctioned by banks for adhoc or temporary purposes of the customers, which are not foreseen by the borrower. This is an additional sanction, in excess of the cash credit limit sanctioned. Once repayment is made, the loan account would be closed. In other words, customer cannot utilise this mode of finance on a continuous basis, like cash credit account. Banks charge higher rate of interest for extending this type of facility, compared to the normal cash credit limit extended to the same borrower.

**Commercial Paper**

Commercial paper is an unsecured instrument, issued in the form a promissory note. They are issued by the highly rated corporate firms to diversify their sources of short-term financing. Equally, they provide an outlet to invest the temporary excess funds by the individual, corporate sector and non-corporate sector in safe and liquid instruments to secure higher returns, compared to the interest rates offered by banks on short-term deposits. Even non residents and foreign institutional investors can invest in commercial paper. As the gamut of investors is more, commercial paper provides the real opportunity to raise finances from varied types of investors. Commercial paper is an ideal route to raise funds as well as investing excess short-term funds.

**Recent Importance:** With reduction in interest rates, the importance of commercial paper has diminished, of late. However, issue of commercial paper has, again, regained its erstwhile importance to raise finances, at a cheaper rate of interest, compared to the rates of interest offered by banking industry, due to increase in interest rates charged by the banking industry. The Indian economy has started witnessing the unprecedented increasing trends on inflation, from the middle of the year 2006. In consequence, bank interest rates have been hardening, more significantly, from the year 2007. Increase in interest rates, offered by banks, is also in consequence of different stringent initiatives taken by RBI. The different measures are increase of credit reserve ratio and statutory liquidity ratio to contain or control the galloping inflation trends, prevailing more than 6%, during the year 2007. So, commercial paper has regained its importance to work as a potent weapon to raise short-term finances, by highly rated companies, to improve their

bottom line. In other words, commercial paper has become attractive as an alternative way to finance short-term requirements, instead of borrowing from the banks.

Commercial paper is an important money market instrument for raising short-term finance, at a cheap interest rate. Reserve Bank of India stipulates conditions for issue of commercial paper, from time to time. Conditions, as amended up to 30th June, 2006 are as under:

- **Eligibility:** Companies, which have net worth not less than ₹4 crores only, can issue commercial paper. They should be enjoying working capital limits. Their advance should have been categorised at 'Standard Asset' by the financing bank.
- **Rating Requirements:** All eligible participants have to obtain the credit rating from CRISIL or CARE or any other recognised credit rating agency. The minimum credit rating required for issue of commercial paper is P-2 of CRISIL or any other equivalent rating from other rating agencies.
- **Minimum Investment and Denomination:** Amount that can be invested by a single investor cannot be less than ₹5 lakhs (Face Value). Commercial paper can be issued in denomination of ₹ 5 lakhs or multiples there of.
- **Maximum Limit:** Company can issue commercial paper up to a maximum of 100% of net owned funds, as per the latest audited balance sheet. This over-all limit covers issues of commercial paper, alongwith other instruments such as term money borrowings, term deposits, certificates of deposit and inter corporate deposits.
- **Reduction of Cash Credit Limit, no Longer, now:** Earlier, banks used to reduce the cash credit limit to the extent commercial paper is issued by the borrowing firm. This restriction is no longer, in force.
- **Working Capital Limits:** Banks and financial institutions have the flexibility, now, to fix working capital limits, duly taking into account the resources pattern of companies' financing, including commercial paper.
- **Period of Raising Subscription:** Commercial paper has to be raised within two weeks, from the date of opening the issue for subscription.
- **Maturity:** Maturity runs between a minimum of 7 days and maximum of one year, from the date of issue.
- **Credit Enhancement:** CP is a 'stand alone' product. However, banks have the flexibility to provide credit enhancement, by way of stand-by assistance, based on their commercial judgement.

In other words, in case of default in payment by the issuer, the responsibility would be cast on the bank that has provided credit enhancement. This credit enhancement provides the necessary cushion to the investor's confidence to invest. It may be made clear that the credit enhancement is not compulsory

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for the issue of commercial paper. The issuer, normally, seeks the credit enhancement, when the credit rating for the commercial paper is not adequate, though enough to issue commercial paper, to attract the investors' response, to raise finance at a cheaper rate of interest. This credit enhancement strengthens the rating of the commercial paper.

These conditions change from time to time and the conditions existing at the time of issue govern the commercial paper. Cheaper interest rate is the attraction for issue of commercial paper. Investors would, generally, invest in commercial paper issued by sound and creditworthy companies. Commercial paper gives higher interest rate compared to interest rate offered by banks on short-term deposits.

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### 4.12 FUNDS FLOW STATEMENT

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Profit and Loss Account and Balance Sheet are the two basic financial statements, which are of immense importance to owners, management and investors. When Profit and Loss Account and Balance Sheet are prepared, what is the need of preparing this separate Funds Flow Statement, again? Balance Sheet shows the summary of assets and liabilities of a firm. The assets side of the balance sheet shows the deployment of funds while the liabilities side shows how the resources have been raised. In other words, balance sheet shows sources and uses of finance too. It indicates the financial position of a firm on a particular date. However, Balance Sheet is a static statement and does not show the causes for the changes in assets and liabilities or movement of finances, between two periods. Balance Sheet does not show the changes that take place during the period. If loan has been raised and repaid during the same period, balance sheet, at the end of the period, does not show both the transactions. Similarly, Profit and loss account shows the expenses and revenues realised for an accounting period. Profit and Loss Account also reflects the operational results of a business for a particular period, which causes changes in owners' equity, partially. Capital raised and funds withdrawn resulting in change in owner's equity does not appear. In other words, Profit and loss account explains only partial story in respect of owner's equity. Profit and Loss Account and Balance Sheet provide the basic essential information about the business activities of the firm. However, both these two statements do not explain the causes for changes in assets, liabilities and owner's equity. Moreover, usefulness of both balance sheet and profit and loss account is limited and fail to serve the purposes of financial analysis and planning. It is clear, from the above, that Profit and Loss Account and Balance Sheet do not provide sufficiently wide range of information to make assessment of the organisation by the end user for the



purpose of analysis and planning. So, there is a need to prepare a separate statement that explains the changes in assets and liabilities, from one period of time to the end of another period. The statement is called "Funds Flow Statement".

**Purposes:** Both Profit and Loss Account and Balance Sheet do not explain the changes in assets, liabilities and owners' equity between two dates. So, an additional statement is needed to serve this purpose. Funds Flow Statement serves this purpose. Funds Flow Statement, broadly, serves the following purposes. The Funds Flow Statement shows:

1. Changes in assets and liabilities, including working capital, between two periods and
2. Utilisation of financial resources during the period such as acquisition of assets, payment of debts and distribution of dividends to shareholders etc.

### Concept of Funds

The term 'Funds' has been defined in a number of ways. They are:

1. **In the Narrow sense:** Here, the term 'funds' refer to cash only. Transactions that involve cash only are taken. Cash Flow Statement is prepared, in this approach, where only cash receipts and disbursements are included. It is a summary of cash transactions.
2. **In the Popular sense:** 'Funds' refer to working capital, the excess of current assets over current liabilities. Total resources of a business are invested in fixed assets and working capital, the later is partly in the liquid form. This is the most popular form of 'Statement of Changes in Financial Position'. Sources and Application of Funds is prepared on this basis.
3. **In the Broader sense:** The term 'Funds' refer to financial resources, in whatever form, they may exist. Statement of Total Financial Resources is prepared as per this approach. This is a comprehensive statement involving cash and non-cash transactions. Transactions involving money, materials, machinery and others are included. When machinery or building is purchased, in exchange of shares, it is not reported both in cash flow statement and Sources and Application of Funds. However, this type of transaction involves financial resources and so finds place in the Statement of Total Financial Resources. All types of transactions involving financial resources are included in this statement. The working capital concept of funds is the most popular one, as already stated, amongst the different ways of defining the term 'Funds'. In this unit, when we discuss Sources and Application of funds, the term 'funds' refer to working capital only.

