

Biyani's Think Tank

**Concept based notes**

# **Financial Management**

*MBA-(II Sem)*

*Prepared*

*by*

**B.K. Jain**

**MBA faculty (BISMA)**

**Biyani Institute of science and Management,  
Jaipur**



***Biyani's***  
**Group of Girls' Colleges**

*Published by :*

**Think Tanks**

**Biyani Group of Colleges**

*Concept & Copyright :*

© **Biyani Shikshan Samiti**

Sector-3, Vidhyadhar Nagar,

Jaipur-302 023 (Rajasthan)

Ph : 0141-2338371, 2338591-95 • Fax : 0141-2338007

E-mail : [acad@biyanicolleges.org](mailto:acad@biyanicolleges.org)

Website : [www.gurukpo.com](http://www.gurukpo.com); [www.biyanicolleges.org](http://www.biyanicolleges.org)

**Edition : 2011**

**Price: -/**

While every effort is taken to avoid errors or omissions in this Publication, any mistake or omission that may have crept in is not intentional. It may be taken note of that neither the publisher nor the author will be responsible for any damage or loss of any kind arising to anyone in any manner on account of such errors and omissions.

*Leaser Type Setted by :*

**Biyani College Printing Department**

## Preface

I am glad to present this book, especially designed to serve the needs of the students. The book has been written keeping in mind the general weakness in understanding the fundamental concepts of the topics. The book is self-explanatory and adopts the “Teach Yourself” style. It is based on question-answer pattern. The language of book is quite easy and understandable based on scientific approach.

Any further improvement in the contents of the book by making corrections, omission and inclusion is keen to be achieved based on suggestions from the readers for which the author shall be obliged.

I acknowledge special thanks to Mr. Rajeev Biyani, *Chairman* & Dr. Sanjay Biyani, *Director (Acad.)* Biyani Group of Colleges, who are the backbones and main concept provider and also have been constant source of motivation throughout this Endeavour. They played an active role in coordinating the various stages of this Endeavour and spearheaded the publishing work.

I look forward to receiving valuable suggestions from professors of various educational institutions, other faculty members and students for improvement of the quality of the book. The reader may feel free to send in their comments and suggestions to the under mentioned address.

**Author**

# SYLLABUS

## Section 'A'

Chapter No.	Particular
1	Meaning, Importance and Objectives of financial Management; Time value of money; Conflicts in profit versus value maximization principle; Functions of chief financial officer.
2	Risk and Return –overview of capital market theory, Beta Estimation, CAPM, and APT.
3	Management of working capital; Cash and Marketable securities management; Treasury management, Receivables management, Inventory management, financing of working capital.
4	Investment decisions: capital budgeting – concept, theory. Cost of capital. Risk analysis in capital budget
5	Financing decisions: concepts of operating and financial leverage; Capital structure Theory and policy; Dividend Policy. Different sources of finance: Asset Based financing – Lease, Hire Purchase and Project financing. Corporate Restructuring, Merger and Acquisition.

## Section 'B'

Case/Problems

Note: 50% of the questions will be numerical.

**FINANCIAL MANAGEMENT**  
**MATERIAL IN THE FORM OF QUESTION & ANSWERS**  
**(ONLY THEORITICAL PORTION)**

**CONTENTS**

<b>S.No</b>	<b>Chapter Name</b>
<b>1</b>	<b>Importance and Objectives of financial Management</b>
<b>2</b>	<b>Management of working capital</b>
<b>3</b>	<b>Investment Decisions</b>
<b>4</b>	<b>Financing decisions</b>
<b>5.</b>	<b>Multiple Choice Question</b>
<b>6</b>	<b>Case Study</b>
<b>7</b>	<b>Key Terms</b>
<b>8</b>	<b>Practical Part</b>
<b>9</b>	<b>Question Paper</b>
<b>10</b>	<b>Bibliography</b>

## Chapter –1

# Importance and Objectives of financial Management

---

**Q.1 Explain in brief meaning of the Term “Finance” and “Financial Management”**

**Ans.** Finance is the life blood of business. Without adequate finance, no business can survive and without efficient finance management, no business can prosper and grow. Finance is required for establishing, developing and operating the business efficiently. The success of business depends upon supply of finance and its efficient management.

Finance is called science of money. It is not only act of making money available, but its administration and control so that it could be properly utilized. The word “Financial Management” is the composition of two words i.e. ‘Financial’ and ‘Management’. Financial means procuring or raising of money supply (funds) and allocating (using) those resources (funds) on the basis of monetary requirements of the business. The word ‘Management’ means planning, organizing, coordinating and controlling human activities with reference to finance function for achieving goals/objectives of organization. Besides raising and utilization of funds, finance also includes distribution of funds in the form of dividend to share holders and retention of profit for growth and developments.

**Hence, three key areas of finance are:**

**I - Raising of funds** - Based on the total requirements of capital/funds for use in fixed assets, current assets as well as intangible assets like goodwill, patent, trade mark, brand etc. crucial decision are:

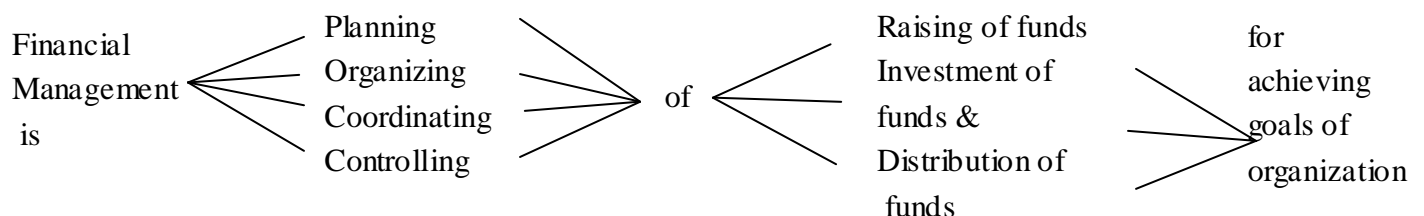
- When to raise (time)
- Sources from which to raise
- How much (quantum of money)
- In which form (debt or equity)
- Cost of raising funds

**II - Investment of funds** - Funds raised need to be allocated/ invested in:

- (i) **Fixed assets** - also known as capital assets or capital budgeting decision. These decisions are based upon cost and return analysis through various techniques
- (ii) **Current assets** - also known as working capital management. These are assets for day today running the business like cash, receivables, inventory, short term investments etc. Decision about investment of funds are taken keeping in view two important aspects i.e.
  - Profitability
  - Liquidity

**III - Distribution of funds** - Profit earned need to be distributed in the form of dividend. Higher the rates of dividend, higher would be the price of shares in market. Another crucial decision under it would be the quantum of profit to be retained. The retained profit is cost free money to the organization.

Hence in brief the financial management is management of funds which can be explained through following chart.



**Q.2 Explain the importance of financial management in the present day business world.**

**Ans.** The importance/significance of financial management can be discussed/ explained from the following angles:

**I - Importance to all types of organizations**

- i. Business organizations** - Financial management is important to all types of business organization i.e. Small size, medium size or a large size organization. As the size grows, financial decisions become more and more complex as the amount involved is also large.
- ii. Charitable organization / nonprofit organization / Trust** - In all those organizations, finance is a crucial aspect to be managed. A finance manager has to concentrate more on collection of donations/ revenues etc and has to ensure that every rupee spent is justified and is towards achieving Goals of organization.
- iii. Government / Govt. or public sector undertaking** - In central/ state Govt, finance is a key/ important portfolio generally given to most capable or competent person. Preparation of budget, monitoring capital /revenue receipt and expenditure are key functions to be performed by the person incharge of finance. Similarly, in a Govt or public sector organization, financial controller or Chief finance officer has to play a key role in performing/ taking all three financial decisions i.e. raising of funds, investment of funds and distributing funds.



iv. **Other organizations-** In all other organizations or even in a family finance is a key areas to be looked in to seriously by a competent person so that things do not go out of gear.

**II - Importance to all stake holders:-** Financial Management is important to all stake holders as explained below:

- i. **Share holders** - Share holders are interested in getting optimum dividend and maximizing their wealth which is basic objective of financial management.
- ii. **Investors / creditors** - these stake holders are interested in safety of their funds, timely repayment of the principal amount as well as interest on the same. All these aspect are to be ensured by the person managing funds/ finance.
- iii. **Employees** - They are interested in getting timely payment of their salary/ wages, bonus, incentives and their retirement benefits which are possible only if funds are managed properly and organization is working in profit.
- iv. **Customers** - They are interested in quality products at reasonable rates which is possible only through efficient management of organization including management of funds.
- v. **Public** - Public at large is interested in general public welfare activities under corporate social responsibility and this aspect is possible only when organization earns adequate profit.
- vi. **Government** - Govt is interested in timely payment of taxes and other revenues from business world where again efficient finance manager has a definite role to play.

**vii. Management** - Management is interested in overall image building, increase in the market share, optimizing share holders wealth and profit and all these aspect greatly depends upon efficient management of financial resources.

### **III - Importance of financial management to all departments of a organization.**

A large size company has many departments like (besides finance dept.)

- Production/ Manufacturing Dept.
- Marketing Dept.
- Personnel Dept.
- Material/ Inventory Dept.

All these departments look for availability of adequate funds so that they could manage their individual responsibilities in an efficient manner. Lot of funds are required in production/ manufacturing dept for ongoing / completing the production process as well as maintaining adequate stock to make available goods for the marketing dept for sale. Hence, finance department through efficient management of funds has to ensure that adequate funds are made available to all department and these departments at no stage starve for want of funds. Hence, efficient financial management is of utmost importance to all other department of the organization.

**Q.3 What is the key objectives or goals of Financial Management?**

**or**

**Why share holders wealth maximization /value maximization is considered as better objective of financial management instead of profit maximization?**

**Ans** There are two objectives of financial management viz

- Profit maximization
- Share holders wealth maximization

There are two schools of thought in this regard i.e. traditional and modern. While tradition approach favours profit maximization as key objective, the modern thinkers favours share holders wealth maximization as key objective of financial management. Traditional thinkers believe that profit is appropriate yardstick to measure operational efficiency of an enterprise. They are of the view that a firm should undertake only those activities that increase the profit.

Modern thinkers criticize the profit maximization objective on the following grounds:

- (i) **Profit is an ambiguous concept** – Profit can be long term or short term, profit before Tax or after Tax, profit can be operating profit or gross profit etc. The economists concept of profit is different then accountants concept of profit.
- (ii) Profit moto may lead to exploitation of customers, workers, employees and ignore ethical trade practices.
- (iii) Profit moto also ignores social considerations or corporate social responsibility or general public welfare.
- (iv) Profit always go hand- to hand with risk. The owners of business will not like to earn more and more profit by accepting more risk.
- (v) The profit maximization was taken as objective when business was self financed and self controlled.

To day, most of large business under taking witness a divergence between ownership and management and business is dependent largely on loan and borrowed funds and only a small fraction being financed out of owners funds. Hence, profit maximization will only act as a narrow objective.

In view of above, modern thinkers consider wealth maximization as key objective of financial management. This is also known as value maximization or net present worth maximizations. This share holders wealth maximization is evident from increase in the price of shares in the market. They are of the view that wealth maximization is supposed to be superior over profit maximization due to following reasons:

1. This uses the concept of future expected cash flows rather than ambiguous term of profit.
2. It takes in to account time value of money
3. It also takes care of risk factors associated with project as the discount rate used for calculating present value is generally a risk adjusted discount rate.
4. It is consistent with the objective of maximizing owners welfare.

Equity shares of a company are traded in stock market and stock market quotation of a share serves as an index of performance of the company. The wealth of equity share holders is maximized only when market value of equity share of the company is maximized. In this context, the term wealth maximization is redefined as value maximization.

At macro level, a firm has obligation to the society which is fulfilled by maximizing production of goods and services at least cost, thereby maximizing wealth of society.

**Q.4 Explain in brief key functions of a finance manager or chief finance officer of a large size industrial organization.**

**Ans.** A chief finance officer (CFO) of a large organization has a very crucial responsibility to shoulder as he has to take all decision about raising & utilization of resources have been taken efficiently and at no time resources should remain idle. As the size of organization grow and volume of financial transactions increases, his role and functions assumes greater importance. The key functions of a CFO can be as follows:

### **I - Primary functions**

#### **(A) Key management functions**

- i. Planning** - A CFO has to make financial planning in the form of short term and long term plans and frame policies relating to sources of finance, investment of funds including capital expenditure and distribution of profit.
- ii. Organizing** - creating and monitoring proper organizational structure of finance looking to the needs of organization.
- iii. Coordination** - A CFO has to coordinate with all other department so that no department suffers for want of funds.
- iv. Controlling** - A CFO has to fix/ set standards of performance, compare actuals with standards fixed and exercise control on differences. He can apply techniques of budgetary control and for this, he has to develop a system of collecting/ processing/ analyzing information.

#### **(B) Functions relating to finance:**

- i. Acquisition/raising of funds** - He has to ensure adequate quantum of funds from right source, right cost, right time, right form and at minimum cost.
- ii. Allocation/ investment of funds** - In fixed assets (long term assets) through appropriate techniques of

capital investment as well as allocation of funds in current assets like cash, receivables, inventory short term investment keeping in view liquidity & profitability.

- iii. **Distribution of income (profit)** - In the form of dividend (dividend decision) and retained earnings for growth and development of business.

**II - Subsidiary functions : Besides core functions as above, a CFO has to perform following equally important functions such as:**

- i. **Maintaining liquidity** - Adequate liquidity need to be maintained for paying obligations in time as well as meeting day to day expenses and for this, he has to keep close eyes on cash in-flows, cash out flows. Hence cash budget and cash forecasting becomes his important function.
- ii. **Profitability** - for ensuring adequate profit and maximizing share holders wealth a CFO has to look in to :
  - Profit planning
  - Price fixation of goods & services
  - Cost of funds/capital
  - Cost control
- iii. **Evaluation of financial performance & reporting** - A CFO has to periodically review financial performance against set standards, take corrective measures as well as report performance to the board & management for facilitating timely decisions pertaining to finance at top level.
- iv. **Upkeep of records and other routine functions** - A CFO has to look in to following aspects:
  - supervision of cash receipts

- safe custody of valuables & securities
- maintenance of account
- internal audit
- compliance of govt regulations

**Functions of Modern Age CFO :**

- i. **Achieving corporate goals** - Besides goals of organization, goals of different departments have to be achieved to increased market share of companies products.
- ii. **Financial projections / for casting** - for next 5-10 years consisting of cost & revenues for coming long term period keeping in view companies long term plans.
- iii. **Corporate Governance** - for image building in the eyes of all stake holders of the company, transparency in systems / procedure and adherence of laws as well as rules & regulations.
- iv. **Merger and acquisitions initiative** - for
  - Including new product lines
  - Technological tie-up/ collaboration with foreign firms
  - Financial restructuring for increasing profitability
  - Tie-up arrangements for greater penetration in new markets in the country & abroad.
- v. **Risk management** - Preparing strategies for combating risks arising out of
  - internal &
  - external factors

A CFO has to keep close eyes on risk factors as a result of policy changes not only in the country but also due to developments taking place in foreign countries. This has become important due to globalization effect.

- vi **Financial engineering** - A CFO has to keep himself abreast with new techniques of financial analysis and new financial instruments coming in market. In financial engineering, a CFO has to work on finding out solutions to the problem through complex mathematical models and high speed computer solutions.

**Gurukul**  
No. 1 Educational Web Portal in India



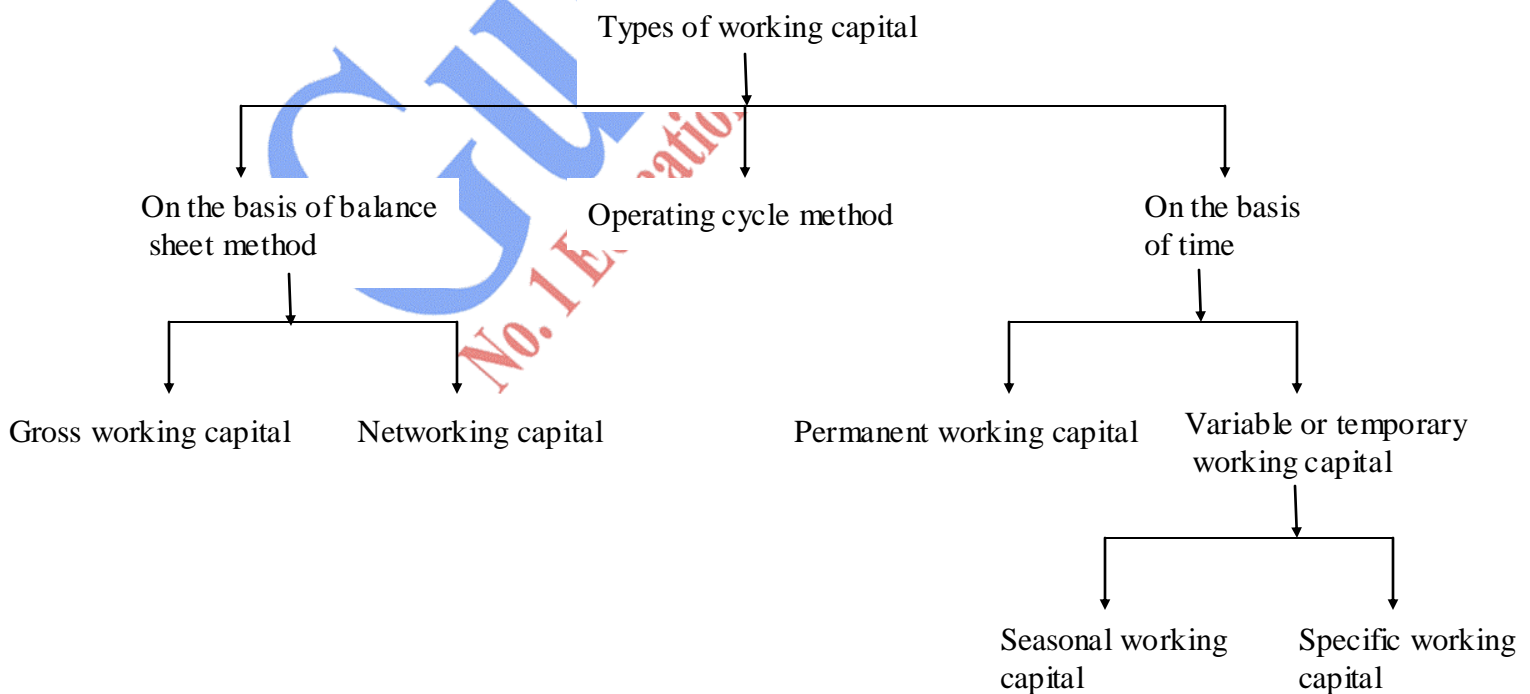
## Chapter - 2

# Management of working capital

**Q.5 Explain in brief the concept of working capital.**

**Ans.** Working capital is that part of firm's capital which is required for financing current assets such as cash, debtors, receivables, inventories, marketable securities etc. Funds invested in such assets keep revolving with relative rapidity and are constantly converted into cash. Hence working capital is also known as circulating capital, revolving capital, short term capital or liquid capital.

The concept or different types of working capital can be explained with the help of following chart:



1. **Gross working capital** – Refers to firms investments in current assets which are converted in to cash during an accounting year such as cash, bank balance, short term investments, debtors, bills receivable, inventory, short term loans and advances etc.
2. **Net working capital** – Refers to difference between current assets and current liabilities or excess of total current assets over total current liabilities.
3. **Operating cycle concept** – Refers to capital/ amount required in different forms at successive stages of manufacturing operation/ process. It represent cycle during which cash is reconverted in to cash again. In manufacturing process, cash is required for purchasing raw material- raw material is converted in to work in progress – which is converted in to finished product – finished products are sold on credit- than cash is realized out of credit sale. Total time taken in completing one cycle helps in ascertaining working capital requirents.
4. **Regular or permanent working capital** – Refers to minimum amount which permanently remain blocked and can not be converted in to cash such as minimum amount blocked in raw material, finished product debtors etc.
5. **Variable or temporary working capital** – Refers to amount over and above permanent working capital i e difference between total working capital less permanent working capital.
6. **Seasonal working capital** - Refers to capital required to meet seasonal demand e.g. extra capital required for manufacturing coolers in summer, wollen garments in winter. It can be arranged through short term loans.
7. **Specific working capital** – Refers to part of capital required for meeting unforeseen contingencies such as strike, flood, war, slump etc.

