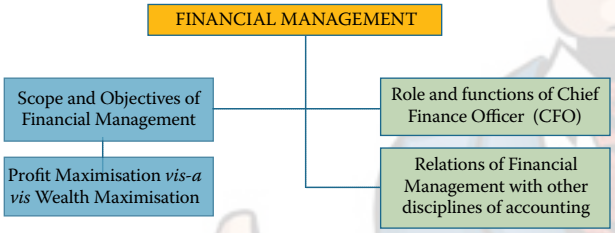
Financial Management-A Capsule for Quick Revision

SCOPE AND OBJECTIVES OF FINANCIAL MANAGEMENT

Chapter Overview

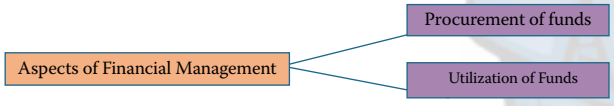


Meaning of Financial Management

Financial management comprises the forecasting, planning, organizing, directing, co-ordinating and controlling of all activities relating to acquisition and application of the financial resources of an undertaking in keeping with its financial objective.

Two Basic Aspects of Financial Management

There are two basic aspects of financial management viz., procurement of funds and an effective use of these funds to achieve business objectives.

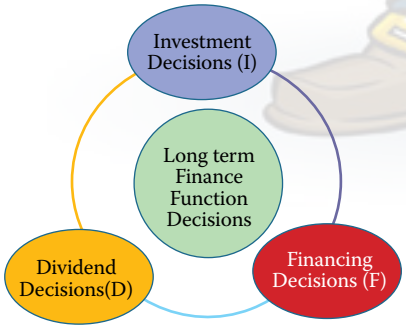


Finance functions/ finance decision

Value of a firm will depend on various finance functions/decisions. It can be expressed as

V = f (I,F,D).

The finance functions are divided into long term and short term functions/decisions



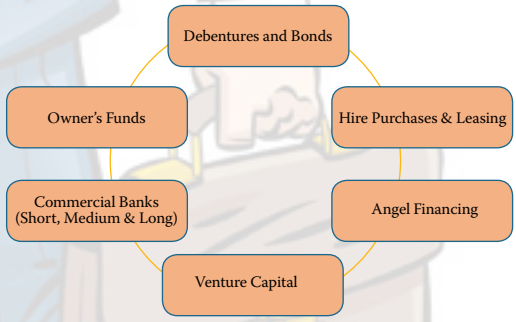
Short- term Finance Decisions/Function	Working capital Management (WCM)

Scope of Financial Management:

- Determination of size of the enterprise and determination of rate of growth.
- Determining the composition of assets of the enterprise.
- Determining the mix of enterprise's financing i.e., consideration of level of debt to equity, etc. and short term functions/decisions
- Analysis, planning and control of financial affairs of the enterprise.

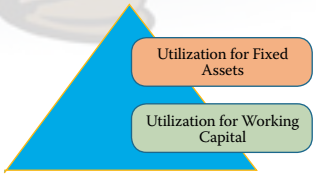
Procurement of Funds:

Since funds can be obtained from different sources, therefore their procurement is always considered as a complex problem by business concerns. Some of the sources for funds for a business enterprise are:



Effective Utilisation of Funds:

The Finance Manager has to point out situations where the funds are being kept idle or where proper use of funds is not being made. All the funds are procured at a certain cost and after entailing a certain amount of risk.



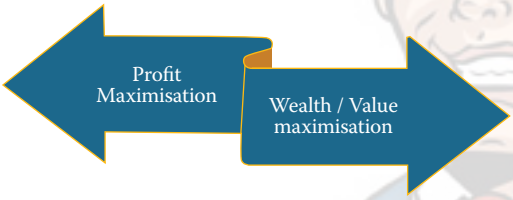
Evolution of Financial Management

The evolution of financial management is divided into three phases. Financial Management evolved as a separate field of study at the beginning of the century. The three stages of its evolution are

Stages of Evolution of Financial Management

Traditional Phase	Transitional Phase	Modern Phase

Objectives of Financial Management



How do we measure the value/wealth of a firm?

