**SYLLABUS**

**Class – B.B.A.LL.B VI Sem. Subject – Financial Management**

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| --- | --- |
|  **Unit-iii****Unit-ii****Unit-i** | Financial management meaning, nature and scope of finance, finance goals: profit maximization. Wealth maximization Wealth finance functions – investment, financing and dividend decisions.  |
|  | Capital budgeting: nature of investment decisions investment evaluation criteria-net present value, internal rate of return, profitability index, payback period, accounting rate of return, NPV and IRR comparison: capital rationing risk analysis in capital budgeting. |
|  | Working capital: meaning significance and types of working capital of working capital: sources of working capital: management of inventory: management of cash: management of account receivables optimum credit policy: credit collection: factoring service: various committee reports on bank finance: dimensions of working capital management.  |
| **Unit-iv** | Capital structure theories: traditional and MM hypotheses: determining capital structure in practices: Capital structure planning .Cost of capital meaning and significance of cost of capital: calculation of cost of debt, preference capital, equity capital and retained earnings: O operating and financial leverages measurement of leverages effects of operating and financial leverages on profit.  |
| **Unit-v** | Dividend decisions – Types of dividend –dividend models – principal of dividend policy – practical aspects of dividend.  |

**Unit-i**

**Introduction**

In our present day economy, Finance is defined at the provision of money at the time when it is required. Every enterprises, whether big medium or small, needs finance of carry on its operations and to achieve its targets, in fact finance is so indispensable today that it is rightly said to be the lifeblood of an enterprise without code finance no enterprise can possibly accomplish its objectives.

**Finance**

Public Finance

Private Finance

1. Government Institutions
2. State Government
3. Local-self government
4. Central government
5. Personal finance
6. Business Finance
7. Finance of Non-profit Organization

However, there are three main approaches to finance

1. The first approach views finance as to providing to funds needed by a business on most suitable terms, this approach confines finance to the raising of funds and to the study of financial institutions and instruments from where funds come to procured.
2. The second approach relates finance to cash.
3. The third approach views finance as being concerned with raising of funds and their effective utilization.

**Definition of Financial Management –**

“Financial Management is the operational activity of a business that is responsible for obtaining and effectively utilizing the funds necessary for efficient operations.” – Prof. J.L. Marsie

“Financial Management is an area of financial decision making, harmonizing individual motives and enterprise goals.” – Weston and Brigham

**Finance Functions**

Experts differ significantly as what are finance functions. Such difference in approach may be put under categories:

1. Traditional concept of Finance function
2. Modern Concept of Finance functions

**Finance Production**

Traditional Approach

(Corporate finance)

Modern Approach

(Finance Management)

Issues Involved

* Financial Institutions
* Financial Instrument
* Procedural Details
* Funds needed at episodic events

Issues involved

* Total volumes of funds needed and acquisition of asses
* Financing the funds needed
* Rate or growth

Procurement of funds

Acquisition of funds as well as Utilisation of funds

1. Traditional concept of Finance function

According to traditional concept of finance function is related only to the arrangement of funds for the business. In other word, procuring necessary capital for the business is the function of financial executive. Financial executive has to take decisions as to what are the sources of capital and how much funds should be raised, what is the proper time of acquiring such funds, on what conditions such funds should be raised etc.

According to Soloman Ezro, The traditional approach thus focused more on sources of funds and was too often largely concerned with specific procedural details.

1. Modern Approach of Finance function.

This approach attempts to answer the question like –

1. What is the total volume of funds and enterprise should arrange?
2. What specific assets should an enterprise acquire?
3. How should the funds required be raised?
4. What should be the composition of liabilities?
5. How should profit be allocated?

Capital Expenditure Decision

Current Assets Or working Capital Management

Long term sources (Capital Structure Decisions)

Short term sources (Working capital financing)

Cash Receivables Inventory

Investment Decisions

Dividend Decisions

Financing Decisions

FM

Cost of Capital

**Investment Decisions**

Investment decisions are concerned with selecting the right type of assets in which funds will be invested by the firm. The assets which can e acquired fall into two groups: (i) Long-term assets (fixed assets), which would yield a return over a period of time to future, and (ii) short-term assets (also known as current assets), which are in normal course of business operations convertible into cash usually within a year. As such, investment decisions of the firm are of two types – long term investment decisions popularly known in the financial literature as ‘Capital budgeting’ and short term investment decisions i.e., financial decisions making with reference to current assets popularly designed as ‘current Assets Management’.

**Financing Decisions**

Financial manager has to make a decision regarding raising of finances (funds) i.e. he has to decide the source-mix or capital structure or leverage. The two important sources of financing are debt and equity. Debt is fixed interest source of financing and equity is variable dividend source of financing.

A proper balance between debt and equity of ensure a tradeoff between risk and return is necessary. Financing decision involves capital structure decision along with its theory.

**Dividend Decisions**

The third major decision of financial management is the decision relating to declaration and payment of dividend. Financial manager has to advise the top management (Board of directors) as what portion of profits should e distributed as dividend to the shareholders and what portion should be retained in the business as well as part of investment decision.

All these three financial decisions as finance function are inter-related because these have the same objective, i.e. maximization of wealth. As such, these should be jointly taken, so that financial decisions-making is optimal with reference to objectives of financial management.

**Nature and Characteristics of financial Management**

1. More analytical than descriptive
2. A continuous & Dynamic process;
3. An integral part of General Management
4. strikes coordination in all functions
5. centralized functions
6. Scientific art.

**LIMITATIONS OF TRADITIONAL APPRAOCH**

1. One-sided approach
2. Ignores the internal decision-making
3. Applicable to company form of organization
4. More emphasis on episodic events.
5. Focus on the long term financing only
6. Ignores the central issue of financial management.

**Modern Approach**

 The central issues of Financial Management are ignored by the traditional approach.

Experts like Walker, Hawrd and Lipton, soloman Ezra etc. have explained the finance function as a financial decision-making.

According to these experts, the meaning of finance function is confined not only to acquisition of funds but also to making effective use of such funds.

Modern approach gives analytical frame work for financial problems. Under this Approach, three types of decisions have to be taken- investment decisions, financing decisions and dividend-decisions.

According to Soloman Ezra, "The newer broader approach aims at formulating rational policies, for optimum use; procurement and allocation of funds."

**NATURE OF FINANCIAL MANAGEMENT**

1. More Analytical the descriptive
2. A continuous & dynamic process.
3. An integral part of General Management
4. Strikes Coordination in all functions
5. Centralized function.
6. Scientific Art.

**SCOPE**

1. Estimating Financial Requirements- The first task is to estimate short term and long requirements of his business. For this prepare a financial plan for present as well as future
2. Deciding Capital Structure- The mixture of debt and 'equity maintaining by the firm.
3. Selecting a source of finance- Various sources from which finance may be raised include: debentures, financial institutions, qpiri4Orcial banks, public deposits etc.
4. Selecting a pattern of investments- It means the uses of funds.
5. Proper Cash Management- Management of assets and liabilities. Cash Flow statement and Liquidity must be maintained in it.

**FUNCTIONS OF FINANCIAL MANAGEMENT**

There are two types, of functions:

1. Executive Functions
2. Routine functions
3. **Executive functions-** Making reasonable forecast of Financial requirements and arranging the sources for the supply of funds, making effective and maximum use of funds provided by the investors etc are the objectives of financial management for which the following functions are carried out:
4. Financial Forecasting- It is the Primary function of financial management because it is the foundation of financial planning. Forecasting about- new enterprises are made by promoters or investors while going concern financial requirements are being forecast by financial executives. Such forecasting needs the applications of various statistical mathematical and accounting techniques.
5. Financial planning- It is done under three distinct sub-activities-
6. Formulation of financial objectives
7. Framing the financial Policies College of Commerce & Management
8. Developing financial procedures.

Both short term & long term plans are prepared with respect to each of above sub activities.

1. Financial Decisions- It involves determination of financial sources, comparative study of their cost of capital, examining the impact on share holder’s equity etc.
2. Financial Negotiations: It means contact all the possible suppliers of funds and to finalize the contract through negotiations / talks. In this process statutory provision, rules and assumptions are to be executed.
3. Investment Decisions- Decisions about the investments' of funds Volume of fund/investments in fixed assets (long term investment) and volume of investments in current assets (short-term investments)
4. Management of income- Correct distribution of income in correct proportion and following the appropriate dividend policy.
5. Management of cash flows- Proper flow of cash is essential for every business Therefore adopt a fair policy regarding the cash flow (both in flows & out flows) and also mange cash surplus! Deficiencies.
6. Appraisal of Financial performing- It is necessary to evaluate & analyse the financial Performance of the business concern in a definite interval and to communicate the results to top management.
7. To make efforts for increasing the productivity of the capital- By the new opportunities of investments.
8. To advise the top Management- Whenever top management has to advise the best solution by diagnosis the problem, alternative solution to the problem. Selection of the best solutions.
9. **Routine Functions-** These functions are being performed by lower-level employee on daily basis. All the top authorities take financial decisions with the help of these functions.
10. Record keeping
11. Preparation of various financial statements
12. Arranging the cash balance as per requirements
13. Managing the credit
14. Safety of significant financial documents.

**OBJECTIVE OF FINANCIAL MANAGEMENT**

It can be explained from two points of view- Macro level & Micro Level

Macro-level theory says the whole society is benefited. On the contrary, according to micro-level theory, the financial objective is determined as per the individual view point of a company, firm or enterprise.

There are two mutually opposite thought regarding objective of financial management at Micro -level.

1. Profit Maximization (P.M.O.) objectives
2. Wealth Maximization (W.M.O) objectives

**PROFIT MAXIMIZATION OBJECTIVES**

The objective of financial management of an enterprise is to maximize the profit. Financial Manager should select that alternative which may maximize the profit. In other words, all such actions which increase the profit should be undertaken and those which reduce the profit should be avoided.

For maximizing the profit either production is to be maximized from limited resources or cost should be minimized for a particular level of production volume.

**JUSTIFITION OF PMO**

1. Rationality
2. Maximization of Social benefits
3. Efficient Allocation and uses of resources
4. Measurement Of success of decisions
5. Source of incentives.

**LIMITATION OF PMO**

Profit maximization objective (PMO) is considered to be a very limited (narrow) objective, because it has a no. of drawbacks.

1. Ambiguity/ Loose Expression of the Term profit
2. Profit Maximization objective ignores timings of benefit
3. Fails to recognize the quality of benefits.

**Wealth Maximization Objectives (W.M.O)**

Wealth Maximization is the appropriate objective of an Enterprise Financial theory asserts that wealth Maximization is the single substitute for a stockholder’s utility.

When the firm maximizes the stock holder's wealth, the individual stock holder can us wealth to maximize his individual utility.

Maximum Utility

Maximum Stock Holder’s wealth y

Maximum Current stock price per share

Refers

Refers

$$Stock Holder^{'}s holder^{'}s current=Number of share owned x current stock price per share ^{}$$

**Merits of WMO**

1. Precise and unambiguous
2. Considers the timing of benefits
3. Takes case of quality of benefits

Financial

Is concerned with

Investment Decision

Analyses

Wealth

Risk & Return Relationship (Trade)

Financing Decision

Dividend Decision

**BASIC FINANCIAL DECISIONS**

1. Investment Decisions- Investment decisions are concerned with selecting the right type of assets in which funds will be invested by the firm. There are two types of assets.
2. Long term assets (Fixed assets)
3. Short-term assets (Current assets)

Long, term assets which would yield a return over a period of time in future. Long term investment decisions popularly known in financial literature as "Capital Budgeting".

Capital Budgeting- The process of planning and managing a firm's long term investment.

It is the planning process used to determine whether a firm's long term investments such as new machinery, replacements machinery, new plants, new products and research development projects are worth pursuing. It is budget for major capital, or investment expenditure.

Short term Assets which are in normal course of business operations convertible into cash usually within a year.

Short term investment decisions known as 'Current Assets Management' or 'Working capital Management'

Working Capital Management- A management firms short terms assets and liabilities

These are decisions involving managing the relationship between a firms' short term-assets and its short-term liabilities.

The goal of working capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow to satisfy both maturing short-term debt and upcoming operational expenses. It means the short term investment decision is the tradeoff between profitability and liquidity (risk)

Financing; Decisions- Financing Decisions are concerned with the proper mix of debt & equity. Therefore, financing decisions are involves “capital structure decision.”

Capital structure: - The mix of debt and equity maintained by the firm. The two important sources of financing are debt and equity.

Debt is fixed interest source: of financing is variable dividend source of financing. Decide the appropriate mix of debt and equity in such a way as to maximize the share holder% Wealth. A proper balance between debt and equity to ensure a tradeoff between risk & return is necessary.

1. Dividend Decisions- The third major decision of financial Management is the decision relating to declaration and Payment of dividend.

Financial manager has to advice the top management (Board of directors) as what portion of profits should be distribute as dividend to the share holders and what portion should be retained in the business for further investment.

If adequate profitable within the enterprise; profits are to be retained because return to shareholders would be maximum and price of share would- also rise.

If the enterprise does not have investment opportunities the profit should be distributed as dividends to shareholders.

All these three financial decision as finance function are inter-related because these have the same objective, i.e., maximization of Wealth. (Share holder's wealth)

Investment

Financing Decision

Dividend Decision

Inter-Relation of Financial Decision

 **UNIT – II**

**Unit-ii**

**NATURE OF INVESTMENT DECISIONS**

The **investment decisions** of a firm are generally known as the capital budgeting, or capital expenditure decisions. A **capital budgeting decision** may be defined as the firm’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. The long-term assets are those that affect the firm’s operations beyond the one- year period. The firm’s investment decisions would generally include expansion, acquisitions, modernizations and replacement of the long-term assets. Sale of a division or business (divestment) is also as an investment decision. Decision like the change in the methods of sales distribution, or an advertisement campaign or a research and development programmed have long-term implications for the firm’s expenditures and benefits, and therefore, they should also be evaluated as an investment decision. It is important to note that investment in the long-term assets invariably requires large funds to be tied up in the current assets such as inventories and receivables. As such, investment in fixed and current assets is one single activity.

 The following are the features of investment decisions:

* The exchange of current funds for future benefits.
* The funds are invested in long-term assets.
* The future benefits will occur to the firm over a series of years.

It is significant to emphasis that expenditures and benefits of an investment should be measured in cash. In the investment analysis, it is cash flow, which is important, not the accounting profit. It may also be pointed out that investment decisions affect the firm’s value. The firm’s value will increase if investments are profitable and add to the shareholders’ wealth.

Thus, investments should be evaluated on the basis of a criterion, which is compatible with the objective of the shareholders’ wealth maximization. An investment will add to the shareholders’ wealth if it yields benefits in excess of the minimum benefits as per the **opportunity cost of capital**.

**INVESTMENT EVALUATION CRITERIA**

Three steps are involved in the evaluation of an investment:

* Estimation of cash flows
* Estimation of the required rate of return (the opportunity cost of capital)
* Application of a decision rule for making the choice.

The first two steps, discussed in the subsequent chapters, are assumed as given. Thus, our discussion in this chapter is confined to the third step. Specifically, we focus on the merits and demerits of various decision rules.

**INVESTMENT DECISION RULE**

The investment decision rule may be referred to as capital budgeting techniques, or investment criteria. A sound appraisal technique should be used to measure the economic worth of an investment project. The essential property of a sound technique is that it should maximize the shareholders’ wealth. The following other characteristics should also be possessed by a sound investment evaluation criterion:

* It should consider all cash flows to determine the true profitability of the project.
* It should provide for an objective and unambiguous way of separating good projects from bad projects.
* It should help ranking of projects according to their true profitability.
* It should recognize the fact that bigger cash flows are preferable to smaller ones and early cash flows are preferable to later ones.
* It should help to choose among mutually exclusive projects that project which maximizes the shareholders’ wealth.
* It should be a criterion which is applicable to any conceivable investment project independent of others.

These conditions will be clarified as we discuss the features of various investment criteria in the following pages.

**EVALUATION CRITERIA**

A number of investment criteria (or capital budgeting techniques) are in use in practice. They may be grouped in the following two categories:

1. **Disconnected Cash Flow (DCF) Criteria**
* Net present value (NPF)
* Internal rate of return (IRR)
* Profitability index (PI)
1. **Non- disconnected Cash Flow Criteria**
* Payback period (PB)
* Discounting payback period
* Accounting rate of return (ARR)

Discounted payback is a variation of the payback method. It involves discounted cash flows, but as we shall see later, it is not true measure of investment profitability. We will show in the following pages that the net present value criterion is the most valid technique of evaluating an investment project. It is consistent with the objectives of maximizing the shareholders’ wealth.