**Q.6 Explain in brief important factors which help in estimating requirements of working capital in a organization. Also explain effects of adequate, inadequate and excess working capital.**

**Ans.** Important factors or determinants of working capital are:

- i. Nature of business :** firms dealing in luxury goods, construction business, steel industry etc need more capital while those dealing in fast moving consumer goods (FMCG's ) need less working capital.
- ii. Size of business :** large size firms need more working capital as compared to small size firms.
- iii. Level of technology :** use of high level technology leads to fastening the process and reduce wastage and in such case, less working capital would be required.
- iv. Length of operating cycle :** longer is the operating cycle, higher would be the need of working capital.
- v. Seasonal nature :** firms dealing in goods of seasonal nature, higher capital during peak season would be required.
- vi. Credit policy :** If credit policy followed is liberal more working capital would be required and if the same is strict less working capital would be required.
- vii. Tern over of working capital :** If rate of turnover is more, less working capital would be required and this rate is less, more working capital would be required.
- viii. Dividend policy :** If a firm retains more profit and distributes less amount as dividend, less working capital would be required.
- ix. Profit margin :** If rate of margin of profit is more, less working capital would be required.

x. **Rate of growth** : If growth rate is high and firm is continuously expending/ diversifying its production & business, more working capital would be needed.

xi. **Other factors like** :

- Means of transport
- Availability of water, power nearby
- Political stability

Coordination of activities also effect estimation of requirements of working capital.

#### **Effects of Adequate capital**

- Prompt payment to supplies & benefit of cash/ trade discount.
- Increase in good will/ image
- Easy loans from banks
- Increase in the efficiency of employee's executives/ directors.
- Increase in the productivity as well as profitability

#### **Inadequate or short working capital**

- Stock out situation may arise
- Loosing customers
- Less profit
- Down fall of good will / image

#### **Excess working capital**

- Unnecessary piling of stock due to which loss of interest on amount blocked, theft, pilferage

- Lead to inefficiency of management
- Adversely effect production and profitability
- Dissatisfaction to share holders

**Q.7 What do you understand by “Management of receivable” ? Explain in brief its scope and costs associated with it.**

**Ans.** Receivables are created on account of credit sales. They are represented in the balance sheet in the form of sundry debtors, trade debtors, book debts, accounts receivable, bills receivable etc. Receivables constitute around 15 to 20% of assets or around 1/3 of working capital in a big organization and substantial amount of working is blocked in this asset. Hence, their efficient management occupies great significance in financial management.

Receivable Management means matching the cost of increasing sales with the benefits arising out of increased sales and maximizing return on investment of firm under this head. Hence, the prime objective of receivables management is to:

- Optimize return on investment
- By minimizing costs associated with receivables

Features of receivables

- They involve risk based on present economic value and seller expects the same value of a later date
- Implies futurity

Benefits of receivables

- Growth in sales- If a firm does not sell on credit, sales cant grow
- Increase in profit – Growth in sales leads to increase in profit. At times, credit sales are at a price more than price of cash sales
- Enables to face competition in market

Costs associated with receivables are :

1. Carrying cost – cost of amount blocked in the form of

- Interest if amont is borrowed
- Opportunity cost if amount blocked is out of retained earnings.

2. Administrative costs – Cost incurred on maintaining staff, for keeping records and for process of collecting amount from debtors e.g.

- Salary to staff
- Cost of collecting information about debtors
- Record keeping
- Cost of collecting cheques
- Cost on phone calls, reminders follow up
- Cost on office space, equipments etc and expenditure on staff assigned the duty of collection of amount from debtors.

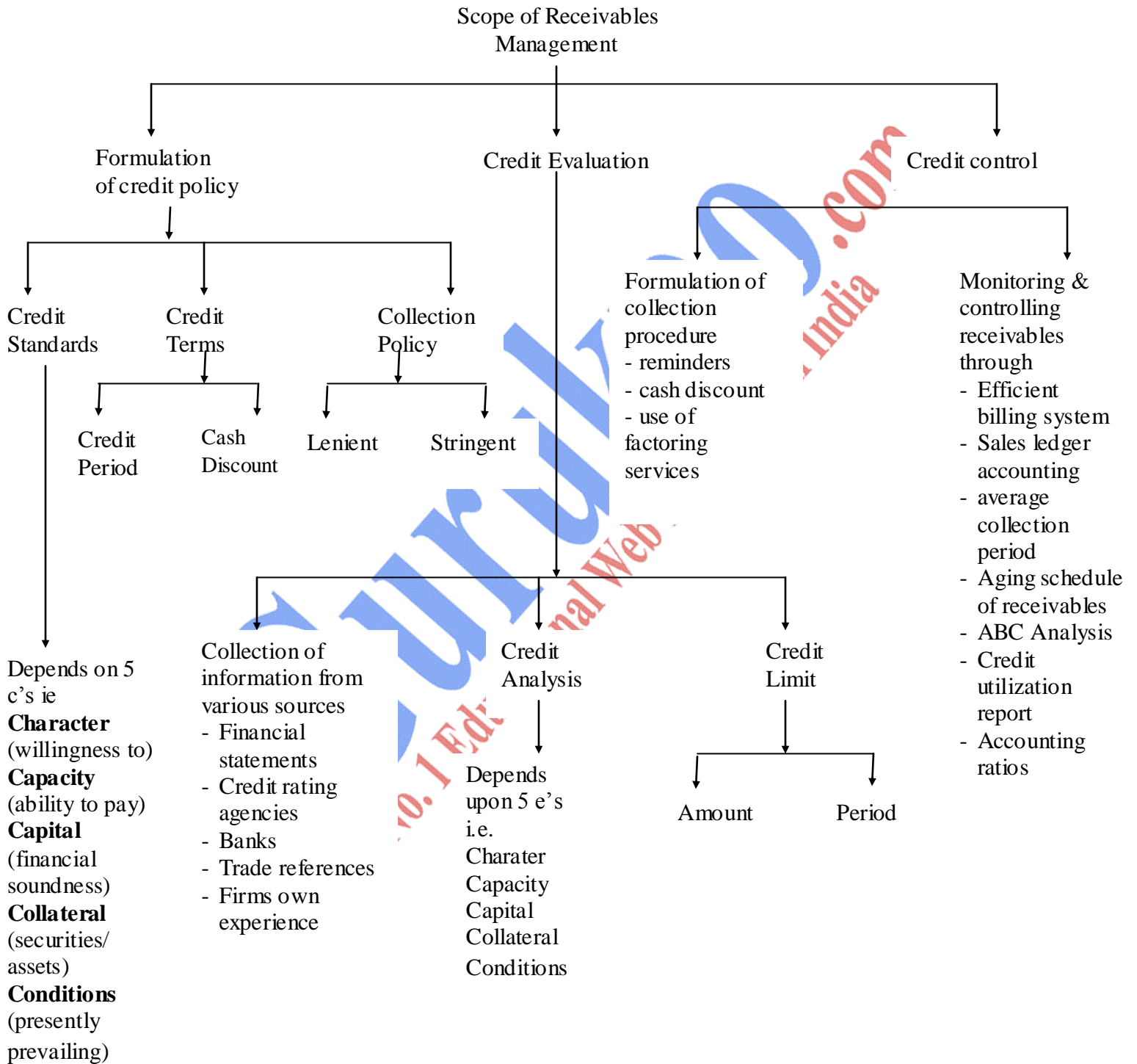
3. Delinquency cost - cost on following up with delinquent debtors, reminders, legal charges etc.

4. Default cost – cost of debtors becoming bad debts

**Factors effecting investments in receivables**

- (i) Level of sales - Higher the sales, high would be amount of credit sales & receivable would also be high
- (ii) Nature and conditions of business - In competitive market, more credit sales in consumer durables like furniture, refrigerators etc.
- (iii) Credit policy of firm - If credit policy is liberal, more would be amount of receivables
- (iv) Terms of credit - Terms of cash & trade discount and period in which payment is expected from debtors.
- (v) Capacity of credit department - With reference to :-
  - Scrutiny of orders placed by customers
  - Assessing creditworthiness for which collecting information from various sources
  - Timely collection of receivables from debtors

Scope of Receivables Management - There are three part under which scope of receivables management can be discussed i.e. Formulation of credit policy, credit evaluation and credit control. This scope has been presented in the form of a chart on next page.





**Q.8** What do you understand by term “inventory” and “inventory management” ? Explain the key objectives of inventory control.

**Ans.** Inventory means stock of goods in the form of raw material, stores or supplies, work in progress and finished product waiting for sale. Important features of inventory are.

- It accounts for large share of working capital
- Risk factor is high in holding inventory
- It involves many types of costs.
- It influences price and income of the firm as well as profitability.
- It involves almost all functional areas of management i.e. purchase, production, marketing & finance.

Various types of risks associated with inventory are.

- risk of price fluctuation
- risk of deterioration of quality of goods
- risk of obsolescence
- risk of pilferage & loss

Inventory management - means efficient management/ control of capital invested in inventory for obtaining maximum return by keeping inventory costs at minimum.

Objectives of inventory control - are two ie.

**Operating objectives**

- (i) Regular flow of material
- (ii) Minimization of risks due to stock out.
- (iii) Avoid obsolescence of stored Goods due to change in demand, technology

**Financial objective**

- (i) Minimum investment or maximization of returns on investments
- (ii) Minimizing inventory costs.

**Key functions of inventory control are:**

- effective use of financial resources
- economy in purchasing
- uninterrupted production of goods & services
- protection against loss of material
- prompt delivery of goods to customers
- eliminating redundant inventory
- providing information to management for decision making

**Dangers of over stocking of inventory**

- **Blocking of funds** - which may lead to reduction in profit due to interest cost or opportunity cost
- **Increase in holding cost** - besides interest rent of space, insurance, loss on account of theft pilferage etc.
- **Loss of liquidity** - as it is difficult to sell stores, woks in proposes as well as semi-finished goods.

- **Dangers of under stocking of inventory/stock out/ shortage of inventory items**
- Loss of profit due to loss of sales
- Loss of future sales as customers may go else where
- Loss of customers confidence resulting to loss of good will
- Loss of machine and men hours as they may remain idle which may lead to frustration in labour force, unnecessary stoppage in production, extra costs in urgent replenishment of items.

**Q.9 Explain in brief different types of costs associated with inventory. Also explain different techniques of inventory control.**

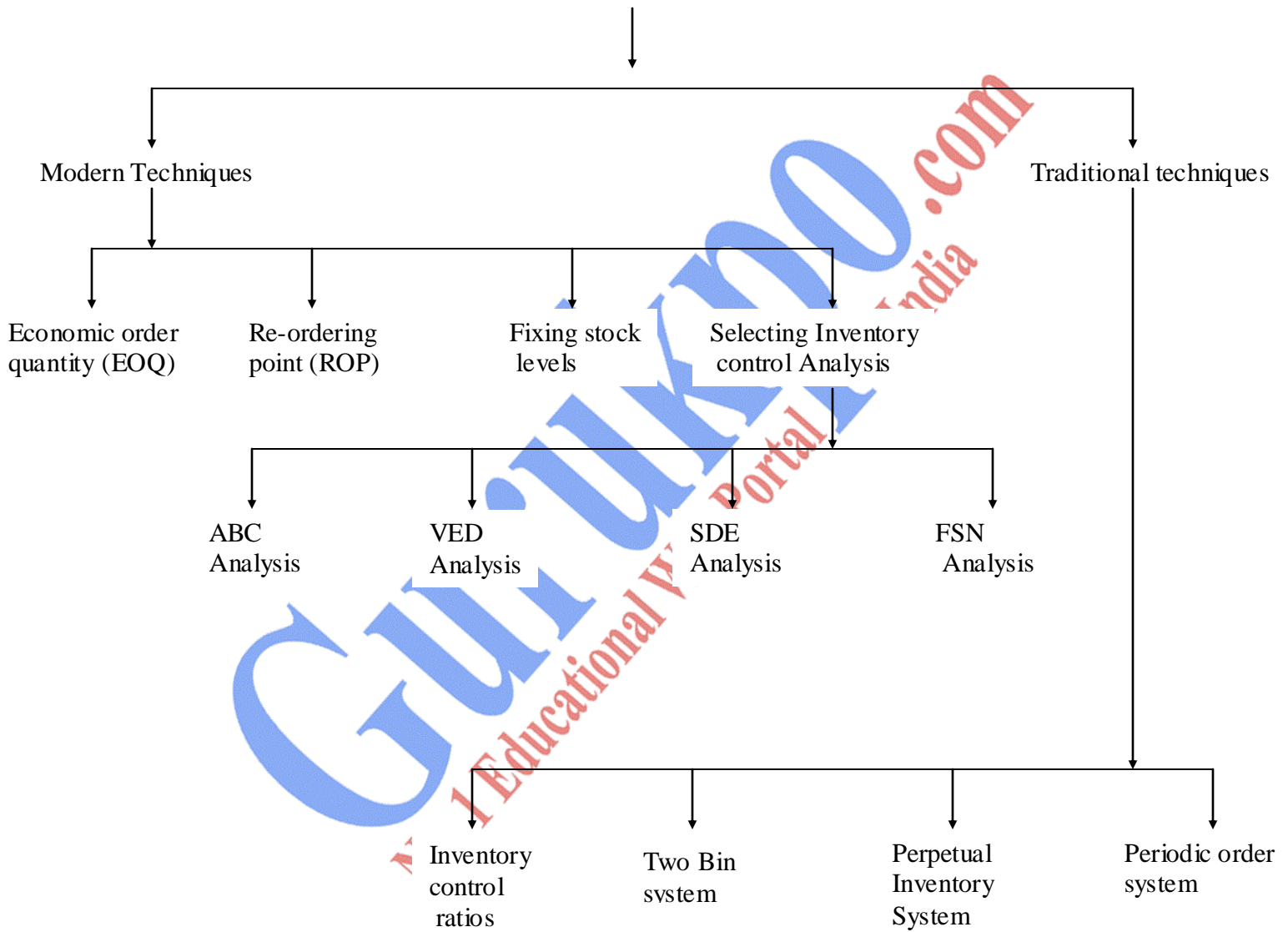
**Ans.** Following are the key types of costs associated with inventory :

- (i) **Material cost** – Which include cost of purchasing material/ Goods including transportation cost, sales tax, octroi, handling cost (loading unloading) etc.
- (ii) **Ordering costs:** Clerical & administrative costs such as salary, postage, stationary telephone etc associated with purchasing, cost of requisition of material for order, follow up, receiving/evaluating quotations, checking of material when received (quality/quantity) accounting costs such as checking of supplies against orders, making payment, maintaining records of purchase etc. setup costs when items are manufactured internally.

- (iii) **Carrying costs-** storage cost eg. rent, lighting heating, refrigeration, labour costs in handling material, store staff equipments, taxes, depreciation, insurance, product deterioration obsolescence spoilage, breakage, pilferage, audit & accounting cost and lastly interest cost on capital or opportunity cost.
- (iv) **Stock out costs or shortage of material** – Which include loss of profit due to loss of sale, loss of future sales, loss of losing goodwill in the eyes of customers and loss of man and machine hours.

**Gurukpo.com**  
No. 1 Educational Web Portal in India

### Techniques of Inventory Control



**EOQ** - Optimum size of an order for replenishment of an item of inventory is called EOQ

**ROP** - Re-ordering point is the level of inventory at which an order should be placed for replenishment of on item of inventory.

**Stock levels** - Fixing levels like minimum, maximum, re-order and danger level.

**ABC analysis** - Always Better control. All items of inventory are divided in to three categories ie. 'A', 'B', & 'C'.

Category	'A'	value	70% to 80%	Where quantity is	5% to 10%
"	"	'B'	" " 20%	" " "	20%
"	"	'C'	" " 10%	" " "	70%

**VED Analysis** - Vital, Essential & Desirable (used for spare parts)

**SDE Analysis**

- Scarce (items in short supply)
- Difficult (items cant be procured easily)
- Easy (items which are easily available)

**FSN Analysis**

- Fast moving (stock to be maintained in large quantity)
- Slow moving (not frequently required by production dept.)
- Non-moving (items which are rarely required by production dept)

**Q.10 Explain in brief all aspects of management of cash in a business organization.**

**Ans.** Efficient management of cash is crucial to the solvency of business. It implies making sure that all business generated revenues are efficiently controlled and utilized in best possible manner to result in gains to the organization. Cash management is concerned with optimizing amount of cash available to the company & maximizing interest on spare funds not required immediately by the company.

**Objectives of cash management:-**

- Ensuring availability of cash as per payment schedule
- Minimize amount of idle cash
- Effective control of cash (Maximizing interest on cash/funds not required immediately by the firm)

**Motives of holding cash :-**

- (i) **Transaction motive** :- Refers to cash required for making payments like wages, operating expenses, taxes, dividend, interest etc.
- (ii) **Precautionary motive**:- To make payment for unpredictable contingencies like strike, lockout, fire, sharp rise in prices etc.
- (iii) **Speculative motive**:- To take advantages of unexpected opportunities e.g. purchase of raw material at reduced prices on cash basis, buying securities at a time when prices have fallen etc.

**Importance /advantages of efficient management of cash:-**

- firms goodwill is maintained by meeting obligations in time
- cash discount can be availed
- healthy relations can be maintained
- unforeseen events can easily be faced.

**Scope of cash management :- In includes :**

- Cash planning & forecasting :
  - Cash budgeted
  - cash flow statement
  - ratio analysis
- Managing cash flows
  - Inflows
  - Out flows
- Determining optimum level of cash
- Investing surplus cash.

**Cash budget** :- A statement showing estimate of cash receipts, cash disbursement and net cash balance for a future period of time. It is a time based schedule & covers a specific period.

**There are two methods of preparing cash budget**

- (i) Cash budget for a short period (up to one year) A statement projecting cash inflows and flows for a firm over various interim periods (months, quarters). For each period, expected cash inflows are put against expected out follows to find out if there is any surplus or deficiency.
- (ii) Long term cash budget (3 to 7 year) under this method profit and loss account is adjusted to know estimates of eash receipts/ payments

**This cash budgets helps in**

- planning for borrowings
- planning for repayment of loans



- distribution of dividends
- estimation of idle cash
- better coordination of timings of each inflows & out flows
- identification of cash surplus position and planning for alternative investments in advance

**collection and disbursement methods to improve cash management efficiency.**

**Collection methods :**

**Concentration banking** - improving flow of cash by establishing collection centers at different places i.e. multiple collection centers instead of single centre. Even the local cheques received are collected fast and amount is deposited in bank. The bank in the head office of firm is known as concentration bank.

**Lock Box system** - A firm takes on rent post office boxes in selected areas and instructs customers to mail their payment in these boxes. The bank of the firm is authorized to open these boxes, pick up mails and deposit cheques in the account of firm and sends a list of cheques received for the record of firm.

**Disbursement methods -**

- (i) **Centralized disbursement centre** - Establishing a centralized disbursement centre at head office of firm and all payments only through this centre. This would help in consolidating all funds in a single account and making a proper schedule of payments/ handling funds.
- (ii) **Payment on due date** - all payment on their due dates (not early & not late) strictly according to agreed terms so that

there is no loss of cash/ trade discount and credit worthiness of firm is maintained.

**(iii) Proper synchronization of receipts and payments**

**(iv) Utilizing float** - float indicates difference between bank balance and firms bank account & bank pass book. It arises due to time gap between cheque written/issued and time when it is presented or time gap between cheque deposited and time when credit is actually given by the bank to the firm this float may be

**Postal float** - Time required for receiving cheque from customers through post

**Deposit float** - Time required to process the cheques received and depositing them in bank.

**Bank float** - Time required by banker to collect the payment from customers bank.

**Models of cash management :**

- (i) **Bamoul Model** :- It is like EOQ model of inventory control. According to this model, optimum level of cash is one at which carrying cost of cash or cost of receiving cash is minimum. Carrying cost of cash refers to interest foregone on marketable securities. This is also called opportunity cost. Cost of receiving cash or transaction cost is the cost of converting marketable securities in cash.
- (ii) **Hiller orr model** - This model is based on assumption that cash balance changes randomly over a period of time in size. This model prescribes two levels i.e. upper limit and lower limit. Optimum balance of cash lies between upper and lower limit. When cash balance reaches upper limit, cash equal to difference between upper limit and optimum

limit, it should be invested in marketable securities. When cash balance reaches to lower limit, cash equal to difference between optimum limit and lower limit, finance manager should immediately sell marketable securities so that cash balance reaches normal level.