Stockholders hire managers to run their firms for them.....

Managers set aside their interest and maximise stock prices...

Stockholders wealth is maximised...

Firm value is maximised....

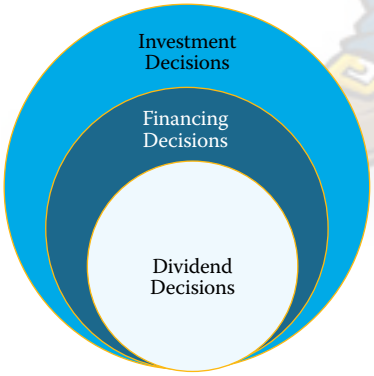
Societal wealth is maximised...

Value of a firm (V) = Number of Shares (N) × Market price of shares (MP)

Or

V = Value of equity (V_e) + Value of debt (V_d)

Three Important Decisions for Achievement of Wealth Maximisation



Conflict between Profit versus Value maximisation Principle:

As a normal tendency, the management may pursue its own personal goals (profit maximization). But in an organization where there is a significant outside participation (shareholding, lenders etc.), the management may not be able to exclusively pursue its personal goals due to the constant supervision of the various stakeholders of the company-employees, creditors, customers, government, etc.

The below table highlights some of the advantages and disadvantages of both profit maximisation and wealth maximization goals

Goal	Objective	Advantages	Disadvantages
Profit Maximization	Large amount of profits	(i) Easy to calculate profits (ii) Easy to determine the link between financial decisions and profits.	(i) Emphasizes the short term gains (ii) Ignores risk or uncertainty (iii)Ignores the timing of returns (iv)Requires immediate resources.
Shareholders Wealth Maximisation	Highest market value of shares	(i) Emphasizes the long term gains (ii) Recognises risk or uncertainty (iii) Recognises the timing of returns (iv) Considers shareholders' return.	(i) Offers no clear relationship between financial decisions and share price. (ii) Can lead to management anxiety and frustration.

Role of Finance executive in today's World vis-a-vis in the past

Today, the role of chief financial officer, or CFO, is no longer confined to accounting, financial reporting and risk management. Some of the key differences that highlight the changing role of a CFO are as follows

What a CFO used to do?	What a CFO now does?
Budgeting	Budgeting
Forecasting	Forecasting
Accounting	Managing M & As
Treasury (cash management)	Profitability analysis (for example, by customer or product)
Preparing internal financial reports for management.	Pricing analysis
Preparing quarterly, annual filings for investors.	Decisions about outsourcing
Tax filing	Overseeing the IT function.
Tracking accounts payable and accounts receivable.	Overseeing the HR function.
Travel and entertainment expense management.	Strategic planning (sometimes overseeing this function).
	Regulatory compliance.
	Risk management.

Relationship of financial management with related disciplines:

Financial management is not a totally independent area. It draws heavily on related disciplines and areas of study namely economics, accounting, production, marketing and quantitative methods. Even though these disciplines are inter-related, there are key differences among them.

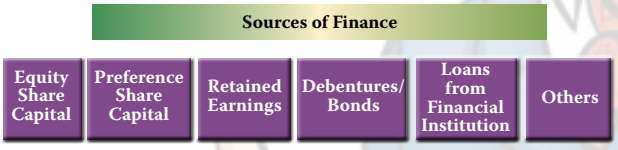
Financial Management and Accounting:	**Treatment of Funds**	In accounting, the measurement of funds is based on the accrual principle.
		The treatment of funds in financial management is based on cash flows.
	Decision – making	Chief focus of an accountant is to collect data and present the data.
		The financial manager's primary responsibility relates to financial planning, controlling and decision making.