**NET PRESENT VALUE METHOD**

The net present value (NPV) method is the classic economic method of evaluating the investment proposals. It is a DCF technique that explicitly recognizes the time value of money. It correctly postulates that cash flows arising at different time period differ in value and are comparable only when their equivalents-present value- is found out. The following steps are involved in the calculation of NPV:

* Cash flows of the investment project should be forested based on realistic assumptions.
* Appropriate discount rate should be identified to discount the forecast cash flows. The appropriate discount rate is the project’s opportunity cost of capital, which is equal to the required rate of return expected by investors on investments of equivalent risk.
* Present value of cash flow should be calculated using the opportunity cost of capital as the discount rate.
* Net present value should be found out by subtracting present value of cash outflows from present value of cash inflows. The project should be accepted if NPV is positive (i.e.,NPV>0).

**Why is NPV important?**

A question may be raised: why should a financial manager invest Rs. 2,500 in Project X? Project X should be undertaken if it is best for the company’s shareholders; they would like their shares to be as valuable as possible. Let us assume that the total market value of a hypothetical company is Rs. 10,000; which includes Rs. 2,500 cash that can be invested in project X. Thus the value of the company’s other assets must be Rs. 7,500. The company has to decide whether it should spend cash and accept Project X or to keep the cash and reject project X. Now suppose the PV of project X is Rs. 2,725 which is greater than Rs. 2,500 cash. If project X is accepted, the total market value of the firm will be Rs. 7,500+ PV of project X= Rs 7,500+ Rs 2,725= Rs. 10,225; that is, an increase by Rs.225. The company’s total market value would remain only Rs 10,000 if project X is were rejected.

**Evaluation of the NPV Method**

NPV is the true measure of an investment’s profitability. It provides the most acceptable investment rule for the following reasons:-

* **Time value:-** It recognizes the time value of money-a rupee received today is worth more than a rupee received tomorrow.
* **Measure of true profitability: -** It uses all cash flows occurring over the entire life of the project in calculating its worth. Hence, it is a measure of the project’s true profitability. The NPV method relies on estimated cash flows and the discount rate rather than any arbitrary assumptions, or subjective considerations.
* **Value-additivity: -** The discounting process facilitates measuring cash flow in terms of present values; that is, interms of equivalent, current rupees. Therefore, the NPVs of projects can be added. For example, NPV (A+B)=NPV(A)+NPV(B). This is called the **value addictivity principle**. It implies that if we know the NPVs of individual projects, the value of the firm will increase by the sum of their NPVs. We can also say that if we know values of individual assets, the firm’s value can simply be found by adding their values. The value- addictivity is an important property of an investment criterion because it means that each project can be evaluated, independent of others, on its own merit.
* **Shareholder value:** The NPV method is always consistent with the objective of the shareholder value maximization. This is the greatest virtue of the method.

Are there any limitations in using the NPV rule? The NPV method is a theoretically sound method. In practice, it may pose some computational problems.

* **Cash flow estimation**: The NPV method is easy to use if forcasted cash flows are known. In practice, it is quite difficult to obtain the estimates of cash flows due to uncertainty.
* **Discount rate:**  it is also difficult in practice to precisely measure the discount rate.
* **Mutually exclusively projects:** Further, caution needs to be applied using the NPV method when alternative (mutually exclusive) projects with unequal lives or under funds constraints are evaluated. The NPV rule may not give unambiguous results in these situations. These problems are discussed in detail in a later chapter.
* **Ranking of projects:** it should be noted that the ranking of investment projects as per the NPV rule is not independent of the discount rates.

**INTERNAL RATE OF RETURN METHOD**

The internal rate of return (IRR) method is another discounted cash flow techniques, which takes account of the magnitude and timing of cash flows. Other terms used to describe the IRR method are yield on an investment, marginal efficiency of capital, rate of return over cost, time-adjusted rate of internal return and so on. The concept of internal rate of return is quite simple to understand in the case of a one period project. Assume that you deposit Rs. 10,000 with a bank and would get back Rs. 10,800 after one year. The true rate of return on your investment would be:

 10,800- 10,000

 Rate of return= ……………………..

10,000

 10,800

 **………….. –** 10,000 = 1.08 – 1= 0.08 or, 8 %

 10,000

* You may observe that the rate of return of your investment (8 percent) makes the discounted (present) value of your cash inflows (Rs. 10,800) equal to your investment (Rs 10,000).

**Evaluation of IRR Method**

IRR method is like the NPV method. It is a popular investment criterion since it measures profitability as a percentage and can be easily compared with the opportunity cost of capital. IRR method has following merits:-

* **Time Value:** The IRR method recognizes the time value of money.
* **Profitability measure:** It considers all cash flows occurring over the entire life of the project to calculate its rate of return.
* **Acceptance rule:** It generally gives the same acceptance rule as the NPV method.
* **Shareholder value:** it is consistent with the shareholders’ wealth maximization objectives. Whenever a project’s IRR is greater than the opportunity cost of capital, the shareholders’ wealth will be enhanced.

Like the NPV method, the IRR method is also theoretically a sound investment evaluation criterion. However, IRR rule can give misleading and inconsistent results under certain circumstances. Here we briefly mention the problems that IRR method may suffer from.

* **Multiple rates**: A project may have multiple rates, or it may not have a unique rate of return. As we explain later on, these problems arise because of the mathematics of IRR computation.
* **Mutually exclusive projects:** it may also fail to indicate a correct choice between mutually exclusive projects under certain situations.
* **Value addictivity:** Unlike in the case of the NPV method, the value addictivity principle does not hold when the IRR method is used- IRRs of projects do not add.

**PROFITABLEITY INDEX**

Yet another time –adjusted method of evaluating the investment proposals is the benefit- cost (B/C) ratio or profitability index (PI). **Profitability index** is the ratio of the present value of cash inflows, at the required rate of return, to the initial cash outflow of the investment. The formula for calculating **benefit-cost ratio** or profitability index is as follows:

 

 **Evaluation of profitability index Method**

Like the NPV and IRR rules, profitability index is a conceptually sound method of appraising investment projects. It is a variation of the NPV method, and requires the same computations as the NPV method**.**

* **Time value:** it recognizes the time value of money.
* **Value maximization:** It is consistent with the shareholder value maximization principle. A project with PI greater than one will have positive NPV and if accepted, it will increase share-holders’ wealth.
* **Relative Profitability:** In the PI method, since the present value of cash inflows is divided by the initial cash outflow, it is a relative measure of project’s profitability.

Like NPV method, PI criterion also requires calculation of cash flows and estimate of the discount rate. In practice, estimation of cash flows and discount rate pose problems.

**PAYBACK**

The payback is one of the most popular and widely recognized tradional methods of evaluating investment proposals. Payback is the number of years required to recover the original cash outlay invested in a project. If the project generates constant annual cash inflows, the payback period can be computed by dividing cash outlay by the annual cash inflow. That is:

Payback = Initial Investment = C0

 Annual cash inflow C

**Evaluation of payback**

Payback is a popular investment criterion in practice. It is considered to have certain virtues.

It is considered to have certain virtues.

* **Simplicity:** The most significant merit of payback is that it is simple to understand and easy to calculate. The business executives consider the simplicity of method as a virtue. This is evident from their heavy reliance on it for appraising investment proposals in practice.
* **Cost effective:** Payback method costs less than most of the sophisticated techniques that requires a lot of the analysts’ time and the use of computers.
* **Short term effects:** A company can have more favorable short-run effects on earnings per share by setting up a shorter standard payback period. It should, however, be remembered that this may not be a wise long-term policy as the company may have to sacrifice its future growth for current earnings.
* **Risk shield:** The risk of the project can be tackled by having a shorter standard payback period as it may ensure guarantee against loss. A company has to invest in many projects where the cash inflows and life expectancies are highly uncertain. Under such circumstances, payback may become important, not so much as a measure of profitability but as a means of establishing an upper bound on the acceptable degree of risk.
* **Liquidity:** The emphasis in payback is on the early recovery of the investment. Thus, it gives an insight into the liquidity of the project. The funds so released can be put to other uses.

In spite of its simplicity and the so-called virtues, the payback may not be a desirable investment criterion since it suffers from a number of serious limitations:

* **Cash flows after payback:** Payback fails to take account of the cash inflows earned after the payback period.
* **Cash flow ignored:**  Payback is not an appropriate method of measuring the profitability of an investment project as it does not consider all cash inflows yielded by the project.
* **Cash flow patterns:** Payback fails to consider the patter of cash inflows, i.e., magnitude and timing of cash inflows. In other words, it gives equal weights to returns of equal amount even though they occur in different time periods.
* **Administrative difficulties:** A firm may face difficulties in determines the maximum acceptable payback period. There is no rational basis for setting a maximum payback period. It is generally a subjective decision.
* **Inconsistence with shareholder value:** Payback is not consistent with the objective of maximizing the market value of the firm’s shares. Share values do not depend on payback periods of investment projects.

Let us re-emphasis that the payback is not a valid method for evaluating the acceptability of the investment projects. It can, however, be used along with the NPV rule as a first step in roughly screening the projects. In practice, the use of DCF techniques has been increasing but payback continues to remain a popular and primary method of investment evaluation.

* **ACCONTING RATE OF RETURN METHOD**

The accounting rate of return (ARR), also known as the return on investment (ROI), uses accounting information, as revealed by financial statements, to measure the profitability of an investment. The accounting rate of return is the ratio of the average after tax profit divided by the average investment. The average investment would be equal to half of the original investment if it were depreciated constantly. Alternatively, it can be found out by dividing the total of the investment’s book values after depreciation by the life of the project. The accounting rate of return, thus, is an average rate and can be determined by the following equation:

 ARR = Average income

 Average investment

* **Acceptance Rule**

As an accept-or-reject criterion, this method will accept all those projects whose ARR is higher than the minimum rate established by the management and reject those projects which have ARR less than the minimum rate. This method would rank a project as number one if it has highest ARR and lowest rank would be assigned to the project with lowest ARR.

* **Evaluation of ARR Method.**

The ARR method may claim some merits:

* ***Simplicity*** The ARR method is simple to understand and use. It does not involve complicated computations.
* ***Accounting data*** The ARR can be readily calculated from the accounting data; unlike in the NPV and IRR methods, no adjustments are required to arrive at cash flows of the project.
* ***Accounting profitably*** The ARR rule incorporates the entire steam of income in calculating the entire stream of income in calculating the project’s profitability.

The ARR is a method commonly understood by accountants, and frequently used as a performance measure. As a decision criterion, however, it has serious shortcomings.

* ***Cash flows ignored*** The ARR method uses accounting profits, not cash flows, in appraising the projects. Accounting profits are based arbitrary assumptions and choices and also include non-cash items. It is, therefore, inappropriate to rely on them for measuring the acceptability of the investment projects.
* ***Time value ignored*** The averaging of income ignores the time value of money. In fact, this procedure gives more weight age to the distant receipts.
* ***Arbitrary cut-off*** The firm employing the ARR rule uses an arbitrary cut-off yardstick. Generally, the yardstick is the firm’s current return on its assets (book-value.) Because of this, the growth companies earning very high rates on their existing assets may reject profitable projects (i.e., with positive NPVs) and the less profitable companies may accept bad projects (i.e., with negative NPVs.) .
* The ARR method continues to be used as a performance evaluation and control measure in practice. But its use as an investment criterion is certainly undesirable. It may lead to unprofitable allocation of capital.

**NPV VERSUS IRR**

The net present value and the internal rate of return methods are two closely related investment criteria. Both are time-adjusted methods of measuring investment worth. In case of independent projects, two methods lead to same decisions. However, under certain situations, a conflict arises between them. It is under these cases that a choice between the two criteria has to be made.

**CAPITAL RATIONING**

We have discussed the various methods of evaluating investment proposals and have concluded that N.P.V. and I.R.R. are the sound methods particularly, when investment proposals under consideration are not mutually exclusive and there are unlimited funds available in the concern making it possible to accept all profitable investment proposals. However, in real situation, many concerns have limited funds and as such all profitable investment proposals may not be accepted; limited funds would have to be allocated to various acceptable proposals in such a way that it maximizes the long-run returns. There comes the problem of rationing them. Thus capital rationing may refer to the situation where the management has more acceptable investment proposals requiring more amount of finance than available to the concern. One may clearly note that the state of limited funds may arise on account of external factors or internal constraints imposed by the management.

 As mentioned above, a concern may not be able to accept all profitable investment proposals, if and when capital rationing is imposed. All investment proposals falling into acceptable criterion should be ranked according to profitability (I.R.R. or P.I.). Such ranking is done in descending order of I.R.R.or P.I. Investment proposals are selected/accepted in descending order of profitability until the budgeted funds are exhausted.

 Since the concern would have to reject certain profitable investment proposals due to lack of funds under capital rationing, it would not be able to maximize its value. In fact, maximization of value is subject to budget constraint. For this reason, the management should choose that combination of investment proposals which the maximum net present values. Application of this principle may force the management not to accept proposals strictly in descending order of profitability. It means that management may accept several less profitable proposals with positive N.P.V. making highest N.P.V.

In fact, risk varies from one investment proposal to another, some proposals may be riskless, some may be less risky, while others may be more risky. Similarly, future, events cannot be anticipated with certainty due to economic, social, fiscal, and political and other reasons.
Since such risk and uncertainty would greatly affect the acceptance or otherwise of the investment proposals, it becomes imperative to incorporate the risk factor in our analysis.

**Meaning of Risk**

 All the methods of evaluation of investment proposals are based on the benefits likely to be derived from the proposal. These benefits are measured in terms of cash flows which are just future estimates. These estimates are based on certain assumptions. The actual benefits in terms of cash inflows depend upon a variety of factors. If these factors are not precisely forecasted at the time of estimating cash flows (benefits) there is very likelihood that actual returns will not correspond to the estimates. This is technically referred to as ‘risk with reference to capital budgeting decisions may be defined as the variability which is likely to occur in future between estimated return and actual return. If the variability is greater, the project will be more risky and vice-versa.

 Though the decision situations as to risk may be broken into three types : (i) certainty (no risk), (ii) risk, and (iii) uncertainty, we propose here to use risk, and uncertainty in an interchangeable sense. Since the decisions with certainty imply the decisions discussed earlier, we propose here to incorporate risk factor (risk and uncertainty both being taken in the same sense.) It is quite obvious that the incorporation of risk factor will certainly affect the cash flows from an investment proposal. The various techniques, which are used to incorporate risk factor in the analysis of capital expenditure decisions, are:

1. Risk Adjusted Discounted Rate
2. Certainty Equivalent Coefficient.
3. Sensitivity Analysis.
4. Probability Assignment.
5. Standard Deviation.
6. Coefficient of Variation.
7. Decision Tree

It is proposed to give a brief sketch of the above techniques duly illustrated by suitable examples.

1. **Risk Adjusted Discount Rate:** This technique is one of the simplest and most widely used methods for incorporating risk in the capital budgeting decision. It is based on the presumption that a comparatively higher rate of return is expected on risky projects as compared to less risky projects. This rate (R.A.D.R.) is generally obtained by incorporating the amount of risk (known as risk premium rate) in the discount rate used in the present value calculations (i.e., risk-free rate). Thus, risk-free rate is the rate at which the future cash inflows should be discounted had three been no risk. It takes only time factor in discounting. Risk premium rate is the extra return expected by the investors over and above risk-free rate on account of the risk inherent in a particular project. Naturally this rate would vary from project to project depending upon the quantum of risk. The Risk Adjusted Discount Rate is a composite discount rate which combines both the time and risk factors.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Unit-iii**

**WORKING CAPITAL**

 **MEANING**

Every business needs funds for two purposes — for its establishment and to carry out its day to day operations. Long term funds are required to create production, facilities through purchase of fixed assets such as plant, machinery land, building, furniture etc. investment in these assets- represent that part of firm's capital which is blocked on a permanent or fixed basis and is called fixed- capital.

Funds are also needed for short term purposes for the purchase of raw materials, payment of wages and other day to day expenses etc these funds are working capital funds. Thus invested in current assets keep evolving- fat and are being constantly converted into cash and this cash flow again in exchange for other current assets. Hence it is also known as "revolving .or circulating capital or short term capital." '

**DEFINITION**

"Working a capital has ordinarily been defined as the excess of current assets over current liabilities”

**IDEAL DEFINITION**

"A firm's working capital consists of its investments in current assets which include short term assets such as cash and bank balance, inventories, receivables & marketable securities.

**IMPORTANCE OF WORKING CAPITAL**

Temporary of variable working capital importance or advantage of adequate working capital.

1. Solvency of business — adequate working capital helps in maintaining solvency of the business by providing uninterrupted flow of production.
2. Good will- Sufficient working capital enables a business concern to make prompt payments and hence helps creating and 'maintaining goodwill.
3. Easy loans- A concern having adequate working capital, high solvency and 't standing can arrange loans from banks other on easy and favorable terms
4. Cash discount- Adequate working capita' also -enables -a concern to avail cash discounts on the purchase and hence it reduce costs.
5. Regular. Supply of Raw material- Sufficient working capital ensures regular supply of raw material and continuous production.
6. Regular payment of salaries, wages & day to day commitments- By regular payments increases efficiency, reduces wastages and costs and enhances production and profits.