**Q.11 Explain in brief the term “Management of marketable securities “ and “treasury management”.**

**Ans. Management of marketable securities**

Cash surplus left in excess of daily cash requirements need to be invested in readily **marketable short term securities**. These securities are also called cash equivalents. Investments in such securities are made keeping in view the following objectives:

- to earn interest for holding period
- to convert securities in cash as & when required
- increase return on excess cash through investments
- to maintain a proper mix of investments

These short term marketable securities include

- Treasury bills
- Certificate of deposits
- Money market mutual funds
- Bill discounting

**Key criteria for investing for surplus cash in marketable securities are:**

1. Liquidity or marketability :- converting securities in cash in minimum time and minimum transaction cost.

2. Safety :- i.e. Absence of risk. One should be prepared to sacrifice extra return for sake of safety
3. Yield/profit /return:- Maximum possible income from investment in such securities
4. Maturity :- No risk on getting cash on maturity through income in the form of interest may be less.

### **Treasury management (TM)**

T.M mainly deals with working capital management and financial risk management. The working capital management include cash management and decide asset liability mix. Financial risk includes forex and interest and interest rate management. Hence, key goal of TM is planning organizing and controlling cash assets to satisfy financial objectives of organization. The goal is to:

- Maximize return on available cash
- Minimize interest cost
- Mobilise as much cash as possible for corporate returns.

### **Key responsibilities of T.M.**

- Maintaining good relations with banks and other financing institutions
- Managing cost while earning optimum return from any surplus fund.
- Providing long term and short term funds for business at minimum cost.
- Managing interest rate risk in accordance with firms/groups policy

- Advising on all matters of corporate finance including capital structure, merger & acquisitions etc.

#### Functions of a treasury manager

1. Cash management:- efficient collection & payment of cash.
2. Fund management:- Planning and sourcing of short/medium/long term funds.
3. **currency management** :- managing foreign currency risk in a multinational company by T.M
4. **Banking function** :- negotiating with banks and maintaining good contact with banks.

#### Q.12 What do you understand by “Financing of Working Capital ?

**Ans.** Financing working capital refers to arranging working capital in an organization i.e. different sources from which working capital has to be raised. For this purpose, we have to classify working capital in to two main categories ie.

I - Temporary/ Short term/ variable working capital

II - Permanent /fixed/ Long term working capital

Arranging or financing both these categories would be different as explained below :

I - **Financing temporary / short term / variable working capital** - different sources of financing this type of working capital are:

- i. Commercial banks:- in the form of short term loan like short term credit limit, overdraft limit, pledge loan etc.

- ii. Indigenous bankers/private money lenders in case of small business organization
- iii. Trade credit :- Receiving goods on credit from suppliers
- iv. Installment credit :- goods/ assets are purchased and payment is made in installments.
- v. Advances from customers/ agents :- against orders received for supplying goods
- vi. Deferred income :- i.e. incomes received in advance
- vii. Commercial paper:- issuing unsecured promissory note
- viii. Public deposits:- accepting deposit for short period i.e. 3 month, 6 months etc.

**II - Permanent /fixed/ long term working capital - Different sources for financing such capital are.**

- i. Shares - In the form of equity shares, preference shares, deferred shares etc.
- ii. Debentures - debentures may be of different type ie secured, unsecured, redeemable, unredeemable convertible, non-convertible etc.
- iii. Ploughing bank of profit- retaining profit for growth. It is a internal source and a source which is cost free.
- iv. Public deposits - accepting fixed deposits from public for a period of one year and above.
- v. Loan from financing institutions - term loan from institutions like:
  - Commercial banks

- National state level financing institutions like IFCI, IDBI, State Finance corporations, SIDC's etc.

**Gurukpo.com**  
No. 1 Educational Web Portal in India

## Chapter 3

# Investment Decisions

---

**Q.13** What do you understand by the term capital budgeting ?

**Ans.** A firm incurs two types of expenses i.e.

**Revenue expenditure** - The benefits of which are supposed to be exhausted within the year concerned and their planning and control is done through various functional departments

**Capital expenditure** - The benefits of which are expected to be received over long period a series of years in future like building, plant, machinery or to undertake a programme on

- research and development of a product
- diversification in to a new product line
- replacement of a machine
- expansion in production capacity
- promotional campaign

Capital expenditure involves investment of substantial funds for longer period and the benefits of such investment are in the form of increasing revenues or decreasing costs. Wrong decision under this head may effect future earnings, employment capacity, quantity and quality of production. Hence, long term planning and right decision to incur or not to incur such expenditure is a crucial responsibility of management. The techniques



used by management to carry out this responsibility is known as capital budgeting. Hence planning and control of capital expenditure is termed as capital budgeting.

According to Milton “capital budgeting involves planning of expenditure for assets and return from them which will be realized in future time period”.

According to I.M pandey “capital budgeting refers to the total process of generating, evaluating, selecting, and follow up of capital expenditure alternative”

### Objects of capital Budgeting

- (1) **Share holders wealth maximization** . In tune with objectives of financial management, its aim is selecting those projects that maximizes shareholders wealth. The decision should avoid over/under investment in fixed assets.
- (2) **Evaluation of proposed capital expenditure** - Capital budgeting helps in evaluating expenditure to be incurred on various assets to measure validity of each expenditure
- (3) **Controlling costs** - by evaluating expenditure costs can be controlled.
- (4) **Determining priority** - arranging projects in order of their profitability enabling the management to select most profitable project.

### Nature/features of capital budgeting decisions

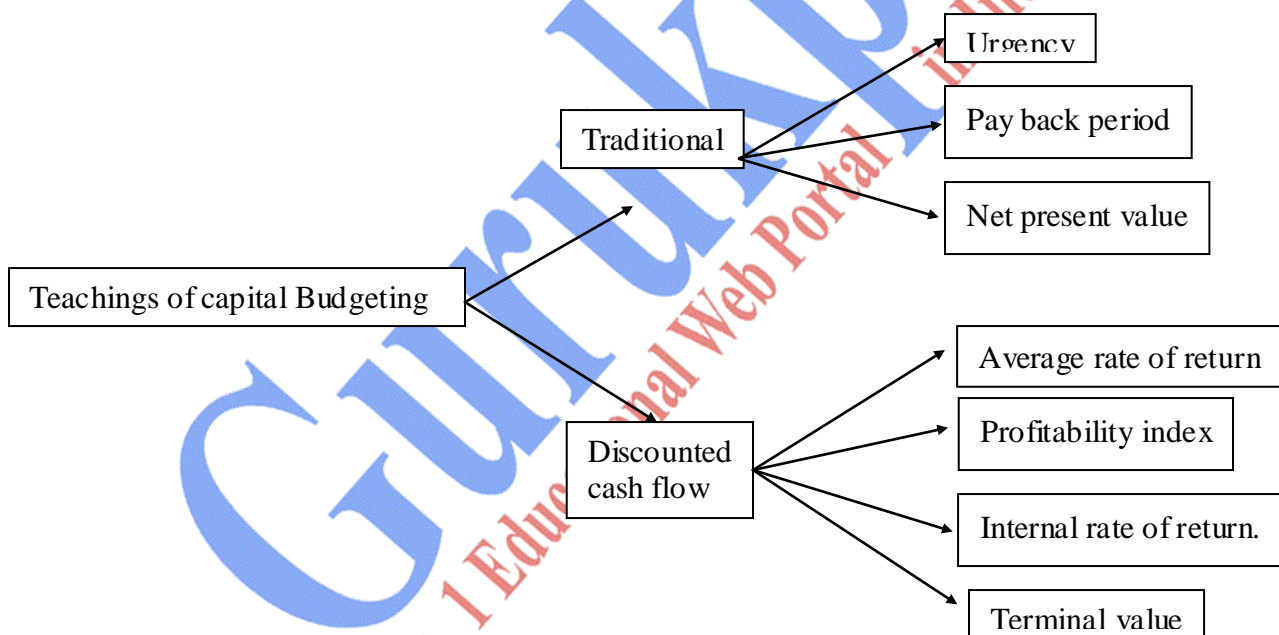
- (1) **Long term effect** - such decisions have long term effect on future profitability and influence pace of firms growth. A good decision may bring amazing/good returns and wrong decision may endanger very survival of firm. Hence capital budgeting decisions determine future destiny of firm.

- (2) **High degree of risk** - decision is based on estimated return. Changes in taste, fashion, research and technological advancement leads to greater risk in such decisions.
- (3) **Huge funds** - large amount/funds are required and sparing huge funds is problem and hence decision to be taken after proper care/analysis
- (4) **Irreversible decision** - Reverting back from a decision is very difficult as sale of high value asset would be a problem .
- (5) **Most difficult decision** - decision is based on future estimates/uncertainty. Future events are effected by economic, political and technological changes taking place.
- (6) **Impact on firms future competitive strengths** - These decisions determine future profit/ cost and hence effects the competitive strengths of firm.
- (7) **Impact on cost structure** - Due to this vital decision, firm commits itself to fixed costs such as supervision, insurance, rent, interest etc. If investment does not generate anticipated profit, future profitability would be effected.

#### **Factors effecting capital Budgeting Decisions(CBD)**

- (1) **Technological changes** - Before taking CBD, management will have to undertake in-depth study of cost of new product /equipment as well productive efficiencies of new as well as old equipment.
- (2) **Demand forecast** - Analysis of demand for a long period will have to be undertaken before CBD.
- (3) **Competitive strategy** - If a competitor is going for new machinery /equipment of high capacity and cost effective, we may have to follow that.

- (4) **Type of management** - If management is innovative, firm may go for new equipments/ investment as compared to conservative management.
- (5) **Cash flow** - cash flow statement or cash budget helps a firm in identifying time when a firm can make investment in CBD.
- (6) **Other factors**- Like fiscal policy (tax concessions, rebate on investments) political salability, global situation etc.



## Chapter -4

# Financing Decisions

---

**Q.14** What do you understand by dividend policy ?

**Explain in brief models of dividend theories .**

**Ans.** Dividend is divisible profit distributed amongst members/ shareholders of a company in proportion to shares in the manner as prescribed under law.

A dividend cannot be declared unless:

1. Sufficient profit is there in a company.
2. It has been recommended by Board of Directors.
3. Its acceptance has been given by the shareholders in Annual General Meeting (AGM)

**Kind of Dividend -**

- I. Type of Security - Preference Dividend, - Equity Dividend
- II. Timings of Dividends - Interim Dividend - Regular Dividend
- III. Mode of Payment - Cash - Stock dividend (Bonus) - Script or Bond.

**Dividend Policy -** Policy followed by Board of Directors concerning quantum of profit to be distributed as dividend. It also includes principal rules and procedure for planning and distributing dividend after deciding rate of dividend.

- Stable : Long term policy without frequent changes i.e. long term policy which is not effected by changes or quantum of profit.
- Lenient : Most of the profit is distributed amongst share holders and a very small part is kept as retained earnings. Even 90% to 95% profit is distributed as dividend. This is generally done in initial years to gain confidence of share holders.

#### **Factors affecting dividend policy or determinants of dividend policy**

- (i) Legal requirements : As per companies Act, dividend only out of earned profit.
- (ii) Liquidity position : In tight liquidity position, instead cash dividend, bonus shares or scripts/bonds are issued.
- (iii) Trade Cycle : In boom conditions, higher profits are there and hence high dividend.
- (iv) Expectations of share holders
- (v) Future needs : If future needs are high, low dividend and high retained earnings.
- (vi) Debt repayment : If heavy debt liability, low dividend.
- (vii) Stability of Income : If income is stable, high dividend.
- (viii) Public Opinion : High dividend to gain public confidence.
- (ix) Composition of Owners : If preference shareholders are large, less dividend to ordinary shareholders.

#### **Models of Dividend (Theories)**

1. **Walter's Model** - As per this model, dividend policy of a firm is based on the relationship between internal rate of return ( $r$ ) earned by it and the cost of capital or required rate of return ( $k$ ). The optimum

dividend policy will have to be determined by relationship of  $r$  &  $k$  under following assumptions.

- Internal rate of return  $r$  and cost of capital ( $k$ ) are constant.
- All new investment opportunities are to be financed through retained earnings and no external finance is available to the firm.
- A firm has perpetual or an infinite life

Hence, as per this Model, a firm should retain its earnings if the return on investment exceeds cost of capital.

2. **Gordon's Model** – This model is like Walters Model but a few extra assumptions are :

- The firm operates its investment activity only through equity.
- The retention ratio once decided is constant for ever.

As per this Model, Market value of share is equal to present value of its expected future dividend.

3. **Modigliani & Miller (M M Model)** – This model says that dividend decision and retained earnings decision do not influence market value of shares. As per this model, "Under conditions of Perfect Capital Market, rational investors, absence of tax, discrimination between dividend income and capital appreciation given the firms investment policy. Its dividend policy may have no influence on the Market price of shares.

**Q.15** What do you understand by term lease and hire purchase ? also explain difference between them.

**Ans. Lease** : Lease is a contractual arrangement where the owner of the asset transfer the right to use the asset to user (Lessee) in return for rentals. Main aspects of lease are :

- (i) **Parties to Lease** : There are two parties in lease i.e. Lesser and Lessee.
- (ii) **Asset under Lease**: The subject matter of lease is a tangible asset movable or immovable.
- (iii) **Term of Lease** : Period for which agreement for lease would be in operation.
- (iv) **Rentals of lease** - These are periodic payments (rentals) that forms the consideration for lease transaction.
- (v) **Ownership** - Ownership remains with lesser and he allows use of asset to lessee during lease tenure.

### **Types of Lease**

- (1) **Operating Lease** : Also known as short term lease and lease period is less than usual life of asset. The lessee has the option to renew the lease after the lease period and he is responsible for maintenance insurance and taxes of asset. As period of lease is short, it implies high risk to lesser and high lease rental to lessee. Operating lease is of two types.

**Wet lease** : Where lesser is responsible for maintenance insurance and taxes.

**Dry lease**: Where lessee is responsible for maintenance, insurance and taxes on asset.

- (2) **Financial lease**: Also called capital lease is one which usually covers useful economic life of an asset or a period that is close to economic life of asset. It is usually a non-cancellation lease where lesser receives the lease rentals during the lease period so as to

recover fully not only the cost of asset but also a reasonable return on funds used to buy asset. This lease is of following types.

- (i) **Direct lease** : The lesser purchases the asset and handover the asset to lessee.
- (ii) **Leveraged Lease:** Where lesser borrows a portion of purchase price from lender and loan is secured by asset and lease rentals. The loan is repaid out of lease rentals either directly by lessee or the lesser.
- (iii) **Sale and lease back** - Under sale and lease back the lessee not only retains the use of the asset ;but also get funds from the sale of asset to lesser.

29

#### **Lease, hire purchase and installment sale**

**Lease** - In case of lease asset is handed over to lessee in return of lease rentals. The ownership and title to the asset remains with lesser.

**Hire Purchase** - The seller handover the asset to buyer but title of goods is not transferred. The buyer becomes the owner of goods and acquires the title to the goods only when he makes payment of all installments. In case of default, in payment, by the buyer, the seller can repossess the goods.

**Installment Sale** : In this case, title of goods is immediately transferred to the buyer though payment of price to be made in future. This is just like a credit sale. In case of default, the seller has no option but to claim the money in court of law. The seller can't repossess the goods as is available in Hire Purchase.



### Difference between Financial Lease and Operating Lease

Basis of Difference	Finance Lease	Operating Lease
1. Life of Contract	Approximates the economic life of project	Shorter than economic life.
2. Maintenance	Provided by lessee or covered by a separate agreement.	Provided by lesser and included in lease rentals.
3. Lease payments	Return the cost of asset and allow a profit to the lesser.	Not sufficient to cover the cost of asset.
4. Cancellation	May be cancelled if both lesser and lessee agree.	May be cancelled before expiry date.

**Hire Purchase** :Hire purchase involves a system under which term loan for purchase of goods and services are advanced to be liquidated in stages through a contractual obligation. It is considered to be a sale of asset, the title of which rests with seller until the purchaser has paid all the installments and exercised his option ;to purchase the asset at the end of contract.

**Features :** (i) At the time of hire purchase agreement, the buyer pays an agreed amount and balance amount in higher purchase installments. (ii) Hire purchase installment cover both principal amount and interest. (iii) Ownership passes to the buyer after payment of last installment.

**Difference between Leasing & Hire Purchase :**

Leasing	Hire purchase
1) Ownership rests with lesser.	1) Ownership passes to the buyer after payment of last installment.
2) Depreciation and investment allowable can be claimed by lesser.	2) Can be claimed by buyer/hirer
3) Lease rental is tax deductible expenditure.	3) Only interest component is tax deductible
4) Lease does not enjoy salvage value of asset.	4) Buyer/Hirer enjoys salvage value of asset.
5) Cost of maintenance is borne by lesser. In case of financial lease, it is borne by lessee.	5) Cost of maintenance is borne by buyer/hirer.

**Q.16** What do you understand by the term "Project financing".

**Ans.** Project financing is the arrangement of funds to finance the development and construction of a project. Project financing means determination and mobilization of required funds for project from various sources at an acceptable cost at different steps of implementation of project. The requirement of funds depends on the cost of project. The total cost of a project is the sum total of estimated **capital cost** and **working capital** requirements.

There are two main sources of financing a project i.e. own funds and loan funds. The cost of a project depends on the nature of project i.e. a project set up for the first time, expansion project, modernization project, diversification project, take over project joint venture project, merger project etc.

The correct estimation of capital costs and working capital requirements is very necessary otherwise the project face serious problems and ultimately the project may remain incomplete or the project may take more time for want of funds. The capital cost may consists of items like land and site development, building and civil works, plant and machinery, technical know how fees, miscellaneous fixed assets, interest, provisions for contingencies etc. Similarly, working capital may consists of items like raw material, work in progress, finished products, debtors/receivables, power, fuel, salary & wages ,taxes, duties, overhead expanses and contingencies.

Main sources of finance-

I - Own funds

(i) Share capital

- Equity and

- preference share capital

(ii) Premium on issue of share capital

(iii) reserves and surplus including retained earnings

(iv) subsidy received from central/state governments

II - Loan funds or debt

(i) **debentures** – convertible, non convertible an partly convertible debentures

- (ii) **term loans or long term loans** from all India level development financing institutions AIDFI's and state level development financing institutions.
- (iii) **Unsecured loans** - Like commercial paper
- (iv) Deferred credit- receiving goods, plan & machinery from suppliers on credit and payment in installments.

**Factors effecting project financing** - are

- Nature of project
- Cost of capital
- Risk factor
- Cash inflows and out flows
- Legal prveisions and restrictions
- Tax considerations

**Basic parameters for grant of financial assistance** - The key Institutions which provide large amount of loans to projects are all India development financing Institutions which provide such finance or financial assistance keeping follwing parameters in view:

- (i) Promoters capability and competence
- (ii) Project preparation - quality of project
  - financial viability
  - commercial viability
  - social and economic viability
- (iv) **Appraisal of project** - on technical grounds as well as from financial angle, commercial aspects, economic aspects, ecological aspects and lastly social and other related aspects

Key Institutions providing long term finance for large projects :

To cater to the needs of financial assistance to industrial projects, there are six generally known all India development financial institutions (AIDFI's).

These are :

- (i) The Industrial Finance Corporation of India (IFCI)
- (ii) The Industrial Development Bank of India (IDBI)
- (iii) The Industrial Credit & Investment Corporation of India (IICI)
- (iv) The shipping credit and investment company of India (SCICI)
- (v) The small Industries development Bank of India (SIDBI)

Besides these six, there are 3 specialized development financial Institutions (SDFIs) such as :

- (i) The risk capital & technology finance corporation Ltd.
- (ii) The technology development & information company of India Ltd. (TDICI)
- (iii) The tourism finance corporation of India (TFCI)

There are 3 other financial institutions which are known as investment institutions which are:

- (i) Life Insurance corporation of India (LIC)
- (ii) Unit Trust of India (UTI)
- (iii) General Insurance Corporation of India (GIC) and subsidiaries

**Q.17 What do you understand by corporate restructuring ?**

**Ans.** That term corporate restructuring implies reorganizing a company or its business or its financial structure in such a way so as to make it operate

more effectively, efficiently for achieving its short term and long term objectives with increased profitability.

(1) Efficiency means better utilization of resources-

- Full capacity utilization
- Better utilization of Human resources
- Better utilization of Financial resources
- Better utilization of Material resources
- Better utilization of Technological resources
- Better utilization of Infrastructure facilities and space.

(2) Increase in profitability can be achieved by

**Increasing turn over -**

1. by improving brand image/power
2. by increasing market share
  - finding new market
  - greater penetration in existing market.

**Reduction of costs -**

1. Manufacturing costs including
  - administrative costs
  - financial costs
  - selling & distribution costs
  - maintenance costs

(without compromising on quality)

(3) Effectiveness- Means with greater customer satisfaction at local, national & international level with better brand image.

## Forms of Re-structuring

### I - Financial Restructuring

- Restructuring of capital base
- Raising finance for new projects

### II - Technological Restructuring

- Alliance with other companies to exploit technological expertise

### III - Market Restructuring

- Entering new market segments, new products etc.