Financial Management and Other Related Disciplines:

Financial management also draws on other related disciplines such as marketing, production and quantitative methods apart from accounting. For instance, financial managers should consider the impact of new product development and promotion plans made in the marketing area since their plans will require capital outlays and have an impact on the projected cash flows.

TYPES OF FINANCING

Chapter Overview

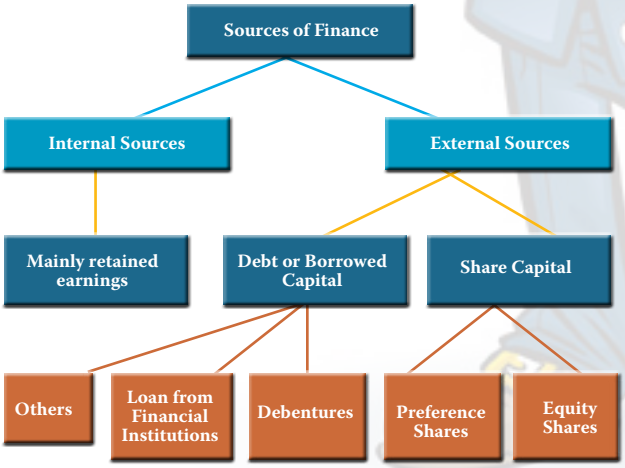


Classification of Financial Sources

There are mainly two ways of classifying various financial sources (i) Based on basic Sources (ii) Based on Maturity of repayment period

Sources of Finance based on Basic Sources

Based on basic sources of finance, types of financing can be classified as



Sources of Finance based on Maturity of Payment

Sources of finance based on maturity of payment can be classified as

Sources of Finance

Long-term

1. Share capital or Equity shares
2. Preference shares
3. Retained earnings
4. Debentures/Bonds of different types
5. Loans from financial institutions
6. Loans from State Financial Corporations
7. Loans from commercial banks
8. Venture capital funding
9. Asset securitisation
10. International financing like Euro-issues, Foreign currency loans

Medium-term

1. Preference shares
2. Debentures/Bonds
3. Public deposits/fixed deposits for duration of three years
4. Medium term loans from Commercial banks, Financial Institutions, State Financial Corporations
5. Lease financing/Hire-Purchase financing
6. External commercial borrowings
7. Euro-issues
8. Foreign Currency bonds

Short-term

1. Trade credit
2. Accrued expenses and deferred income
3. Short term loans like Working Capital Loans from Commercial banks
4. Fixed deposits for a period of 1 year or less
5. Advances received from customers
6. Various short-term provisions

Owner's Capital or Equity Capital:

A public limited company may raise funds from promoters or from the investing public by way of owner's capital or equity capital by issuing ordinary equity shares.

Preference Share Capital:

These are a special kind of shares; the holders of such shares enjoy priority, both as regards to the payment of a fixed amount of dividend and also towards repayment of capital on winding up of the company

Debt Securitisation:

Securitization is a process in which illiquid assets are pooled into marketable securities that can be sold to investors. The process leads to the creation of financial instruments that represent ownership interest in, or are secured by a segregated income producing asset or pool of assets.

Lease Financing:

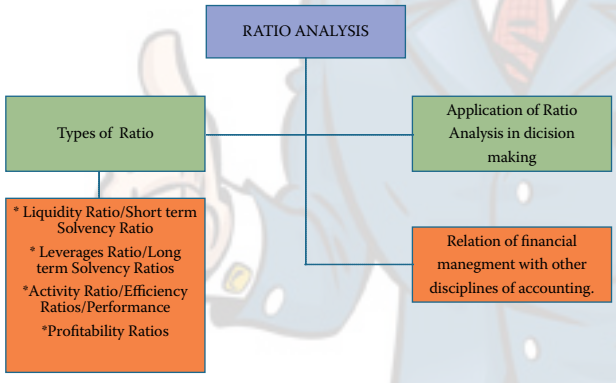
Leasing is a general contract between the owner and user of the asset over a specified period of time. The asset is purchased initially by the lessor (leasing company) and thereafter leased to the user (lessee company) which pays a specified rent at periodical intervals.