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## Meaning of Flow of Funds

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The term 'Flow' refers to movement of funds. The movement can be in the form of increase or decrease of funds *i.e.*, working capital. If a transaction creates a change in the quantum of working capital, 'flow' of funds takes place. The transaction may increase or decrease the existing amount of working capital. Every transaction has two sides. Let us take some examples to explain the concept of flow of funds. Issue of shares for cash results in increase of working capital, it is a transaction of 'Source'. The transaction has resulted in 'inflow' of funds. Purchase of furniture on credit reduces the amount of working capital; it is 'Application' of funds. There is outflow of funds with the transaction. There would be change in working capital if one of the items were related to current assets or current liabilities. If the transaction creates a change in working capital, the transaction would find a place in the Sources and Application of Funds Statement. If the transaction does not change the amount of working capital, it is said to be non-fund transaction and does not appear in the Sources and Uses of Funds Statement. In a non-fund transaction, both the items are non-current or current items. We are referring to current assets and current liabilities. When machinery has been purchased and in consideration debentures are issued, the transaction has not changed the working capital, both the items are non-current, it is non-fund transaction. If cash is realised from debtors, there is no increase in working capital as both the items are current items. These types of transactions do not appear in the sources and application of funds statement.

**Simple Rule:** The simple rule is "Ask the transaction, whether it changes working capital, if it is 'YES', the transaction finds a place in Sources and Application of Funds. If the answer is 'NO', no place for the transaction in the Statement.

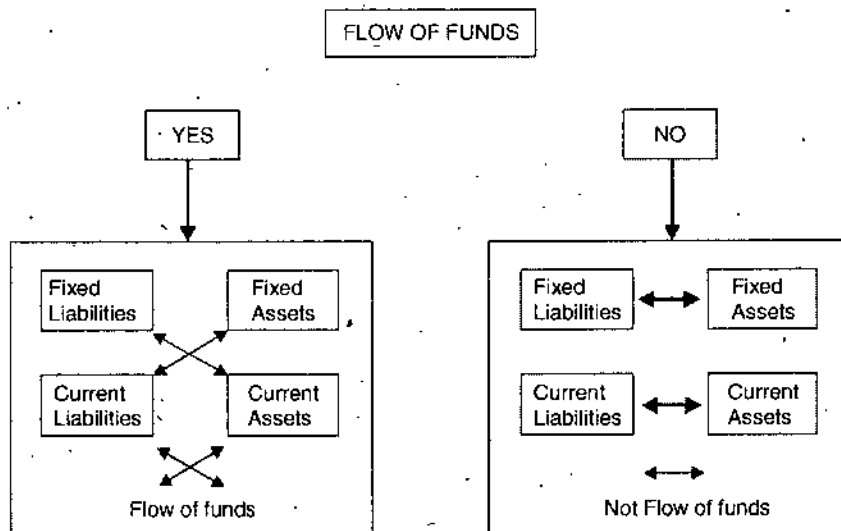


Fig. 4.6

## Objectives of Funds Flow Statement

**Meaning and Definition:** Funds Flow Statement is a device that indicates the various means through which funds have been obtained, during a specified period and the ways they have been used. Simply, it shows the different sources of procuring funds and their varied application during that period. It shows the inflow and outflow of funds. **The term 'funds' refer to working capital.** Funds Flow Statement shows the change in financial position of a firm between beginning and ending financial statement dates. Foulke defines this statement as:

“A statement of sources and application of funds is a device designed to analyse the changes in financial condition of a business enterprise between two dates”. The statement has two sides, the left side shows the sources and the right side presents their uses. The statement is an important tool for financial analysis for the management, bankers and investors who are interested in knowing the changes in the financial position of the firm. It is a supplement to the financial statements. Banks insist on this statement as and when loan application is submitted for financial assistance. Now, Funds Flow Statement is a mandatory requirement of reporting in India for limited companies.

Funds Flow Statement is called by various names such as:

- Statement of Sources and Uses of Funds
- Where got, where gone Statement
- Statement of Inflow and Outflow of Funds
- Funds Received and Funds Disbursed Statement
- Statement of Sources and Applications of Funds

As observed rightly, the key word is 'Funds'.

**Importance and Objectives of Funds Flow Statement:** This statement is widely used by the financial institutions, banks and credit rating agencies. By preparing the statement, the management can know well, in advance, about the adequacy or otherwise of working capital position for proper planning.

**1. Analysis of Financial Position and Profits:** Balance sheet is a static statement about the financial position, on a particular date. It shows the net effect of various transactions on the operational and financial position of a concern. It does not explain the causes for the change in assets and liabilities, between two different dates. The fund's flow statement explains its effect on the liquidity position of the organisation. At times, even after the firm is profitable, still, it experiences difficulty in meeting normal payments. Firm does not understand reasons for such a situation. Sources and Application of Funds gives the answers for these questions.

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2. **Throws Light on Perplex Questions:** Questions of general interest but answers not available elsewhere are found from this statement such as:
  - Why firm is not able to declare higher dividend despite increase in profits?
  - Where the proceeds of shares and debentures have gone?
  - In what manner, the sale proceeds of fixed assets have been used?
  - What are the sources of repayment of long-term debts?
  - How the increase in working capital requirement was financed and how further requirements would be met?
3. **Information of Profit from Operations and Non-Operations:** Profit and Loss Account shows the summary or net effect of operating and non-operating expenses, in the form of net profit. In other words, operating and non-operating profit is not calculated and shown separately. Firm may be in net profit, due to non-operation profit, even after offsetting the operating losses. This alarming picture is not known from the profit and loss account for timely action. Funds Flow Statement shows the operating and non-operating profit, separately, that helps timely managerial action.
4. **Management of Working Capital:** Statement of changes in working capital reveals to management the ways in which working capital was obtained and used in the past. Projections are always prepared by the management to achieve future plans. A projected statement of working capital may reveal the need of large amount of working capital. In case, the firm is not able to meet the future working capital needs from internal resources, it can plan, in advance, to procure to meet its needs.
5. **Helps in Borrowing Decision:** Nowadays, banks and other financial institutions insist on the submission of Funds Flow Statement along with loan application. This helps the bank to assess the working capital needs of the firm. Based on this statement, banks consider whether to sanction working capital limits or not and if so to what extent the limit is to be sanctioned. This statement also facilitates the long-term institutions to appreciate the means of the firm for repaying the installment on long-term debt. This is a necessary statement both for commercial banks and long-term institutions while assessing the borrowing needs of the firm.
6. **Knowledge of Sources and Uses:** Sources in the Funds Flow Statement provide knowledge in respect of the various ways funds have been raised. In a similar manner, information in respect of Applications or uses gives knowledge about the different ways in which the funds of the firm have been used. Firm may be able to plan future course of action with the information.

**7. Other Information:** Funds Flow Statement provides that information that is not precisely available in the financial statements. If the firm purchases building and sells the same in the same accounting year for loss, the transaction does not appear in the Balance Sheet hence it would not be known. For this reason, Funds Flow Statement is always needed as a supplementary statement.

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### Utility of Funds Flow Statement to Different Parties

The versatile utility of Funds Flow Statement to different parties can be summarised as follows:

- 1. Management:** The historical Funds Flow Statement (Statements of the earlier years) provides the information how the funds were available and their use in the past. They provide the means to understand why the targets of the earlier years were not achieved. That would be useful information to avoid recurrence, in future. Funds Flow Statements can be prepared for future too. Planning can be more effective with their help. They provide the necessary hints to the management whether it is necessary for them to review and recast their plans, in a more realistic way, in case the future inflows are not adequate to meet the anticipated outflows.
- 2. Financial Institutions:** Commercial banks require them to assess the working capital needs of the firm. Term-lending institutions want to satisfy the repayment capacity of the firm. Funds Flow Statement provides the information how the firm used the funds, earlier. Instances of diversion of sanctioned working capital for acquisition of fixed assets, contrary to the terms of sanction, would be known. The lenders would know firm's style of functioning. The borrowings may be secured by the assets, but the financial institutions want to satisfy with the financial integrity of the borrower too. Financial institutions would know the ways the funds were used, earlier and future ways of use to judge their repaying ability.
- 3. Debenture Holders:** Debenture holders too are long-term creditors of the firm. Their stake is similar to financial institutions. They would get back their money after several years, dependant on the maturity period of the debentures. Debenture holders look for redemption and projected Funds— Flow Statement shows the position of availability of funds when the debentures fall due for repayment. To continue to hold the debentures till such time or not, Funds Flow Statement is useful for them to take a suitable decision.
- 4. Trade Creditors:** They are the suppliers of goods and services and look for short-term liquidity for payment. Liquidity of the firm and operating profits assure the repayment schedule. Statement of Working Capital

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Position indicates how far the firm is liquid to meet the promised payment schedule to review their credit policy.

- 5. Shareholders:** Shareholders are basically interested about the financial position of the firm and their future investment plans that generate operating profits. This holds well to the existing as well as potential shareholders. **Future investment plans and the operating profits that are likely to generate would be known from the Funds Flow Statement.**

### Sources of Funds

These are the sources through which funds come into the business of the firm.