**IV - Organizational** - To implement above three re-structuring.  
re.- Structuring of personnel in organization to make these more effective in discharging of their role and responsibilities.

### Most common tools of re-structuring are

- Amalgamation
- Merger
- Demerger
- Slump sale
- Acquisition/ Take over
- Joint venture
- Strategic alliance
- Franchises

### Objectives o restructuring

- Orderly redirection of firms activities
- Deploying surplus cash and other financial resources for more profitable growth

- Efficient allocation of managerial capabilities and infrastructure
- Risk reduction
- Cost reduction (without compromising on quality aspects)
- Consolidation of economies of scale by expansion or diversion to exploit domestic and global market.
- Access to scientific research and technological developments
- Eliminate disadvantages and acquire/combine advantages.
- Development of core competencies
- Limiting competition
- Market leadership
- Taxation or investment incentives

**Q.18 Explain in brief the concept and procedure to be followed in merger & acquisition.**

**Ans. Merger :** The term merger refers to combination of two or more companies into a single company and this combination may be through absorption or consolidation. When one company absorbs another company, it is called absorption whereas when two or more companies combine to form a new company, it is known as consolidation. In legal parlance, merger is also referred to as amalgamation.

Companies Act 1956 governs the merger of companies into a single economic unit and the scheme of merger is approved by all or prescribed majority of share holders of the merging company as well as merged company in their respective general meetings and is also sanctioned by the court.

Kinds of merger :



- (iv) **Horizontal merger** : When two firms engaged in the same business line merge together, it is known as horizontal merger. This form of merger results in the expansion of business of firms operations in a given product line and the same time eliminates competitor.
- (v) **Vertical merger**: When two firms working in different stages of production or distribution of the same product join together, it is called vertical merger. The economic benefits of this type of merger comes from firms increased control over the acquisition of raw material or distribution of finished goods.
- (vi) **Conglomerate merger** : It relates to merger of two firms engaged in totally unrelated business i.e. business are not related to each other horizontally or vertically. A Conglomerate may have operations in manufacturing, banking, fast food restaurant etc. This form of merger results in expansion of business in different unrelated lines with a aim to diversify the business.

**Acquisition** :- Acquisition refers to effective working control by one company over another. This control may be acquired through purchase of majority of shares carrying voting rights exercisable at general meeting or controlling the composition of board of directors of the company. The control over management of another company can be acquired through either a **friendly take over** or through **forced or unwilling** acquisition. But generally when a company takes control of another company through mutual agreement it is called acquisition.

Merger and acquisition play a vital role in corporate financial management. This (M&A) is resorted by many companies which are seeking entry in new markets, acquire and consolidate strength, expand customer base or cut competition. It is done for **revenue enhancement** and **cost savings**.

**Motives for merger & acquisition**

- Economics of large scale business
- Elimination of competition
- Take advantages of technical and managerial talent
- Desire to enjoy monopoly power
- Patent rights
- Desire of unified control and self-sufficiency
- Personal ambitions
- Government pressure
- Tax benefits/ implications
- Growth & stabilization

**Q.19 Writ short note on the following**

**(i) Venture capital (ii) secured premium note (SPN) (iii) Management Buy out (MBO)/ Leverage Buy Out (LBO) (iv) commercial paper (v) Bridge loan & (vi) Universal Banking System.**

**Ans. Venture Capital:** Venture capital assistance is provided by Development Financial Institutions (DFI's) to the technologically advanced projects in the form of direct equity contribution, term loans and conditional loans. DFI's like IDBI, IFCI, SIDBI have created venture capital funds to provide venture capital assistance to high risk modern technological projects in the areas of electronics, computer software, energy, chemicals, pharmaceuticals etc.

The DFI like IDBI has a venture capital fund scheme under which financial assistance in the form of loan carrying concessional rate of interest, during development period for financing cost of fixed assets (land, building plant, machinery) as well as operating expenditure (cost of raw material, utilities and market development expenses). The maximum

project cost shall not ordinarily exceed Rs. 500 lacs. Under this scheme, assistance is provided to new or existing industrial concerns for.

- encouraging commercial application of endogenously developed technology
- adopting imported technology to wider domestic application &
- high risk, high return ventures

**Secured Premium Note (SPN)** : SPN is a kind of debenture or bond which is issued on the security of the assets of a company and is matured with an assured premium. The interest on SPN is paid along with the repayment of principal amount on redemption which is spread over a period of time. This is a long term source of project financing which is used by well established project making organizations for financing a new project.

**Management Buy Out (MBO) & Leverage Buy Out (LBO)** :- MBO is a way of acquisition where management buy business from its owners. It is done with very little advance information to the company which is being bought. It is known as take over rather than acquisition. It is a method of setting up of business by management team itself. It occurs when existing owners are unable to run a company successfully and very existence of company is at stake.

A LBO is the acquisition financed largely by borrowings by a small group of investors against all stocks or assets of a company. In an LBO debt financing typically represent 50% or more of the purchase price. The debt is secured by the assets of acquired firm and is usually authorized over a period of less than 10 years.

**Commercial Paper** :- Commercial paper is an unsecured promissory note issued by a listed company having sufficient credit rating from an approved credit rating agency. It has a maturity period of 90 to 180 days and issued at a discount to face value. It is a source of short term financing which enables highly rated corporate borrowers to diversify their source

of short form financing. It was introduced by RBI in 1990 with the objective of providing reasonable excess to users of short term money to meet their requirements at a realistic price.

**Bridge Loan** :- Is a finance provided for interim period to meet urgent needs of a borrower till the borrower gets regular loan sanctioned by AIDFI's. It is issued by a bank or DFI for a period of say six months on the condition that it will be repaid immediately out of regular loan received. A borrower has to execute bridge loan agreement.

Bridge loan can also be raised through public issue of share or debentures to the extent of 50% of value of regular public issue. The main condition in this special issue is that the share holders/debenture holders will be paid back their value of share/ debenture along with interest out the proceeds of regular issue of shares /debentures.

**Universal Banking System** :-A universal bank is the one stop shop which deals with a wide portfolio of financial products integrating:

- Project financing
- Commercial banking
- Term lending
- Investment Banking
- Retail operations
- Mutual funds
- Pension funds
- Under writing of securities
- Insurance

Universal banking model benefit from the economies of scale, direct mobilization of funds from public through bank deposits and using such funds for term lending institutional subsidies and retail business. In a universal banking system more customers are served with the same

existing network which ultimately benefits their customers with the low cost of services.

Based on the recommendations of Navsimhan Committee II and guidelines issued by the RBI, in the post liberalization period, ICICI and IDBI have transformed in to universal banks from AIDFI's to meet the growing universal needs relating to finance of various industries and projects.

**Gurukpo.com**  
No. 1 Educational Web Portal in India

## Multiple Choice Questions

1. Key areas of finance are (a) 3, (b) 2 and (c) 4
2. Key object of Finance Management is (a) share holder wealth maximization (b) profit maximization.
3. Minimum amount which remain worked in debtors is known as (a) permanent working capital (b) specific working capital.
4. Capital required to meet unforeseen contingencies like strike, flood, war etc is known as (a) seasonal working capital (b) specific working capital.
5. Capital required to meet seasonal demand is known as (a) variable working capital (b) seasonal working capital.
6. Cost on following up with delinquent customers is categorized as (a) default cost (b) delinquency cost.
7. Costs on maintaining staff for keeping record of debtors is categories as (a) carrying cost (b) administrative costs.
8. Cost of debtors become bad debt is categories as (a) delinquency cost (b) default cost.
9. Discount allowed by wholesaler to retailer on bulk purchases is known (a) cash discount (b) trade discount.
10. Cost of purchasing material including transportation octroi etc is categorized as material cost (b) ordering cost.
11. Under motives of holding cash, cash required to meet day to day expenses is knows as (a) transaction motive (b) precautionary motive.
12. Time required by banker to collect payment of cheque from customers account is knows (a) Bank float (b) Deposit float (c) Postal float.
13. Shares & debentures are sources of financing (a) temporary working capital (b) permanent working capital.
14. Trade credit (receiving goods on credit from suppliers) is a source of (a) temporary. working capital (b) permanent working capital

15. Rate of dividend is finally approved by (a) Board of Directors (b) AGM.
16. When two firms engaged in totally unrelated business, it is known as (a) Horizontal merger (b) conglomerate merger.
17. As per companies Act 1956, company merging with other company and company in which merger is allowed requires approval from their respective (a) Board of directors (b) Majority of share holders in AGM.
18. In Management Buy Out (MBO), who acquires management (a) Management (b) Investors.
19. In leverage buy out, acquisition is largely financed by (a) small group of investors (b) Management team

**Answer Key**- 1 (a), 2(a), 3(a), 4(b), 5(b), 6(b), 7(a), 8(b), 9(b), 10(a), 11(a), 12(b), 13(b), 14(a), 15(b), 16(b), 17(b), 18(1), 19(a),

### Fill in the blanks

1. Loss of sale due to no stock of goods is known as .....(stock out costs.)
2. Five C's for assessing credit worthiness of a borrower are..... ( character capital capacity collateral conditions)
3. Four stock levels fixed for stock control are ..... (minimum maximum danger ordering).
4. Statement showing estimated cash receipts and payment is known as..... (cash budget).
5. Opening multiple cash collection centers in cities is known as ..... (concentration banking).
6. Fixing post office boxes for receiving cheques cash is known as .....(lock box system).

7. Three key points to be kept in mind while making investment in short term securities are ..... (safety liquidity profitability).
8. Dividend declared quarterly or six monthly is known as .....(Interim Dividend).

**Write full form of the following**

- |    |                          |   |                             |
|----|--------------------------|---|-----------------------------|
| 1. | <b>E.O.Q.</b>            | - | Economic Order Quantity     |
| 2. | <b>R.O.P.</b>            | - | Recording Point             |
| 3. | <b>A.B.C. Analysis</b>   | - | Always Better Control       |
| 4. | <b>V. E. D. Analysis</b> | - | Vital Essential & Desirable |
| 5. | <b>S.D.E.</b>            | - | Scarce, Difficult & Easy    |
| 6. | <b>F.S.N.</b>            | - | Fast, Slow & not moving     |

**GURUKPO.COM**  
No. 1 Educational Web Portal



# Case Study

## Case study No.1

### **Operating Cycle Method (OCM) of working capital**

Under OCM, total operating expenses for one full year are divided by total number of days in which one operating cycle from purchase of raw material up to final collection of cash from debtors is complete. From the following information, workout number of operating cycles and requirement for working capital.

Total operating expenses for one year Rs. 20 Lakhs.

Raw material holding period	40 days
Work in progress period	21 days
Finished Goods Storage period	20 days
Debtors Collection period	21 days
Creditor's payment period	30 days

## Case study No.2

### **Maximum Permissible Bank Finance/Credit**

Tandon Committee has recommended three methods of working out Maximum Permissible Bank Credit. Explain each of these three methods and workout MPBF on the basis of following figures for all the three methods.

1. Current Assets Rs. 20 lakhs
2. Current Liabilities Rs. 8 lakhs
3. Core Current Assets Rs. 2 lakhs

**Case Study No.3**  
**Merger & Amalgamation**

AB Company has decided to merge with YZ Company. This decision of merger has been taken in the board of directors of both these companies. The employees of AB Company are resenting this merger and are planning to take up this matter in court of law.

**Question-** What the key provisions of Indian Companies Act regarding merger which has not been complied in this case and what steps you would suggest so that this merger could be completed.

**Case Study No.4**  
**Wrong declaration of dividend & Divisible profits**

ABC & Company has recently declared dividend @ 15% on the basis of net profit certified by the auditors. This rate of dividend was proposed by manager finance and approved by board. Net profit certified by auditor was found to be incorrect and inflated. The amount of share capital was Rs. 1 crore. Subsequently, during special audit it was revealed that real net profit is Rs. 40 lakhs as against 1.20 crores earlier certified by auditors.

**Questions-**

1. What were main legal lapses in this case?
2. What was the excess amount distributed in the form of dividend.
3. How you are going to fix liability for lapses in this case.

**Case Study No.5**  
**Lease, Hire purchase and installment sale**

**Fill in the blanks in respect of above 3 items**

1. In case a lease, numbers of parties are \_\_\_\_\_ (2).
2. In lease, ownership remains with \_\_\_\_\_ (lessor).
3. Operating lease is for \_\_\_\_\_ term period (short term).

4. Financial lease usually covers \_\_\_\_\_ of an asset (life).
5. In hire purchase ownership remains with till \_\_\_\_\_ payment of last installment (seller).
6. In hire purchase, sellers can \_\_\_\_\_ the asset if installments are defaulted (Repossess).
7. In installment sale, can seller repossess the assets of installments are defaulted (Yes/No).
8. In installment sale \_\_\_\_\_ is immediately transferred in favour of purchase after paying first installment (Ownership).
9. In installment sale which of the following course is available to seller for recovery of defaulted installments (legal suit or repossessing the asset).

■■■

## Key Terms

1. **APT Arbitrage Pricing Theory** (APT) is one of the tools used by the investors and portfolio managers which explain return of the securities on the basis of their respective betas. This theory was developed by Stephen Ross.
2. **Acquisition** - Refers to effective working control by one company over another. This acquisition may be through either a friendly takeover or through forced or unwilling take over. Generally acquisition is done through mutual agreement.
3. **ABC Analysis** - It stands for "Always Better Control" it is a technique of inventory control where all items of inventory are classified in two 'A', 'B' & 'C' category where 'A' represents items of high value but quantity is very less, B represents items of medium value and quantity is also and 'C' represent items. Which are very high quantity items but their value is much less.
4. Refers to situation where two or more existing companies are combined in to a new company formed for the purpose old companies cease to exist and their share holders and paid by the new company in each or through starts or debentures.
5. **Beta Estimation** - Beta is a measure of volatility of stock prices in relation to movement in the stock index of the market. If data of a particular share is high, it means its price tomorrow more, if market price increases.
6. **Bridge Loan** - It is a financial provider for interim period to meet urgent needs of borrower till he gets regular loan sanctioned by development financial institutions.
7. **Baumol Model** - Is a model of assessing optimum cash balance. It is like EOQ model of inventory. According to this model, optimum is one at which carrying cost of cash or cost of receiving cash is minimum.
8. **Loan Terms** - Refers to terms on which loan is being provided to a loanee. These terms include period of loan, purpose of credit and allowing cash/trade discount.

9. **Credit Standards** - Are guiding principles set by the credit control department to sever credit applicants for this credit worthiness. They are basic criteria for extension of credit to customers.
10. **Credit Assessment** - Refers to assessment of credit worthiness of a loanee. Generally, this is done by using 5 c's i.e. character, capital, capacity collateral and conditions of the borrower.
11. **Collection Policy** - Refers to the policy of an organization to reenev money from debtors. This policy may be benient ashure organization does not stick to time schedule of getting payment and stringent when one is strictly adhore the tiare of schedule of getting payment and stringent when one is strictly adhore i.s. the tiare of payment.
12. **Capital Budgeting** - Refers to total process of generatialy, eradiating, selecting and follow up of capital expenditure alternatives. Such expenditure has a long term effect and is based on risk and return.
13. **Corporate restructuring** - Refers to reorganizing a company or its business so as to approval it more effectively, efficiently and profitability. This restructuring may be financial, technological, organizational or marketing restructuring.
14. **Corporate Governance** - Refers to governaner of a corporate on the principles of transparency, alternate of legal provision and rules framed there under, internal rutes and directors and ethical values.
15. **Commercial Paper** - Commercial Paper is an unsecured promissory rote issued by a listed company haring sufficient credit rating from an approved credit rating.
16. **Cash Budget** - Refers to statement showing estimate of cash receipts, case disbursement and net cash habnee for a future period of time. It helps in finding and when cash would be in difiert and when cash would by in surplus.
17. **Cost of Capital** - Is reward for use of capital. It is price paid to the inrestion for the use of capital provided lup hire. It is investors required rate of return.

18. **Cash Management** - Refers to optimizing amount of cash available to the company and maximizing interest on surplus funds to ensure that adequate cash is available for payments due, minimize idle cash and maximizing interest on surplus cash.
19. **Incentration Banking** - Refers to establishing multiple centres in various parts of city for fast collection of charges. The bank in the head office of firm is known as concentration bank.
20. **CAPM** - Capital Asset Pricing Model (CAPM) is a useful technique of measuring risk factor as well as required rate of return. It is a useful model in dealing with risk.
21. **Dividend Policy** - Policy followed by an organization concerning grantors of profit to be distributed as dividend. Quantum of dividend in Annual General meeting of share holders.
22. **E.O.Q.** - It stands for economic order quantity and refers to optimum size of an order for replenishment of an item of inventory. At this point, ordering cost is minimum.
23. **Excess working capital** - Refers to a situation where an organization has working capital much more than required. It leads to loss of interest on excess capital, in efficiency of turnover and adversely affects the profitability.
24. **Finance** - Refers to procuring or raising of money (funds) and allocating (using) these resources (funds) on the basis of monetary requirements of the business. It also includes distribution of funds (profit).
25. **Financial Management** - Refers to planning, organizing, coordinating and controlling of raising, investment & distribution of funds for achieving goals of an organization.
26. **Financing working capital** - Refers to arranging working capital in an organization i.e. different sources from which capital is to be arranged. Sources for raising temporary/short term/variable capital and permanent/ long term capital are different.

27. **Float** - Float arises due to time gap between cheque loosed and time when amount is actually debited in account. This float may be postal float, deposit float or band float.
28. **Financial Engineering** - Refers to new techniques of financial analysis and finding solutions of financial problems through complex mathamatreial models and high speed computer solutions.
29. **FSN Analysis of Stock** - FSN Stands for fast moving, slow moving and not moving items of stock. It is maintained for fast moving items and comparatively less for slow moving and not moving items.
30. **Gordan Model** - It is one of the models of dividend theories. As per this model market nature of share is equal to present value of it vepreted future dividend.
31. **Gross working capital** - Refers to forms investments in current assets which are converted in to cash during an accounting year such as cash, bank balance, short terms investments debtors, bills receivable, inventory & short term loans/adraners.
32. **Hire Purchase** - Involves a system under which an asset is sold on installment basis and title remains with the seller on payment of last & final installment the title goes to the purchaser.
33. **Hiller Orr Model** - This model is model for working art optimum cash level in an organization. It is based on assumption that cash balances changes randomly Orr a period of time and size. It prescribes two lands of cash i.e. upper limit and lower limit. Optimum cashes his between upon limit and lower limit.
34. **Installment Sale** - In this sale, title of goods is immediately transferred in favor of purchaser and seller cant repossess The sold asset and he has to follow normal procedure for recovering pending installment.
35. **Inventory** - Refers to stock of goods in the form of raw material, stores or supplies, work in progress and finished product on a particular date. It involves all functional areas of management i.e. purchase, production, marketing & finance.

36. **Inventory Management** - Refers to efficient management control of capital invested in inventory to obtain maximum return by keeping inventory cash at minimum. Two objectives of inventory control are operating objectives and financial objectives. Operating objectives refers to regular flow of material for production and financial objection refers to maximizing return on investments and minimizing inventory costs.
37. **Inventory costs** - Refers to costs associated with inventory such as costs on purchasing material, ordering costs, carrying costs and stock and cash. Order inventory control, these costs are to be kept at minimum level.
38. **Inventory Control** - Refers to exercising due control on inventory as it is an important part of working capital. Such control is exercised by various modern techniques like EOQ, ROP, Stock levels, ABC analysis, FSN analysis, VED analysis, SDE Analysis etc.
39. **Lease (Operating & Financial)** - Is a contractual arrangement where owner of the asset transfers the right to use the asset to user in return of rentals. Operating lease is for a short term and lease period is less than usual life of the asset and financial lease generally covers usual economic life of asset or a period close to the life of asset.
40. **LBO** - Leverage Buy Out (LBO) is acquisition financed through borrowings by a small group of investors against stocks or assets of the company. The debt is secured by the assets of acquired firm.
41. **Interim dividend** - Refers to payment of dividend for an interim period say 3 months, 6 months. It is declared on the basis of quarterly result or interim results/profit of a company to attract more share capital.
42. **Lock Box System** - When firm takes on rent post office boxes in selected areas and instructs their customers to mail this payment in these boxes, it is known as lock Box System.
43. **Merger** - Refers to continuation of two or more companies in to single company through consolidation or absorption. In legal partner, merger is also referred to amalgamation. This merger is governed by the companies Act. 1956.