**COMPONENTS OF WORK1NG-CAPITAL**

There are two components, of working capital as under

1. Current Mets- Current Assets are those assets which in the ordinary -course of business can be converted into cash within a short period of normally one accounting ,year
2. Current liabilities- Current liabilities are those liabilities which are intended to be paid in the ordinary course of business within a short period of normally one accounting year.

**CONSTITUENTS OF**

|  |  |
| --- | --- |
| **Current Assets**  | **Current Liabilities** |
| Cash in hid and bank balance | Bills payable |
| Bills Receivables | Sundry creditors or accounts payable |
| Sundry Debtors | Accrued bi outstanding expense |
| Short term loans, advances | Short term, loans, advances & deposit |
| Inventories of StockRaw materialsWork-in-processStores & sparesFinished goodsTemporary investment of surplus fund | Dividend payable  |
| Temporary investments of surplus fund | Bank overdraft |
| Prepaid Expense | Provision for taxation |
| Accrued Incomes |  |

Concept - There are two concepts of working capital

1. Balance Sheet Concept
2. Operating Cycle/Circular Flow Concept
3. Balance Sheet Concept — There are two interpretations of working capital under the balance sheet concept:
4. **Gross Working capital —** In the broad sense, the term working capital refers to the gross working capital represents the amount of funds invested in current assets.
5. **Net working capital —** In a narrow sense, the term working capital refers to the net working capital. Net working capital is the excess of current assets over current liabilities.

Networking capital = Current. Assets Current Liabilities

1. Operating .Cycle/Circular Flow Concept. Funds thus invested in current Assets keep revolving fast and are being constantly converted into cash and this cash flow out again in exchange for other, current assets. Hence, it is also known as revolving or circulating capital

The cycle starts with the purchase of raw material & other resources and ends with the realization of cash from the sale of finished goods.

Cash

Finished goods

Debtors

Sales

Raw Material

Work in Progress

**Kinds of working capital**

Working capital may be classified in two ways

1. On the basis of concept
2. On the basis of lime.

Kinds of working Capital

On the basis of Concept

On the basis of Time

Gross Working capital

Net Working

Permanent or fixed working capital

Temporary or variable working capital

Regular Working capital

Reserve Working capital

Seasonal Working capital

Special Working capital

1. Permanent or Fixed Working Capital- There is always a minimum level of current assets which Assets is called permanent or fixed working capital. is continuously required by the enterprise to carry out its normal Business like a minimum level of raw materials, work-in-progress finished goods and cash balance. This minimum level of current assets is called permanent of fixed working capital
2. Regular working capital - The permanent working capital can further be classified as regular working capital to ensure circulation of current assets from casu to inventories, from inventories to receivables and from receivables to cash and soon.
3. Reserve working capital- It is the excess amount over the requirement for regular working capital which may be provided for counting excise that may arise at unstated periods such as strikes, rise in price depression etc.
4. Temporary or variable working capital - It is the amount of working capital which is required to meet the seasonal demands and some special exigencies. Most of the enterprises ha.% e to provide • additional working capital meet the seasonal and special feeds
5. Seasonal Working capital - The capital required to meet the seasonal needs of the enterprises is called seasonal working capital.
6. Special working capital- Special working capitals that part of working capital which is required to meet special exigencies such as – launching of extensive marketing campaigns for conducting research etc.

**Excess or inadequate working capital**

Every business concern should have adequate working capital to runt’s business operations.

It should have neither excess nor shortage of working capital. Both positions are bad for any business.

**Disadvantages of Extensive working capital**

1. Excessive working capital means Rile funds which earn no profit for business and hence the business cannot earn a proper rate of return on investment.
2. Excessive Working capital implies excessive debtors and defective credit policy which may cause higher incidence of bad debts.
3. Due to low rate of return on investments, the value of shares may also fall.

**Disadvantages of Inadequate working capital**

1. The' firm cannot pay day to day expenses of its operations and it creates inefficiencies, increases cost and reduces the profit of business.
2. It can buy its requirements in bulk and cannot avail of discounts etc.
3. It becomes difficult for the firm to exploit favourable market conditions and undertake profitable project due to lack of working capital.

**Determinants of working capital**

1. Nature or character of Business.
2. Size of Business/Scale of operations.
3. Production Policy.
4. Manufacturing Process/ Length of production cycle
5. Seasonal variation
6. Working capital cycle
7. Rate of stock Turnover.
8. Credit Policy.
9. Business Cycles.
10. Rate of Growth Business’
11. Earning capacity & dividend policy
12. Price level changes.
13. Other factors.

**Needs of working capital**

The need of working capital arises due to t€ time gap between production and Realization of cash from sales. Thus, working capital is needed for the following purposes-

1. For the purchase of raw materials, components 84 spare.
2. To pay wages & salaries.
3. To incur day to day expenses and overheads cost such as fuel, power & office expenses etc.
4. To meet the selling costs as packing advertising etc.
5. To provide credit facilities to the customer
6. To maintain the inventories of raw material, work-in-progress, stores & spares and finished stock.

**Financing Working Capital**

Both core and variable working capital are to be supported by a mix of finance. Such mix may combine:

1. Spontaneous sources of financing –trade credit and other accounts payables including tax provisions arising spontaneously in the firm’s day-to-day operations.
2. Short-term sources of financing—bills payable, bank finance, marketable securities, etc.
3. Long- term sources of financing—long-term debt, equity, retained earnings, etc.

What combination f different sources of working capital financing should be adopted towards financing the core and variable working capital constitutes a major problem confronting the finance manager. Since spontaneous sources (trade credit and other accruals) are determined by exogenous factors, the crucial aspect for any working capital financing strategy is determining the proportion of current assets that is to be funded short-term sources of finances

**Three Strategies are Available**

1. **Conservative Financing Strategy:** This strategy calls for keeping the proportion of current assets that is to be financed by short-term sources as low as possible. Thus , in this case the principle is:

Fixed Assets Financed by long-term sources

 + }

Core Working Capital

 +

A portion of variable W.C. } Financed by short- term sources

 Only a portion of variable

 Working Capital

As such, less 100% of variable working capital is financed by short-term sources. Rates are then locked in for a longer term dispelling the uncertainty associated with frequent refinancing. The price of this strategy is higher financing costs, because long-term rates will normally exceed short-term rates. However, liquidity is assured due to availability of funds for a longer period.

B. Aggressive Financing Strategy: Under this strategy, short-term sources of financing are used even to finance the core working capital. As such, the principle here is

Fixed Assets } Financed by long-term sources +

Only a portion of core working capital

A portion of core and total }

Variable working capital Financed by Short-term sources

In this case, more than 100% of variable Working Capital is financed by short-term sources. Such aggressive strategy would boost, the bottom line but the company runs the risk of illiquidity because current assets portfolio may not churn out cash flows fast enough to service rapidly maturing obligations. Mr. P.B. Desai, Vice-President of United Phosphorus says, “Duration mismatches can create all kinds of cash flow problems.”

1. Hedging Strategy: Just to avoid duration mismatches, it is imperative to match the maturities of current assets with the financing mix. It is a cardinal principle of corporate finances that long-term assets should be financing by long-term sources and short-term assets by mix of long and short sources. Therefore, a hedging strategy would match each current assets with a financing instrument of approximately the same maturely. Thus, short-term working capital should be financing by short-term sources. The core component of current assets, however, should be financed through a mix of debt and equity’ As such, the principle is:

Fixed Assets } Financed by long-term sources

 +

Core working capital

Variable working Capital } Financed by Short-term sources

Note that permanent asset needs are matched exactly spontaneous plus long-term sources of financing, while temporary current assets are financed with short-term sources of financing.

**Structured Solution**

Of these three strategies, which one should be implemented by the CFO of a company would depend upon his vision and perception of the changes in financial markets, financial instruments and interest movements. Depending on his perception of interest rate movements, CFO can tweak the basic formula/principle to minimize interest costs. Again, the state of liquidity may also affect the strategy selection. When there is excess liquidity in the system CFO, should meet their working capital requirements through medium to long-term instruments. Conversely, if the tight liquidity situation in the economy has caused rates to surge, financing even the core component through short-term may be considered.

**Sources of financing of working capital**

Financing of working capital is to be arranged considering the practical aspect of working capital, i.e., whether it is fixed working capital or variable working capital .

These types of sources of financing the working capital are spontaneous, short-term and long- term. We may consider spontaneous sources as a part of short-term sources. Spontaneous sources comprise of trade credit, outstanding expenses and other account payable.

Bills payable, short-term bank loan, bank overdraft, cash credit, commercial papers, inter-company loans, etc., are the examples of long-term sources. Equity shares, term loans, debentures/bonds, retained earnings etc. are the examples of long-term sources. However, for the present discussion sources of financing of working capital are put into two categories:

1. Long-term sources,
2. Short-term sources including spontaneous.
3. **Long-term Sources**

Normally, this sources is resorted to finance that part/portion of working capital which is of permanent character, I e , it is believed that this type of working capital will be needed constantly for a longer period. Long-term sources for permanent working capital financing may have the following components:

1. Owned sources : the following may by including under this component :
2. Issue of shares: Issue of shares is an important source for raising fund/finance for permanent working capital. These shares may be both equity shares and preference shares. Since issue of equity shares does not create any fixed burden on the earnings of the business, therefore normally equity shares are issued for raising funds for financing permanent working capital.
3. Retained earnings: That part of earned profits in a business which is not distributed as dividend is called or known as retained earnings and it is consider as regular and costless sources of financing working capital. Working Capital requirements do increase with the growth of business concern and which can be met by reinvesting the profit in business itself.
4. Reserves : Like retained earnings, various types of reserves also do not involve any fixed charge on business earnings and therefore the use of such reserves in financing working capital is also considered as proper and profitable.
5. Sale of fixed assets: some fixed assets owned by the business concern may become obsolete and some of them are available as scrap/ residual. At the same time, some are being purchased due to faculty planning and forecasting and thus become as surplus or superfluous. All these assets can be disposed off and thus working capital can be arranged. However this may be fully irregular and non-dependable source.
6. Retiring current liabilities below-value: A business concern may avail some discount while making payments against current liabilities, i.e. , discharging the current obligations. Similarly, provisions for taxes and other known expenses are created and it is just possible that actual payment on these score may be less than the amount provided for. Thus, the payment of current liabilities at less than their book values should be considered as non-recurring sources for financing working capital.
7. Borrowed sources: Under this component of long-term sources, the following are including :
8. Debentures: Business concern may also raise funds for financing the working capital by issue of debentures in the same way as the issue of shares. It is, however noticeable that issue of debentures created fixed burden on the business, stability of business earnings, risk-factor etc.
9. Long-term loans/debts: In addition to the issue of debentures, a business concern may also obtain funds for working capital spontaneous ones. Following may be including in this category :
10. Trade Credit
11. Bank Credit
12. Public Deposits
13. Inter-corporate Deposits
14. Advances from customers
15. Internal sources Some New & Innovative (non-Bank) Such as :
16. Commercial Paper
17. Convertible Debentures
18. Factoring
19. Trade Credit: Sellers/suppliers of different kinds of products /raw materials provide credit to their customers spontaneously as per trade conventions. It is a common experience that a substantial part of purchases of goods and service in business are on credit terms rather than against cash payment. While the seller supplier of goods and service may perceive credit as a lever for increasing the sales volume, the buyer may look upon it as an alternative to loaning for the purchases. The credit offered by the seller/supplier is known as Trade Credit or Bills Payable (also as Account Payable or Notes Payable in America) depending upon the nature of credit allowed.
20. Bank Credit or Bank finance (short-term) : Banks provide short-term finance in the following forms:
21. Overdraft: Customers/clients having current account in the Bank may avail the benefit of overdraft up to a certain limit from their bankers. Customers can overdraw to that extent any time and may repay the amount any time. Interest is charged by the bankers only on the amount which has been overdrawn by the customer subject to a minimum charge. Overdraft account operates against security in the form of pledge of shares and securities, assignment of life insurance policies and sometimes even the mortgage of fixed assets.
22. Cash Credit : Commercial bank provide cash credit facilities to its customers for meeting their short-term financing requirements. It is such regular system under while bank offers the facilities to clients to withdraw the money within the limits pre-fixed by the bank. The security offered by the clients is in the nature of hypothecation of stocks or promissory notes bearing signatures of other persons also.
23. Discounting trade bills: Sellers often draw bills on their customers purchasing goods on credit. The purchasers give their acceptance. Such bills are being discounted by the sellers for arranging short-term funds. In other words, bank provide finance to the customers either by outright purchasing or by discounting bills receivable held by the customers. Obviously, bank will not pay the full amount and therefore charge sometime as discount.
24. Opening of letters of credit: Letter of credit is opened by a bank in favour of its customers undertaking the responsibility to pay the supplier of goods if its customers fails to pay for goods purchased within the stipulated time. Under this scheme of bank finance, does not provide fiancé, rather it assumes the risk of non-payment by its customer.
25. Public Deposits: Regulations imposed on the availability of bank credit induced many concerns to explore alternative sources of financing the working capital and the mobilization of savings from the general public was rated to be a very important alternative source. Funds thus mobilized from general public out of their savings were termed as ‘public deposits’. Mobilization of savings as deposits by non-financial and non-banking companies is a very old system.
26. Inter corporate deposits: One more source for mobilizing short-term funds for working capital requirements is to accept inter-corporate deposits. Deposits made by one company in another company are known as inter-corporate deposits. Such deposits may be short-term or fixed term. Short-term deposits in turn may be (i) call deposits which can be returned on one day’s notice, (ii) quarterly deposits, and (iii) half-yearly deposits.
27. Advances from customers: Many times some producers/sellers receive whole or part of the amount of goods quite in advance and such amount remains with them till the supply of goods. Normally, no interest is paid on this paid Therefore, it is the cheaper sources of short-term financing but resort to this method can be made only by some reputed and well-settled concerns. In case of industries, where tough competition is noticed, no advance can be received rather goods are to be sold to customers on credit terms.
28. Internal sources: When a business concern establishes a depreciation fund/reserve, this can be used to provide for working capital financing at least till these are needed for replacing the assets. Similarly, the plough-back of profit or retained earnings can be useful for providing working capital financing. Again, provision for tax can also be utilized in the same way.

New and innovative sources: a number of significant changes have taken place in short-term financing or money market in India during the last 10 to 15 years. Some more important areas are as under :

1. Commercial Paper: Commercial Paper is a short-term money market instrument which is considered as most ideal both for investors as well as for corporate sector borrowing from banks for working capital requirements. While high-rate companies may take advantage of these sources, the investors too can earn profit by using their short-term funds. Commercial Paper is a promissory note which is negotiable by endorsements and fit for delivery with a fixed maturity between one month to one year and it is issued on discount basis. It helps to raise short-term debt at attractive rates. It is an unsecured instrument and is not tied up to any specific business transactions.
2. Convertible Debentures: For augmenting funds for working capital along with long-term purposes, there is one more sources, i.e., the issue of convertible debentures. It has been gaining popularity since last two decades or so. Since banks generally grant loans/advances only on the security of current assets, the issue of debentures is regarded as the only other appropriate alternatives source for raising capital including working capital.
3. Factoring: One most recent source for financing working is ‘factoring’. In fact, factoring is also a business activity in which a financial intermediary takes the responsibility of collecting the debtors or receivable of a manufacturing/trading concern (called ‘seller ‘or; client’). In other words, chief financing executive instead of discounting the bills from banker sells the debtors and receivable to a special financial institution and collections from institution assumes total responsibility of sells ledger administration and collections from debtors. Thus “Factoring is a continuing” arrangement between financial intermediaries (celled either Bank of Private Finance Companies. It is also important to note that factoring should not be considered as related only to a specifies transaction rather it should be considered as a continuous arrangements. In fact, it takes care of all revise designed to help companies in managing the receivable in a better way.

**Meaning of Inventory Management**

Generally speaking, the application of managerial functions on the basis of management principles in the field of inventory is termed as inventory management. Managerial functions primarily include planning, organizing, control and coordination. When all these four functions are performed with respect to inventory, it may be called inventory management. In this sense, quantity and value of the inventory. Really speaking, the objective if inventory management is to plan the optimum size of inventory which is neither excessive nor deficient and is timely available. For timely available along with optimum size, There is need for controlling as well. Timely available. But effective control in itself depends upon organizing and coordination. Thus, inventory management compresses of the functions of planning, controlling and organizing the types of all goods, quantity, status, flow and time-sequence etc. Inventories which comprise of raw materials, consumable stores, works-in-process, and finished goods are to be purchased and stored. Inventory management is , therefore a scientific method of determining what, when and how to purchase and how much to have in stock for a given period of time.