- 1. Funds from Operations:** Profits from business is the main source of funds. Profit does not mean the amount that is shown in the profit and loss account. When profit and loss account is prepared, several operating and non-operating expenses are debited. Similarly, operating and non-operating incomes are also credited. Non-operating item is one, which is not connected with the conduct of the business such as loss on sale of assets; preliminary expenses written off and rent from building, not connected to the business. Adjustment is necessary to arrive at the correct profit from business operations. To arrive at operating income, non-operating expenses are to be added and nonoperating income is to be deducted from the amount of profit shown in profit and loss account. Profit from operations is the source as funds are received into the business.
- 2. Sale of Fixed Assets:** If any fixed asset such as land, building, plant and machinery is sold, the total sale proceeds are a source. Sale of fixed assets increases the working capital. However, if one non-current asset (Fixed asset) is exchanged for another non-current asset, it does not constitute inflow of funds, as there is no change in working capital.
- 3. Issue of Shares and Debentures:** When shares and debentures are issued to be public and cash is received, the amount of cash received is a source. The important point is if cash is received then only it is a source. In the following instances, it is not to be treated as source:
  - (A) Issue of shares and debentures for consideration other than current assets
  - (B) Conversion of debentures and loans into shares
  - (C) Issue of bonus shares or making partly paid shares as fully paid shares out of the accumulated profits.

The reason is simple. Such above instances do not increase the working capital.

4. **Increase in Long-Term Loans:** Long-term loans from financial institutions and banks are a source as the amount increases the availability of funds.
5. **Decrease in Working Capital:** If the working capital at the end of the period is decreased compared to the amount at the beginning of the period, it is a source. This can happen due to reduction of current assets or increase of current liabilities. If stock ₹ 60,000 is reduced to ₹ 40,000, working capital is decreased by ₹ 20,000 and the decrease is a source. Similarly, creditors may increase from ₹ 10,000 to ₹ 15,000 and the effect is reduction of working capital by ₹ 5,000. Decrease of working capital is a source of funds.
6. **Non-Trading Receipts:** Non-trading receipts like dividend and rent are also credited to profit and loss account. These items are deducted from the net profit to arrive at profit from business operations. So, these items are to be shown, separately, in the Funds Flow Statement, as they are also sources of funds, not included in the funds from operations.

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### 4.13 FINANCIAL SYSTEM OF INDIA AND INDIAN GOVERNMENT

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Finance plays a key role in the part of economic and business activities of the country. Systematic and efficient flow of finance is needed to efficient and effective management of the business concern. Arrangement of finance to required business concern, should be properly maintained and channelised through regulated institutions and markets. In India, with the effect of the new economic policy, emerging needs of financial institution and markets should be looked after. Indian financial system has developed constantly and successfully to infuse the new blood to the economic development of the nation. Hence, the economic growth and development is purely based on the regulated and well established financial system of the country.

Financial system is the basic concept for the industrial development of the nation. Financial system provides adequate and smooth flow of finance to the needed parts. Indian financial system consists of the four important components such as:

- Financial Institutions
- Financial Markets
- Financial Instruments
- Financial Services.

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Financial system implies a set of complex and closely connected or intermixed institutions, agent practices, markets, transactions, claims and liabilities in the economy. The financial system is concerned about the money, loan and finance. These three parts are very closely interrelated with each other and depend on each parts.

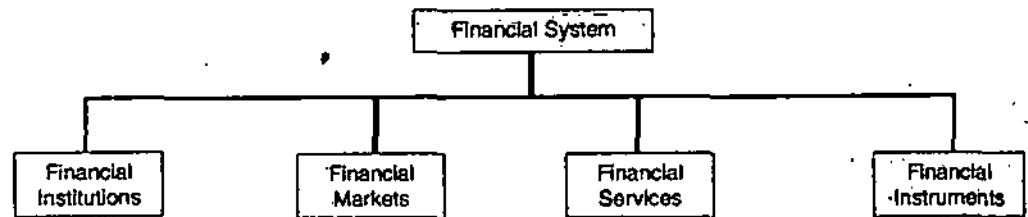


Fig. 4.7. Financial System

In Indian financial system, financial institutions are play the major role. Hence, it is more importance than other component of the IFS because all the components of IFS are directly or indirectly related with the financial institutions. Financial institutions are providing various services to the economic development with the help of issuing of the financial instruments. Financial institutions can be classified into banking and non-banking institutions. Now in India, all the financial institutions are systematically regulated and controlled by respective act.

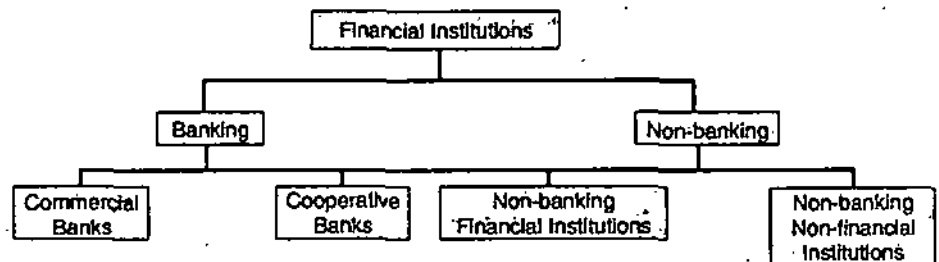


Fig. 4.8. Financial Institutions

Here we will discuss regarding financial institutions in detail:

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## 4.14 BANKING INSTITUTIONS

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Banking institutions are the key part of the economic development of the nation. Any country's financial transaction should be properly arranged from investors to the needed industrialist. Banking institutions play a major role in the field of savings and investments of money from public and lending loans to the business concern. Indian Banking institutions may be classified into two broad categories:

- (1) Commercial Banks
- (2) Cooperative Banks



## Commercial Banks

Commercial Banks are the most important deposits mobilisation and disbursers of finance. Indian commercial banks are the oldest, biggest and fastest growing financial institutions. The main function of the commercial banks are accepting deposits and rendering loans to the public. Indian commercial banks can be classified into the following categories:

### Scheduled Commercial Banks

Scheduled banks are those which are included in the second scheduled of Banking Regulation Act 1965 and others are non scheduled banks. To be included in the second scheduled of the Banking regulation act the bank full fill the following conditions:

- Must have paid up capital and reserves of not less than ₹ five lakh.
- It must also satisfy the RBI that its affairs are conducted in a manner.
- It is required to maintain a certain amount of reserves with the RBI.

### Nationalised Banks

To use financial institutions as the instrument of promoting economic and social development in a more purposeful manner and to overcome the monopoly over financial resources, the government of India nationalised 20 commercial banks during the tenure of Prime Minister of Indira Gandhi. On July 19, 1969, the first nationalisation of 14 banks took place with the following banks:

1. Bank of India
2. Union Bank of India
3. Bank of Baroda
4. Bank of Maharashtra
5. Punjab National Bank
6. Indian Bank
7. Indian Overseas Bank
8. Central Bank of India
9. Canara Bank
10. Syndicate Bank
11. United Commercial Bank
12. Allahabad Bank
13. United Bank of India
14. Dena Bank

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On April 15, 1980 the second nationalisation took place with the following banks:

1. Andhra Bank
2. Corporation Bank
3. New Bank of India
4. Oriental Bank of Commerce
5. Punjab and Sind Bank
6. Vijaya Bank

In October 1993 the New Bank of India was merged with Punjab National Bank, in March 2007, Bhart Overseas Bank merged with Indian Overseas Bank therefore, at present there are only 19 nationalised banks in the country besides the RBI.