44. **MBO** - Management Buy Out (MBO) is a way of acquisition where management buy business from its owners. It is known as take over rather than acquisition and resorted when owners are unable to run a company successfully and very existence of company is at stake.
45. **Mgmt. of Marketable Securities** - Refers to investment of surplus in readily marketable securities which are considered or cash equivalents to cash interest is holding period and convert them in cash as & when required investment is made keeping in view principles of safety, liquidity, yield and maturity.
46. **Modigliani Model** - Is a model of dividend theories. This model says that dividend decisions and retained earnings decision do not influence market value of shares.
47. **Maximum Permissible Bank Finance** - (As per Tandon committee) MPBS is the optimum permissible bank finance based on the appraisal of balance sheet. Tandon committee suggested 3 methods of working and MPBS. As per method I, Current assets less current liabilities and 75% of balance is MPBS. As per method II, 75% of current assets less current liabilities. As per method III, 75% of current assets less current liabilities less core current assets.
48. **Net Working Capital** - Refers to difference between current assets and current liabilities or excess of current assets over current liabilities.
49. **Operating cycle method of working capital** - It represents cycle during which cash is reconverted into cash. In a manufacturing process cash is required for purchasing raw material, raw material is converted into work in progress and finished product, and finished product is then sold both in cash & credit. Total number of days to complete this cycle is identified and based on that working capital requirements are assessed.
50. **Project financing** - Refers to arranging finance for developing and implementation of a project. It includes determination and mobilization of required funds of different stages of implementation of project. Two main sources are own funds and loan funds. Funds in large quantities for such project are provided by development financial institution (DFI's)

51. **Profit Maximisation** - As per trading thinkers, maximizing profit is the key objectives of financial management. They argue their proposition as it is national, real list of business maximum social welfare, main source of inspiration and basis for decision making.
52. **Perpetual inventory system** - Is a method of recording stores balance after each receipt and issue to facilitate regular checking to obviate closing down for stock taking.
53. **Reordering Point (ROP)** - Refers to level of inventory of which an order should be placed for replenishment of an item of inventory.

**Gurukpo.com**  
No. 1 Educational Web Portal in India

54. **Risk & Return Relationship** - Determining acceptability of a investment proposal involves a tradeoff between risk & return. These two are bought together so that high risk investments offer high return and vice-versa
55. **Receivable Management** - Receivable are created on account of credit sales receivable management refers to matching cost of increasing credit sales with lunifts arising and such sales. It aims at optimizing return on investment by minimizing cost of receivables.
56. **Regular or Permanent Capital** - Refers to minimum amount which permanently remain blocked and cannot be converted in to cash such as minimum amount blocked in raw material finished product, debtors etc.
57. **Receivable Management** - Receivables in balance shut are shown in the form of sundry debtors, book debts, trade debtors, bills receivables etc. Its prime objectives are optimizing return on investments by minimizing costs associated with receivables.
58. **Regular dividend** - Refers to dividend paid/declared after close of financial year i.e. once a year. Some good concerns declared in advance rate of dividend payable for next 3-5 years.
59. **Specific working capital** - Refers to capital required for meeting unfore seen contingencies such as strike flood, war, slump etc.
60. **SDE Analysis of stock** - It is a technique of inventory control where items are classified as searse, difficult and easy. Efforts are made to replenish search and difficult items.
61. **Seasonal working capital** - Refers to capital required to meet seasonal demand e.q. extra capital required to manufacture coolers in summer woolen garments in winter. Such capital can lu arranged through short term lonas.
62. **Stock levels** - For better/ efficture inventory control, stock levels are fixed such as minimum level. Maximum level, danger level, reorder level etc. such levels gives timely signals for taking action e.q. if stock comes down to danger level immediate action is required for replenishment.
63. **Share holders wealth maximization** - Modern thinkers consider share holders wealth maximization as price objective of financial management

- rather than profit maximization if refers to increase in the price of shares in market. It is also known as value maximization.
64. **Time value of money** - It may be defined as the relationship between the rupees one in future and rupees one day. A rupee in hand today is worth more than a rupee to be received in future if rate of interest is greater than zero.
  65. **Treasury Management** - Refers to working capital management and financial risk management. It broadly includes cash management, funds management, and currency management maintaining good contacts with banks.
  66. **Transaction motive of cash** - Refers to cash required for making payment like wages, operating expenses, taxes, dividend, interest etc. Two other motives of holding cash are precautionary & operating mode.
  67. **Ved Analysis of Stock** - VED refers to vital, essential and desirable. This technique of inventory control is used to inspect of stores items which are classified as vital, essential and desirable.
  68. **Value Maximisation** - Refers to maximizing value of shares in the market. It is also known as share holders wealth maximization which is key objective of financial management as per modern thinkers.
  69. **Variable Capital** - Refers to amount over and above permanent capital required depending upon the level of business activity. It is difference between total working capital less permanent working capital.
  70. **Venture Capital** - Refers to capital provided by development financial institutions (DFI's) to the technologically advanced projects in the form of term loans where risk is very high and if project succeeds, gains would also be very high. DFI's like IDBI, IFCI, SIDBI have created venture capital fund to finance such projects.
  71. **Universal Banking** - Refers to one stop shop which deals with a wide range of financial products such as project financing commercial banking, term lending, investment banking, merchant banking, retail operations, mutual funds, insurance, underwriting etc.

72. **Unit Banking** - Refers to a bank which operates from single unit i.e. head office and it does not have any branch for presiding various banking services. Such banks are very few in India under urban cooperative banking sector.
73. **Watters Model** - As per this model, dividend policy of a firm is based on the relationship between internal rate of return earned by it and the cost of capital or required rate of return.
74. **Two Bin System** - Under this, all items of inventory are kept in two separate lines. In the first bin sufficient stock is maintained for current requirements in served bin, stock is maintained for use in lead time. The movement stock of first bin is used, order for replenishment is placed.
75. **Just in Time (JIT)**-In this inventory system. There is zero inventory and goods are produced and ordered. When they are needed procurement of raw material is done just in time so that manufacturing process could be completed just in time so that supply order could be complied just in time.

## Practical Part

**Gurukpo.com**  
No. 1 Educational Web Portal in India

## Unit-1

# Time Value of Money

---

**Ques 1 Why should Money have time value?**

**Ans.** Money can be employed productively to generate real returns. For instance, if a money sum of Rs. 100 invested in raw materials and labour results in finished goods worth Rs. 105, we can say that the investment of Rs. 100 has earned a rate of return of 5%.

In an inflationary period a rupee today has higher purchasing power than a rupee in future. Since future is characterised by uncertainty, individuals prefer current consumption to future consumption. That's why money should have some time value.

**Ques 2 Explain the methods of time value of money.**

**Ans.** Two methods of taking care of time value of money:-

**1. Compounding/ future value :-** Future value or compounding is the value of an asset or cash at a specified date in the future that is equivalent in value to a specified sum today

$$\text{Future Value}(n) = \text{Present Value} * (1+k)^n$$

$$\text{Future Value} = \text{PV} * \text{FVIF}(k,n)$$

Where, FV(n) = Future value of the initial flow n years hence

PV = Initial cash flow

K = Annual Rate of interest

$n$  = Life of investment.

FVIF= Future Value Interest Factor ( it will be calculated by fv table value)

**2. Discounting / present value** -- The current worth of a future sum of money or stream of cash flows given a specified rate of return. Future cash flows are discounted at the discount rate, and the higher the discount rate, the lower the present value of the future cash flows

Under the method of discounting, in time value of money, we compare the initial outflow with the sum of present value (PV) of the future inflows at a given rate of interest.

$$PV = FV / (1+k)^n$$

$$PV = FV * PVIF (k,n)$$

Where PVIF= Present value interest factor ( calculated by table value)

**Ques 3** If X has a sum of Rs. 1000 to be invested, and there are two schemes, one offering a rate of interest of 10%, compounded annually, and other offering a simple rate of interest of 10%, which one should he opt for assuming that he will withdraw the amount at the end of (a) 1 Year (b) 2 Year, and (c) 5 Years?

**Ans.** PV= Rs 1000  
 Rate of interest (k) = 10%  
 a) no. of years = 1 yr.

$$\text{Future Value}(n) = \text{Present Value} * (1+k)^n$$

$$FV = 1000 * (1+.10)^1$$

$$= \text{Rs. } 1100 .$$

b) no. of years = 2



$$\begin{aligned} \text{FV} &= 1000 * (1+.10)^2 \\ &= \text{R. 1210} \end{aligned}$$

c) no. of years = 3

$$\begin{aligned} \text{FV} &= 1000 * (1+ .10)^3 \\ &= \text{Rs. 1331} \end{aligned}$$

**Ques 5** The fixed deposit scheme of a bank offers the following interest rates

Period of Deposits	Rate Per Annum
46 days to 179 days	10.00%
180 days to 1 year	10.50%
1 Year and above	11.00%

**An amount of Rs. 10000 invested today will grow in three years ?**

**Ans.**

**Future Value(n) = Present Value (1+k)<sup>n</sup>**

$$= \text{Pv} * \text{FVIF}(11,3)$$

$$= 10000(1.368)$$

$$= \text{Rs. 13,680}$$

**Ques 6** Explain the future value of non annual compounding.

**Ans.** When there are non annual compounding for semi -annually or quarterly then

The generalised formula for shorter compounding periods is

$$\text{FV}(k,n) = \text{PV}(1+k/m)^{m*n}$$

Where,  $FV_n$  = Future value after 'n' years

$PV$  = Cash Flow Today

$K$  = Nominal interest rate per annum

$m$  = Number of times compounding is done in an year

$n$  = Number of years for which compounding is done

**Ques 7** In a particular investment scheme deposits can be made for periods ranging from 6 months to 10 years. Interest to be compounded quarterly.

Rate of Interest for 12 to 23 months = 9%

Rate of Interest for 24 to 120 months = 10%

An amount of Rs. 1000 invested for 2 years will grow to ?

**Ans.**  $FV_n = PV(1+k/m)^{m*n}$

Where,  $m$  = frequency of compounding during a year

$$= 1000(1+0.10/4)^8$$

$$= 1000(1.025)^8$$

$$= 1000*1.2184 = 1218$$

**Ques 8** Explain the future value of multiple flows.

**Ans.** Suppose we invest Rs. 1000 now (beginning of the year 1), Rs. 2000 at the beginning of the year two and Rs. 3000 at the beginning of the year three, how much will these flows accumulate to at the end of year three at a rate of interest of 12% p.a?

To determine the accumulated sum at the end of year three, we have to just add the future compounded values of Rs. 1000, Rs. 2000 and Rs. 3000.

$$FV(\text{Rs. } 1000) + FV(\text{Rs. } 2000) + FV(\text{Rs. } 3000)$$

At  $k = 0.12$ , the sum is equal to

$$= \text{Rs. } 1000 * FVIF(12,3) + 2000 * FVIF(12,2) + 3000 * FVIF(12,1)$$

$$= \text{Rs. } [(1000 * 1.405) + (2000 * 1.254) + (3000 * 1.120)]$$

$$= \text{Rs. } 7273$$

**Ques 9** What is effective rate of interest ?

**Ans.** Effective vs. Nominal Rate of Interest

$$r = (1 + k/m)^m - 1$$

Where,  $r$  = Effective rate of interest

$k$  = Nominal Rate of interest

$m$  = Frequency of compounding per year.

**Ques 10** If we get Rs. 1611 at 10% rate of interest for a period of 5 years. What is the present value of this Investment?

**Ans.**  $Fv = \text{Rs. } 1611$

$$K = 10\%$$

$$N = 5 \text{ years}$$

$$PV = FV / (1 + k)^n$$

$$= 1611 / (1 + .10)^5$$

$$= \text{Rs. } 1000$$

**Ques 11** Amount can be invested for a period of 1 to 10 years. The rate of interest is 12% p.a compounded quarterly. What would be the issue price of a certificate of Rs. 100000 to be received after 10 years?

**Ans.**

$$PV = FVn / (1+k)^n$$

Firstly the effective rate of interest has to be calculated

$$\begin{aligned} R &= [1 + 0.12/4]^4 - 1 \\ &= 12.55\% \end{aligned}$$

The issue price of the cash certificate can now be calculated as

$$\begin{aligned} &= 100000 / (1 + 0.1255)^{10} \\ &= \text{Rs. } 30,658 \end{aligned}$$

**Ques. 12** Interest rate = 12% certificate has a value of Rs. 100 after one year what would be the issue price of the certificate if the interest is to be compounded quarterly?

**Ans.-** The effective rate of interest has to be calculated first:

$$r = (1 + k/m)^m - 1$$

$$\begin{aligned} r &= (1 + 0.12/4)^4 - 1 \\ &= 12.55\% \end{aligned}$$

The issue price of the certificate is

$$\begin{aligned} PV &= FVn / (1+k)^n \\ &= 100 / (1 + 0.1255)^1 \end{aligned}$$

= Rs. 88.85

**Ques. 13. What is Annuity ? Explain Future value and present value of annuity.**

**Ans. Annuity-**

**Future Value of Annuity -**

**Future Value of Annuity**

$$FVAn = A[(1+K)^n - 1 / k]$$

Where, A = Amount deposited at the end of the year for n years

K = Rate of interest (expressed in decimals)

n = Time horizon

FVAn = Accumulation at the end of n years.

**Present value of annuity-** In this case the cash flow values remain the same throughout the n periods.

The present value of an annuity receivable at the end of every year for a period of n years at a rate of interest k is equal to

$$PVAn = A * [(1+k)^n - 1 / k (1+k)^n]$$

**Ques. 14 As per the investment scheme a fixed sum is deposited every month for 12 months to 120 months. The period of deposit should be in multiples of three months.**

**Ans. -** Rate of Interest for 12 to 24 months = 9%

Rate of Interest for 24 to 120 months = 10%

Interest to be compounded quarterly.

Amount of deposit = Rs. 5 per month.

Rate of interest = 9% p.a compounded quarterly

Effective rate of interest P.a =  $(1+0.09/4)^4-1 = 0.0931$

Rate of interest per month =  $(r+1)^{1/m}-1$

=  $(1+0.0931)^{1/12}-1$

=  $1.0074 - 1 = .0074 = .74\%$

Maturity value can be calculated using the formula

$FVA_n = A\{(1+k)^n-1/k\}$

=  $5\{(1+0.0074)^{12}-1/0.0074\}$

=  $5 * 12.50$

= Rs. 62.50

**Ques. 16** A lump sum deposit is remitted and the principal is received with the interest @ 12% p.a in 12 or 24 monthly instalments, interest is compounded quarterly. What amount should be deposited initially to receive a monthly instalment of Rs. 100 for 12 months.

**Ans. -** Firstly, the effective rate of interest has to be calculated:

$r = (1+k/m)^m - 1$

=  $(1+0.12/4)^4 - 1$

$$= 12.55\%$$

After calculating the effective rate of interest p.a the effective rate of interest per month has to be calculated which is nothing but:-

$$=(1.1255)^{1/12} - 1$$

$$= .00990$$

The initial deposit can now be calculated as below

$$PVA_n = A * [(1+k)^n - 1 / k (1+k)^n]$$

$$= 100 [(1+.00990)^{12} - 1 / .00990 (1+.00990)^{12}]$$

$$= 100 [.1255 / .01114]$$

$$= 100 * 11.26$$

$$= \text{Rs. } 1126$$

**Gurukpo.com**  
No. 1 Educational Web Portal in India

## Unit 2

# Risk and Return

---

**Ques 1** Explain the concept of return.

**Ans.** The objective of the any investor is to maximise expected returns from his investment subject to various constraints, primarily risk. Return is the motivating force, inspiring the investor in form of rewards, for undertaking the investment.

The importance of return in any investment decision can be traced to the following factors:

- Enables investors to compare alternative investments in terms of what they have to offer the investor.
- Measurement of historical returns enables the investors to assess how well they have done.
- Measurement of historical returns also helps in estimation of future returns.

**Ques 2** Explain the types of Return.

**Ans.** Returns are of two types:-

1. Realized and
2. Expected

Realized return – This is ex-post return or return that was earned.



Expected Return – This is the return that investors expect to earn over some future period.

### The Components of Return

Return is basically made up of two components:-

- The periodic cash receipts or income on the investment in the form of interest dividends etc.
- The appreciation in the price of the asset is referred to as capital gain.

### Ques 3 How can we measure the realized rate of return.

**Ans.** It is the income from the security in the form of cash flows and the difference in price of the security between the beginning and end of the holding period expressed as a percentage of the purchase price of the security at the beginning of the holding period.

**Realised rate of return- Rate of Return**

$$K = Dt + (P_t - P_{t-1}) / P_{t-1}$$

Where, k = rate of return

$P_t$  = Price of the security at the end of the holding period

$P_{t-1}$  = Price of the security at the beginning of the holding period or purchase price.

$D_t$  = Income or cash flows receivable from the security at Time 't'

**Ques 4** If a share of a company is purchased for Rs.3580 an year back and sold for Rs. 3800 this year and the company paid the dividend of Rs. 35 for the year what is the rate of return of this security.

**Ans.**

$$K = Dt + (P_t - P_{t-1}) / P_{t-1}$$

$$= 35 + (3800 - 3580) / 3580 = 7.12\%$$

**Ques. 5** If a 14% Rs.1000 debentures was purchased for Rs. 1350 and the price of this security rises to Rs. 1500 by the end of an year. What is the rate of return for this debenture?

**Ans.**

$$K = \frac{Dt + (P_t - P_{t-1})}{P_{t-1}}$$

$$= \frac{140 + (1500 - 1350)}{1350} = 21.48\%$$

**Ques 6** How can we measure Expected Rate of Return?

**Ans.** Expected rate of return "R" is calculated by summing the products of the rates of return and their respective probabilities.

$$R = \sum P_i R_i$$

Where, R = expected rate of return.

$P_i$  = Probability associated with the  $i$ th possible outcome.

$R_i$  = Rate of return from the  $i$ th possible outcome.

**Ques. 7** What are probabilities?

**Ans.** A probability is a number that describes the chances of an event taking place. Probabilities are governed by following rules and range from 0 to 1.

- A probability can never be larger than one.
- The sum total of probabilities must be equal to 1.
- A probability can never be a negative number.
- If an outcome is certain to occur it is assigned a probability of 1 while impossible outcomes are assigned a probability of 0.
- The possible outcomes must be mutually exclusive and collectively exhausted.

**Ques. 8** The probability distributions and the corresponding rates of return of a company are shown below.

Possible Outcomes(i)	Probability of Occurrence (Pi)	Rate of Return (%) (Ri)
1	0.10	50
2	0.20	30
3	0.40	10
4	0.20	-10
5	0.10	-30

**How do we calculate the expected rate of return?**

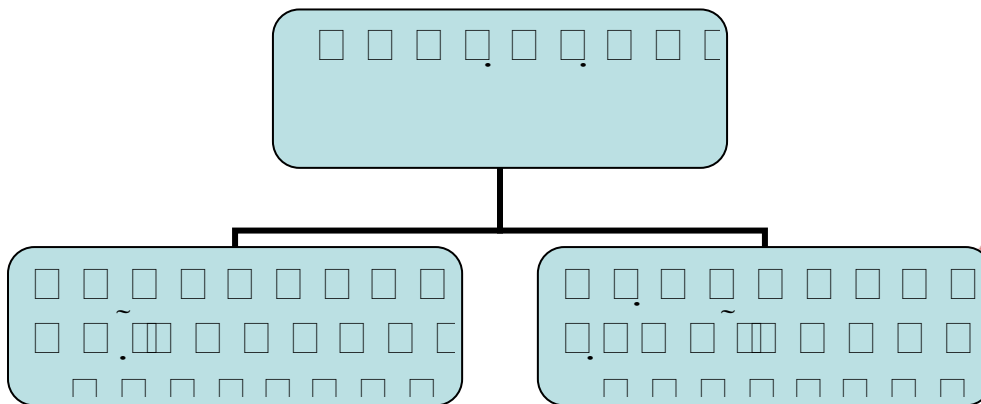
**Ans.**

$$\begin{aligned}
 K &= \sum p_i R_i \\
 &= (0.10)(0.50) + (0.20)(0.30) + (0.40)(0.10) + (0.20)(-0.10) + (0.10) \\
 &\quad (-0.30) \\
 &= 0.05 + 0.06 + 0.04 - 0.02 - 0.03 = 0.1 \\
 &= 10\%
 \end{aligned}$$

**Ques. 9** Explain the concept of Risk.

**Ans.** Risk and return go hand in hand in investments and finance. One cannot talk about returns without talking about risk, because, investment decisions always involve a trade - off between risk and return. Risk can be defined as a change that the actual outcome from an investment will differ from the expected outcome. This means that, the more variable the

There are two types of Risk



**Ques 10 Explain Diversifiable and Non-Diversifiable Risk.**

**Ans.** Because of the fact that returns on stock do not move in the same direction risk can be reduced by diversification but there is a limit on the amount of risk that can be reduced through diversification we can trace this by two major reasons.