**Need for Inventory management**

Inventory management is how an integral part of general management. There important functions aspects of a business are closely related to inventory management and these functions management are production management, marking management (sales management) and financial management. As far as production management and marketing management are concerned, these are related to physical aspect of inventory management. Production manager will always strive to have a such a large inventory of raw materials and of such a good quality as to ensure stable productions operation. Similarly, marketing manager aims at satisfying ever-increasing demands for improved customer’s services by having large inventory of inside goods. On the other hand finance manager’s efforts will be to keep investments in different types of inventory at a minimum possible level so that the business concern may earn maximum return. Needless to motion that productions manager and marketing manager cannot oversight the financial aspects of inventory management. In fact, a proper coordination is needed taking into account the goal of the entire business, for which budgetary control is the appropriate technique.

**Dangers of Excessive Inventory**

If the actual quantity of inventory is more than the economic size (quantity), it may lead to the following dangers:

1. Inventory is such a current asset which does not possess liquidity i.e., it is less liquid asset. If larger proportion of working capital (and that too in excess of what is required) is invested or locked up in inventory the business liquidity starts eroding.
2. Not only this, if the size of inventory is more than the requirement, it means that the concern has invested its funds in such an area where the possibility of getting any return is very remote. Thus, fund is unnecessarily tied up.
3. If excessive inventory is in the form of finished goods/manufacture goods, the production operations may be more or less stand-aside. The presence of excessive inventory of finished goods will compel to suspend the productions operations for a short-period.
4. The collective impact of all the above dangers may be on profit-margin too. On the one hand, Capital is unnecessarily locked up in inventory and on the other hand there comes laxity in the productions operations. As such certain that profit margin of the concern can be feeble.

If excessive inventory is kept constantly for a longer period, the impact of the above dangers after passage of time can be so deep and formidable that the business has to be ultimately closed.

**Dangers of Inadequate Inventory**

If the size of actual inventory is less than the economic size (quantity), i.e., inventory kept in the business is inadequate, it is also then dangerous and disadvantageous to the business, because inadequate inventory may also cause a number of defects, such as:

1. If the quantity of inventory especially that of raw materials is inadequate, the concern may not utilities its full capacity. In such a situation, production capacity of the concern will remain unutilized and there may be reduction in the capacity also.
2. When the capacity is not fully utilized due to inadequate inventory, it has impact on cot of productions also. Since certain elements of total costs are for full capacity utilization and these costs remain the same even capacity is partly utilized, these costs affect the per unit productions cost and also the total costs of productions in the form of increasing trend.
3. In the case of inadequate inventory of row masteries, productions operation cannot be performed smoothly. There are chances of productions delays due to non-availability of adequate quantity of raw materials.
4. Delay in productions directly hits the customer’s delivery system and its timing. The concern my not be able to keep its proms of delivering the goods to its customers and in this way there comes laxities in customers services.

**Costs Associated Inventory**

Inventory should be neither too low nor too high and therefore, effective inventory management involves a tradeoff between too low and too high inventory. This Kind of trade off requires a detailed discussion about costs associated with the inventory, the various costs directly associated with the purchase and holding goods as inventory are as under:

1. Materials Costs: These are the costs of purchasing the raw materials/merchandise and include all types of transportation and handing costs also.
2. Ordering Costs: With reference to inventory ordering means the purchase of components of inventory from outside of manufacturing the same internally. In the case of purchasing the raw materials or other items, ordering costs include the clerical costs and cost of receiving and checking the materials/goods. Clerical costs include the cost associated with the preparation of purchase requisition, placing and handing at warehouse for storing. These are known as buying costs.
3. Carrying Costs : When ordered goods or materials are receiving by the concern and inspected, these are not immediately sold or converted into finished goods rather these are to be stored for certain period, the expense incurred on such stored are known as carrying costs. These costs include cost of capital locked up in inventory, rent or depreciation of warehouse, insurance, salaries of storekeeper, obsolescence, spoilage and taxes etc.

**Techniques of Inventory Management**

There are two approaches to inventory management:

1. Traditional Approach: Under this approach, various levels of inventory may be compared from time to time between companies hailing from the same industry or within the same company over a period of time. This is based on the conviction that comparison is fundamental in establishing standards which can be used in ascertaining the efficiency or otherwise in inventory management.
2. Modern or Scientific Approach: If minutely observe the problems arising during inventory management, it will e found that basically the problem of inventory management and control are related to the following facts:
3. Whenever a concern needs additional goods of raw materials, then the size of the ‘order’ for the supply should be such as to be called the ‘best’. Deciding this best size of the order is the core problem of inventory management. The technique used to solve this problem is known as E.O.Q. analysis.
4. If it is once decided that should be the size of order for the requisition of new goods or Materials, the next problem arises as to what should be best point of time for placing the order for new goods/materials. We have already pointed out that the availability of goods/materials must be at the appropriate time; neither earlier to that or after-wards. This problem is solved on the basis of R.O.P. technique.
5. Another problem is related to uncertainties either in the supply of goods/materials order or in the usage/demand. This problem can be resolved by creating a buffer stock or safety stock.
6. While solving the problems mentioned at points (i) and (ii), a practical difficulty comes. It become difficult to give equal attention to all the items or goods included in inventory. Therefore, a question arises in the form of a problem as whether only few selected items should be considered more attentively. This problem may be resolved by using A.B.C. analysis, H.M.L. analysis, F.S.N. analysis and V.E.D. analysis.

**MANAGEMENT OF CASH**

Cash is the basic foundation of any business. No business can operate successfully and efficiently without adequate cash. At the same time, cash is an idle asset not earning anything in itself and therefore excessive cash would have negative effect on the profitability of the business. Thus, cash has to be managed wisely and efficiently.

**OBJECTIVE OF CASH MANAGEMENT:-**

The main objective of cash management is to maintain equilibrium is to maintain equilibrium between liquidity and profitability for maximizing the profit of the enterprise. More the cash the enterprise has, more will be the liquidity of the enterprise but lower (poor) the profitability will be. The situation will just be opposite; in the case the enterprise has lower cash balances. As such, the management of cash aims to achieve the following:

* To supply the needs for cash disbursement according to payment schedule ;
* To keep at minimum level the amount of cash tied as cash balance.

To meet the need of payment schedule is the primary objective of the cash management. The enterprise has to make payments in a regular manner to the suppliers, short- term loan providers, etc.

The business activities may standstill, if payments are not made in time. There is one saying regards to cash, i.e., “it is lubricant to the ever running wheels of the business; the business activities will be compelled to shut down without it.” Therefore, the enterprise should have adequate amount of cash to meet the needs of cash disbursements. However, one should remember that keeping the adequate amount of cash increase the cost.

Another objective, equally important, is to minimize the amount to be kept as cash balance. Financial manager may face two conflicting aspects, while making efforts to keep the cash balance minimum- while higher cash balance ensure payment at appropriate time along with other benefits,

On the other hand significant part of cash balance is found lying as idle. The enterprise may face difficulties in meeting the payment schedule by keeping minimum cash balance. Again keeping into account the profit and sacrifice, the finance manager has to maintain optimum cash balance.

**Various steps in cash Management**

1. Cash Planning & Control
2. Cash Flow analysis
3. Cash Budget
4. Ratio analysis
5. Cash Management modals
6. Collecting and Disbursing Cash efficiently
7. Speeding up collections through:
8. Prompt Billing and Cash Discount
9. Reduction in deposit float
10. Decentralized collections :
11. Concentration banking,
12. Lock-box system,
13. Internal Control,
14. Reducing bank account s,
15. Delaying the disbursements :
16. Payment only through cheques
17. Complicated payment procedure
18. Setting a particular day or time
19. Avoiding cash discount
20. Centralized payment
21. Payment float(Cheque kitting)
22. Determination of Appropriate Cash Balance
23. Cash cycle model
24. Baumol model
25. Miller-Orr model
26. Stone model
27. Investing Remaining Excess Cash Balance
28. Default risk
29. Maturity
30. Marketability.

**Management of Receivables**

Receivables comprise both debtors and bills receivable. Customers to whom goods/services are sold /rendered on credit and who have not paid the amount till the end of accounting period are called in accounting language as ‘Debtors’ or ‘Book Debts’ or’ Accounts Receivables . On the others hand, the customers who have delivered to the seller the bills hundis or promissory notes duly accepted in exchange of credit sales available are known as ‘Bills receivables’ or ;Notes Receivables’.

**Objective of Maintaining Receivables**

The objectives of creating and maintaining receivables are the same as that of credit sales, because receivables are generated through credit sales. As such, the following objectives should be remembered:

1. Increase in sales: An enterprise, which provides the facilities of credit sales, may sell more than what could be sold for cash only. Credit sales facility is a strong motivator for increasing the sales volume because it makes sales even to those not make credit sales; the number of customers is reduced resulting into lower amount of sales. Thus credit sales through the creation of receivable increase the sales volume.
2. Increase in Profit: sales on credit also increase the volume of profit in two ways –first, profit margin in the case of credit sales is always kept higher than that of cash sales and secondly, additional profit is yielded by increased volume of sales.
3. To meet the competition: Sometimes credit facilities are provided to customers only because competitive firms do also provide credit facilities. If the enterprise does not provide this facility, it cannot itself establish in the market and cannot sell too. Therefore, the enterprise by adopting sales credit policy have to credit receivable, so that its customers are tempted to purchase goods from competitors.

**Steps Involved in the Management of Receivables**

When an enterprise offers to sell its goods/service on credit it must give serious thought as:

* To which customers the enterprise is prepared to offer credit?
* What factors should be taken into account while analyising the customers who are interested purchase goods on credit?
* What should be the credit terms for selling on credit?
* What collections policies should be adopted?
* What should be the system of monitoring the preceding respective matters in the case of receivables management:
1. Credit analysis
2. Credit standards
3. Credit terms
4. Collections policies
5. Control and Monitoring

 **Optimum credit policy**

The firm’s operating profit is maximized when total cost is minimized for a given level of revenue. Credit policy at point represents the maximum operating profit (since total cost is minimum). But it is not necessarily the optimum credit policy. Optimum credit policy is one which maximizes the firm’s value. The value of the firm is maximized when the incremental or marginal rate of return of an investment is equal to the incremental or marginal cost of funds used to finance the investment. The incremental rate of return can be calculated as incremental operating profit divided by the incremental investment in receivable. The incremental cost of funds is the rate of return required by the suppliers of funds, given the risk of investment in accounts receivable. Note that the required rate of return in not equal to the borrowing rate. Higher the risk of investment, higher the required rate of return. As the firm loosens its credit policy, its investment in accounts receivable becomes more risky because of increase in slow-paying and defaulting accounts. Thus the required rate of return is an upward sloping curve.

**Credit Collection**

Credit [collection](https://ecollect.org/wiki/bad-debt-collection/) refers to the general [debt](https://ecollect.org/wiki/debt/) recovery process of reimbursing unpaid and past-due credit loans from the consumer in debt, on behalf of the lender. Such process is normally performed by specialized DRAs ([Debt Recovery](https://ecollect.org/wiki/debt-recovery/) Agencies), which act on lender’s behalf in exchange of an interest, which is to be requested from the creditor or from the debtor, depending on the [collection agency](https://ecollect.org/wiki/collection-agency/)’s terms and policy. [Debt collection](https://ecollect.org/wiki/debt-collection/) is directly connected to the definition for “credit” and “credit loan”. It generalizes the procedure of granting a monetary loan to a consumer with a written reservation that the sum will be restored by the consumer (an individual or a business organization) before an alluded deadline has passed. Debt recovery proceedings typically include tracing services, pre-legal phone calls, emails and letters; legal proceedings with the usage of special [debt recovery solicitors](https://ecollect.org/wiki/debt-recovery-solicitors/) in compliance with country and international government approved laws; and court process, involving small claims court procedures, wage garnishment, seizure of belongings or property, etc.

## Credit collections management

The credit [collection process](https://ecollect.org/wiki/debt-collection-process/) can also enlist a restructuring of the [debt plan](https://ecollect.org/wiki/debt-plan/) if the debtor is unable to cover the default payments’ requirements. In such case the subject of debt can use the so-called debt collections management. This service is provided by the creditor (if there is such department in his company); by a debt recovery agency; or by a private [debt management](https://ecollect.org/wiki/debt-management/) company, which specializes only in carrying out specific and individual debt management plans for indebted subjects.

A debt recovery management carries out different debt management plans (DMPs). A DMP represents an unofficial agreement between the creditor and the indebted subject. It is based on a regular payment (most often- monthly), which the debtor is able to afford. A debt management plan is usually offered to consumers in debt, which are not in a stable financial state and cannot pay the amounts on time. The aim of such credit [collection](https://ecollect.org/faq/past-due-payments/) management is to help debtors gain control over their outcome without the need of further falling into debt. Another positive feature of debt recovery management plans is that when the creditor agrees to such option, further interest and fees, applicable for the debtor, are to be frozen.

When a credit collections management plan contract is to be signed, a debtor has three options for payment, depending on who offers the debt management agreement. If the creditor has his own debt recovery management department, the debtor will have to pay directly to the debtor. If a DCA provides debt management services, the subject of debt will make monthly payments to the agency, which will deduct its interest and transfer the rest to the lender. If such services are provided directly by a specialized Debt Management Organization (DMO), then the debtor will transfer the payments to the DMO, along with its commission fees and the management company will forward the rest of the amount to the creditor.

## Factoring Service

Factoring is a service that covers the financing and collection of account receivables in domestic and international trade. It is an ongoing arrangement between the client and Factor, where invoices raised on open account sales of goods and services are regularly assigned to "the Factor" for financing, collection and sales ledger administration. The buyer and the seller usually have long term relationships. The client sells invoiced receivables at a discount to the factor to raise finance for working capital requirement. The factor may or may not accept the incumbent credit risk. Factoring enables companies to sell their outstanding book debts for cash.

The factor operates by buying from the selling company their invoiced debts. These are purchased, usually with credit protection, by the factor that will be responsible for all credit control, collection and sales accounting work. Thus the management of the company may concentrate on production and sales and need not concern itself with non-profitable control and sales accounting matters.

By obtaining payment of the invoices immediately from the factor, usually up to 80% of their value the company's cash flow is improved. The factor charges service fees that vary with interest rates in force in the money market.

### ****Dehejia Committee:****

The National Credit Council (NCC) was constituted in October 1968, under the Chairmanship of V. T. Dehejia, to examine how far the credit requirements of trade and industry were inflated and, at the same time, to suggest some measures on the basis of its findings.

**In its words:**

“The extent to which credit needs of industry and trade are likely to be inflated and how much trends could be checked”.

The Study Group submitted its report in September 1969. It may be noted here that the term ‘inflated’ means the borrowers have taken short-term credit in excess of their real requirements for working capital.

#### Criteria:

**For the purpose of such ‘inflation’, the study group took the following criteria:**

(i) Whether the rise in short-term credit was substantially higher than the growth in the value of output;

(ii) Whether the rise in such credit is higher than the increase in inventories;

(iii) Whether short-term bank borrowings have been diverted for building up fixed asset or other non-current assets;

1. Whether there is double or multiple financing of the same stocks; and
2. Whether the period of credit is unduly lengthened.

#### Findings:

**The major findings of the Dehejia Committee were:**

**(A) Inflation of bank credit:**

Granting bank credit to industry increased significantly in comparison with the increase in industrial output or inventories in value terms e.g. granting bank credit (short-term) to industry was increased by 130% in between 1961-62 and 1966-67, whereas industrial output was increased by only 60% for the same period.

 **(B) Improper utilization of short-term credit:**

Although the bank credit was allowed for short-term current assets, the same was actually

utilized for the acquisition of non-current/fixed asset i.e., short-term credit was diverted.

**(c) Granting credit without proper securities and projected financial statements:**

. Banks granted credit to industries without proper securities and without assessing their real needs which are based on their projected financial requirements.

**(D)Prevailing Lending System:**

The prevailing lending system helps the industry to depend on short-term bank financing in order to acquire fixed assets.

#### Suggestions:

**The following significant suggestions were prescribed by the Dehejia Committee in order to control the regulation of bank finance between the industry and other private sectors:**

(a) The appraisal of credit applications must be made in relation to the total financial situation, i.e., current and projected, which can be reflected by Cash Flow Analysis along with forecast Profit and Loss Account and Forecast Balance Sheet submitted by the borrowers.

**(b) Cash credit account must be distinguished into two parts, viz.,**

(i) ‘The hard core’ which represents the minimum level of current assets required for maintaining a given level of production;

(ii) ‘the strictly short-term’ components which represent the fluctuating part of the account. The second component of the accounts, however, reveals the requirement of funds for short-term purpose. Thus, the said borrowings should be adjusted out of turnover in a short- period.

(c) In the case of ‘Double’ or ‘Multiple’ financing, the group, however, suggested that a customer must be required to deal with only one bank. But if the requirements of the borrowers are high or more, and which cannot be provided by one bank only, in that case, a ‘Consortium’ arrangement may be adopted which has been recommended by the group.

(d) The period of trade credit must not exceed 60 days and 90 day in case of special cases so that the bank’s resources must not be blocked in unproductive purposes.

(e) The committee also suggested that a levy of commitment charges on un-utilized limit along with a provision to impose a minimum interest charge should be considered to control the tendency of having credit more than their requirements.