**State Bank of India (SBI)**

The largest Public sector bank of India which was created after nationalisation of Imperial Bank of India in 1955. It is now the largest commercial banks in India and in terms of branch largest in the world. As part from the main State Bank of India, there are seven subsidiaries:

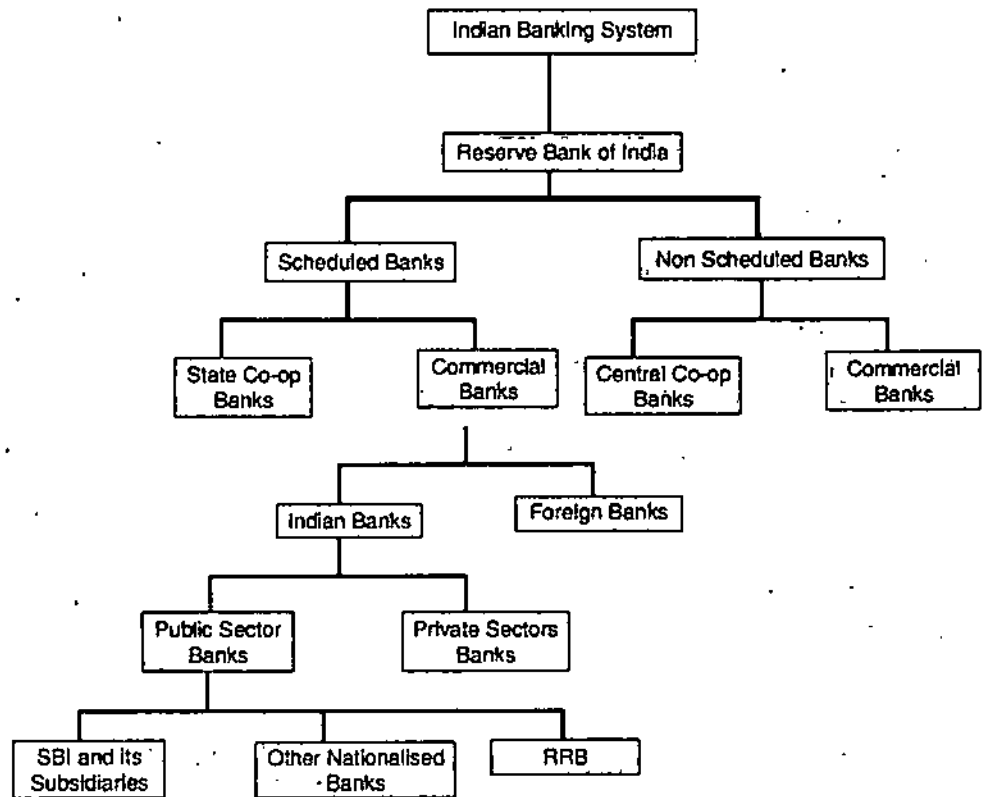


Fig. 4.9. Indian Banking System

1. State Bank of Bikaner and Jaipur
2. State Bank of Hyderabad
3. State Bank of Indore
4. State Bank of Mysore
5. State Bank of Patiala
6. State Bank of Saurashtra
7. State Bank of Travancore

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**Table 4.1. Growth and Structure of Commercial Banks in India**

S.No.	Particulars	1951	1986	1996	2002	2005
1.	Number of Sch. Banks	92	79	91	98	98
2.	Number of RRB	-	194	196	196	196
3.	Number of Non-Sch. Banks	474	3	3	4	4

**Private Sectors Banks**

These comprise of foreign and private domestic banks. The foreign banks have market share of 8.5% of total deposits into banking industry and the domestic private banks have a share of 5.8% of total deposits of the banking industry. Presently 31 private domestic banks and 33 foreign banks are functioning in India. The following are the old generation private sector banks in India:

- Bharat Overseas Bank Ltd.
- City Union Bank Ltd.
- Development Credit Bank Ltd.
- Ing Vysya Bank Ltd.
- Karnataka Bank Ltd.
- Lord Krishna Bank Ltd.
- The Nainital Bank Ltd.
- SBI Coml. and Intl. Bank Ltd.
- Tamilnadu Mercantile Bank Ltd.
- The Bank of Rajasthan Ltd.
- The Catholic Syrian Bank Ltd.
- The Dhanalakshmi Bank Ltd.
- The Federal Bank Ltd.
- The Ganesh Bank of Kurndwad Ltd.
- The Jammu & Kashmir Bank Ltd.

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- The Karur Vysys Bank Ltd.
- The Lakshmi Vilas Bank Ltd.
- The Ratnakar Bank Ltd.
- The Sangli Bank Ltd.
- The South Indian Bank Ltd.
- The United Wester Bank Ltd.

***New Banks in Private Sectors***

In the year 2000, the government of India related entry level for private sector by reducing the government holding in nationalised banks from 51% to 33%. The RBI in 2003 thereby issued directions for establishment of private banks in India. Some of the new banks in private sector as follows:

- UTI Bank Ltd.
- Indus Ind Bank Ltd.
- ICICI Bank Ltd.
- Global Trust Bank Ltd.
- HDFC Bank Ltd.
- Centurian Bank Ltd.
- Bank of Punjab Ltd.
- Times Bank Ltd.
- IDBI Bank Ltd.
- Development Credit Bank Ltd.
- Kotak Mahindra Bank Ltd.

**Foreign Banks in India**

RBI has been issuing licenses to various foreign banks to operate in India. 33 foreign and multinational banks are working in India today. The following are the major foreign banks play in Indian banking markets.

- ABN-Amro Bank N.V.
- Abu Dhabi Commercial Bank Ltd.
- American Express Bank Ltd.
- Antwerp Diamond Bank N.V.
- Arab Bangladesh Bank Ltd.
- Bank International Indonesia
- Bank of America NA
- Bank of Bahrain and Kuwait BSC
- Bank of Ceylon

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- Barclays Bank PLC
- BNP Paribas
- China Trust Commercial Bank
- Chohund Bank
- Citibank N.A.
- Calyon Bank
- Credit Lyonnais
- Deutsche Bank AG
- Ing Bank N.V.
- JP Morgan Chase Bank
- Krung Thai Bank Public Company Ltd.
- Mashreq Bank psc
- MIZUHO Corporate Bank Ltd.
- Oman International Bank SAOG
- Societee Generale
- Sonali Bank
- Standard Chartered Bank
- State Bank of Mauritius Ltd.
- Sumitomo Mitsui Banking Corporation
- The Bank of Nova Soctia.
- The Bank of Tokyo-Mitsubishi, Ltd.
- The Development Bank of Singapore Ltd.
- The Hong Kong and Shanghai Banking Corporation Ltd.
- UFJ Bank Ltd.

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## **4.15 NON-BANKING INSTITUTIONS**

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Apart from the banking institutions, Non-banking institutions are also performing their function to improve the Indian financial system. Non-banking Institutions can be classified into the following two major categories:

1. Non-banking Financial Institutions.
2. Non-banking Non-financial Institutions.

Here, we will discuss about non-banking financial institutions in detail.

## 4.16 NON-BANKING FINANCIAL INSTITUTIONS

### NOTES

Non-banking Financial Institutions are providing fund based services such as investment, insurance, mutual funds and lending institutions:

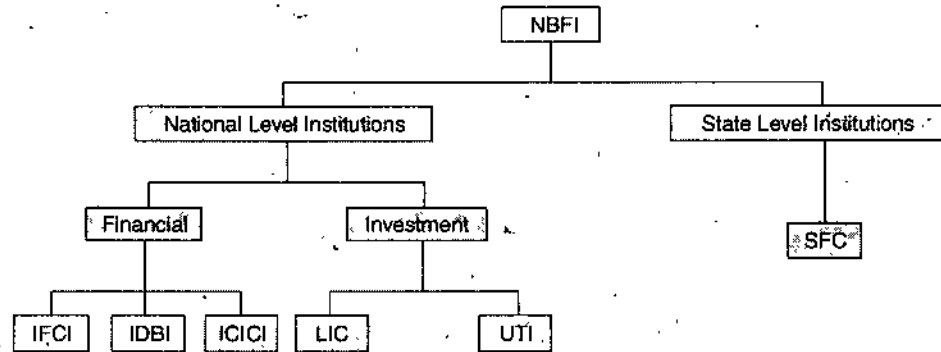


Fig. 4.10. Non-banking Financial Institutions

### Industrial Finance Corporation of India (IFCI)

#### Origin

Industrial Finance Corporation of India, the first development bank in India was set up in July, 1, 1948 by passing a special Act as Industrial Finance Corporation of India Act 1948 in the parliament.

#### Capital

Industrial finance corporation of India was started with the paid up share capital of ₹ 10 crore. The share capital was contributed by Reserve Bank of India, scheduled banks, insurance companies, investment trust and co-operative banks. Industrial finance corporation of India can raise further capital with the help of issue of bonds, debentures, accepts deposits from public and advance from RBI.

#### Objectives

The objective of Industrial finance corporation of India is to make medium and long-term credits more readily available to industrial concern in India particularly to the industries.

- Manufacturing, preservation or procession of goods
- The mining industry
- The shipping industries
- The hotel industries
- Generation or distribution of electricity or power.