**1. Non Diversifiable Risk** - It is that part of total risk that is related to the general economy or the stock market as a whole and hence cannot be eliminated by diversification.

Non diversifiable risk is also referred to as market risk or systematic risk.

**Non-Diversifiable or Market Risk Factors**

1. Major Changes in tax rates
2. War and other Calamities
3. An increase or decrease in inflation rates
4. A change in economic policy
5. Industrial Recession
6. An increase in international oil prices, etc.

2) **Diversifiable risk-** Diversifiable risk on the other hand, is that part of the total risk that is specific to the company or industry and hence can be eliminated by diversification.

Diversifiable risk is also called unsystematic risk or specific risk.

### Diversifiable or Specific Risk Factors

1. Company Strike
2. Bankruptcy of a major supplier
3. Death of a key company officer
4. Unexpected entry of a new competitor into the market etc.

**Ques 11 Explain the Degree of Correlation which use to identify type of risk.**

**Ans.** The amount of risk reduction depends on the degree of positive correlation between stocks. The lower the degree of positive correlation, the greater is the amount of risk reduction that is possible.

IF  $r = 1$  (systematic risk and can not be diversified)

$r = -1$  (unsystematic risk and can be diversified by portfolio)

$r = 0$  (no relationship between the security)

**Ques 12 Two Company has the following information calculate which has more rate of return.**

**Ans.**

**Company A**

	Pi	Ri(%)	PiRi
1	0.05	38	1.9
2	0.20	23	4.6

3	0.50	8	4.0
4	0.20	-7	-1.4
5	0.05	-22	-1.1
		TOTAL	=8%

### B Company

	Pi	Ki(%)	PiKi
1	0.10	90	9
2	0.25	50	12.5
3	0.30	20	6
4	0.25	-10	-2.5
5	0.10	-50	-5
		total	20%

Company B has 20% rate of return where as company A has 8% rate of return so company B has more return and we should invest in this company.

**Ques. 13** What are the various source of risk? What are the factors which make any financial asset risky?

**Ans.**

- Interest Rate Risk
- Market Risk
- Inflation Risk
- Business Risk
- Financial Risk and
- Liquidity Risk

**Ques.14** How can we Measurement of Total Risk?

**Ans.** There are different ways to measure the variability of returns/ Risk .

**1) Range** - The range of the returns, the difference between the highest possible rate of return and the lowest possible rate of return is one measure, but the range is based on only two extreme values.

**2) Variance** - The variance of an assets rate of return can be found as a sum of squared deviation of each possible rate of return from the expected rate of return multiplied by the probability that the rate of return occurs.

$$\text{VAR} = \sum (\text{R}_i - \text{R})^2 * \text{P}_i$$

Where, VAR(R) = Variance of returns

P<sub>i</sub> = Probability associated with the possible outcome.

R<sub>i</sub> = Rate of return from the possible outcome.

R = Expected rate of return.

n = Number of years.

### **3) Standard Deviation**

The most popular way of measuring variability of returns is standard deviation. The standard deviation is simply the square root of the variance of the rates of return as explained above:-

S.D = Square root of VAR (R)

**Ques 15** Explain the advantage of Standard Deviation method in calculating risk.

**Ans.** The S.D and variance are conceptually equivalent quantitative measures of total risk. S.D is preferred to range because of the following advantages.

1. S.D considers every possible event and assigns each event a weight equal to its probability.

2. S.D is a very familiar concept and many calculators and computers are programmed to calculate it.
3. S.D is a measure of dispersion around the expected value.
4. S.D is obtained as the square root of the sum of the square differences multiplied by their probabilities. This facilitates comparison of risk as measured by S.D and expected returns as both are measured in the same cost. This is why S.D is preferred as a measure of risk.

**Ques. 16 Calculate the risk for the following information.**

Possible Outcomes	Ri(%)	Ri-R	(Ri-R) <sup>2</sup>	Pi	Pi(Ri-R) <sup>2</sup>
1	50	40	1600	0.10	160
2	30	20	400	0.20	80
3	10	0	0	0.40	0
4	-10	-20	400	0.20	80
5	-30	-40	1600	0.10	160
	50				$\sum P_i(R_i - R)^2 = 480$

$$R = \sum R_i / N = 50 / 5 = 10\%$$

$$S.D = \text{Square root of VAR (k)}$$

$$= \text{Square root of } 480 = 21.9\%$$

**Ques 17 What is a portfolio?**

**Ans.** An investment portfolio refers to the group of assets that is owned by an investor. Investing in a single security is always more riskier than investing in two or more securities.

As the saying goes **NEVER PUT ALL YOUR EGGS IN ONE BASKET.**



**Ques 18** Explain the concept of return of a Portfolio with an example.

**Ans.** Return of a portfolio =  $(R_p) = \sum W_i R_i$

Where  $W_i$  = weights of different securities

$R_i$  = return on different securities

Example-

Weather Conditions	Return On A Stocks $R_a(\%)$	Return on B Stocks $R_b(\%)$	Return on Portfolio(50%A + 50%B) $R_p(\%)$
Rainy	0	20	10
Normal	10	10	10
Sunny	20	0	10

Possible Outcomes	Probability	$R_a$	$R_b$	$R_p$
Rainy	1/3	0	20	10
Normal	1/3	10	10	10
Sunny	1/3	20	0	10
Expected Rate of return $k$		10%	10%	10%
S.D		Square root of 66.67= 8.16%	Square root of 66.67= 8.16%	

**Ques. 19** Explain Diversifiable and Non-Diversifiable Risk.

**Ans.** Because of the fact that returns on stock do not move in the same direction risk can be reduced by diversification but there is a limit on the amount of risk that can be reduced through diversification we can trace this by two major reasons.

**1) Non Diversifiable Risk** - It is that part of total risk that is related to the general economy or the stock market as a whole and hence cannot be eliminated by diversification.

Non diversifiable risk is also referred to as market risk or systematic risk.

#### **Non-Diversifiable or Market Risk Factors**

7. Major Changes in tax rates
8. War and other Calamities
9. An increase or decrease in inflation rates
10. A change in economic policy
11. Industrial Recession
12. An increase in international oil prices, etc.

**2) Diversifiable risk**- Diversifiable risk on the other hand, is that part of the total risk that is specific to the company or industry and hence can be eliminated by diversification.

Diversifiable risk is also called unsystematic risk or specific risk.

#### **Diversifiable or Specific Risk Factors**

5. Company Strike
6. Bankruptcy of a major supplier
7. Death of a key company officer
8. Unexpected entry of a new competitor into the market etc.

**Ques 20** Explain the Degree of Correlation which use to identify type of risk.

**Ans.** The amount of risk reduction depends on the degree of positive correlation between stocks. The lower the degree of positive correlation, the greater is the amount of risk reduction that is possible.

- IF  $r = 1$  ( systematic risk and can not be diversified)
- $r = -1$  ( unsystematic risk and can be diversified by portfolio)
- $r = 0$  ( no relationship between the security )

**Ques 21** How do we measure the risk of stocks in a portfolio?

**Ans.** A portfolio's S.D is a good indicator of its risk to the extent that if addition of a stock to the portfolio increase the portfolio's S.D, the stock adds risk to the portfolio.

**Ques. 22** How does one measure non- diversifiable or market risk?

**Ans.** It is generally measured by Beta coefficient. Beta measures the relative risk associated with any individual portfolio as measured in relation to the risk of the market portfolio. The market portfolio represents the most diversifies portfolio of risky assets an investor could buy since it includes all risky assets. The relative risk can be expressed as:-

Beta<sub>j</sub> = Non-Diversifiable Risk of asset or portfolio/Risk of market Portfolio.

Thus, the beta coefficient is the measure of the non-diversifiable or systematic risk of an asset related to that of the market portfolio.

Value of Beta Factor	Indication
1	Average Risk
>1	Above Average Risk
<1	Below Average Risk

The beta of a portfolio is nothing but the weighted average of the betas of the securities that constitute the portfolio, the weights being the proportions of investments in the respective securities for example, if the

beta of the security A is 1.5 and that of security B is 0.9 and 60% and 40% of our portfolio is invested in the two securities respectively the beta of our portfolio will be:-

$$1.26 = (1.5 * 0.6 + 0.9 * 0.4)$$

**Ques 23 How can we Measure of Beta ?**

**Ans.** The relationship between the return on the security or a portfolio and the return on the market can be described using a simple linear regression, identifying the return on a security or portfolio as the dependent variable  $k_j$  and the return on market portfolio as the independent variable  $k_m$ , in the single index model or the market model developed by William Sharpe.

$$R_j = \text{Alpha}_j + (\text{Beta}_j)k_m + e_j$$

The beta parameter  $\text{Beta}_j$  in the model represents the slope of the above regression relationship and as explained earlier, measures the responsiveness of the security or portfolio to the general market and indicates how extensively the return of the portfolio or security will vary with the changes in market return.

**Ques 24 Defined Beta ?**

**Ans.** The ratio of the securities covariance of return with the market to the variance of the market.

$$B_j = \text{cov}(R_j, R_m) / \text{var}(R_m)$$

$$\text{Where Cov}(R_j, R_m) = \sum (R_j - R) (R_m - \text{Mean } R_m) / n$$

$$\text{var}(R_m) = \sum (R_m - \text{Mean } R_m) / N$$

**Ques.25 Explain the Beta coefficient with an Example.**

**Ans.**

Year	Rj	Rj-Rj(Assumed mean)	Rm	Rm- Rm(Assumed mean)	P	P(Rj-Rj)*(Rm-Rm)	P(Rm-Rm)raise to power 2
1	20	0	10	0	0.1	0	0
2	50	30	30	20	0.1	60	40
3	-50	-70	-30	-40	0.1	280	160
4	-10	-30	-10	-20	0.1	60	40
5	90	70	50	40	0.1	280	160
6	20	0	10	0	0.1	0	0
7	-10	-30	10	0	0.1	0	0
8	20	0	10	0	0.1	0	0
9	20	0	-10	-20	0.1	0	40
10	50	30	-30	20	0.1	60	40
					1.0	740	480

Assumed Rj = 20

Assumed Rm = 10

$B_j = \text{cov}(R_j, R_m) / \text{var}(R_m)$

= 740 / 480

= 1.54

**Ques. 26** What do these figures of alpha and beta imply?

**Ans.** When we say that the security has a beta of 1.54 we mean that if the return on the market portfolio rises by 10%, the return on the security 'j' will rise by 15.4% an alpha of 4.6% implies that the security earns 4.6% over the above market rate of return.

**Ques 27 Explain Capital Asset Pricing Model (CAPM).**

**Ans.** The CAPM establishes a linear relationship between the required rate of return of a security and its systematic or undiversifiable risk or beta. CAPM enables us to be much more precise about how trade-offs between risk and return are determined in the financial markets.

In CAPM the expected rate of return can also be thought of as a required rate of return because the market is assumed to be in equilibrium.

Expected Rate of Return is the return that an investor expects to earn.

Required Rate of Return of a security is the minimum expected rate of return needed to induce an investor to purchase it.

Mathematically it can be represented as follows:-

$$R_j = R_f + B_j(R_m - R_f)$$

Where,

$R_j$  = expected or required rate of return on security  $j$

$R_r$  = risk free rate of return

$B_j$  = beta coefficient of security  $j$

$R_m$  = return on market portfolio

**Ques 28 Explain Assumptions of CAPM.**

**Ans.**

1. Investors are risk averse and use the expected rate of return and standard deviation of return as appropriate measures of risk and return for their portfolio. In other words, the greater the perceived risk of portfolio, the higher return a risk averse investor expects to compensate the risk.
2. Investors make their decisions based on a single period horizon.

3. Transaction costs are low enough to be ignored and assets can be bought and sold in any quantity. The investor is limited only by his wealth and the price of the asset.
4. Taxes do not affect the choice of buying assets.
5. All individuals assume that they can buy assets at the going market price and they all agree on the nature of the return and the risk associated with each investment.

**Ques. 29 What do investors require when they invest?**

**Ans.** Required Rate of Return = Risk Free Rate + Risk Premium

CAPM provides an explicit measure of the risk premium.

Risk Premium = Beta of security  $j$  ( $R_m - R_f$ )

This beta coefficient above is the non diversifiable risk of the asset relative to the rate of the market. If beta exceeds 1 the investor assigns a higher risk premium to the asset than to the market.

**Ques30 If Beta of Asset = 1.5**

Required Rate of Return on the market ( $R_m$ ) = 15%

Risk free Interest Rate ( $R_f$ ) = 6%

**Ans.**  $R_j = R_f + \text{Beta factor}(R_m - R_f)$

$= 0.06 + 1.5(0.15 - 0.06)$

$= 0.195$  or 19.5%

## Working Capital Management

**Ques 1** What is working Capital?

**Ans.** Working Capital in its simplest form could be defined as the amount required for meeting the current liabilities of the business or to cope up the normal day to day expenditure of the business.

### 1) Types of Working Capital

Gross Working Capital

Net Working Capital

### 2) Objective of Working Capital Management

The goal of working capital management is to manage the firm's current assets and liabilities in such a way that a satisfactory level of working capital is maintained.

**Ques 2** What are the factors affecting working capital of a firm?

**Ans.** Factors Affecting the Requirement of Working Capital

- General Nature of Business – Public utilities (i) Cash Sale (ii) Sale of Services Vs. Trading, Financial and Mfg Industries.
- Production Cycle – Bakery Vs. Heavy Machinery
- Business Cycle – Recovery, Boom, Recession and Depression.
- Production Policy – Seasonal
- Credit Policy – Long Credit Period Vs. Short Credit period
- Growth and Expansion
- Vagaries in the Availability of Raw Materials – Easily available throughout the Year Vs. Not available easily throughout the year.
- Profit level – Level of Taxes, Dividend Policy and Depreciation Policy



- Price Level Changes
- Operating Efficiency

**Ques 3 Explain Operating Cycle Approach to Working Capital Management.**

**Ans.** Operating cycle approach has following periods.

#### **Raw Material Storage Period (n1)**

1. Annual consumption of raw materials, components etc.
2. Average daily consumption of raw material by dividing the first point above by 360.
3. Average stock of raw materials, components etc. opening + closing stock / 2.
4. Raw material storage period =  $3/2 = n1$  days.

#### **Conversion Period (n2)**

1. Annual cost of production = Opening WIP + Raw material consumed + other manufacturing costs like wages fuel etc. + Depreciation - Closing WIP.
2. Average daily cost of production =  $1/360$
3. Average stock of WIP = opening WIP + Closing WIP / 2
4. Average conversion period =  $3/2 = n2$  days

#### **Finished Goods Storage Period (n3)**

1. Annual cost of sales = Opening stock of finished goods + cost of production + Excise duty + Selling and distribution costs + General administrative costs + Financial costs - Closing stock of finished goods.
2. Average daily cost of sales =  $1/360$
3. Average stock of finished goods = Opening stock + Closing stock / 2
4. Finished goods storage period =  $3/2 = n3$  days

**Average Collections Period (n4)**

1. Annual credit sales of the company.
2. Average daily credit sales =  $1/360$
3. Average balance of sundry debtors =  $\frac{\text{Opening balance} + \text{Closing balance}}{2}$
4. Average collection period =  $3/2 = n4$  days

**Average Payment Period (n5)**

1. Annual credit purchases made by a company.
2. Annual daily credit purchases =  $1/360$
3. Average balance of sundry creditors =  $\frac{\text{opening balance} + \text{closing balance}}{2}$
4. Average payment period =  $3/2 = n5$  days.

**Gross Operating Cycle =  $n1 + n2 + n3 + n4$**

**Net Operating Cycle =  $n1 + n2 + n3 + n4 - n5$**

**Ques 4 Calculate the gross and net operating cycle periods from the data given below:-**

Particulars	Amount (Rs. In Lakh)
1. Opening Balances of	3454.84
○ Raw Materials, Stores and Spares, etc	56.15
○ Work - in - Process	637.92
○ Finished Goods	756.45
○ Accounts Receivable	2504.18
○ Accounts Payable	
2. Closing Balances of	
○ Raw Materials, Stores and Spares, etc	

○ Work - in - Process	4095.41
○ Finished Goods	
○ Accounts Receivable	72.50
○ Accounts Payable	
	1032.74
3. Purchases of Raw Materials, Stores and Spares, etc.	
	1166.32
4. Manufacturing Expenses etc.	
5. Depreciation	3087.47
6. Customs and Excise Duty	
7. Selling administration and financial expenses	10676.10
8. Sales	
	1146.76
	247.72
	35025.56
	4557.48
	54210.65

Ans.

A. Raw Material Storage Period

1. Annual Consumption of Raw Materials

$$= \text{Opening Stock} + \text{Purchases} - \text{Closing Stock}$$

$$= 3454.84 + 10676.10 - 4095.41$$

$$= 10035.53$$

2. Average daily consumption of raw materials:-

$$= 10035.53/360 = 27.88$$

3. Average stock of Raw Materials

$$= (3454.84 + 4095.41)/2$$

4. Raw Material Storage Period

$$= 3775.13/27.88 = 135 \text{ days}$$

B. Average Conversion or Work-in-process Period

1. Annual Cost of Production

= Opening WIP + Consumption of Materials + Manufacturing Expenses + Depreciation - Closing WIP

$$= 56.15 + 10035.53 + 1146.76 + 247.72 - 72.50$$

$$= 11413.66$$

2. Average Daily Cost of Production

$$= 11413.66/360 = 31.70$$

3. Average Stock of Work-in - Progress

$$= (56.15 + 72.50)/2 = 64.33$$

4. Average Conversion Period

$$= 64.33/31.70 = 2 \text{ days}$$

C. Finished Goods Storage Period

## 1. Annual cost of sales

= Opening stock of finished goods + cost of production + Selling, administration and financial expenses + customs and excise duties - closing stock of finished goods.

$$= 637.92 + 11413.66 + 4557.48 + 35025.56 - 1032.74$$

$$= 50601.88$$

2. Average daily cost of sales : =  $50601.88/360 = 140.56$

3. Average inventory of finished goods =  $(637.92 + 1032.74)/2 = 835.33$

4. Finished goods storage period =  $835.33/140.56 = 6$  days

**D. Average Collection Period**

1. Annual Sales = 54210.65

2. Average Daily Sales =  $54210/360 = 150.59$

3. Average Book Debts =  $(756.45+1166.32)/2 = 961.38$

4. Average Collection Period =  $961.38/150.59 = 6$  days

**E. Average Payment Period**

1. Annual Purchases = 10676.10

2. Average Daily Purchases =  $10676.10/360 = 29.66$

3. Average balance of trade creditors =  $(2504.18 + 3087.47)/2 = 2795.82$

4. Average payment period =  $2795.82/29.66 = 94$  days

**Operating Cycle Period**

$$= 135 + 2 + 6 + 6 - 94 = 55 \text{ days}$$

## Inventory Management Techniques

### Ques 1 What is Economic Order Quantity ?

**Ans.** The economic order quantity (EOQ) refers to the optimal order size that will result in the lowest total of order and carrying costs for an item of inventory given its expected usage, carrying costs and ordering cost. By calculating the economic order quantity, the firm determine the order size that will minimize the total inventory costs.

$$EOQ = \sqrt{2RO/C}$$

Where R= Annual Requirement

O= Ordering Cost

C= Carrying Cost

#### **Example:-**

A firm expects a total demand for its product to be 10000 units, while the ordering cost per order is Rs. 100 and the carrying cost per unit is Rs. 2.

$$EOQ = \text{Under root of } 2 \times 10000 \times 100 / 2 = 1000 \text{ units.}$$

### Ques 2 Explain Reorder Point Formula.

**Ans.** At what point in the level of inventory a reorder has to be placed for replenishment of stock.

Reorder Point

$$= U * L + F * \sqrt{U * R * L}$$

Where,

U= Usage in units per day

L= Lead time in days

R= Average number of units per order

F= Stock out acceptance factor

**Ques 3** For a company the average daily usage of a material is 100 units, lead time for procuring material is 20 days and the average number of units per order is 2000 units. The stock out acceptance factor is considered to be 1.3. What is the reorder level for the company?

**Ans.**

From the data contained in the problem we have

U = 100 units

L = 20 Days

R = 2000 Units

F = 1.3

Reorder Level =  $U * L + F * \sqrt{U * R * L}$

=  $100 * 20 + 1.3 * \sqrt{100 * 2000 * 20}$

=  $2000 * 1.3 + 2000 = 4600$

## Unit-3

# Capital Budgeting

---

**Ques 1** What is Capital Budgeting?

**Ans.** The capital budgeting decisions can be defined as the company's decision to invest its current funds most efficiently in long-term assets in anticipation of an expected flow of benefits over a series of years. Capital budgeting decisions occupy a very important place in corporate finance for the following reasons:

- Once a decision is taken, it has far-reaching consequences which extend over a considerably long period, and influences the risk exposure of the firm.
- These decisions involve huge amounts of money.
- These decisions are irreversible once taken.
- is faced with various potentially viable investment opportunities.