 (f) Another suggestion of the committee was that industry, trade and commercial banks may introduce the system of issuing bills which would help both the purchasers and the suppliers for their financial activities.

# ****Tandon Committee Report:****

In 1974, a study group under the chairmanship of Mr. P. L. Tandon was constituted for framing guidelines for commercial banks for follow-up & supervision of bank credit for ensuring proper end-use of funds. The group submitted its report in August 1975, which came to be popularly known as **Tandon Committee Report on Working Capital**. Its main recommendations related to norms for inventory and receivables, the approach to lending, style of credit, follow ups & information system.

It was a landmark in the history of bank lending in India. With acceptance of major recommendations by [Reserve Bank of India](https://www.mbaknol.com/financial-management/indias-apex-bank-the-reserve-bank-of-indiarbi-its-objectives-and-functions/), a new era of lending began in India.

## ****Tandon committee’s recommendations****

Breaking away from traditional methods of security oriented lending; the committee enjoyed upon the banks to move towards need based lending. The committee pointed out that the best security of [bank loan](https://www.mbaknol.com/project-management/term-loans-as-a-project-financing-method/) is a well functioning business enterprise, not the [collateral](https://www.mbaknol.com/business-finance/commercial-credit-analysis-collateral/).

Major **recommendations of the Tandon committee** were as follows:

1. Assessment of need based credit of the borrower on a rational basis on the basis of their [business plans](https://www.mbaknol.com/management-concepts/what-is-a-business-plan/).
2. Bank credit would only be supplementary to the borrower’s resources and not replace them, i.e. banks would not finance one hundred percent of borrower’s [working capital requirement](https://www.mbaknol.com/financial-management/estimation-of-working-capital-requirements/).
3. Bank should ensure proper end [use of bank credit](https://www.mbaknol.com/business-finance/credit-creation-by-commercial-banks/) by keeping a closer watch on the borrower’s business, and impose financial discipline on them.
4. [Working capital finance](https://www.mbaknol.com/financial-management/approaches-to-working-capital-financing/) would be available to the borrowers on the basis of industry wise norms (prescribe first by the Tandon Committee and then by [Reserve Bank of India](https://www.mbaknol.com/financial-management/indias-apex-bank-the-reserve-bank-of-indiarbi-its-objectives-and-functions/)) for holding different current assets, viz.
	* Raw materials including stores and others items used in manufacturing process.
	* Stock in Process.
	* Finished goods.
	* [Accounts receivables](https://www.mbaknol.com/business-finance/accounts-receivable-management/).
5. Credit would be made available to the borrowers in different components like cash credit; [bills purchased](https://www.mbaknol.com/business-finance/modes-of-short-term-working-capital-financing/) and discounted working, [term loan](https://www.mbaknol.com/business-finance/term-loan-appraisal/), etc., depending upon nature of holding of various current assets.
6. In order to facilitate a close watch under operation of borrowers, bank would require them to submit at regular intervals, data regarding their business and financial operations, for both the past and the future periods.

**The Norms**

Tandon committee had initially suggested norms for holding various current assets for fifteen different industries. Many of these norms were revised and the least extended to cover almost all major industries of the country.

**The norms for holding different current assets** were expressed as follows:

1. Raw materials as so many months’ consumption. They include stores and other items used in the process of manufacture.
2. Stock-in-process, as so many months’ cost of production.
3. Finished goods and accounts receivable as so many months’ cost of sales and sales respectively. These figures represent only the average levels. Individual items of finished goods and receivables could be for different periods which could exceed the indicated norms so long as the overall average level of finished goods and receivables does not exceed the amounts as determined in terms of the norm.
4. Stock of spares was not included in the norms. In financial terms, these were considered to be a small part of total operating expenditure. Banks were expected to assess the requirement of spares on case-by-case basis. However, they should keep a watchful eye if spares exceed 5% of total inventories.

The norms were based on average level of holding of a particular current asset, not on the individual items of a group. For example, if receivables holding norms of an industry was two months and an unit had satisfied this norm, calculated by dividing annual sales with average receivables, then the unit would not be asked to delete some of the accounts receivable, which were being held for more than two months.

The Tandon committee while laying down the norms for holding various current assets made it very clear that it was against any rigidity and straight jacketing. On one hand, the committee said that norms were to be regarded as the outer limits for holding different current assets, but these were not to be considered to be entitlements to hold current assets upto this level. If a borrower had managed with less in the past, he should continue to do so. On the other hand, the committee held that allowance must be made for some flexibility under circumstances justifying a need for re-examination.

**Chore Committee:**

The quality of lending improved considerably but the cash credit system continued to pose few difficulties. Bifurcation of working capital limit in two parts as demand loan and a fluctuating cash credit component, as suggested by Tandon Group, was not done by many banks. It was, therefore, considered necessary by Reserve Bank to review the system of cash credit in all its aspects and for this purpose a 'Working Group' headed by Sh. K. B. Chore was appointed in 1979. The terms of reference to the 'Group' were as follows:

·         To review the operation of cash credit system in recent years, particularly with reference to the gap between sanctioned credit limits and the extent of their utilisation;

·         In the light of the review, to suggest:

(a) Modifications in the system with a view to making the system more amenable to rational management of funds by commercial banks, and/or

(b) alternative types of credit facilities, which would ensure greater credit discipline and also enable banks to relate credit limits to increases in output or other productive activities, and  to make recommendations on any other related matter as the 'Group' may consider germane to the subject.

The 'Group' gave its recommendations in 1979. Important recommendations which are accepted by Reserve Bank and have a direct bearing on credit limits of the borrowers are discussed below. The features of the guidelines which were issued by RBI in Dec.

**1980 were as under:**

1. **Annual Revenue of Accounts**:

Bearing in mind the information that the system of cash credit cannot be totally replaced by any other lending system, the RBI felt the necessity of streamlining the system with regular periodical reviews of limits in order to verify the continued viability of borrowers and for assessing the need-based character of their limits.

All scheduled banks are required to review accounts of the borrowers having working capital limits of Rs 10 lakhs and over at least once in a year. If the borrowers’ limit exceeds by Rs. 50 lakhs and over, they are required to submit quarterly statement for the purpose.

**(b) Bifurcation of Accounts Discontinued:**

The RBI withdrew its past directives which were issued to the scheduled banks requiring them to bifurcate the cash credit accounts into demand loan, cash credit components and charging differential interest rates. If the accounts are already bifurcated, the differential rates are to be abolished as an immediate effect.

The RBI indicated the following four measures that are applicable on all the borrowers having total working capital limits of Rs. 50 lakhs and over.

**(i) Peak Level and Non-Peak Level Limits**:

Banks are to fix separate credit limits for the borrowers according to the normal peak level and non-peak level as far as possible which are to be selected on the basis of past performances of the borrowers and the utilization of such limits. At the same time, the period for which the borrowings are to be utilized is to be specified.

For agriculture based industries and consumer goods industries, separate limits are to be fixed since they have seasonal demand of their products and for others, only one limit is to be fixed by the banks

**(ii) Withdrawals of Funds**:

After sanctioning the credit limit, the borrower must indicate, before the com­mencement of each quarter, his expected requirements of funds in the said quarter. Such limits are known as operating limit. It is expected that borrower must withdraw funds from bank within the operating limit in that particular quarter subject to a tolerance limit of 10% either way.

That is, if a borrower withdraws any amount which is more than or less than that tolerance limit, the same is considered as irregularity in the account and as a consequence, bank should take corrective steps in order to avoid such repetition of irregularity of funds in future which is actually the product of defective planning of the borrower.

**(iii) Temporary Limits**:

Banks must be very careful about the request made by the borrower for ad hoc/ temporary limits in excess of the sanctioned limits in order to meet unforeseen contingencies. Such limits should be allowed for pre-determined short-durations and in the form of a demand loan or ‘non-operable’ cash credit account for which an additional interest of 1% over and above the normal rate is to be charged.

But if the borrower is unable to provide corresponding additional contributions for this purpose, bank will simply refuse.

**(iv) Contribution of the Borrowers**:

The RBI stressed the need in order to reduce the over-dependence on bank credit by medium and large borrowers. Borrowers must increase their contribution towards working capital. Bank must assess the maximum permissible bank finance by applying the second method of lending which was recommended by Tandon Committee.

That is, under this method, borrowers must have to contribute from (i) his owned funds and (ii) term loans an amount which must be at least 25% of total current assets. In short, the contribution of the borrowers towards working capital should be in­creased from 25% of the working capital gap (under 1st Method) to 25% of the total current assets which result in a current ratio of 1.3: 1 instead of a 1: 1 current ratio.

**Arrangement during Transition Period**:

If it is found that the borrower fails to comply with the above requirements, immediately bank may segregate the excess borrowing and may treat the same as Working Capital Term Loan (WCTL). This loan must be repaid by the borrowers in half-yearly installments within a period not exceeding 5 years.

Of course, banks may charge a higher rate of interest for this purpose which must not exceed the ceiling for encouraging early payments. Bank also may charge a penal rate if there is any default in repayment of the said loans.

**Additional Credit Limits**:

Banks are permitted to grant additional credit limits to the borrowers, if such limits are necessary for increased production. But Bank must insist on (i) the incremental current ratio of 1.33: 1 and (ii) WCTL component must not be increased.

#### Marathe Committee:

The Reserve Bank of India appointed a committee under the chairmanship of Marathe in 1982. The objectives of the committee were to analyze the working of the Credit Authorization Scheme (CAS).

**Recommendations:**

**The Marathe Committee had given some importance to examine and to analyses the CAS in the following forms:**

(i) The CAS must be considered as a regulatory measures which would be applicable in the case of all borrowers, irrespective of size i.e., large or small.

(ii) The objectives of the CAS was to see that proper credit management and improved quality of bank lending had taken place according to the principles and policies which were laid down by Central Banking Authority (CBA) for the purpose.

(iii) The CAS must not be applied only in case of certain kinds of borrowers the lending criteria above the minimum level must be the same.

(iv) Simply by concentrating only one point it is impossible to improve the quality of lending

(v) The time taken by the commercial banks for their necessary formalities must be reduced together with the time taken by RBI for the same purpose.

However, the recommendations of the Marathe Committee was to give incentive to the borrowers of all categories after complying with the necessary formalities of the CAS and at the same time to improve the quality of lending It also stated that the commercial banks should be given discretion to grant credit without the prior authorization of RBI if the following conditions are satisfied.

(a) The estimates relating to production, sales, current assets, current liabilities (excluding bank borrowings), and working capital are quite reasonable in comparison with the past trend and norms justified assumptions for the future.

(b) Whether or not, the so-called classification of assets and liabilities as per RBI norms are made

(c) The estimated or projected current ratio must not be less than 1.33: 1 (although the norm is 2: 1 in all other normal cases) excluding certain specified categories.

(d) Whether the borrower submitted the quarterly income-statement for the past six months within the schedule date/period and promises to do the same in future also.

(e) Whether the borrower submitted his annual accounts in time and the bank makes an annual review of the various facilities provided by it and also to examine whether the borrower requires any further credit.

However the Marathe Committee recommended that the CAS should be re-named as Credit Monitoring Scheme as a result of the proposed change in its approach.

Now we are going to explain the Credit Monitoring Arrangement in brief.

The Reserve Bank of India introduced the term Credit Monitoring Arrangement (CMA) in place of Credit Authorization Scheme (CAS) on the basis of the recommen­dation of the Marathe Committee in October 1988.

**The fundamental characteristic of CMA is noted below:**

(a) A post-sanction scrutiny of term loans and working capital limits which were provided by commercial banks will be made by the RBI. It is the duty of the commercial bank to submit the necessary paper to the RBI within 15 days from such transactions.

(b) The commercial banks must mention whether the minimum prescribed level made by RBI relating to finance for credit transactions by drawing and accepting trade bills in each and every case and steps must be taken if RBI norms is not followed.

**Kanan Committee Report**

 With a view to free the banks from rigidities of the Tandon Committee recommendations in the area of working capital finance and considering the ongoing liberalization in the financial sector, IBA constituted, a committee on “working capital finance” including assessment of maximum permissible bank finance (MPBF), headed by K. Kanan, Chairmen and Managing Director of the Bank of Baroda. It submitted its report to Indian Bank Association in Feb. 1997. It observed that since commercial banks in India are undergoing a metamorphosis of deregulations and liberalizations, it is imperative that micro level credit administration should be handled by each bank individually with their risk perception, risk analysis and risk forecasting. The following areas also require to be given greater attention:

1. Regular interface with the borrower to have a better understanding of his business activities and problems faced by him. 182

2. Periodical obtaining of affidavits from the borrower declaring highlights of their assets, liabilities and operating performance.

3. Periodical exchange of information among the financial institution to pick up the alarm signals at the earliest.

4. Establishing a time bound programme a “Credit Information Bureau” to provide updated information of existing/new borrowers before taking a credit decision.

The committee recommended that the arithmetical rigidities imposed by Tondon Committee and reinforced by Chore Committee in the form of MPBF, having so far been in vogue, should be given a go by. The committee also recommended for freedoms to each bank in regard to evolve their own system of working capital finance for fast credit delivery in order to serve more effectively various segments of borrowers in the Indian economy. Reserve Bank of India advised to all bank that an appropriate system may be evolved by banks for assessing to working capital needs of borrowers within the prudential guidelines and exposures norms already prescribed. The turnover method, as already prevalent for small borrowers, may continue to be used as a tool of assessment for this segment; since major corporates have adopted cash budget system for assessing working capital finance in respect of large borrowers. There should be no objection to the individual banks retaining the concept of the present maximum permissible bank finance with necessary modifications or any other system. Banks according to their perception of the borrower may henceforth determine working capital credit and the credit needs. Committee felt that Line of Credit system as prevalent in many advanced countries, should replace the existing system of assessment of sub limits within total working capital credit requirement. Under the L/c, the borrowers’ working capital credit requirement is assessed at an outer limit, which is flexible enough to be used in one or more of the forms as selected by the borrower in lieu of his requirements from time to time. Entire current assets are to be the prime security for the confirmed line of credit. The committee proposed to shift emphasis from the liquidity level lending to the cash deficit lending. The new system of working capital finance may be called Desirable Bank Finance. RBI has advised that in the interest of developing “bills” culture in the system, out of the total inland credit purchases of the borrowers, not less than 25% should be through bill drawn on them by concerned sellers.

**Categorization of borrowers according to size of working capital finance •**

* For non-SSI borrowers requiring working capital finance over Rs. 2 lakhs and up to Rs. 10 lakhs from the banking system, the committee proposed a simplified turnover based method of perceiving working capital credit requirement.
* For non-SSI borrowers requiring working capital finance over Rs. 10 lakhs and up to Rs. 500 lakhs and SSI borrowers requiring working capital finance over Rs. Rs. 200 lakhs but up to Rs. 500 lakhs from the banking system, the committee proposed the same method i.e. turn over based method for determining working capital requirement.
* For all borrowers requiring working capital finance over Rs. 500 lakhs but up to Rs. 1000 lakhs from the banking system, the committee proposed the assessment of working capital finance within with size of limit should continue to be on the basis of holding of current assets/current liabilities at present and later on switch over to the method of Cash Deficit Financing when it is stabilized fully at higher scale of working capital finance.
* For all borrowers, requiring working capital finance over Rs. 1000 lakhs from the banking system, are statutorily required to maintain various financial database and statements. Such borrowers do not generally run out of adequate holding level of inventory and/or receivables but suffer more from the cash deficit arising from time to time.

**Dimension of Working Capital Management:**

Working capital management is concerned with all the aspects of managing current assets and current liabilities. Let us pinpoint its significant dimensions which require the attention of financial executives.

* **Managing Investment in current Assets**

Determination of appropriate level of investment in current assets is the first and foremost responsibility of a working capital management. Although the amount of investment in any current assets ordinarily varies from day-to-day, the average amount or level over a period of time can be used in determining the fluctuating and permanent investment in current assets. This distinction is of great importance in devising appropriate financing strategies. We shall elaborate this point a little later. Beside the level of investment, the type of current assets to be held is equally important decision variables. Think of the inventory of a dealer in construction equipment, the dealer must decide how many bulldozers to keep in stock as well as whether to stock bulldozer or dump trucks. From the viewpoint of the financial managers, all the decisions as to particular items add up to an average level of inventory for a given item and these averages, for all items add up to the total average inventory investment of the firm. Investment in receivables and marketable securities also pose a similar choice.

The result is that there is a very large number of alternative levels of investment in each type of current assets. Therefore in principle, current assets investment is a problem of evaluating a large number of mutually exclusive investment opportunities.

* **Financing of Working Capital**

Another important dimension of working capital management is determining the mix of finance for working capital which may be combination of spontaneous, short-term and long-term credit and other instance as the firm makes purchase of raw materials and supplies, trade credit is often made available spontaneously as per trade usage from the firm’s suppliers. In addition to trade credit, wages and salaries payable, accrued interest and accrued taxes also provide the firm with valuable source of spontaneous financing.