Short term Sources of Finance:

There are various sources available to meet short- term needs of finance. The different sources are as shown alongside

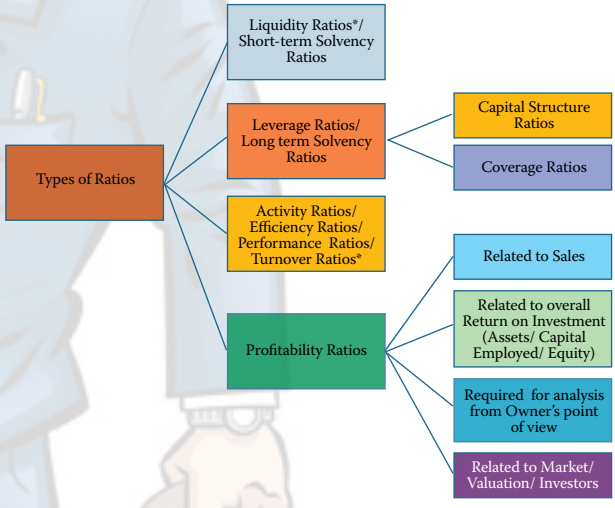
FINANCIAL ANALYSIS AND PLANNING - RATIO ANALYSIS

Chapter Overview



Ratio and its Types:

Ratio analysis is a comparison of different numbers from the balance sheet, income statement, and cash flow statement against the figures of previous years, other companies, the industry, or even the economy in general for the purpose of financial analysis. Types of the Ratios is as given slongside:



Summary of Ratios:

Summary of the ratios has been tabulated as under

Ratio	Formulae	Comments
Liquidity Ratio		
Current Ratio	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	A simple measure that estimates whether the business can pay short term debts. Ideal ratio is 2 : 1.
Quick Ratio	$\frac{\text{Quick Assets}}{\text{Current Liabilities}}$	It measures the ability to meet current debt immediately. Ideal ratio is 1 : 1.
Cash Ratio	$\frac{\text{(Cash and Bank Balances + Marketable Securities)}}{\text{Current Liabilities}}$	It measures absolute liquidity of the business.