**Ques 2** Explain the technique of Capital Budgeting.

**Ans.** Techniques of Capital Budgeting

1) **Traditional Technique**

- a) urgency Method
- b) Pay- Back Period Method
- c) Average Rate of Return Method

2) **Modern Method**

- a) Net Present Value Method
- b) Profitability Index
- c) Internal Rate Of Return Method

**Ques 3** Explain Pay back period Method.



**Ans.** The payback period measures the time length required to cover the initial outlay in the project.

**Pay back period= Intial Investment/ Net Annual Cash Inflow**

**Ques 4** Initial investment in a project whose estimated life is say 5 years is Rs 20 lacs and it is expected that the project will generate inflow of Rs. 8 Lacs per annum.

Pay back period for the project is equal to  $20/8 = 2.5$  years.

On the other hand if the project is expected to generate amount inflows of say Rs. 4 lacs, Rs. 6 lacs, Rs. 10 lacs, Rs. 12 lacs and Rs. 14 lacs over the period of five years the payback period will be equal to three years.

**Ques 5 Explain Merits and Demerits of Pay Back Period.**

**Ans.** Merits of payback period are:

- It is simple in both concept and application.
- It helps in weeding out risky projects by favouring only those projects which generate substantial inflows in earlier years.

Demerits of payback period are:

- It fails to consider the time value of money.
- The cut off period is chosen rather arbitrarily and applied uniformly for evaluating projects regardless of their life spans. Consequently the firm may accept too many short-lived projects and too few long-lived ones.

**Ques 6 Explain Accounting Rate of Return Method.**

**Ans** Accounting Rate of Return

The accounting rate of return or the book rate of return is typically defined as follows:

**Accounting rate of return (ARR) = Average profit after tax/ Average book value of the investment.**

To use it as an appraisal criterion, the ARR of the project is compared with the ARR of the firm as a whole or against some external yardstick like the average rate of return for the industry as a whole.

**Ques 7 Calculate Average Rate of Return for the following information:**

Year	0	1	2	3
Investment	100000			
Sales Revenue		120000	100000	80000
Operating Expenses (Excluding Depreciation)		60000	50000	40000
Depreciation		30000	30000	30000
Annual Income		30000	20000	10000

Average annual income =  $(30000+20000+10000)/3 = 20000$

Average net book value if the investment =  $(100000+0)/2 = 50000$

Accounting rate of return =  $20000/50000 * 100 = 40\%$

The firm will accept the project if its target rate is less than 40%.

**Ques 7 Write Merits and Demerits of ARR.**

**Ans.** Merits of ARR are:

- Like payback criterion, ARR is simple both in concepts and application. It appeals to businessmen who find the concept of rate of return familiar and easy to work with rather than absolute quantities
- It considers the returns over the entire life of the project and therefore serves as a measure of profitability (unlike the payback period which is only a measure of total recovery)

Demerits of ARR are:

- Ignores the time value of money.
- Depends on accounting income not on cash flows.
- Finally, the firm using ARR as an appraisal criterion must decide on a yard-stick for judging the project and this decision is often arbitrary. Often firms use their current book values as the yard stick for comparison. In such cases if the firms rate of return tends to be usually high or low, then firm can end up rejecting good ones and accepting bad ones.

**Ques 8 Explain Net Present Value.**

**Ans.** The net present value is equal to the present value of future cash flows and any immediate cash outflows. In the case of a project, the immediate cash outflows will be investment and the net present value will be equal to the present values of future cash inflows minus the initial investment.

**Npv= PV of Cash Inflow- PV of Cash Outflow**

**Ques 9** A ltd is considering the purchase of a new leather cutting machine to replace an existing machine which has a book value of Rs. 3000 and can be sold for Rs. 1500. The estimated salvage value of the old machine in four years would be zero, and it is depreciated on a straight line basis. The new machine will reduce costs (before tax) by Rs. 7000 per year i.e. Rs. 7000 cost savings over the old machine. The new machine has a four year life, costs Rs. 14000 and can be sold for an expected amount of Rs. 2000 at the end of the fourth year. Assuming straight line depreciation and a tax rate of 40%, calculate the cash flows associated with the investment and calculate the NPV of the project assuming the cost of funds to the firm is 12% and straight line method is used for tax purposes?

**Ans.**

Cash flows associated with the replacement decisions

Year		0	1	2	3	4
1.	Net investment in new machine	(12500)				
2.	Savings in costs		7000	7000	7000	7000
3.	Incremental Depreciation		2250	2250	2250	2250
4.	Pre-Tax profits		4750	4750	4750	4750
5.	Less Tax		1900	1900	1900	1900
6.	Post-tax profits		2850	2850	2850	2850
7.	Initial Flow (=1)	(12500)				
8.	Operating Flow (= (6) + (3))		5100	5100	5100	5100
9.	Terminal Flow					2000
10.	Net Cash flow(=7+8+9)	12500	5100	5100	5100	7100

Year	1	2	3	4
Net cash flows	5100	5100	5100	7100
PVIF @k = 12%	0.893	0.797	0.712	0.636
Present Value (Rs.)	4554	4065	3631	4516

Net present value

$$= (-12500) + (4554 + 4065 + 3631 + 4516)$$

$$= \text{Rs. } (-12500 + 16766)$$

$$= \text{Rs. } 4266$$

The decision rule based on NPV is obvious. A project will be accepted if the NPV is positive and rejected if NPV is negative.

**Ques 10 Explain the Technique Internal Rate of Return.**

**Ans. Internal Rate of Return**

The internal rate of return is that rate of interest at which the present value of a project is equal to zero, or in other words, it is the rate which equates

the present values of the cash inflows to the present values of the cash outflows. While under NPV method the rate of discounting is known, under IRR this rate which makes NPV zero has to be identified.

**Ques 11 Project has the following patterns of cash flows:**

Year	Cash Flow (Rs. In Lakh)
0	(10)
1	5
2	5
3	3.08
4	1.20

What is the IRR of this project?

**Ans.:**

To determine the IRR, we have to compare the NPV of the project for different rates of interest until we find that rate of interest at which the NPV of the project is equal to zero. To reduce the number of iterations involved in this hit and trial process, we can use the following short cut procedure:

Step 1

Find the average annual net cash flow based on given future net cash inflows.

$$= (5 + 5 + 3.08 + 1.20) / 4 = 3.57$$

Step 2

Divide the initial outlay by the average annual net cash inflows i.e.  
 $10 / 3.57 = 2.801$

Step 3

From the PVIFA table find that interest rate at which the present value of an annuity of Rs. 1 will be nearly equal to 2.801 in 4 years i.e. the duration of the project. In this case the rate of interest will be equal to 15%.

We use 15% as the initial value for starting the hit and trial process and keep trying at successively higher rates of interest until we get an interest rate at which the NPV is zero.

The NPV at  $r = 15\%$  will be equal to:

$$= -10 + (5 * .0870) + (5 * .756) + (3.08 * .658) + (1.2 * .572) = 0.84$$

NPV at  $r = 16\%$  will be equal to:

$$= -10 + (5 * .862) + (5 * .743) + (3.08 * .641) + (1.2 * .552) = .66$$

NPV at  $r = 18\%$  will be equal to:

$$= -10 + (5 * .848) + (5 * .719) + (3.08 * .609) + (1.2 * .516) = .33$$

NPV at  $r = 20\%$  will be equal to:

$$= -10 + (5 * .833) + (5 * .694) + (3.08 * .609) + (1.20 * .482) = 0$$

We find that at  $r = 20\%$ , the NPV is zero and therefore the IRR of the project is 20%.

**Ques 12** What are the Merits and Demerits of IRR?

**Ans.** Merits of IRR are:

- It takes into account the time value of money.
- It considers the cash flow stream over the entire investment horizon.
- It does not use the concept of the required rate of return. It itself provides a rate of return which is indicative of the profitability of the proposal.

- It is consistent with the overall objective of maximizing shareholders wealth.

**Demerits of IRR are:**

- It involves tedious calculations.
- Under IRR method it is assumed that all intermediate cash flows are reinvested at IRR.

**Gurukpo.com**  
No. 1 Educational Web Portal in India

## Unit-4

# Cost of Capital

---

**Ques 1** Explain Cost of Debentures.

**Ans.** The cost of debentures can be calculated with the following formula:

$$k_d = M [i(1-t) - (f-p)t/n](1-t) / (F + P)/2$$

Where:-

$k_d$  = post-tax cost of debenture capital

$i$  = annual interest payment per debenture capital

$t$  = corporate tax rate

$F$  = redemption price per debenture

$P$  = net amount realized per debenture and

$n$  = maturity period.

**Ques 2** A ltd. Made an issue of 14% debentures of Rs. 400 lacs, face value of Rs. 100. The interest is payable annually and the debenture is redeemable at a premium of 5% after 10 years.

If A ltd. Realizes Rs. 97 per debenture and the corporate tax rate is 50%, what is the cost of the debenture to the company?

**Ans.**



Given:

$$i = \text{Rs. } 14$$

$$t = 0.5$$

$$P = \text{Rs. } 97$$

$$n = 10 \text{ years}$$

$$F = \text{Rs. } 105$$

by putting these values in the above mentioned formula we will get

$$k_d = [i(1 - t) + (F - P)/n]/(F + P)/2$$

$$k_d = [14(1 - .05) + (105 - 97)/10]/(105 + 97)/2$$

$$k_d = 7.7\%$$

**Ques 3 Explain Cost of Preference Share Capital.**

**Ans.** Cost of preference share capital can be calculated by the following formula:

$$k_p = (D + (F - P)/n) / (F + P)/2$$

Where:

$k_p$  = Cost of preference share capital

$D$  = preference dividend per share payable annually

$F$  = Redemption price

$P$  = net amount realized per share and

$n$  = maturity period.

**Ques 4** The terms of a preference share issue made by a company are as follows: 14% preference shares of Rs. 100 each dividend payable annually. Share is redeemable after 12 years at par. If the net amount realized per share is Rs. 95, what is the cost of the preference capital.

**Ans.**

Given,

$$D = 14,$$

$$F = 100,$$

$$P = 95, \text{ and}$$

$$n = 12$$

Putting the given values in the above mentioned formula we get,

$$k_p = (D + (F - P/n) / (F + P) / 2$$

$$k_p = [14 + (100 - 95)/12] / (100 + 95) / 2$$

$$k_p = 0.148 \text{ or } 14.8\%$$

**Ques 5 Explain Cost of Equity Capital.**

**Ans.** There are many approaches for estimating the cost of equity capital as there is no fixed dividend or interest. There are several approaches for calculating the cost of equity capital, like:

- Dividend forecast approach,
- Capital asset pricing model,
- Realized yield approach,
- Earning - price ratio approach, and
- Bond yield plus risk premium approach.

**Ques 6 Explain Dividend Forecast Approach .**

**Ans.** As per dividend forecast approach the cost of equity capital can be calculated as follows:

$$k_e = (D_1/P_e) + g$$

Where:

$P_e$  = price per equity share

$D_1$  = Expected dividend per year at year one

$K_e$  = rate of return required by the equity shareholders

$g$  = growth rate.

**Ques 7** The market price per share of a company is Rs. 125. The dividend expected per share after an year is Rs. 12 and the dividend is expected to grow at a constant rate of 8% per annum. What is the cost of equity capital to the company.

**Ans.**

The cost of equity capital can be calculated as follows:

$$k_e = (D_1/P_e) + g = (12/125) + 0.08 = 17.6\%$$

**Ques 8**

Year	1	2	3
DPS(Rs.)	1.50	2.00	1.50
Price per share at year end	12.00	11.00	12.00

The price per share at the beginning of year 1 is Rs. 10.

**Ans.**

The wealth ratios are:

Year	1	2	3
Wealth Ratio	1.35	1.08	1.23

Realized Yield =  $[(1.35 * 1.08 * 1.23) \text{ Raise to the power } 1/3] - 1$

Yield on the long-term bonds of the company + Risk premium.

**Ques 9 What is Cost of Retained Earnings.**

**Ans.** Earnings of a firm can be reinvested or paid as a dividend to the shareholder. If the firm retained part of its earning for future growth of the firm, the shareholders will demand compensation from the firm for using that money. As a result, the cost of retained earnings simply represents a shareholder's expected return from the firm's common stock. Viewing retained earnings as fully subscribed issue of additional common stock the cost of retained earnings can be said as,

$$k_r = k_e$$

**Ques 10** A Ltd. has got Rs. 100 lacs of retained earnings and Rs. 100 lakh of external equity through a fresh issue, in its capital structure. The equity investors expect a rate of return of 18%. The cost of issuing external equity is 5%. Find out the cost of retained earnings and the cost of external equity?

**Ans:** Cost of retained earnings:  $K_r = k_e$  i.e. 18%

Cost of external equity raised by the company:

$$\text{Now } K'_e = (k_e / 1 - f) = 0.18 / (1 - 0.05) = 18.95\%$$

**Ques 11 Explain the Concept of Weighted Average Cost of Capital.**

**ABC Ltd. has the following capital structure:**

Rs. In Lacs

Equity Capital(Rs. 10 Lacs share at par value)	100
12% Preference share capital	10
Retained Earnings	120
14% Non - convertible Debentures (70000 debentures at par)	70
14% term loan from Bank	100
<b>Total</b>	<b>400</b>

The market price per equity share is Rs. 25. The next expected dividend per share is Rs. 2 and the DPS is expected to grow at a constant rate of 8%, The preference shares are redeemable after 7 years at par and are currently quoted at Rs. 75 per share on the stock exchange. The debentures are redeemable after 6 years at par and their current market quotation is Rs. 90 per share. The tax rate is 50%. Calculate the weighted average cost of capital.

Ans.

First calculate the costs of various sources of finance

- i. Cost of Equity =  $K_e = (D_1/P_0) + g = (2/25) + 0.08 = 0.16$
- ii. Cost of Retained earnings =  $K_r = K_e = 0.16\%$
- iii. Cost of preference shares =  $k_p = (D + (f-p)/n) / (f+p) / 2$   
 $= (12 + (100 - 75)/7) / (100 + 75) / 2 = 0.1780$
- iv. Cost of debentures =  $[i(1-t) + (f-p)/n] / (f+p) / 2$   
 $= [14(1-0.5) + (100 - 90)/6] / (100 + 90) / 2 = 0.0912$
- v. Cost of term loans =  $k_i = 0.14(1 - 0.5) = 0.07$

Then we will calculate the weights associated with the various sources of funds:

- i.  $W_e = 100/400 = 0.25$
- ii.  $W_r = 120/400 = 0.30$
- iii.  $W_p = 10/400 = 0.025$
- iv.  $W_d = 70/400 = 0.175$
- v.  $W_i = 100/400 = 0.25$

Weighted average cost of capital

$$\begin{aligned} &= W_e k_e + W_r k_r + W_p k_p + W_d k_d + W_i k_i \\ &= (0.25 * 0.16) + (0.30 * 0.16) + (0.025 * 0.1780) + (0.175 * 0.0912) + \\ &\quad (0.25 * 0.07) = 0.1259 = 12.59\% \end{aligned}$$

**GURUKPO.COM**  
No. 1 Educational Web Portal in India

# Leverage

**Ques 1 Explain The concept of leverage.**

**Ans.** Leverage in the general sense means influence of power i.e. utilizing the existing resources to attain something else. Leverage in terms of financial analysis is the influence which an independent financial variable has over a dependent financial variable. When leverage is measured between two financial variables it explains how the dependent variable responds to a particular change in the independent variable.

## Measures of leverage

To better understand the importance of leverage in financial analysis, it is necessary to understand the three measures of leverage.

- Operating Leverage
- Financial Leverage
- Combined/Total Leverage

**Ques 2 What is Operating leverage?**

**Ans.** Operating leverage examines the effect of the change in the quantity produced on the EBIT of the company and is measured by calculating the degree of operating leverage (DOL).

Operating Leverage = Contribution / EBIT

DOL = % Change in EBIT / % Change in Output

=  $(\Delta \text{EBIT} / \text{EBIT}) / (\Delta Q / Q)$

We know  $\text{EBIT} = Q(S - V) - F$

Substituting for EBIT, we get

$$DOL = [Q(S - V)]/[Q(S - V) - F]$$

**Ques 3** Calculate the DOL for ABC company ltd. given the following additional information:

Quantity produced	5000
Variable cost per unit	Rs. 200
Selling price per unit	Rs. 500
Fixed Cost	Rs. 900000

DOL of ABC ltd.

$$= [5000(500 - 200)]/[5000(500 - 200) - 900000] = 2.50$$

**Ques 4** Calculate DOL and make implication.

Quantity produced	Degree of operating leverage
1000	-0.5
2000	-2.0
3000	0
4000	4.0
5000	2.5

**Ans.** Where the value of Q is 3000 the EBIT of the company is zero and this is the operating break - even point. Thus at operating break- even point, where the EBIT is zero, the quantity produced can be calculated as follows:

$$Q = F/(S - V)$$

For A ltd:

$$Q = 900000/(500 - 200) = 3000$$



After calculating the DOL we can make the following observations:

- DOL is undefined at the operating break-even point.
- If Q is less than the operating break-even point, then DOL will be negative.
- If Q is greater than the operating break-even point, then the DOL will be positive. However, the DOL will start to decline as the level of output increases as well as reach a limit of 1.

Ques 5 Calculate operating leverage and state the implication.

Company A

Company B

Units produced & sold	Sales	Total operating cost	EBIT	Units produced & sold	Sales	Total operating cost	EBIT
Q	PQ		Rs.	Q	PQ		Rs.
10000	100000	160000	(60000)	10000	100000	240000	(140000)
20000	200000	230000	(30000)	20000	200000	290000	(90000)
30000	300000	300000	0	30000	300000	340000	(40000)
40000	400000	370000	30000	40000	400000	390000	10000
50000	500000	440000	60000	50000	500000	440000	60000
60000	600000	510000	90000	60000	600000	490000	110000
70000	700000	580000	120000	70000	700000	540000	160000
80000	800000	650000	150000	80000	800000	590000	210000
Unit Selling Price = 10				Unit Selling Price = 10			
Operating Fixed Cost (F) = Rs. 90000				= Rs. 190000			
Per unit variable cost = 7				= Rs. 5			
EBIT BEP = 30000 Units.				= 38000 units.			

From above table we can see that A ltd. has lower fixed cost and higher variable cost per unit when compared to B ltd. The selling price per unit of both firms is same i.e. Rs. 10 another point to notice is that at an output of 50000 units both the firms are having same profit i.e. Rs. 60000. However as sales fluctuate the EBIT of A fluctuates far less than the EBIT of B. This brings us to the conclusion that the DOL of B is greater than the DOL of A.

Lets clear this point more by calculating the DOL of both the firms:

For A ltd.

$$\text{DOL} = [50000(10 - 7)]/[50000(10 - 7) - 90000] = 2.5$$

For B ltd. to the uncertainty of the firm's EBIT.

$$\text{DOL} = [50000(10 - 5)]/[50000(10 - 5) - 190000] = 4.17$$

**Ques 6 What is Financial Leverage ?**

**Ans.** While operating leverage measures the change in the EBIT of a company to a particular change in the output, the financial leverage measures the effect of the change in EBIT on the EPS of the company. Financial leverage also refers to the mix of debt and equity in the capital structure of a company. Degree of financial leverage i.e. DFL can be calculated as follows:

$$\text{DFL} = (\% \text{ change in EPS})/(\% \text{ change in EBIT})$$

$$\text{DFL} = (\Delta \text{ EPS}/\text{EPS})/(\Delta \text{ EBIT}/\text{EBIT})$$

$$\text{DFL} = \text{EBIT}/\text{EBIT} - I - D_p/(1 - T)$$

**Ques 7 A ltd has an EBIT of Rs. 600000 at 5000 level of production, the capital structure of a company is as follows:**

Capital Structure	Amount (Rs.)
Authorized Issued and Paid-up capital	
500000 equity shares of Rs. 10 each	5000000
15% Debentures	500000
10% Preference Shares	
5000 Preference Shares @ Rs. 100	500000
Total	6000000

**Ans.** DFL of A ltd can be calculated as follows:

$$\text{EBIT} = \text{Rs. } 600000$$

$$\text{Interest (I)} = \text{Rs. } 75000$$

$$\text{Preference dividend (Dp)} = 50000$$

$$\text{Corporate tax (T)} = 50\%$$

$$\text{DFL} = \frac{600000}{600000 - 75000 - (50000/1 - 0.5)}$$

$$= 1.41$$

**Ques 8** If increased financial leverage leads to increased return on equity, why do companies not resort to ever increasing amount of debt financing? Why do financial and other term lending institutions insist on norms for Debt-Equity ratio?