Bills payable, short-term bank loans, inter-corporate loans, commercial papers are the most common examples of short-term sources of working capital finance. Term loans, debenture, equity and retained earning constitute long-term sources of working capital finance.

* **Inter-relatedness**

Characteristic of working capital decision, the financial manager cannot simply decide that the investment in inventory for example, will be so much and stop there. The desired level of inventory is itself, a changing quantity. For example, the desired level for a period when its sales are very high would not be the same desired level for a period when its sales are very low.

Furthermore, no decision regarding inventory and sales could be made without considering the implication for accounts receivables. Moreover, any business decision that results in increased sales and collections for the firm is likely to mean that lower average cash balances will be needed or that a new cash management system will be desirable. Thus, all the current assets decisions are interrelated. We may now consider some of the units between current assets and current liabilities. If sales increase, purchases must increase to maintain a constant level of inventory and growing sales will usually require greater inventory investment and purchases unless the firm purchases on cash terms and increase in purchases will lead to an increase in accounts payable. Thus, an increase in inventory will be financed spontaneously with trade credit. The amount of trade-credit financing will depend on decision regarding payments; inventory decisions are thus linked to trade-credit decisions The inventory and account receivable commonly provide collateral for loans, thus, for firms unable to obtain unsecured financing, the nature and quality of these current assets affects the availability and terms of short-term financing. The working capital managers thus have to pay attention to the interrelated nature of current assets and current liabilities and take into account major interactions that influence the working capital investment and financing decisions.

**VOLATILITY AND REVERSIBILITY**

Another significant feature of the working capital management is that the amount of money invested in current assets can change rapidly and so does the financing required. The level of investment in current assets is influenced by a variety of factors which may be as erratic as labour unrest or flooding of the plant. Seasonal and cyclical fluctuations in demands are a common sense of rapid changes in investment in current assets and current liabilities which mean that the cash flow related to these could be readily reversed. Suppose we have taken a loan of N1, 000 at 20% p.a. interest payable quarterly, we will continue to pay N500 per quarter so long as we do not repay N10,000.

At any time we choose to repay N10,000, the quarterly cash flow of N500 stops. This type of transaction is described as reversible. The current assets and current liabilities will be treated as reversible in our decision.

####

 **Unit-IV**

**Unit-iv**

 **CAPITAL STRUCTURE THEORIES**

What is the relationship between capital structure, cost of capital and Company’s value? There are different theories to answer this question. One school of thought firmly believes that there is a relationship between value of the company and its overall cost of capital. However, according to another school of thought there is no relationship between the value of company and its overall cost of capital. Remember, overall cost of capital is the outcome of capital structure. The following approaches are generally followed for examining the relationship between the value of company and its capital structure:-

1. Net Income Approach
2. Net Operating Income Approach
3. Modigiliani-Miller Approach
4. Traditional Approach

Before we take each approach separately for discussion, let us mention the basic assumptions regarding capital structure theories. These assumptions are:-

1. There are only two sources of finances, viz., perpetual riskless debt and equity shares.
2. Corporate taxes are not in vogue.
3. Entire earnings are distributed as dividends i.e., dividend payout ratio is 100 percent.
4. In view of (iii) above, there are no retained earnings.
5. The operating profit of the company is given and is not expected to grow.
6. All Investors have the same subjective probability distribution of the expected future earnings before interest and taxes for a given company.
7. Total assets of a company are given and these are not expected to change over a period of time.
8. The company has perpetual life.
9. Business risk is constant over time and it is independent of its capital structure and financial risk.

#  Modigliani and Miller (MM) Approach

The Modigliani and Miller approach to capital theory, devised in the 1950s, advocates the [capital structure](https://efinancemanagement.com/financial-leverage/capital-structure-and-its-theories) irrelevancy theory. This suggests that the valuation of a firm is irrelevant to the capital structure of a company. Whether a firm is highly leveraged or has a lower debt component has no bearing on its market value. Rather, the market [value of a firm](https://efinancemanagement.com/investment-decisions/value-of-a-firm) is solely dependent on the operating profits of the company.

The[capital structure](https://efinancemanagement.com/financial-leverage/capital-structure-and-its-theories) of a company is the way a company finances its assets. A company can finance its operations by either equity or different combinations of debt and equity. The capital structure of a company can have a majority of the debt component or a majority of equity, or an even mix of both debt and equity. Each approach has its own set of advantages and disadvantages. There are various capital structure theories that attempt to establish a relationship between the [financial leverage](https://efinancemanagement.com/financial-leverage) of a company (the proportion of debt in the company’s capital structure) with its market value. One such approach is the Modigliani and Miller Approach.

## MODIGLIANI AND MILLER APPROACH

This approach was devised by Modigliani and Miller during the 1950s. The fundamentals of the Modigliani and Miller Approach resemble that of the [Net Operating Income](https://efinancemanagement.com/financial-accounting/net-operating-income) Approach. Modigliani and Miller advocate capital structure irrelevancy theory, which suggests that the valuation of a firm is irrelevant to the capital structure of a company. Whether a firm is highly leveraged or has a lower debt component in the financing mix has no bearing on the value of a firm



The Modigliani and Miller Approach further states that the market value of a firm is affected by its operating income, apart from the risk involved in the investment. The theory stated that the value of the firm is not dependent on the choice of capital structure or financing decisions of the firm.

**ASSUMPTIONS OF MODIGLIANI AND MILLER APPROACH**

* There are no taxes.
* Transaction cost for buying and selling securities, as well as the bankruptcy cost, is nil.
* There is symmetry of information. This means that an investor will have access to the same information that a corporation would and investors will thus behave rationally.
* The cost of borrowing is the same for investors and companies.
* There is no floatation cost, such as an underwriting commission, payment to merchant bankers, advertisement expenses, etc.
* There is no corporate dividend tax.

The Modigliani and Miller Approach indicates that the value of a leveraged firm (a firm that has a mix of debt and equity) is the same as the value of an unleveraged firm (a firm that is wholly financed by equity) if the operating profits and future prospects are same. That is, if an investor purchases shares of a leveraged firm, it would cost him the same as buying the shares of an unleveraged firm.

#  Traditional Approach

The traditional approach to [capital structure](https://efinancemanagement.com/financial-leverage/capital-structure-and-its-theories) suggests that there exist an optimal [debt to equity ratio](https://efinancemanagement.com/financial-analysis/debt-to-equity-ratio) where the overall [cost of capital](https://efinancemanagement.com/investment-decisions/cost-of-capital) is the minimum and market value of the firm is the maximum. On either side of this point, changes in the financing mix can bring positive change to the value of the firm. Before this point, the marginal [cost of debt](https://efinancemanagement.com/investment-decisions/cost-of-debt-capital-yield-to-maturity) is less than a [cost of equity](https://efinancemanagement.com/investment-decisions/models-for-calculating-cost-of-equity) and after this point vice-versa.

[Capital Structure Theories](https://efinancemanagement.com/financial-leverage/capital-structure-and-its-theories) and its different approaches put forth the relation between the proportion of debt in the financing of a company’s assets, the [weighted average cost of capital](https://efinancemanagement.com/investment-decisions/weighted-average-cost-of-capital-wacc) (WACC) and the market value of the company. While Net Income Approach and [Net Operating Income](https://efinancemanagement.com/financial-accounting/net-operating-income) Approach are the two extremes Approach are the two extremes, traditional approach, advocated by Ezta Solomon and Fred Weston is a midway approach also known as “intermediate approach”

**TRADITIONAL APPROACH TO CAPITAL STRUCTURE:**

The traditional approach to capital structure advocates that there is a right combination of equity and debt in the capital structure, at which the market [value of a firm](https://efinancemanagement.com/investment-decisions/value-of-a-firm) is maximum. As per this approach, debt should exist in the capital structure only up to a specific point, beyond which, any increase in leverage would result in the reduction in value of the firm.

****

It means that there exists an optimum value of debt to equity ratio at which the WACC is the lowest and the market value of the firm is the highest. Once the firm crosses that optimum value of debt to equity ratio, the cost of equity rises to give a detrimental effect to the WACC. Above the threshold, the WACC increases and market value of the firm starts a downward movement.

## ASSUMPTIONS UNDER TRADITIONAL APPROACH:

1. The rate of interest on debt remains constant for a certain period and thereafter with an increase in leverage, it increases.
2. The expected rate by equity [shareholders](https://efinancemanagement.com/sources-of-finance/shareholders-vs-stakeholders) remains constant or increase gradually. After that, the equity shareholders start perceiving a financial risk and then from the optimal point and the expected rate increases speedily.
3. As a result of the activity of rate of interest and expected rate of return, the WACC first decreases and then increases. The lowest point on the curve is optimal capital structure.

## DIAGRAMMATIC REPRESENTATION OF TRADITIONAL APPROACH TO CAPITAL STRUCTURE:



### Factors Determining Capital Structure

1. **Trading on Equity-** The word “equity” denotes the ownership of the company. Trading on equity means taking advantage of equity share capital to borrowed funds on reasonable basis. It refers to additional profits that equity shareholders earn because of issuance of debentures and preference shares. It is based on the thought that if the rate of dividend on preference capital and the rate of interest on borrowed capital is lower than the general rate of company’s earnings, equity shareholders are at advantage which means a company should go for a judicious blend of preference shares, equity shares as well as debentures. Trading on equity becomes more important when expectations of shareholders are high.
2. **Degree of control-** In a company, it is the directors who are so called elected representatives of equity shareholders. These members have got maximum voting rights in a concern as compared to the preference shareholders and debenture holders. Preference shareholders have reasonably less voting rights while debenture holders have no voting rights. If the company’s management policies are such that they want to retain their voting rights in their hands, the capital structure consists of debenture holders and loans rather than equity shares.
3. **Flexibility of financial plan-** In an enterprise, the capital structure should be such that there is both contractions as well as relaxation in plans. Debentures and loans can be refunded back as the time requires. While equity capital cannot be refunded at any point which provides rigidity to plans. Therefore, in order to make the capital structure possible, the company should go for issue of debentures and other loans.
4. **Choice of investors-** The Company’s policy generally is to have different categories of investors for securities. Therefore, a capital structure should give enough choice to all kind of investors to invest. Bold and adventurous investors generally go for equity shares and loans and debentures are generally raised keeping into mind conscious investors.
5. **Capital market condition-** In the lifetime of the company, the market price of the shares has got an important influence. During the depression period, the company’s capital structure generally consists of debentures and loans. While in period of boons and inflation, the company’s capital should consist of share capital generally equity shares.
6. **Period of financing-** When company wants to raise finance for short period, it goes for loans from banks and other institutions; while for long period it goes for issue of shares and debentures.
7. **Cost of financing-** In a capital structure, the company has to look to the factor of cost when securities are raised. It is seen that debentures at the time of profit earning of company prove to be a cheaper source of finance as compared to equity shares where equity shareholders demand an extra share in profits.
8. **Stability of sales-** An established business which has a growing market and high sales turnover, the company is in position to meet fixed commitments. Interest on debentures has to be paid regardless of profit. Therefore, when sales are high, thereby the profits are high and company is in better position to meet such fixed commitments like interest on debentures and dividends on preference shares. If company is having unstable sales, then the company is not in position to meet fixed obligations. So, equity capital proves to be safe in such cases.
9. **Sizes of a company-** Small size business firms capital structure generally consists of loans from banks and retained profits. While on the other hand, big companies having goodwill, stability and an established profit can easily go for issuance of shares and debentures as well as loans and borrowings from financial institutions. The bigger the size, the wider is total capitalization.

**Capital Structure Management or Planning the Capital Structure**

            Estimation of capital requirements for current and future needs is important for a firm. Equally important is the determining of capital mix. Equity and debt are the two principle sources of finance of a business. But, what should be the proportion between debt and equity in the capital structure of a firm now much financial leverage should a firm employ? This is a very difficult question. To answer this question, the relationship between the financial leverage and the value of the firm or cost of capital has to be studied. Capital structure planning, which aims at the maximisation of profits and the wealth of the shareholders, ensures the maximum value of a firm or the minimum cost of the shareholders. It is very important for the financial manager to determine the proper mix of debt and equity for his firm. In principle every firm aims at achieving the optimal capital structure but in practice it is very difficult to design the optimal capital structure. The management of a firm should try to reach as near as possible of the optimum point of debt and equity mix.

**Essential Features of a Sound Capital Mix**

            A sound or an appropriate capital structure should have the following essential features:

            (i)         Maximum possible use of leverage.

            (ii)        The capital structure should be flexible.

            (iii)       To avoid undue financial/business risk with the increase of debt.

            (iv)       The use of debt should be within the capacity of a firm. The firm should be in a position to meet its obligation in paying the loan and interest charges as and when due.

(v)               It should involve minimum possible risk of loss of control.

(vi)             It must avoid undue restrictions in agreement of debt.

(vii)           The capital structure should be conservative. It should be composed of high grade securities and debt capacity of the company should never be exceeded.

(viii)         The capital structure should be simple in the sense that can be easily managed and also easily understood by the investors.

(ix)             The debt should be used to the extent that it does not threaten the solvency of the firm.

**COST OF CAPITAL**

**Meaning, Concept and Definition**

The cost of capital of a firm is the minimum rate of return expected by its investors. It is the weighted average cost of various sources of finance used by a firm. The capital used by a firm may be in the form of debt, preference capital, retained earnings and equity shares. The concept of cost of capital is very important in the financial management. A decision to invest in a particular project depends upon the cost of capital of the firm or the cut off rate which is the minimum rate of return expected by the investors. In case a firm is not able to achieve even the cut off rate, the market value of its shares will fall. In fact cost of capital is the minimum rate of return expected by its investors which will maintain the market value of shares at its present level. Hence to achieve the objective of wealth maximization, a firm must earn a rate of return more than its cost of capital. The cost of capital of a firm or the minimum rate of return expected by its investors has a direct relation with the risk involved in the firm. Generally, higher the risk involved in a firm, higher is the cost of capital.

According to Solomon Ezra Cost of capital is the minimum required rate of earnings or the cut-off rate of capital expenditures.

Thus, we can say that cost of capital is that minimum rate of return which a firm, and, is expected to earn on its investments so as to maintain the market value of its shares.

From the definitions given above we can conclude three basic aspects of the concept of cost of capital:

(i)                 Cost of capital is not a cost as such. In fact, it is the rate of return that a firm requires to earn from its projects.

(ii)               It is the minimum rate of return. Cost of capital of a firm is that minimum rate of return which will at least maintain the market value of the shares.

(iii)             It comprises of three components. As there is always some business and financial risk in investing funds in a firm, cost of capital comprises of three components:

(a)    the expected normal rate of return at zero risk level, say the rate of interest allowed by banks;

(b)  the premium for business risk; and

(c)  the premium for financial risk on account of pattern of capital structure.

|  |
| --- |
|                   Symbolically cost of capital may be represented as:       where,                     K = ro+b+f                                      K=Cost of capital                                      ro=Normal rate of return at zero risk level                                      b=Premium for business risk.                                      f=Premium for financial risk. |

#### Significance of the Cost of Capital

The concept of cost of capital is very important in the financial management. It plays a crucial role in both capitals budgeting as well as decisions relating to planning of capital structure. Cost of capital concept can also be used as a basis for evaluating the performance of a firm and it further helps management in taking so many other financial decisions.

**(1)** **As an Acceptance Criterion in Capital Budgeting**: Capital budgeting decisions can be made by considering the cost of capital. According to the present value method of capital budgeting, if the present value of expected returns from investment is greater than or equal to the cost of investment, the project may be accepted; otherwise the project may be rejected. The present value of expected return is calculated by discounting the expected cash inflows at cut-off rate (which is the cost of capital). Hence, the concept of cost of capital is very useful in capital budgeting decision.

***(*2)** **As a Determinant of Capital Mix in Capital Structure Decisions:** Financing the firm’s assets is a very crucial problem in every business and as a general rule there should be a proper mix of debt and equity capital in financing a firm’s assets. While designing an optimal capital structure, the management has to keep in mind the objective or maximizing the value of the firm and minimizing the cost of capital. Measurement of cost of capital from various sources is very essential in planning the capital structure of any firm.

**(3)** **As a basis for evaluating the Financial Performance**: The concept of cost of capital can be used to ‘evaluate the financial performance of top management’. The actual profitability of the project is compared to the projected overall cost of capital and the actual cost of capital of funds raised to finance the project. If the actual profitability of the project is more than the projected and the actual cost of capital, the performance may be said to be satisfactory.

**(4)** **As a Basis for taking other Financial Decisions**: The cost of capital is also used in making other financial decisions such as dividend policy, capitalization of profits, making the rights issue and working capital.