## Functions

The following are the main functions of the Industrial finance corporation of India:

1. Granting loans and advances.
2. Subscribing to the shares and debentures floated by industrial concern.
3. Guaranteeing loan taken from capital market.
4. Guarantee deferred payment in respect of import of capital goods by approved concerns.
5. Involves merchant banking activities.
6. Special assistance to women, SSI and backward area.
7. Consultancy for technical, marketing and financial.

## Management

Industrial finance corporation of India is managed by the board of directors which consist of 12 directors and one full time chairman. Some of the directors are nominated by IDBI, Central government, Scheduled Commercial Bank, Co-operative Banks and Insurance Companies.

## Subsidies of Industrial Finance Corporation of India

Apart from the financial service to the industrial concern Industrial finance corporation of India promote some of the institutions:

- Tourism Finance Corporation of India Ltd.
- Management Development Institute.
- Risk Capital and Technology Finance Corporation Ltd.
- Technical consultancy organisation.
- Investment information and credit rating agency of India.

## Working Result

In 1970-71 loan sanctioned was ₹ 32.2 crore, in 1998 it was reached to ₹ 8684 crore. The total sanctioned by Industrial finance corporation of India as at the end of March 1999 stood at ₹ 47245 crore. Now-a-days Industrial finance corporation of India providing all kind of financial assistance to medium and large scale industrial sector in India.

## Industrial Credit and Investment Corporation of India (ICICI)

### Origin

Industrial Credit and Investment Corporation of India was started in January, 5 1955 as a Public Ltd. Companies under the companies act. It is only development bank which has participation by foreign investors.

## NOTES

## NOTES

### Capital

Paid up share Capital of Industrial Credit and Investment Corporation of India is ₹ 25 crore, which was contributed by commercial banks, insurance companies, foreign investors from UK, USA, Germany, France and Japan.

### Objective

The following are the major objectives of Industrial Credit and Investment Corporation of India:

1. To provide following are the major objectives of Industrial Credit and Investment Corporation of India.
2. To develop underwriting facilities, to help private sector units.

### Functions

The main functions of the Industrial Credit and Investment Corporation of India are as follows:

- Expansion of private sector industries.
- To give loans or guarantee of loans either in rupees or foreign currency.
- To underwrite shares and debentures and subscribes directory to share issued.
- To encourage and promote private capital.
- To promote private ownership of industrial investment alongwith the expansion of investment market.

### Management

Industrial Credit and Investment Corporation of India is managed by the board of directors which full time chairman. The directors are nominated by Government, Reserve Bank of India Foreign shareholders and IDBI.

### Subsidiaries of Industrial Credit and Investment Corporation of India

Industrial Credit and Investment Corporation of India is one of the leading and wide range of financial service providers in India. The following are the subsidiaries of the Industrial Credit and Investment Corporation of India.

- ICICI Banking Corporation Ltd.
- ICICI Securities and Finance Company Ltd.
- ICICI Assets Management Company Ltd.
- ICICI Trust Ltd.
- ICICI Brokerage Service Ltd.
- ICICI Credit Corporation Ltd.



## Working Result

Industrial Credit and Investment Corporation of India provided financial assistance to industrial concerns has increased from 145.8 crore in 1961-62 to ₹ 34,220 crore in 1998-99 of the total loan sanctioned in 1998-99, 33% went to corporate finance, 29% to infrastructure, 19.5 each to oil gas and petrochemicals industries.

## NOTES

## Industrial Development Bank of India (IDBI)

### Origin

The Industrial Development Bank of India was set up as a wholly owned subsidiary of the RBI on July 1st 1964 under an act of parliament. In February 1976, it became an independent and autonomous bank.

### Capital

Industrial Development Bank of India was started with initial paid up capital of ₹ 100 crores and now it can raise further capital with the help of issue of shares, debentures and accept deposits from public.

### Objectives

The main objectives of the Industrial Development Bank of India are as follows:

- To provide credit, team finance, and financial services for the establishment of new projects.
- To expansion, diversification modernization and technology upgradation of existing Industrial concern.
- To provide several diversified financial products.
- To undertake merchant banking activities.

### Functions

The functions of Industrial Development Bank of India are as follows:

1. Direct finance—Project loan, soft loan, technical development loan, equipment finance etc.
2. Indirect finance—Refinancing, rediscounting of bills, seed capital to new entrepreneurs.
3. Special assistance—Promotion of development assistance funds.
4. General assistance—Non-financial promotional activities like marketing, research, consultancy etc.

### Management

Industrial Development Bank of India managed by board of directors which consist of 14 directors and one full time chairman. The directors are nominated

## NOTES

by the government, Reserve Bank of India, company law board, insurance companies and various industries. Subsidiaries of Industrial Development Bank of India are as follows:

- IDBI Bank Ltd.
- IDBI Capital Market Service Ltd.
- IDBI Mutual Funds.
- SIDBI
- IDBI Intech Ltd.

Industrial Development Bank of India has helped to set up the following institutions:

- Technical Consultancy Organization.
- EXIM Bank.
- Entrepreneurship Development Institute.
- Credit Rating and Information Service India Ltd.

### Working Result

Total assistance sanctioned by Industrial Development Bank of India in 1998–99 was ₹ 25,555 crores, of this 96.7% goes to direct assistance, 0.4% belongs to refinance. The total amount of assistance sanctioned by the Industrial Development Bank of India till the end of March 1999 from the date of its incorporation has been ₹ 1,07,264 crores.

### Industrial Reconstruction Bank of India (IRBI)

#### Origin

In April 1971, Industrial Reconstruction Corporation of India (IRCI) was set up by IDBI and other development and public sector banks. IRCI was reconstituted and renamed as Industrial Reconstruction Bank of India in 1985 with a special Act in the parliament.

#### Capital

Industrial Reconstruction Bank of India was started with initial paid up capital of ₹ 50 crore which is contributed by central government, Reserve Bank of India, SCB and various financial institutions. Further capital can be raised with the help of issue of shares, debentures and accept deposits from public.

#### Objectives

Industrial Reconstruction Bank of India was established mainly for rehabilitating sick industrial units in India.

- To identify and remedial measures to sick industries.
- To provides financial assistance to reconstruction of sick industrial units.
- To promote the sick units into profitable units.

### Functions

The following are the major functions of the Industrial Reconstruction Bank of India Credit and reconstruction agency for industrial revival modernization, rehabilitation, expansion, reorganization, diversification and rationalization. Empowered to grant loans and advances:

- Underwrite stocks, share and bonds.
- Guarantee loans and advances, performances and deferred payments.
- Gives assistance for capital expenditure, addition of balancing equipment etc.

### Management

Industrial Reconstruction Bank of India is managed by the Board of directors with a full time chairman. Directors are nominated by central government, Reserve Bank of India, Schedule commercial Bank and financial institutions.

### Subsidies of Industrial Reconstruction Bank of India

On March 27 1997, Industrial Reconstruction Bank of India was transformed into Industrial Investment Bank of India Ltd (IIBI) under the Companies Act. IIBI acts as a coordinating agency in the field of reconstruction.

### Working Result

Industrial Reconstruction Bank of India sanctioned financial assistance to various sick industrial units. Industrial Reconstruction Bank of India sanctioned ₹ 92 crores in 1980–81 but it has increased to ₹ 4526 crore in 2002–03. It contributed 80% of the financial assistance at all over India.

## State Finance Corporation (SFC)

### Origin

Central government decided to promote the Small Scale Industries and Medium Scale Industries at the state level by establishment of State Finance Corporation under a special Act. It is called as State Finance Corporation Act 1951. According to this act, state government have been empowered to set up State Finance Corporation. At present these are 18 State Finance Corporation in India.

### Capital

State Finance Corporations will have a paid up capital from ₹ 50 lakhs to ₹ 5 crore which will be contributed by the respective state government,

## NOTES

Schedule Commercial Bank, Reserved Bank of India and various financial institutions.

### Objectives

- To provides financial assistance to Small scale industries
- To promote tiny, village and cottage Industries
- To provides infrastructure facilities to SSI

### Functions

- Long term loans to Small Scale Industries.
- Refinance from Reserve Bank of India and Industrial Development Bank of India
- Assistance from International Development Agency (IDA) and foreign currency hire of credit from the IDBI

### Management

State Finance Corporation are managed by Board of directors constituted by the respective State Government, Central Government, Reserve Bank of India, Schedule Commercial Bank and Financial Institutions as nominated directors to the State Finance Corporation.

### State Finance Corporation in Tamil Nadu

The Madras Industrial Investment Corporation (MIIC) was started as early as 1949, under the companies act and it was renamed as Tamil Nadu Industrial Investment Corporation (TIIC). It was the first State Finance Corporation in India, after the establishment of the State Finance Corporation Act, 1951, the first State Finance Corporation was in Punjab in 1953.