Basic Defense Interval Ratio	(Cash and Bank Balances + Marketable Securities) / Operating Expenses – No. of days	It measures the ability of the business to meet regular cash expenditures.
Net Working Capital Ratio	Current Assets – Current Liabilities	It is a measure of cash flow to determine the ability of business to survive financial crisis.
Capital Structure Ratio		
Equity Ratio	Shareholders' Equity / Capital Employed	It indicates owner's fund in companies to total fund invested.
Debt Ratio	Total Outside Liablilities / Total Debt + Net Worth	It is an indicator of use of outside funds.
Debt to equity Ratio	Total Outside Liabilities / Shareholders' Equity	It indicates the composition of capital structure in terms of debt and equity.
Debt to Total assets Ratio	Total Outside Liabilities / Total Assets	It measures how much of total assets is financed by the debt.
Capital Gearing Ratio	(Preference Share Capital + Debentures + Other Borrowed Funds) / (Equity Share Capital + Reserves & Surplus – Losses)	It shows the proportion of fixed interest bearing capital to equity shareholders' fund. It also signifies the advantage of financial leverage to the equity shareholder.
Proprietary Ratio	Prorietary Fund / Total Assets	It measures the proportion of total assets financed by shareholders.
Coverage Ratios		
Debt Service Coverage Ratio (DSCR)	Earnings available for debt service / Interest + Instalments	It measures the ability to meet the commitment of various debt services like interest, installment etc. Ideal ratio is 2.
Interest Coverage Ratio	EBIT / Interest	It measures the ability of the business to meet interest. Ideal ratio is > 1.
Preference Dividend Coverage Ratio	Net Profit/Earning after taxes (EAT) / Preference dividend liability	It measures the ability to pay the preference shareholders' dividend. Ideal ratio is > 1.
Fixed Charges Coverage Ratio	EBIT + Depreciation / Interest + Re-payment of loan / 1 – tax rate	This ratio shows how many times the cash flow before interest and taxes covers all fixed financing charges. The ideal ratio is > 1.
Activity Ratio/ Efficiency Ratio/ Performance Ratio/ Turnover Ratio		
Total Asset Turnover Ratio	Sales/COGS / Average Total Assets	A measure of total asset utilisation. It helps to answer the question - What sales are being generated by each rupee's worth of assets invested in the business?
Fixed Assets Turnover Ratio	Sales/COGS / Fixed Assets	This ratio is about fixed asset capacity. A reducing sales or profit being generated from each rupee invested in fixed assets may indicate overcapacity or poorer-performing equipment.
Capital Turnover Ratio	Sales/COGS / Net Assets	This indicates the firm's ability to generate sales per rupee of long term investment.
Working Capital Turnover Ratio	Sales/COGS / Working Capital	It measures the efficiency of the firm to use working capital.
Inventory Turnover Ratio	COGS/Sales / Average Inventory	It measures the efficiency of the firm to manage its inventory.
Debtors Turnover Ratio	Credit Sales / Average Accounts Receivable	It measures the efficiency at which firm is managing its receivables.

Receivables (Debtors') Velocity	$\frac{\text{Average Accounts Receivable}}{\text{Average Daily Credit Sales}}$	It measures the velocity of collection of receivables.
Payables Turnover Ratio	$\frac{\text{Annual Net Credit Purchases}}{\text{Average Accounts Payables}}$	It measures the velocity of payables payment.
Profitability Ratios based on Sales		
Gross Profit Ratio	$\frac{\text{Gross Profit}}{\text{Sales}} \times 100$	This ratio tells us something about the business's ability consistently to control its production costs or to manage the margins it makes on products it buys and sells.
Net Profit Ratio	$\frac{\text{Net Profit}}{\text{Sales}} \times 100$	It measures the relationship between net profit and sales of the business.
Operating Profit Ratio	$\frac{\text{Operating Profit}}{\text{Sales}} \times 100$	It measures operating performance of business.
Expenses Ratio		
Cost of Goods Sold (COGS) Ratio	$\frac{\text{COGS}}{\text{Sales}} \times 100$	It measures portion of a particular expenses in comparison to sales.
Operating Expenses Ratio	$\frac{\text{Administrative exp.} + \text{Selling \& Distribution OH}}{\text{Sales}} \times 100$	
Operating Ratio	$\frac{\text{COGS + Operating Expenses}}{\text{Sales}} \times 100$	
Financial Expenses Ratio	$\frac{\text{Financial Expenses}}{\text{Sales}} \times 100$	
Profitability Ratios related to Overall Return on Assets/ Investments		
Return on Investment (ROI)	$\frac{\text{Return/ Profit / Earnings}}{\text{Investments}} \times 100$	It measures overall return of the business on investment/ equity funds/ capital employed/ assets.
Return on Assets (ROA)	$\frac{\text{Net Profit after taxes}}{\text{Average Total Assets}} \times 100$	It measures net profit per rupee of average total assets/ average tangible assets/ average fixed assets.
Return on Capital Employed ROCE (Pre-tax)	$\frac{\text{EBIT}}{\text{Capital Employed}} \times 100$	It measures overall earnings (either pre-tax or post tax) on total capital employed.