#### COMPUTATION OF SPECIFIC SOURCE OF FINANCE

Computation of each specific source of finance, viz, debt, preference share capital equity share capital and retained earnings is discussed as below:

**1. Cost of Debit**

The cost of debt is the rate of interest payable on debt. For example, a company issues Rs. 1, 00,000 debentures at par; the before tax cost of this debt issue will also be 10%. By way of formula, before-tax-cost of debt may be calculated as:

(i)                             Kdb =

            Where,        *Kdb* = before tax cost of debt

                                *I*= Interest

            And              *P* = Principal

In case the debt is raised at premium or discount, we should consider P as the amount of the net proceeds received from the issue and not the face value of securities. The formula may be changed to

(ii)               Kdb =  (where, NP = Net Proceeds)

Further, when debt is used as a source of finance, the firm saves a considerable amount in payment of tax as the interest is allowed as a deductable expense in computation tax. Hence, the effective cost of debt is reduced. The after tax cost of debt may be calculated with the help of following formula;

(iii)               Kda = Kdb (1-t) =

Where,   Kda= after tax cost of debt

                 t = Rate of tax.

**Cost of Redeemable Debt**

Usually, the debt is issued to be redeemed after a certain period during lifetime of a firm. Such a debt issue is known as Redeemable debt. The cost of redeemable debt capital be computed as:

(iv)                 Before-tax cost of debt

 Where,                  I = Interest

                             N = Number of years in which debt is to be redeemed

                             P = Proceeds at par

                            NP = Net Proceeds

(v)    After tax cost of debt, Kda = Kdb (1-t)

Where,

## *Illustration1:* A Company issues shares of Rs.10,00,000,  10% redeemable debentures at a discount of 5%. The cost of floatation amount to Rs.30,000. The debentures are redeemable after 5 years. Calculate before tax and after tax cost of debt assuming tax rate of 50%.

**Solution:**

|  |
| --- |
| Before-tax cost of debt,                                           =    (NP=Rs. 10,00,000-50,000 (discount) – 30,000 cost of floatation)                        =       After tax cost of debt, Kda = Kdb (1-0.5)                        = 12.09 (1-0.5) = 6.04%                       |

**Cost of Debt Redeemable at Premium**

Sometimes debentures are to be redeemed at a premium; i.e at more than the face value after the expiry of a certain period. The cost of such debt redeemable at premium can be computed as below:

(i) Before tax cost of debt,

  Where,     I = Interest

               n = Number of years in which debt is to be redeemed

              RV= Redeemable value of debt

              NP = Net Proceeds

(ii) After-tax cost of debt,

                Kda= Kdb (1-t)

##

## Illustration2: A 5-year Rs.100 debenture of a firm can be sold for a net price of Rs.96.50. The coupon rate of interest is 14 %per annum and debenture will be redeemed at 5% premium on maturity. The firm tax rate is 40%. Compute the after tax cost of debentures.

**Solution:**

     After-tax cost of debt,

                Kda = Kdb (1-t)

                        = 15.58 (1-0.4) = 15.58 x 0.6 = 9.35%

**Cost of Debt Redeemable in Installments**

Financial institutions generally require principal to be amortized in installments. A company may also issue a bond or debenture to be redeemed periodically. In such a case, principal amount is repaid each period instead of a lump sum at maturity and hence cash period include interest and principal. The amount of interest goes on decreasing each period as it is calculated on decreasing each period as it is calculated on the outstanding amount of debt. The before-tax cost of such a debt can be calculated as below:

or, Vd=

or, Vd =

where,             Vd = Present value of bond or debt

I1, I2....In = Annual interest (Rs.) in period 1,2... and so on.

P1,P2...Pn=Periodic payment of principal in period 1, 2, and so on.

n = Number of years to maturity

Kd = Cost of debt or Required rate of return.

**Cost of Existing Debt**

If a firm wants to compute the current cost of its existing debt, the current market yield of the debt should be taken into consideration. Suppose a firm has 10% debentures of Rs. 100 each outstanding on January 1, 1994 to be redeemed on December 31, 2000 and the new debentures could be issued at a net realizable price of Rs. 90 in the beginning of 1996, the current cost of existing debt will be computed as:

Further, if the firm’s tax rate is 40% the after-tax cost of debt will be:

                 Kda = Kdb (1-t)

                      = 12.63 (1-0.4)

                      = 7.58%

**Cost of Zero Coupon Bonds**

Sometimes companies issue bonds or debentures at a discount from their eventual maturity value and having zero interest rate. No interest is payable on such debentures before their redemption and at the time of redemption the maturity value of the bond is to be paid to the investors. The cost of such debt can be calculated by finding the present values of cash flows as below:

(i)           Prepare the cash flow table using an arbitrary assumed discount rate to discount the cash flows to the present value.

(ii)         Find out the net present value by deducting the present value of the outflows from the present value of the inflows.

(iii)       If the net present value is positive apply higher rate of discount.

(iv)       If the higher discount rate still gives a positive net present value increase the discount rate further until the UPV becomes negative.

(v)         If the NPV is negative at this higher rate the cost of debt must be between these two rates.

***Illustration 3:*** X Ltd. has issued redeemable zero coupon bonds of Rs. 100 each at a discount rate of Rs. 60 repayable at the end of fourth year. Calculate the cost of debt.

|  |
| --- |
| ***Cash Flow Table At Various Assumed Discount Rates*** |
| ***Year*** | ***Cash flow (Rs.)*** | ***Discount Factor at               12%*** | ***P.V. at 12% Rs.*** | ***Discount Factor at 14%*** | ***P.V. at 14%  Rs.*** |
| 04 | 60100 | 1.0000.636 | (60)63.603.60 | 1.0000.592 | (60)59.20-0.80 |
| Cost of Debt (Kd) =  12+                   = 12+ = 13.64% |

**Floating or Variable Rate Debt**

The interest on floating rate debt changes depending upon the market rate of interest payable on gilt edged securities or the prime lending rate of the bank. For example, suppose a company raises debt from external sources on the terms of prime lending rate of the bank plus four percent. If the prime lending rate of the bank is 8% p.a. the company will have to pay interest at the rate of 12% p.a. Further, if the prime lending rate falls to 6% p.a. the company shall pay interest at only 10% p.a.

***Illustration 4:*** ABC Ltd. raised a debt of Rs. 50 lakhs on the terms that interest shall be payable at prime lending rate of bank plus three percent. The prime lending rate of the bank is 7 per cent. Calculate the cost of debt assuming that the corporate rate of tax is 35%.

***Solution:***

|  |
| --- |
| Before-tax cost of debt,                          Kdb = 7%+3% = 10%After-tax cost of debt,                          Kda = Kdb (1-t)                                = 10% (1-0.35) = 10% (0.65) = 6.5% |

**Real or Inflation Adjusted Cost of Debt**

In the days of inflation, the real cost of debt is much loss than the nominal cost as the fixed amount is payable irrespective of the fall in the value of money because of price level changes. The real cost of debt can be calculated as below:

Real Cost of Debt =

**2. Cost of Preference Capital**

A fixed rate of dividend is payable on preference shares. Though dividend is payable at the discretion of the Board of directors and there is no legal binding to pay dividend, yet it does not mean that preference capital is cost free. The cost of preference capital is a function of dividend expected by its investors i.e. its stated dividend. In case dividends are not paid to preference shareholders, it will affect the fund raising capacity of the firm. Hence, dividends are usually paid regularly on preference shares except when there are no profits to pay dividends. The cost of preference capital which is perpetual can be calculated as:

                  Kp =

Where                   *Kp* = Cost of Preference Capital

                             *D* = Annual Preference Dividend

            *P* = Preference Share Capital (Proceeds.)

Further, if preference shares are issued at *Premium or Discount* or when costs of floatation are incurred to issue preference shares, the nominal or par value of preference share capital has to be adjusted to find out the net proceeds from the issue of preference shares. In such a case, the cost of preference capital can be computed with the following formula:

                      Kp=

It may be noted that as dividend are not allowed to be deducted in computation of tax, no adjustment is required for taxes.

Sometimes Redeemable Preference Shares are issued which can be redeemed or cancelled on maturity date. The cost of redeemable preference share capital can be calculated as:

                    Where,             Kpr = Cost of Redeemable Preference Shares

            *D* = Annual Preference dividend

            *MV* = Maturity Value of Preference Shares

            *NP* = Net proceeds of Preference Shares

***Illustration 5:***  A company issues 10,000 shares 10% Preference Shares of Rs. 100 each. Cost of issue is Rs. 2 per share. Calculate cost of preference capital if these shares are issued (a) at par, (b) at a premium of 10% and (c) at a discount of 5%.

***Solution:***

|  |
| --- |
| Cost of Preference Capital, Kp =  (a)     (b) =              = 9.26% (c)     =              =10.75% |

**3. Cost of Equity Share Capital**

The cost of equity is the maximum rate of return that the company must earn on equity financed portion of its investments in order to leave unchanged the market price of its stock.’ The cost of equity capital is function of the expected return by its investors. The cost of equity is not the out-of-pocket cost of using equity capital as the equity shareholders are not paid dividend at a fixed rate every year. Moreover, payment of dividend is not a legal binding. It may or may not be paid. But it does not mean that equity share capital is a cost free capital. The cost of equity can be computed in following ways:

***(*a) Dividend Yield Method or Dividend/Price Ratio Method**: According to this method, the cost of equity capital is the ‘discount rate that equates the present value of expected future dividends per share with the net proceeds (or current market price) or a share’. Symbolically.

Ke =

Where, Ke = Cost of Equity Capital

            D = Expected dividend per share

            NP = net proceeds per share

and      MP = Market Price per share.

***Illustration 6:*** A company issues 1000 equity shares of Rs. 100 each at a premium of 10%. The company has been paying 20% dividend to equity shareholders for the past five years and expects to maintain the same in the future also. Compute the cost of equity capital, Will it make any difference if the market price of equity share is Rs. 160?

***Solution:***

|  |
| --- |
|                     Ke = D/NP                         =     If the market price of a equity share is Rs. 160                      Ke = D/MP                          =  |

**(b) Dividend yield plus growth in dividend method:** When the dividends of the firm are expected to grow at a constant rate and the dividend payout ratio is constant this method may be used to compute the cost of equity capital. According to this method the cost of equity capital is based on the dividends and the growth rate.

Ke =

Where, Ke = Cost of equity capital

            *D1* = Expected Dividend per share at the end of the year

            *NP* = Net proceeds per share

            *G* = Rate of growth in dividends

            *Do* = previous year’s dividend.

Further, in case **cost of existing equity share capital** is to be calculated, the NP should be changed with MP (market price per share) in the above equation.

 **(c) Earning Yield Method:** According to this method, the cost of equity capital is the discount rate that equates the present values of expected future earnings per share with the net proceeds (or, current market price) of a share. Symbolically:

 **(d) Realized Yield Method:**One of the serious limitations of using dividend yield method or earnings yield method is the problem of estimating the expectations of the investors regarding future dividends and earnings. It is not possible to estimate future dividends and earnings correctly; both of these depend upon so many uncertain factors. To remove this drawback, realized yield method which takes into account the actual average rate of return realized in the past may be applied to compute the cost of equity share capital. To calculate the average rate of return realized, dividend received in the past along with the gain realized at the time of sale of shares should be considered. The cost of equity capital is said to be the realized rate of return by the shareholders. This method of computing cost of equity share capital is based upon the following assumptions:

(a) The firm will remain in the same risk class over the period.

(b) The shareholders expectations are based upon the past realized yield.

(c) The investors get the same rate of return as the realized yield even if they invest elsewhere;

(d) The market price of shares does not change significantly.

 **4. Cost of Retained Earning**

It is sometimes argued that retained earnings do not involve any cost because a firm is not required to pay dividends on retained earnings. However, the shareholders expect a return on retained profits. Retained earnings accrue to a firm only because of some sacrifice made by the shareholders in not receiving the dividends out of the available profits.

The cost of retained earnings may be considered as the rate of return which the existing shareholders can obtain by investing the after tax dividends in alternative opportunity of equal qualities. It is, thus, the opportunity cost of dividends foregone by the shareholders. Cost of retained earnings can be computed with the help of following formula:

*K*r =

Where,

                                      *K*r = Cost of retained earnings

                                      *D* = Expected dividend

                                      *NP* = Not proceeds of share issue

                                      *G*= Rate of growth.

**Leverage**

In finance, leverage (also known as gearing or levering) refers to the use of debit to supplement investment. Companies usually leverage to increase returns to stock, as this practice can maximize gains (and losses). Leverage is the degree to which an investor or business is utilizing borrowed money.

**Types of leverage –**

1. **Operating leverage –** The operating leverage is a measure of how revenue growth translates into growth in operating income. It is a measure of leverage and how risky (volatile) a company’s operating income is. Operating leverage can also be measured in terms of change in operating income for a given change in sales (revenue). Operating leverage reflects the extent to which fixed assets and associated fixed costs are utilized in the business. Degree of operating leverage (DOL) may be defined as the percentage to levering. DOL the Degree of operating leverage (DOL) can be computed in a number of equivalent ways; one way it is defined as the ratio of the percentage change in Operating Income for a given percentage change in Sales.

1. **Financial leverage –**
* Financial leverage is the ability of the firm to use fixed financial charges to magnify the effects of changes in EBIT on the firm’s earnings per share.
* In other words, financial leverage may be defined as the payments of fixed rate of interest for the use of fixed interest bearing securities to magnify the rate of return as equity shares.
* The use of the fixed-charges sources of funds, such as debt and preference capital along with the owner’s equity in the capital structure, is described as financial leverage or gearing or trading on equity.

Degree of financial leverage – Degree of financial leverage (DFL) may be defined as the percentage change in earnings (earnings per share) that occurs as a result of a percentage in earnings before interest and taxes.

1. **Combined leverage** – If both operating and financial leverage allow us to magnify our returns, and then we will get maximum leverage through their combined use in the form of combined leverage. Degree of combined leverage (DTL) uses the entire income statement and shows the impact of a change in sales or volume on bottom-line earnings per share.

**FORMAT OF LEVERAGE**

|  |  |
| --- | --- |
| **Particular**  | **Amount** |
| Sales (In Rs.) (-) Variable Cost  | \*\* |
| = Contribution (-) Fixed Cost  | \*\* |
| = EBIT (-) Interest | \*\* |
| = EBT(-) Tax | \*\* |
| = EAT (-) Preference Dividend | \*\* |
| = Earning after Preference dividend(-) Equity Divided | \*\* |
| = Net Profit (Retained Earning)  | \* |

EBIT = Earnings before Income & Tax – EBT = Earnings Before Tax – EAT = Earnings after Tax

**Formulae**

1. **Operating Leverage =** $\frac{Contribution }{EBIT}$ or $\frac{Percentage changes in EBIT}{Percentage change in sales }$
2. **Financial leverage =** $\frac{EBIT }{EBT}$ or $\frac{Percentage changes in EPS}{Percentage change in EBIT }$
3. **Combined leverage =** $\frac{Contribution }{EBT}$ or $\frac{Percentage changes in EPs}{Percentage change in sales }$ or OL x FL

**Other Formulae**

1. Earnings per share (EPS) = $\frac{Net Profit or REtained Earnings }{No.of Equity shares }$
2. Break even Analysis = $\frac{fixed Cost x Sales }{Contribution }$
3. P/V ratio = $\frac{ Contribution }{sales }$ x 100
4. ROI = $\frac{ EBIT }{Capital Employed }$ x 100
5. Assets turnover = $\frac{Net Sales }{Total Sales }$

**Some major points taken into consideration**

1. Interest in chargeable on debts only
2. Total assets = Debts Assets + Equity Capital

**Degree of combined leverage**

DCL = DOL x DFL

 OR

 DCL = $\frac{\%change in EBIT}{\%change in sales }$x $\frac{\%change in EBT}{\%change in EBIT }$

OR

DCL = $\frac{\%change in EBT or EPS}{\%change in sales }$

# How Financial Leverage Affects Profits

Financial leverage refers to the portion of a company's operations financed with debt. Being highly leveraged means that you have a significant amount of debt in use. While debts used to generate revenue can boost revenue and profit over time, unproductive or excessive debt can inhibit profitability.

**Interest Impact**

One of the most direct ways leverage negatively affects ongoing profit is payment of interest. When you owe money, you pay the lender interest over time. Every dollar in interest reduces your profit by the same amount. If you get a low interest rate on a particular loan, the cost of the interest may make a reasonable investment. Trade buyers often purchase inventory on account and pay interest to carry the debt. The inventory flexibility is a positive tradeoff.

**Growth and Development**

To launch or grow a business, you have two basic ways to finance the move. You can seek out investment money or get a loan. If you prefer to maintain greater control with debt financing, you accept the repayment obligations as part of the deal. In the long run, a business may generate greater profit through business expansion. Plus, each owner gets a greater share of the profit in that scenario if you borrowed money instead of inviting more owner-investors.

**Cash Flow Limitations**

Leverage inhibits future cash flow because you must set aside a certain amount of ongoing profit for principal and interest payments. Limited cash flow often causes companies to avoid taking new risks or making additional investments. While this approach may not affect current profit, it can prohibit growth in profitability over time. A high degree of leverage is very stifling for this reason. If competitors aggressively go after new opportunities, you could also miss out on needed revenue streams and capital resources for future profit development.