### Export Import Bank (EXIM Bank)

#### Origin

EXIM bank was set up in January 1982 as a wholly owned by the central government.

#### Capital

EXIM bank was established with the paid up capital of ₹ 50 crores. It is empowered from RBI and also from central government to further capital raise by issue of bonds and grants from government.

#### Objectives

EXIM bank was established mainly for the purpose of promoting export and trading in India. The objectives are as follows:

- To promote the export and import activities

## NOTES

- To meet the financial requirements of the exporters
- To provides guarantee and make foreign exchange facilities to exporters.

### Functions

EXIM banks performs the following important functions:

1. Grants direct loans in India and outside for import and export.
2. Refinances loans and suppliers of credit.
3. Rediscounts usance export bills export bills for banks.
4. Provides overseas investment finance.
5. Bulk import finance.
6. Foreign currency preshipment credit.
7. Product equipment finance programme.
8. Business advisory and technical assistance (BATA).

### Management

EXIM bank is one of the wholly owned by central government, hence, the entire management is controlled by the central government.

### Working Result

EXIM banks business is exclusively devoted to India's export and import activities. The aggregate loans and outstanding reached ₹ 16.16 billion during the first decade of the its operation. During the year 1990-91, it was sanctioned ₹ 1984 crore and it has increased to ₹ 12011 crore in 2002-03. The share of EXIM bank in industrial finance is 2.11% in the year 2002-03.

## National Bank for Agricultural and Rural Development

### Origin

The National Bank for agricultural and rural development was set up on July 12, 1982, based on the Recommendation of the All India rural credit survey committee under an act of Parliament as a central or apex institution for financing agricultural and rural sectors. It has taken over the functions of Agricultural Refinance and Development Corporation (ARDC) and Agricultural credit department of Reserve Bank of India.

### Capital

The National Bank for Agricultural and Rural Development Functioning with the paid up capital of ₹ 100 crore which is subscribed by Government and Reserve Bank of India in equal amount. Further capital can be raised from the special borrowings from the Central Government.

## NOTES

## NOTES

### Objectives

The main objectives of National Bank for Agricultural and Rural Development are as follows:

- To provides refinance assistance for agriculture, Small Scale Industries and Village Industries.
- To undertakes promotional activities for integrated rural development
- To coordinates agricultural finance alongwith the state government
- To undertakes research and development in agriculture, rural industries

### Functions

The National Bank for agricultural and rural development discharges are: It provides all sorts of reference to Co-operatives, Commercial Banks, and Regional Rural Banks, in respect the above three agencies and advices the government thereon. It makes loans to state government to enable them to subscribe to the share capital of co-operative bank. It helps in promoting research in agriculture and rural development. National bank for agricultural and rural development undertakes evaluation and monitoring projects financed by it. It is responsible for the development, operation and co-ordination relating to rural credit.

### Management

National Bank for Agricultural and Rural Development is wholly owned by central government, hence it is managed by the central government constituted management board.

### Working Result

National Bank for Agricultural and Rural Development operates through 28 regional offices, 336 district offices, one sub-office at Port Blair and one special cell in Srinagar during the year 1986. National Bank for Agricultural and Rural Development sanctioned short-term credit to Small Scale Industries ₹ 400 crore and it has increased to ₹ 1200 crore in the year 1990-91. Nearly ₹ 400 crore have been provided as medium term loans to various activities, ₹ 200 crore have been sanctioned as long-term loans contributing to the share capital of co-operative institutions.

National Bank for Agricultural and Rural Development has refinanced banks for implementing the national programmes of mass assistance of small and marginal farmers. It also refinance development activities of the handloom sectors. It extends refinance to state co-operative banks, provide block capital to industrial Co-operative Societies and rural artisans against state government guarantee. Service area approach of commercial banks is supported by National bank for agricultural and rural development through various special assistance.

## Specialized Financial Institutions

The following are the specialized financial institutions established by government to provide financial and non-financial assistance to various industrial sectors in India.

- Shipping Credit and Investment Corporation of India (SCICI), 1986.
- Infrastructure Leasing and Financial Service Limited (IL and FS), 1988.
- Technology Development and Information Company of India Limited (TDICI), 1988.
- Risk Capital and Technology Finance Corporation Limited (RCTFC), 1988.
- Tourism Finance Corporation of India (TFCI), 1989.
- Small Industries Development Bank of India (SIDBI), 1989.
- Infrastructure Development Finance Company (IDFC), 1997.

## NOTES

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### 4.17 INSURANCE SECTOR IN INDIA

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Insurance is one of the fund based financial services which provides risk coverage facilities to the human beings. Realising the vast potential in Indian market, foreign insurance companies started entering into India and even banking organisations (SBI, ICICI, etc.) also showed much interest in insurance business, this is being attributed to global technology and conversions of services as a result of which Indian Insurance market registered highest growth in the Asian region even though Indian's share of global insurance premium is less 0.5% (1998) than that of US 24.2 per cent and Japan 21 per cent. The private players from India and abroad are well aware that only 25 per cent of the insurable population have been covered by insurance by existing companies which includes that Indian insurance market has potential enough to exploit. In this process IRDA has so far granted registration for 12 private life insurance companies and 9 general insurance. If the existing public sector insurance companies are included, there are currently 14 insurance companies in the life side and 16 companies in general insurance business. Insurance sectors in India has been classified into the following categories:

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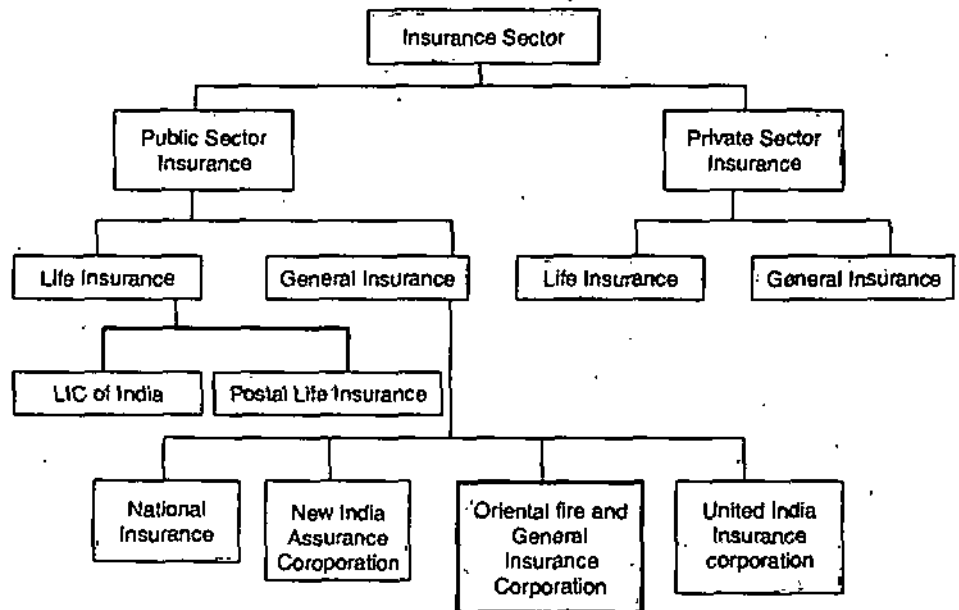


Fig. 4.11. Insurance Sector

Some of the Private Sector Life Insurance Corporation are given below:

- ICICI Prudential Life Insurance Corporation Limited.
- ING Vysya Life Insurance Corporation Limited.
- HDFC Standard Life Insurance Corporation Limited.
- Birla Sun Life Insurance Corporation Limited.
- SBI Life Insurance Corporation Limited.
- Om Kotak Life Insurance Corporation Limited.
- Met Life Insurance Corporation Limited.
- Allianz Bajaj Life Insurance Corporation Limited.
- Max New York Life Insurance Corporation Limited.
- Tata AIG Life Insurance Corporation Limited.
- AMP Sanmar Life Insurance Corporation Limited.

Some of the Private Sector General Insurance Corporation in India are as follows:

- CH NBH Assn General Insurance Corporation.
- ICICI Lombard General Insurance Corporation.
- Bajaj Allianz General Insurance Corporation.
- AIG General Insurance Corporation.
- IFFCO Tokio General Insurance Corporation.
- Royal Sundaram General Insurance Corporation.
- Reliance General Insurance Corporation.