**Ans.** As the company becomes more financially leveraged, it becomes riskier, i.e. increased used of debt financing will lead to increased financial risk which leads to:

- Increased fluctuations in the return on equity.
- Increase in the interest rate on debts.

**Ques 9** Explain Total/ combined Leverage.

**Ans.** A combination of the operating and financial leverages is the total or combined leverage. Thus, the degree of total leverage DTL is the measure of the output and EPS of the company. DTL is the product of DOL and DFL.

It can be calculated as follows:

$$\text{DTL} = \% \text{ change in EPS} / \% \text{ change in output}$$

$$= (\Delta \text{EPS} / \text{EPS}) / (\Delta Q / Q)$$

$$\text{DTL} = \text{DOL} * \text{DFL}$$

$$= [Q(S - V)] / [Q(S - V) - F - I - (D_p / (1 - T))]$$

**Ques 10** Calculate the DTL for XYZ Co. Ltd. given the following information:

Equity Earnings	Rs. 162000
Quantity Produced (Q)	5000 Units
Variable cost per unit (V)	Rs. 200
Selling price per unit (S)	Rs. 500
Number of equity shareholders (N)	500000
Fixed expenses (F)	Rs. 900000
Interest (I)	Rs. 75000
Preference dividend	Rs. 50000
Corporate tax (T)	50%

$$\begin{aligned} \text{DTL} &= [5000(500 - 200)] / [5000(500 - 200) - 900000 - 75000 - 50000 / (1 - 0.5)] \\ &= 3.53 \end{aligned}$$

$$\text{DTL} = \text{DOL} * \text{DFL}$$

$$= 2.5 * 1.41 = 3.53$$

Thus when the output is 5000 units, a one % change in Q will result in 3.5% change in EPS.

**Gurukpo.com**  
No. 1 Educational Web Portal in India

# Dividend Policy

## Ques 1 What is Dividend?

**Ans.** Dividends refer to that portion of a firm's net earnings which are paid out to shareholders. We will focus on dividends paid to ordinary shareholders because holders of preference shares are entitled to a stipulated rate of dividend. Since dividends are paid out of profits, the alternative to the payment of dividends is the retention of earnings/profits. The retained earnings constitute to easily accessible important source of financing in investment requirements of the firm. Thus retained earnings and cash dividends have got inverse relationship between them: larger dividends, lesser dividends; smaller retentions, larger dividends. Thus the alternative uses of dividends and retained earnings - are competitive and conflicting.

## Ques 2 Explain M-M Approach.

**Ans.** Modigliani and Miller maintain that dividend policy has no effect on the share price of the firm and is, therefore of no consequence. According to them what matters, is the investment policy through which the firm can increase its earnings and thereby the value of the firm.

### Assumptions

- Perfect capital markets in which all investors are rational. Information is available to all free of cost, there are no transaction cost; securities are infinitely indivisible; no investor is large enough to influence the market price of securities; there are no floatation costs.
- There are no taxes. Alternatively there are no differences in tax rates applicable to capital gains and dividends.
- A firm has a given investment policy which does not change. The operational implication of this assumption is that financing of new investments out of retained earnings will not change the business

risk complexion of the firm and, therefore there would be no change in the required rate of return.

The market price of a share in the beginning of the period is equal to the present value of dividends paid at the end of the year plus the market price of share at the end of the period.

$$P_0 = (1/1 + k_e) (D_1 + P_1)$$

Where,

$P_0$  = Prevailing market price of the share.

$k_e$  = Cost of equity capital

$D_1$  = Dividend to be received at the end of period 1.

$P_1$  = Market price of a share at the end of period 1.

**Ques 3** A company belongs to a risk class of 10%. It currently has 25000 outstanding shares selling at Rs. 100 each. The firm is contemplating the declaration of a dividend of Rs. 5 per share at the end of a current financial year. It expects a net income of Rs. 2500000 and has a proposal for making a new investment of Rs. 500000. Show according to MM approach, the payment of dividend does not affect the value of the firm.

**Ans**

a. Value of the firm, when dividends are paid:

i. Price per share at the end of year 1,

$$P_0 = (1/1 + k_e) (D_1 + P_1)$$

$$Rs.100 = (1/1 + .10)(Rs 5 + P_1)$$

$$\text{Rs.110} = \text{Rs } 5 + P1$$

$$P1 = 105$$

- ii. Amount required to be raised from the issue of new shares,

$$\Delta nP1 = I - (E - nD1)$$

$$= \text{Rs } 500000 - (\text{Rs } 250000 - 125000) = \text{Rs } 375000$$

- iii. Number of additional shares to be issued,

$$\Delta n = \text{Rs } 375000 / \text{Rs. } 105 = 75000 / 21 \text{ Shares}$$

- iv. Value of the firm,

$$nP_o = [(n + \Delta n)P1 - I + E] / (1 + k_e)$$

$$= [25000 / 1 + 75000 / 21] (\text{Rs } 105) - \text{Rs } 500000 + \text{Rs } 250000$$

$$= \text{Rs } 2750000 / 1.10 = \text{Rs } 2500000$$

- b. Value of the firm when dividends are not paid:

- i. Price per share at the end of year 1,  $\text{Rs } 100 = P1 / 1.10$

$$\text{Or } P1 = 110$$

- ii. Amount required to be raised from issue of new shares,

$$\Delta nP1 = (\text{Rs } 500000 - \text{Rs } 250000) = \text{Rs } 250000$$

- iii. Number of additional shares to be issued,

$$= \text{Rs } 250000 / \text{Rs } 110 = 25000 / 11 \text{ shares}$$

- iv. Value of the firm



$$= [25000/1 + 25000/11] (\text{Rs } 110) - \text{Rs } 500000 + 250000$$

$$= \text{Rs } 2750000/1.1 = \text{Rs. } 2500000$$

**Ques 4 Explain Walter's Model.**

Ans. Walter's model supports the doctrine that dividends are relevant. The investment policy of the firm cannot be separated from its dividends policy and both are, according to Walter interlinked.

The key argument in the favour of Walter proposition is the relationship between the return on firm's investment or its internal rate of return ( $r$ ) and its cost of capital or the required rate of return ( $k$ ).

- If  $r > k$  the firm should retain the earnings.

If  $r < K$  the firm should distribute the earnings to shareholders

formula:  $P = (D + r/ke(E - D))/ke$

Where,

$P$  = The prevailing market price of a share

$D$  = Dividend per share

$R$  = The rate of return on firm's investment.

**Ques 5 The following information is available in respect of a firm:**

Capitalisation Rate ( $ke$ ) = 0.10

Earnings per share ( $E$ ) = Rs 10

Assumed rate of return on investments ( $r$ ): (i) 15

calculate the effect of dividend policy on the market price of shares, using walter's model.

**Ans.** Dividend Policy and Value of Shares (Walter's Model) when  $r = 15\%$

a. D/P ratio = 0 (Dividend per share = 0)

$$P = (D + r/ke(E - D))/ke$$

$$P = [0 + (0.15/0.10)(10 - 0)]/0.10 = \text{Rs. } 150$$

(b) D/P ratio = 25 (Dividend per share = Rs 2.5)

$$P = [2.5 + (0.15/0.10)(10 - 2.5)]/0.10 = \text{Rs. } 137.50$$

(c) D/P ratio = 50 (Dividend per share = Rs 5)

$$P = [5 + (0.15/0.10)(10 - 5)]/0.10 = \text{Rs. } 125$$

D/P ratio = 75 (Dividend per share = Rs 7.5)

$$P = [7.5 + (0.15/0.10)(10 - 7.5)]/0.10 = \text{Rs. } 112.50$$

(d) D/P ratio = 100 (Dividend per share = Rs 10)

$$P = [10 + (0.15/0.10)(10 - 10)]/0.10 = \text{Rs. } 100$$

**Ques 6** Explain Gordon Model.

**Ans.** This theory as Walter's also support that dividend policy of a firm affects its value.

Assumptions of Gordon's Model

1. The firm is an all equity firm. No external financing is used and investment programmes are financed exclusively by retained earnings.
2. Both  $r$  and  $ke$  are constant.
3. The firm has perpetual life.

4. The retention ratio, once decided upon, is constant. Thus, the growth rate ( $g = br$ ) is also constant.
5.  $K_e > br$

Gordon's model can be expressed as:

$$P = E(1 - b)/(k_e - br)$$

Where,

$P$  = Price of a share,

$E$  = Earnings per share

$b$  = Retention ratio or percentage of earnings retained.

$1 - b$  =  $D/P$  ratio i.e. percentage of earnings distributed as dividends

$k_e$  = Capitalisation rate/ Cost of capital,

$br = g$  = Growth firm = rate of return on investment of an all equity firm.

**GURUKPO.COM**  
No. 1 Educational Web Portal in India

Roll No. \_\_\_\_\_

**2M6202**

**M.B.A. (Sem.-II) (Main & Back) Examination, June/July - 2011  
M-2-2 Financial Management**

**Time : 3 Hours**

**Total Marks : 70  
Min. Passing Marks : 28**

The question paper is divided in two sections. There are sections A and B, Section A contains 6 questions out of which the candidate is required to attempt any 4 questions. Section B Contains short case study/application based question which is Compulsory. All questions are carrying equal marks.

Use of following supporting material is permitted during examination.  
(Mentioned in form No.205)

1. \_\_\_\_\_ 2. \_\_\_\_\_

**SECTION-A**

1. Explain as to how the wealth maximization objective is superior to profit maximization objective?
2. (a) Explain the Lock-Box System.  
(b) The Board of Directors of Ruby Ltd. Requests you to prepare a statement showing the working capital requirements forecast for a

level of a activity of 1,56,000 units of production. The following information is available for your calculation.

Particulars	Rs. (per unit)
Raw Materials.....	90
Direct Labour.....	40
Overhead.....	75
Total.....	205
Profit.....	60
Selling price per unit.....	265

Raw Material are in stock on average one month Materials are in process on average 2 weeks Finishing goods are in stock, on average one month Credit allowed by suppliers - one month Time lag in payment from debtors - 2 months Lag in payment of wages - 1.5 weeks Lag in payment of overheads - one month add 10% to calculated amount of contingencies. 20% of the output is sold against cash. Cash in hand and at bank is expected to be Rs. 60,000. It is to be assumed that production is carried on evenly throughout the year. Wages and overheads accrue similarly and a time period of 4 weeks is equivalent to a month.

3. (a) What is "Optimum capital structure"? Explain.  
 (b) A company has the following capital structure on 31.12.2003

	Rs.
Equity Capital (20,000 shares)	10,00,000
10% Preference share capital	2,50,000
14% Debentures	7,50,000
	-----
	20,00,000

The Company's share is currently selling at Rs.20. Next year expected dividend is Rs. 2 per share that will grow at 6 percent forever. The company is in the tax bracket of 50 percent. You are required to calculate :

- (a) WACC based on the existing capital structure.
- (b) New WACC if the company raises an additional Rs. 5,00,000 debts by issuing 15 percent debentures. This will increase the existing dividend by Re. 1 and leave growth rate unchanged, but the price of share will fall to Rs. 15.

4. (a) Write a brief note on CAPM.
- (b) Prepare income statements of the P and Q firms.

Particulars	P	Q
Corporate tax (%)	40	40
Interest p.a. (Rs.)	12,00,000	10,00,000
Operating leverage	2	4
Financial leverage	2	3
Variable cost (%) of sales	60	50

5. (a) Examine the factors determining the dividend policy of a company.
- (c) From the following data determine price per share According to Walter's Model and comment.

Particulars	ABC Co.	XYZ Co.
Earnings per share Rs.	10	10
Cost of Capital (%)	12	12
Return on investment (%)	15	15
Dividends per share Rs.	8	5

6. (a) EXE limited has received an offer of quantity discount on its order of material as under :

Price per ton (Rs.)	Tones (Nos.)
1200	Less than 500
1180	500 and less than 1000
1160	1000 and less than 2000
1140	2000 and less than 3000
1120	300 and above

The annual requirement for the material is 5,000 tones. The ordering cost per order is Rs. 1,200 and stock holding cost is estimated at 20% of material cost per ton. You are required to compute the most economic purchase level.

What will be your answer to the above question if there are no discount offered and the price per tone is Rs. 1,500?

- (b) The risk free rate is 5% and the market risk premium is 8.6% and Beta of security is 2.83, what is the expected return of the security under CAPM.

#### SECTION-B

7. A company is considering purchase of machinery which costs Rs. 8,00,000 and which has an estimated life of 10 years. This machine will generate additional sales of Rs. 4,00,000 per year while increased costs and maintenance will be Rs. 1,00,000 per year. The cost of the machine is depreciated on a straight line and has no salvage value at the end of its 10 years life. The company has a cost of capital of 12 percent and a corporate tax rate of 40 percent.

You are required to calculate:

- (a) Annual cash flow  
 (b) The Net Present Value

- (c) Profitability Index
- (d) The payback period
- (e) Internal rate of return.

Should the company purchase the new machine?

**Gurukpo.com**  
No. 1 Educational Web Portal in India



Roll No. \_\_\_\_\_

**2M6202**

**M.B.A. (Sem.-II) (Main & Back) Examination, May/June- 2010  
M-202 Financial Management**

**Time : 3 Hours**

**Total Marks : 70  
Min. Passing Marks : 28**

The question paper is divided in two sections. There are sections A and B, Section A contains 6 questions out of which the candidate is required to attempt any 4 questions. Section B Contains short case study/application based question which is Compulsory. All questions are carrying equal marks.

Use of following supporting material is permitted during examination.  
(Mentioned in form No.205)

2. \_\_\_\_\_ 2. \_\_\_\_\_

**Section-A**

1. (a) Discuss finance function for wealth maximization.  
(b) "It is useless to emphasize on time value of money when interest rates and inflation rates are unpredictable, specially with respect to Indian economy". Comment.

2. (a) Discuss limitations of "Capital Asset Pricing Model".  
 (d) A company's share has following expected returns with associated probabilities.

Return (%)	-20	-10	10	15	20	25	30
Probability	0.05	0.10	0.20	0.25	0.20	0.15	0.05

Calculate expected rate of return and standard deviation.

3. (a) Discuss factors affecting working capital requirement of seasonal industries.  
 (b) Discuss relevance of the assumptions of Modigliani-Miller theory of capital structure in contemporary economic scenario.
4. Write notes on: (Any two)  
 (i) Corporate restructuring  
 (ii) Treasury Management  
 (iii) Dividend policy
5. Calculate degree of operating leverage (DOL), degree of financial leverage (DFL) and degree of combined leverage (DCL) for the following companies.

Companies	X	Y	Z
Output (In units)	50,000	10,000	80,000
Fixed Cost (Rs.)	8,000	10,000	2,000
Variable Cost per unit (Rs.)	0.30	2,000	0.05
Interest on borrowed capital (Rs.)	5,000	9,000	NIL
Selling price per unit (Rs.)	0.80	6.00	0.20

- (a) Verify the calculated DCL using DOL and DFL.

(b) Interpret the results.

6. Rank the following two investment proposals using 'net present' value method and pay back period :

Year	Proposal 1 Cas flow before Tax (Rs.)	Proposal 2 Cash flow before Tax (Rs.)
1	19,000	19,000
2	19,000	23,000
3	19,000	25,000
4	19,000	19,000
Cost of Capital	10%	10%
Amount to be		
Invested (Rs.)	23,000	25,000
Life in years	4	4
Salvage Value (Rs.)	3,000	5,000
Tax Rate	50%	50%

PV Factor at 10%

Year 0.....1.00

Year 1 .....0.909

Year 2 .....0.826

Year 3.....0.751

Year .....0.683

### Section-B

7. Evaluate following buy or lease options

But option:

The but the equipment by taking loan of Rs. 1,00,000 from any of interest is 15% Life of equipment is not known but while calculating, show

calculations for 10 years. Depreciation is to be charged @ on written down value. Discounting rate applicable is 16% and the tax rate is 50% lease option:

To get the equipment on lease rental of Rs. 32,000 per year (year end) for 5 years.

- (a) Which option (buy/lease) is preferable on the basis of "present value" of cash out flows?  
 (b) Which option (buy/lease) is preferable on the basis of "equivalent" annuity value?  
 PV @ 16%

End of Year	1	2	3	4	5	6	7	8	9	10
PV Factor	0.862	0.743	0.641	0.552	0.476	0.410	0.353	0.305	0.263	0.227

Present value annuity factor:

(16%, 10 Years)	4,833
(16%, 5 Years)	3,274

Roll No. \_\_\_\_\_

**2M6202**

**M.B.A. (Sem.-II) (Main & Back) Examination, June/July - 2009**  
**M-2-2 Financial Management**

**Time : 3 Hours**

**Total Marks : 70**  
**Min. Passing Marks : 28**

The question paper is divided in two sections. There are sections A and B, Section A contains 6 questions out of which the candidate is required to attempt any 4 questions. Section B Contains short case study/application based question which is Compulsory. All questions are carrying equal marks.

Use of following supporting material is permitted during examination.  
(Mentioned in form No.205)

1. \_\_\_\_\_ 2. \_\_\_\_\_

**Section-A**

1. What are the basic financial decisions? How do they involve riskreturn trade off?
2. Write short notes:
  - (i) Financial leverage and operational leverage
  - (ii) Bonus shares
  - (iii) Lease financing and Hire purchase financing
  - (iv) Commercial paper.

3. (a) The following facts are available :
- Risk free rate .....9%
- Required rate of return .....18%
- Beta coefficient during next year .....1.5
- Expected dividend during next year .....Rs.3
- Growth rate in dividends .....8%
- Compute the price at which the shares of ABC should sell?
- (b) What is Risk? How can risk of a security be calculated? Explain with the help of example.
4. (a) Consider the following figures pertaining to risk free rate, market rate and return of a security of Pappu Ltd.

Year	Risk Free rate	market Rate ( $K_m$ )	Security Return ( $R_j$ )
1	0.06	0.14	0.08
2	0.05	0.03	0.11
3	0.07	0.21	0.29
4	0.08	0.26	0.25
5	0.09	0.03	0.07
6	0.07	0.11	0.04

Determine the cost of equity capital in the context of CAMP. Past data may be taken as a proxy for future.

- (b) Risk free return - 7.75%
- Beta - 2
- Expected return of investors - 16%
- Apply CAPM compute the expected market return.
5. (a) What are the factors that influence management's decision to pay dividend of a certain amount?

- (b) Define and distinguish between the concepts of merger, take over and amalgamation. Illustrate your answer with suitable examples.
6. (a) What is capital budgeting? Why is it significant for a firm?  
 (b) How do you calculate the accounting rate of return? What are its limitations?

## Section-B

7. Case study :

A firm has applied for working capital finance from a commercial bank. You are requested by the bank to prepare an estimate of the working capital requirement of the firm. You may add 10% to your estimated figures to account for exigencies. The following is the firm's projected profit and loss account:

1. Sales .....	22,47,000
2. Cost of goods sold .....	16,37,100
3. Gross profit.....	6,09,900
4. Administration expenses.....	1,49,800
5. Selling expense .....	1,39,100
6. Profit before tax.....	3,21,000
7. Tax provision .....	1,07,000
8. Profit after tax .....	2,14,000

**The cost of goods sold is calculated as follows :**

Materials used .....	8,98,800
Wages and other expenses .....	6,68,750
Depreciation .....	2,51,450
<b>Total :</b>	<b>18,19,000</b>

<b>Less : Stock of finished goods</b>	
(10% product not yet sold).....	1,81,900
Cost of goods sold .....	<u>16,37,100</u>

The figures given above relate only to the goods equal to 15 percent of the year's production (in terms of physical units) are in progress on an average requiring full material but only 40% of other expenses. The firm has a policy of keeping 2 months consumption of material in stock.

All expenses are paid 1 month in, arrear suppliers of material grant 15 month credit sales are 20% cash while remaining sold on 2 month credit. 70% of the income tax was to be paid in advance in quarterly installments.

**Gurukpo.com**  
No. 1 Educational Web Portal in India



## Bibliography

<b>Sr. No.</b>	<b>Name of the Book</b>	<b>Name of the Author</b>
1.	Financial Management	I.M. Pandey
2.	Financial Management	M.R. Agrawal
3.	Financial Management	Agrawal & Mishra
4.	Financial Management	Richa Thakul & Shaifali Mathur
5.	Indian Financial System	By Khan

**Gurukpo**.com  
No. 1 Educational Web Portal in India