**Asset Sale Implications**

A minor way that leverage affects net profit relates to asset sales. When you borrow money to pay for a building or piece of equipment, the value of the item is an asset and the debt is a liability. If you sell an asset, the money you receive is recorded as one-time unusual revenue. This boosts your net profit. However, the money received is mitigated by amounts that you have to use to pay down debt at the time of the sale.

**Unit-v**

**UNIT-V**

**DIVIDEND DECISIONS**

The term dividend refers to that profit of a company which is distributed by company among its shareholders. It is the reward of the shareholders for investments made by them in the shares of the company. A company may have preference share capital as well as equity share capital and dividends may be paid on both types of capital. The investors are interested in earning the maximum return on their investments and to maximize their wealth on the other hand, a company needs to provide funds to finance its long-term growth. If a company pays out as dividend most of what it earns, then for Business requirements and further expansion it will have to depend upon outside resources such as issue of debt or a new shares. Dividend policy of a firm, thus affects both long-term financing and wealth of shareholders.

**Concept and Significance**

The dividend decision is one of the three basic decisions which a financial manager may be required to take, the other two being the investment decisions and the financing decisions. In each period any earning that remains after satisfying obligations to the creditors, the government and the preference shareholders can either be retained or paid out as dividends or bifurcated between retained earnings and dividends. The retained earnings can then be invested in assets which will help the firm to increase or at least maintain its present rate of growth.

In dividend decision, a financial manager is concerned to decide one or more of the following:

-          Should the profits be ploughed back to finance the investment decisions?

-          Whether any dividend be paid? If yes, how much dividend be paid?

-          When these dividend be paid? Interim or final.

-          In what form the dividend be paid? Cash dividend or Bonus shares.

All these decisions are inter-related and have bearing on the future growth plans of firm. If a firm pays dividend it affects the cash flow position of the firm but earns the goodwill among investors who therefore may be willing to provide additional funds for financing of investment plans of firm. On the other hand, the profits which are not distributed as dividends become an easily available source of funds at no explicit costs.

However, in case of ploughing back of profits, the firm may loose the goodwill and confidence of the investors and may also defy the standards set by other firms. Therefore, in taking dividend decision, the financial manager has to consider and analyze various factors. Every aspects of dividend decision is to be critically evaluated. The most important of these considerations is to decide as to what portion of profit should be distributed which is also known as **dividend payout ratio.**

**Types of Dividend**

Dividends can be classified in various forms. Dividend paid in ordinary course of business is known as *Profit Dividends*, while dividends paid out of capital are known as *Liquidation dividends*. Dividend may also be classified on the basis of medium in which they are paid:

**(a)**      **Cash Dividend:** A cash dividend is a usual method of paying dividends. Payment of dividend in cash results in outflow of funds and reduces the company’s net worth, though the shareholder gets an opportunity to invest the cash in any manner they desire. This is why ordinary shareholders prefer to receive dividends in cash. But the firm must have adequate liquid resources at its disposal or provide for such resources so that its liquidity position is not adversely affected on account of cash dividends.

**(b)**      **Scrip or Bond Dividend:**A scrip dividend promises to pay shareholders at future specific date. In case a company does not have sufficient funds to pay dividends in cash, it may issue notes or bonds for amounts due to shareholders. The objective of scrip dividend is to postpone the immediate payment of cash. A scrip dividend bears interest and is accepted as a collateral security.

**(c)**       **Property Dividend:**Property dividends are paid in the form of some assets other than cash. They are distributed under exceptional circumstances and are not popular in India.

**(d)**      **Stock Dividend:**Stock Dividendmeans the issue of bonus shares to the existing shareholders. If a company does not have liquid resources it is better to declare stock dividend. Stock dividend amounts to capitalization of earnings and distribution of profits among existing shareholders without affecting the cash position of the firm.

**Dividend Decision and Valuation of Firms**

The value of the firm can be maximized if the shareholders wealth is maximized. There are conflicting views regarding the impact of dividend decision on valuation of the firm. According to one school of thought, dividend decision does not affect shareholders wealth and hence the valuation of firm. On other hand, according to other school of thought dividend decision materially affects the shareholders wealth and also valuation of the firm. We have discussed below the views of two schools of thought under two groups:

1.      The Relevance Concept of Dividend a Theory of Relevance.

2.      The Irrelevance Concept of Dividend or Theory of Irrelevance.

**The Relevance Concept of Dividend**

The advocates of this school of thought include Myron Gordon, James Walter and Richardson. According to them dividends communicate information to the investors about the firm’s profitability and hence dividend decision becomes relevant. Those firms which pay higher dividends will have greater value as compared to those which do not pay dividends or have a lower dividend pay out ratio. It holds that dividend decisions affect value of the firm.

We have examined below two theories representing this notion: (i) Walter’s Approach and (ii) Gordon’s Approach.

***(i) Walter’s Approach:***Prof. Walter’s model is based on the relationship between the firms (a) return on investment i.e. r and (b) the cost of capital or required rate of return i.e. k.

According to Prof. Walter, If r>k i.e. if the firm earns a higher rate of return on its investment than the required rate of return, the firm should retain the earnings. Such firms are termed as growth firms and the optimum pay-out would be zero which would maximize value of shares.

In case of declining firms which do not have profitable investments i.e. where r<k, the shareholder would stand to gain if the firm distributes it earnings. For such firms, the optimum payout would be 100% and the firms should distribute the entire earnings as dividend.

In case of normal firms where r=k the dividend policy will not affect the market value of shares as the shareholders will get the same return from the firm as expected by them. For such firms, there is no optimum dividend payout and value of firm would not change with the change in dividend rate.

**Assumptions of Walter’s model**

(i)           The firm has a very long life.

(ii)         Earnings and dividends do not change while determining the value.

(iii)       The Internal rate of return  ( r ) and the cost of capital (k) of the firm are constant.

(iv)       The investments of the firm are financed through retained earnings only and the firm does not use external sources of funds.

Walter’s formula for determining the value of share

Where              P = Market price per share

                        D = Dividend per share

                        r = internal rate of return

                        E = earnings per share

                        ke = Cost of equity capital.

**Criticism of Walter’s Model**

Walter’s model has been criticized on account of various assumptions made by Prof Walter in formulating his hypothesis.

(i)                 The basic assumption that investments are financed through retained earnings only is seldom true in real world. Firms do raise fund by external financing.

(ii)               The internal rate of return i.e. r also does not remain constant. As a matter of fact, with increased investment the rate of return also changes.

(iii)             The assumption that cost of capital (k) will remain constant also does not hold good. As a firm’s risk pattern does not remain constant, it is not proper to assume that (k) will always remain constant.

***(ii)******Gordon’s Approach :***Another theory which contends that dividends are relevant is Gordon’s model. This model which opinions that dividend policy of a firm affects its value are based on following assumptions:-

1.            The firm is an all equity firm. No external financing is used and investment programmes are financed exclusively by retained earnings.

2.            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.            ke>br

Gordon argues that the investors do have a preference for current dividends and there is a direct relationship between the dividend policy and the market value of share. He has built the model on basic premise that investors are basically risk averse and they evaluate the future dividend/capital gains as a risky and uncertain proposition. Investors are certain of receiving incomes from dividend than from future capital gains. The incremental risk associated with capital gains implies a higher required rate of return for discounting the capital gains than for discounting the current dividends. In other words, an investor values current dividends more highly than an expected future capital gain.

        *Hence, the “bird-in-hand” argument* of this model suggests that dividend policy is relevant, as investors prefer current dividends as against the future uncertain capital gains. When investors are certain about their returns they discount the firm’s earnings at lower rate and therefore placing a higher value for share and that of firm. So, the investors require a higher rate of return as retention rate increases and this would adversely affect share price.

Symbolically: -

          where              P = Market price of equity share

                        E = Earnings per share of firm.

                        b = Retention Ratio (1 – payout ratio)

                        r = Rate of Return on Investment of the firm.

                        Ke = Cost of equity share capital.

                        br = g i.e. growth rate of firm.

**The Irrelevance Concept of Dividend**

The other school of thought on dividend policy and valuation of the firm argues that what a firm pays as dividends to share holders is irrelevant and the shareholders are indifferent about receiving current dividend in future. The advocates of this school of thought argue that dividend policy has no effect on market price of share. Two theories have been discussed here to focus on irrelevance of dividend policy for valuation of the firm which is as follows:

**1. Residual’s Theory of Dividend**

According to this theory, dividend decision has no effect on the wealth of shareholders or the prices of the shares and hence it is irrelevant so far as valuation of firm is concerned. This theory regards dividend decision merely as a part of financing decision because earnings available may be retained in the business for re-investment. But if the funds are not required in the business they may be distributed as dividends. Thus, the decision to pay dividend or retain the earnings may be taken as residual decision. This theory assumes that investors do not differentiate between dividends and retentions by firm. Their basic desire is to earn higher return on their investment. In case the firm has profitable opportunities giving higher rate of return than cost of retained earnings, the investors would be content with the firm retaining the earnings to finance the same. However, if the firm is not in a position to find profitable investment opportunities, the investors would prefer to receive the earnings in the form of dividends. Thus, a firm should retain earnings if it has profitable investment opportunities otherwise it should pay them as dividends.

Under the Residuals theory, the firm would treat the dividend decision in three steps:

* Determining the level of capital expenditures which is determined by the investment opportunities.
* Using the optimal financing mix, find out the amount of equity financing need to support the capital expenditure in step (i) above
* As the cost of retained earnings kris less than the cost of new equity capital, the retained earnings would be used to meet the equity portions financing in step (ii) above. If available profits are more than this need, then the surplus may be distributed as dividends of shareholder. As far as the required equity financing is in excess of the amount of profits available, no dividends would be paid to the shareholders.

Hence, in residual theory the dividend policy is influenced by (i) the company’s investment opportunities and (ii) the availability of internally generated funds, where dividends are paid only after all acceptable investment proposals have been financed. The dividend policy is totally passive in nature and has no direct influence on the market price of the share.

**2. Modigliani and Miller Approach (MM Model)**

Modigliani and Miller have expressed in the most comprehensive manner in support of theory of irrelevance. They maintain that dividend policy has no effect on market prices of shares and the value of firm is determined by earning capacity of the firm or its investment policy. As observed by M.M, “Under conditions of perfect capital markets, rational investors, absence of tax discrimination between dividend income and capital appreciation, given the firm’s investment policy, its dividend policy may have no influence on the market price of shares”. Even, the splitting of earnings between retentions and dividends does not affect value of firm.

**Assumptions of MM Hypothesis**

(1)    There are perfect capital markets.

(2)    Investors behave rationally.

(3)    Information about company is available to all without any cost.

(4)    There are no floatation and transaction costs.

(5)    The firm has a rigid investment policy.

(6)    No investor is large enough to affect the market price of shares.

(7)    There are either no taxes or there are no differences in tax rates applicable to dividends and capital gains.

**The Argument of MM**

The argument given by MM in support of their hypothesis is that whatever increase in value of the firm results from payment of dividend, will be exactly off set by achieve in market price of shares because of external financing and there will be no change in total wealth of the shareholders. For example, if a company, having investment opportunities distributes all its earnings among the shareholders, it will have to raise additional funds from external sources. This will result in increase in number of shares or payment of interest charges, resulting in fall in earnings per share in future. Thus whatever a shareholder gains on account of dividend payment is neutralized completely by the fall in the market price of shares due to decline in expected future earnings per share. To be more specific, the market price of share in beginning of period is equal to present value of dividends paid at end of period plus the market price of shares at end of period plus the market price of shares at end of the period. This can be put in form of following formula:-

                 P0  = D1+ P1

                          1 + Ke

Where

PO = Market price per share at beginning of period.

D1 = Dividend to be received at end of period.

P1 = Market price per share at end of period.

Ke = Cost of equity capital.

The value of P1 can be derived by above equation as under.

The MM Hypothesis can be explained in another form also presuming that investment required by the firm on account of payment of dividends is financed out of the new issue of equity shares.

In such a case, the number of shares to be issued can be computed with the help of the following equation:

Further, the value of the firm can be ascertained with the help of the following formula:

Where,

m = number of shares to be issued.

I = Investment required.

E = Total earnings of the firm during the period.

P1 = Market price per share at the end of the period.

Ke = Cost of equity capital.

n = number of shares outstanding at the beginning of the period.

D1 = Dividend to be paid at the end of the period.

nPO = Value of the firm.

This equation shows that dividends have no effect on the value of the firm when external financing is used. Given the firm’s investment decision, the firm has two alternatives, it can retain its earnings to finance the investments or it can distribute the earnings to the shareholders as dividends and can arise an equal amount externally. If the second alternative is preferred, it would involve **arbitrage process**. Arbitrage refers to entering simultaneously into two transactions which exactly balance or completely offset each other. Payment of dividends is associated with raising funds through other means of financing. The effect of dividend payment on shareholder’s wealth will be exactly offset by the effect of raising additional share capital. When dividends are paid to the shareholder, the market price of the shares will increase. But the issue of additional block of shares will cause a decline in the terminal value of shares. The market price before and after the payment of the dividend would be identical. This theory thus signifies that investors are indifferent about dividends and capital gains. Their principal aim is to earn higher on investment. If a firm has investment opportunities at hand promising higher rate of return than cost of capital, investor will be inclined more towards retention. However, if the expected return is likely to be less than what it would cost, they would be least interested in reinvestment of income. Modigiliani and Miller are of the opinion that value of a firm is determined by earning potentiality and investment policy and never by dividend decision.

**Criticism of MM Approach**

MM Hypothesis has been criticized on account of various unrealistic assumptions as given below.

1.      Perfect capital markets does not exist in reality.

2.      Information about company is not available to all persons.

3.      The firms have to incur floatation costs which issuing securities.

4.      Taxes do exit and there is normally different tax treatment for dividends and capital gains.

5.      The firms do not follow rigid investment policy.

6.      The investors have to pay brokerage, fees etc. which doing any transaction.

7.      Shareholders may prefer current income as compared to further gains.

**Let’s Sum Up**

·         Dividend decision is an important decision, which a financial manager has to take. It refers to those profits of a company which is distributed by company among its shareholders.

·         There has been a difference of opinion on the effect of dividend policy on value of firm. Two schools of thought have emerged on relationship between dividend policy and value of firm.

·         On one hand Walter model and Gordon model consider dividend as relevant for value of firm as investors prefer current dividend over future dividend.

·         On other hand Residuals Approach and MM Model consider dividend is irrelevant for value of firm. The detention of profit for re-investment is important. MM Model have introduced arbitrage process to prove that value of firm remain same whether firm pays dividend or not.

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| **Practical aspects of Dividend Policy**While deciding on the dividend policy, firms face two questions –1. What should be the average pay ratio?
2. How stable should the dividends be over time?

Firms consider the following factors to determine the payout ratio –1. **Funds requirement –** The dividend payout ratio of firms depends on the firm’s future requirements for funds. Long term financial forecasting of funds can assess this requirement. Usually firms, which have plans for substantial financial investment, need funds to exploit the available opportunities. Thus, they keep their dividend payout ratio low. On the other hand, firms, which have very few investment avenues have larger dividend payout ratio.
2. **Liquidity –** It is another factor which influences the dividend payout ratio as dividends involved cash payment. Firms, which desire to pay dividends, may not do so, because of insufficient liquidity. This usually happens in the case of profitable and expanding firms, which have very low liquidity because of substantial investments.
3. **Availability of external sources of financing –**Firms which have easy access to external sources of funds enjoy a great deal of flexibility in deciding the dividend payout ratio. For such firms, dividend payout decision is somewhat independent of its investment decision as well as its liquidity position. Such firms are usually more generous in their dividend policies. While on the other hand, firms, which do not have easy access to external sources of funds, have to rely on the internal sources of funds or investment purposes. Such firms are usually very conservative in their dividend policy decisions.
4. **Shareholder preference –**Preferences of shareholder are another major factor, which influence dividend payout. If shareholders prefer current income to capital gains, then the firm may follow the liberal dividend policy. While on the other hand if they prefer capital gain to dividend income, then firms follow the conservative dividend policy.
5. **Difference in the cost of external equity and retained earnings –**The cost of equity in all cases except for those raised by way of rights issue is higher than the cost of retained earnings. Depending on the extent of this difference in cost, firms decide the relative proportion of external equity and retained earnings to be used. This affects the dividend policy decision of the company.
6. **Control –** Raising money from external resources may lead to dilution of control, in case money is raised by issuing public equity. Internal financing on the other hand does not lead to any dilution of control. Hence, if management and shareholders are averse to dilution of control, then firms prefer to rely more on retained earnings. Thus, such companies may adopt the conservative dividend policy.
7. **Taxes –**In India dividend income for the individuals is free, however capital gains are taxable. Thus, in that case shareholders who are in high tax bracket may prefer dividend income rather than capital gains. However, if tax on dividends is viewed from point of view of corporate, they have to pay dividend tax. Thus, this may influence the companies’ dividend policy.

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