## Life Insurance Corporation of India

The Life Insurance Corporation of India (LIC) was set up in the year 1956 by nationalizing 245 insurance companies. The Primary objective of nationalization was to protect the interest of policy-holders against misuses and embezzlement of funds by private insurance companies.

Secondly, the object of nationalization was to direct investment of funds in government securities, leaving a meager part for the private sector. What marks and distinguishes the LIC from other long-term financial institutions is this that it discharges the two fold function of mobilization of long-term savings and their effective channelisation as well. The other agencies are suppliers of fund obtained from government and the Reserve Bank of India.

### Role of LIC

The activities of the LIC can be broadly classified into two categories. First, it mobilizes longterm contractual savings. Its policy-holders view the LIC as a trustee of their funds, a source of emergency fund to guard against any financial misfortune and a way to accumulates funds by the time of retirement from work. As an agency it is designed to the inculcation of savings for the sake of rainy days.

During the last forty years of its operations, there has been concentration of colossal funds in hands of this monolithic state owned corporation. The resources thus obtained by the LIC from policy-holders are invested in diverse ways for different purposes. Basically LIC is an investment institution. It is a big investor of funds in government marketable securities. Since April, 1975 the amended Section 27A of the Insurance Act, 1938 the LIC is required to invest to not less than 50% of its accruals of premium income in government marketable securities. Of this not less than 25% in central government securities. Besides it has to give loans to approved authorities like electricity boards or state government for socially oriented schemes like electricity, housing, water supply etc. These loans and investments should not exceed 87.5 per cent of accretion to the controlled fund of the LIC.

The remaining 12.5 per cent can be made to the private sector directly in the form of purchase of shares and debentures. Besides it grants loans to the private corporate sector and finances projects by subscribing shares and debentures of private industries. Its contribution to financing of industries in the private corporate sector is also indirect. The investment in the share capital and bonds of IFCI, SFCs, UTI and IDBI flow back to private sector in the form of direct loans. The LIC is also engaged in underwriting new issues.

The LIC plays an important role in the securities market in India. It purchases even when the market is dull (bearish) and prices are low in order to reap the benefit of future price appreciation. Nor does it usually sell shares from

## NOTES

**NOTES**

its stock when the market is spturn at higher prices. Although Income Tax concessions provide incentive to higher income groups through LIC policies, the insuring public does not get the real value of its long-term savings because of chronic inflation. Barring risk coverage, the rate of return offered by LIC is much lower compared to other savings media. It is true LIC has grown at a fast speed yet it can grow at a faster rate if it can make the message of life insurance more attractive by its operational efficiency and innovative attitude.

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#### **4.18 MIBOR AND MIBID**

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On June 15, 1998 National Stock Exchange launched two new Reference Rates for the loans of Inter-Bank Call Money Market. These rates are Mumbai Inter-Bank Offer Rate (MIBOR) and Mumbai Inter-Bank Bid Rate (MIBID). MIBOR will be the indicator of Landing Rate for loans while MIBID will be the landing rate of receipts.

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#### **4.19 PUBLIC ISSUE**

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By far the most important mode of issuing securities, a public issue involves sale of securities to the public at large. A company making a public issue informs the public about it through statutory announcements in the newspapers, makes application forms available through stock brokers and others and keeps the subscription open for a period of three to seven days. If the issue is over-subscribed, the pattern of allotment is decided in consultation with the stock exchange where the issue is proposed to be listed.

After the allotment pattern is finalized the company mails the allotment advice/letter alongwith refund order, if any. This is supposed to be done within 10 weeks of the closure of subscription. If the full amount is not asked for at the time of allotment, the balance is called in one or two calls later. The letter of allotment is exchangeable for share certificates (or debenture certificates, as the case may be), after it is duly stamped by the bank where the balance payment is made.

Of course, if the allottee wants he can sell the letter of allotment itself by transmitting it alongwith a transfer deed. If the allottee fails to pay to call money as and when called by the company, the shares are liable to be forfeited. In such a case, the allottee is not eligible for any refund of the amounts already paid. While a new company set up by promoters without a track record is required to issue its shares at par, other companies are allowed to make a public issue at a premium.

## Right Issue

A right issue involves selling securities in the primary market by issuing rights to the existing shareholders. When a company issues additional equity capital, it has to be offered in the first instance to the existing shareholders on a pro rata (proportional) basis. This is required under Section 81 of the Companies Act 1956. The shareholders however, may by a special resolution forfeit this right, partially or fully, to enable a company to issue additional capital to the public.

## Private Placement

In a private placement, funds are raised in the primary market by issuing securities privately to some investors without resorting to underwriting (insurance against risk by a guarantor). The investors in this case may be financial institutions, commercial banks, other companies, shareholders of promoting companies, and friends and associates of the promoters.

## Group A and Group B Shares

The listed shares are divided into two categories: Group A shares (also referred to as cleared securities or specified shares) and Group B shares (also referred to as non-cleared securities or non-specified shares).

For Group A shares, the facility for carrying forward a transaction from one account period to another is available; for Group B shares, it is not. Group A shares basically represent large, well-established companies that have a broad investor base and are very actively traded. Since transactions in these shares can be carried forward, these shares attract a lot of speculative trading.

This seems to be the reason why these shares, other things being equal, tend to command higher price-earning multiples. This is clear from the fact that whenever a share is moved from Group B to Group A, its market price rises; likewise, when a share is shifted from group A to Group B market price declines.

The Mumbai Stock Exchange employs several criteria for shifting stocks from the non-specified list to the specified list. The key ones are that the company must have an equity base of ₹ 10 crore, a market capitalization of ₹ 25-30 crore, a public holding of 35 to 40 percent, a shareholding population of 15,000 to 20,000 a dividend paying status and a good growth potential.

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## 4.20 SECURITIES AND EXCHANGE BOARD OF INDIA (SEBI)

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In 1988, SEBI was created by an administrative feat of the Ministry of Finance. Since then SEBI has gradually been granted more and more powers.

## NOTES

## NOTES

With the repeat of the Capital Issues Control Act and the enactment of the SEBI Act in 1992, the regulation of the primary market has become the preserve of SEBI. Further, the Ministry of Finance has transferred a number of powers under the Securities Contracts (Regulation) Act 1956 also to SEBI.

Before the establishment of the SEBI, the principal legislations governing the securities markets in India were the Capital Issues Control Act 1956 (governing the primary market) and the Securities Contract (Regulation) Act 1956 (governing the secondary market). The regulatory powers were vested with the Controller of Capital Issues (for the primary market) and the Stock Exchange Division (for the secondary market) in the Ministry of Finance, Government of India.

### Functions

1. The SEBI Act armed SEBI with statutory powers.
2. It has entrusted SEBI with the responsibility of dealing with various matters relating to the capital market.

#### SEBI's principle tasks are to:

1. regulate the business in stock exchanges and any other securities market.
2. register and regulate the working of capital market intermediaries (brokers, merchant bankers, portfolio managers and so on).
3. register and regulate the working of mutual funds.
4. promote and regulate self-regulatory organizations.
5. prohibit fraudulent and unfair trade practices in securities markets.
6. promote investors' education and training of intermediaries of securities markets.
7. prohibit insider trading in securities.
8. regulate substantial acquisition of shares and take-over of companies.
9. perform such other functions as may be prescribed.

### Trading Procedure at Stock Exchanges

Securities can be traded at a stock exchange only if it is listed at that stock exchange or any of the other stock exchanges. Listing is a procedure by which, the issuing company has to enter into an agreement, called the listing agreement, with a stock exchange and has to abide by the clauses of the listing agreement regarding disclosure of information, payment of listing fees redressal of investor's grievance etc.

Once listed, the security can be traded at other stock exchanges too. The sale and purchase (transaction) of securities at the stock exchange can be done only through registered share brokers. An investor desiring to enter into a

## NOTES

transaction has to place an order with one of the share brokers. In the 'outcry' system where the brokers used to shout, the deals are confirmed in few hours but in the screen-based system, the deals are confirmed immediately. The investor then gives the delivery of the securities in case of sale, or makes the payment in case of purchase of security, to the stock broker.

The stock broker in turn makes the payment for the securities sold or delivers the security certificate purchased on the completion of settlement programme of the stock exchange. Generally, it takes 15 to 20 days for completion of the transaction. The National Stock Exchange and the Over The Counter Exchange of India (OTCEI) have been operating since their inception at the national level through satellite-linked computer based system. To be in tune with the NSE, the stock exchanges at Mumbai, Delhi, Ahmedabad, and Calcutta, have already converted their operations from the 'outcry' system to the computerised one. The transactions at these stock exchanges now take place through computer based online screen system.

### Recent Trends in Capital Market

In recent years, Non-Banking Finance companies, variously called as "finance companies or corporations". Finance companies have mushroomed all over the country and have been making rapid progress. These finance companies or corporations, with very little capital of their own—less than ₹ 1 lakh have been raising deposits from the public by offering attractive rates of interest and other incentives.

They advance loans to wholesale and retail traders, small-scale industries and selfemployed persons. Bulk of their loans is given to parties which do not either approach commercial banks or are denied credit facilities by the latter. The finance companies give loans which are generally unsecured and the rate of interest charged by the then generally range between 24 to 36 percent per annum.

The number of official stock exchanges (SEs) in India has increased from nine in 1979–80 to 23 as at the end of March 2003. In fact, the number of SEs has remained to be 23 during 1993-94 to 2000-03. India has not the largest number of organized and recognized SEs in the world. All of them are regulated by the SEBI. They are organized either as voluntary, non-profit-making associations (*viz.*, Mumbai, Ahmedabad, Indore), or public limited companies (*viz.*, Calcutta, Delhi, Bangalore), or company limited by guarantee (*viz.*, Chennai, Hyderabad).

The BSE is the premier or apex stock exchange in India. It is the biggest in size in terms of the amount of fresh capital raised, secondary market turnover and captialisation and the total listed companies and their paid-up capital. It is also the oldest market and has been recognized permanently, while the

recognition for other exchanges is renewed every five years. Its business is no longer confined to Mumbai alone; at the end of 1997, there were 100 other cities in which it had set up business.

## NOTES

The NSEI has a fully automated, electronic, screen-based trading system. It is sponsored by the IDBI and co-sponsored by other term-lending institutions, LIC, GIC, other insurance companies, commercial banks, and other financial institutions; viz., SBI Caps, SHCIL, and ILFs. Its objectives are: (a) to provide nation-wide equal access and fair, efficient, completely transparent securities trading system to investors by using suitable communication network, (b) to provide shorter settlement cycles and book entry settlement system, (c) to bring the Indian stock market in line with international markets, (d) to promote the secondary market in debt instruments such as government and corporate bonds.

It was set up in 1992 and was the first stock exchange in India to introduce screen-based automated ring less trading system. It is promoted by UTI, ICICI, IDBI, IFCI, LIF, GIC, SBI Caps, and CANBANK as a company under Section 25 of the Companies Act 1956, with headquarters at Mumbai. Its objectives are: (a) to help companies to raise capital from the market at the cheapest costs and on optimal terms; (b) to help investors to access capital market safely and conveniently; (c) to cater to the needs of the companies which cannot be listed on other official exchanges; (d) to eliminate the problems of illiquid securities, delayed settlements, and unfair prices faced by the investors. There are 20 other national and regional exchanges located in metropolitan centers and other cities in India.

**Table 4.2. Operational Performance of Stock Exchanges**

Exchange	No. of Listed Companies	Market Capitalization	Total Members	Corporate Members
	1	2	3	4
1. Ahmedabad	551	7,681	285(323)	49(151)
2. Bangalore	253	17,812	230(245)	51(114)
3. Bhubaneshwar	43	887	222(233)	8(18)
4. Calcutta	1,962	77,131	861(987)	78(200)
5. Cochin	90	7,244	488(464)	38(75)
6. Coimbatore	86	1,233	192(182)	42(62)
7. Delhi	1,579	30,465	379(374)	65(212)
8. Gawahati	175	786	206(175)	0(5)
9. Hyderabad	520	11,917	304(306)	23(120)

**NOTES**

10. Jaipur	145	4,004	587(555)	0(19)
11. Ludhiana	227	7,198	275(302)	48(85)
12. Madhya Pradesh	229	6,645	188(188)	11(34)
13. Chennai	593	28,604	200(186)	49(71)
14. Magadh	29	246	193(199)	3(20)
15. Manglore	18	3,183	147(116)	2(11)
16. Mumbai	3,990	5,63,748	608(665)	71(446)
17. NSEI	422	2,17,721	873(1036)	736(918)
18. OTCEI	88	643	785(883)	544(675)
19. Pune	121	12,533	197(197)	23(59)
20. Saurashtra Kutch	36	1,999	437(436)	38(85)
21. Uttar Pradesh	321	7,260	507(518)	13(103)
22. Vadodara	372	10,633	312(319)	25(65)
23. Total	11,750	10,19,573	8,476(9515)	1,917(3794)

**SUMMARY**

- Financial management deals with the study of procuring funds and its effective and judicious utilisation, in terms of the overall objectives of the firm, and expectations of the providers of funds.
- In the course of performance of duties, a finance manager has to take various types of financial decisions – Investment Decision, Finance Decision, Liquidity Decision and Dividend Decision.
- An efficient finance manager fixes that level of operations, where he can achieve maximisation of the shareholders' wealth. Such a level is termed as risk-return trade off.
- Financial management is concerned with the procurement and judicious use of funds. Its main aim is to maximise the earnings and value of the equity share, in the best interests of the firm.
- A firm's performance is measured by the profit it makes. Profits of a firm depend upon a large number of factors. But, the most important factors

are costs of manufacture, volume of sales and selling price of the products. The analytical technique employed to study the interrelationship of cost, volume and price and its impact on the behaviour of profit is known as 'Cost-Volume Profit Analysis'.

## NOTES

- Break-even analysis establishes the relationship between revenues and costs with respect to volume. It indicates the level of sales at which total costs are equal to total revenues. Break-even analysis is a specific way of presenting information to management in a precise manner.
- Short-term finance means availability of funds for a period of one year or less than that period. The basic purpose of short-term financing is to meet the working capital requirements of the company. There are two main types of short-term financing: Trade credit and Bank borrowing.
- Trade credit refers to the credit received by a customer from the supplier of goods, in the normal course of business.
- Banks are the main institutions that provide working capital, which is a short-term source of financing. Bank credit is the most important source for working capital. There are various forms of bank finance for short-term requirements.
- Profit and Loss Account and Balance Sheet do not provide sufficiently wide range of information to make assessment of the organisation by the end user for the purpose of analysis and planning. So, there is a need to prepare a separate statement that explains the changes in assets and liabilities, from one period of time to the end of another period. The statement is called "Funds Flow Statement".
- Indian financial system has developed constantly and successfully to infuse the new blood to the economic development of the nation. Hence, the economic growth and development is purely based on the regulated and well established financial system of the country.

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## REVIEW QUESTIONS

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1. The horizons of Financial Management have changed substantially in scope and complexity over the years. Justify the statement?
2. Explain the scope of financial management. Describe the role of finance manager in a modern business?
3. Detail the aims of finance function?
4. Detail the basic finance functions? How trade-off is possible between return and risk?
5. "The Profit Maximisation is not an operationally feasible criterion". Illustrate your views with suitable examples?



6. Of the two objectives of financial management viz. profit maximisation and wealth maximisation, which one do you think is a better operational guide for a finance manager and justify with reasoning?
7. Describe the objectives of Financial Management?
8. What do you understand by the term cost-volume-profit relationship? Why is this relationship important in financial decision making?
9. What is CVP analysis? Explain its utility to management in decision making process?
10. 'Profit volume analysis' is a technique of analysing the relationship of cost and profit at various levels of volume? Explain how such analysis helps the management in decision making?
11. Discuss the behaviour of fixed and variable costs in relation to volume?
12. 'Break-even point is the point at which total cost and revenue are just equal' – Discuss?
13. Detail the different sources of short-term finance and explain whether these forms of finance involve any additional cost to the buyer?
14. Explain the importance and advantages of trade credit as a source of working capital. Whether provision of this source involves any cost to the provider and who bears it, finally?
15. Describe the different types of short-term finance provided by commercial banks for meeting working capital requirements? Is there a way to utilise non-fund based limit for working capital purposes?
16. Explain the meaning, importance and objectives of Funds Flow Statement?
17. Describe the significance of Funds Flow Statement to the different users?
18. Describe the need and limitations of Funds Flow Statement?
19. Define financial system?
20. Explain the major component of financial system?
21. Discuss various classification of banking as per the RBI Act?
22. Explain the role of NBFI in Indian economy?
23. Explain the different categories of financial services provided by the NBFC.
24. Discuss the role of Life Insurance Corporation of India.

## NOTES

### FURTHER READINGS

- '*Cost and Financial Management*', Dr. Mohd. Arif, University Science Press.
- '*Working Capital Management*', Dr. M.K. Rastogi, University Science Press.