Users and Objective of Financial Analysis : A Bird's Eye view

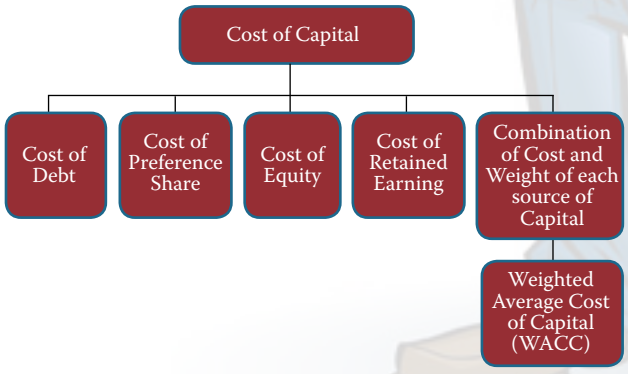
Financial Statement analysis is useful to various shareholders to obtain the derived information about the firm

S.No.	Users	Objectives	Ratios used in general
1.	Shareholders	Being owners of the organisation they are interested to know about profitability and growth of the organization	• Mainly Profitability Ratio [In particular Earning per share (EPS), Dividend per share (DPS), Price Earnings (P/E), Dividend Payout ratio (DP)]
2.	Investors	They are interested to know overall financial health of the organisation particularly future perspective of the organisations.	• Profitability Ratios • Capital structure Ratios • Solvency Ratios • Turnover Ratios
3.	Lenders	They will keep an eye on the safety perspective of their money lended to the organisation	• Coverage Ratios • Solvency Ratios • Turnover Ratios • Profitability Ratios

4.	Creditors	They are interested to know liability position of the organisation particularly in short term. Creditors would like to know whether the organisation will be able to pay the amount on due date.	• Liquidity Ratios • Short term solvency Ratios/ Liquidity Ratios
5.	Employees	They will be interested to know the overall financial wealth of the organisation and compare it with competitor company.	• Liquidity Ratios • Long terms solvency Ratios • Profitability Ratios • Return of investment
6.	Regulator / Government	They will analyse the financial statements to determine taxations and other details payable to the government.	Profitability Ratios
7.	Managers:-		
	(a) Production Managers	They are interested to know various data regarding input output, production quantities etc.	• Input output Ratio • Raw material consumption.
	(b) Sales Managers	Data related to quantities of sales for various years, other associated figures and produced future sales figure will be an area of interest for them	• Turnover ratios (basically receivable turnover ratio) • Expenses Ratios
	(c) Financial Manager	They are interested to know various ratios for their future predictions of financial requirement.	• Profitability Ratios (particularly related to Return on investment) • Turnover ratios • Capital Structure Ratios
	Chief Executive/ General Manager	They will try to find the entire perspective of the company, starting from Sales, Finance, Inventory, Human resources, Production etc.	• All Ratios
8.	Different Industry		
	(a) Telecom	Finance Manager /Analyst will calculate ratios of their company and compare it with Industry norms.	• Ratio related to 'call' • Revenue and expenses per customer
	(b) Bank		• Loan to deposit Ratios • Operating expenses and income ratios
	(c) Hotel		• Room occupancy ratio • Bed occupancy Ratios
	(d) Transport		• Passenger -kilometre • Operating cost - per passenger kilometre.

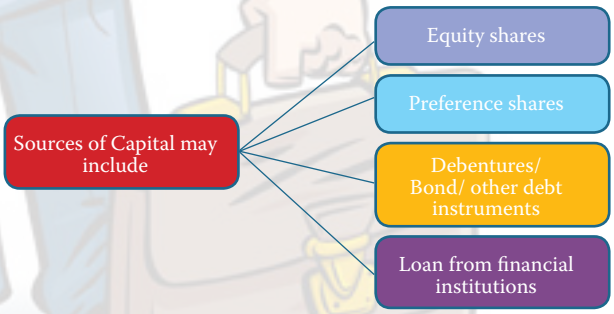
COST OF CAPITAL

Chapter Overview



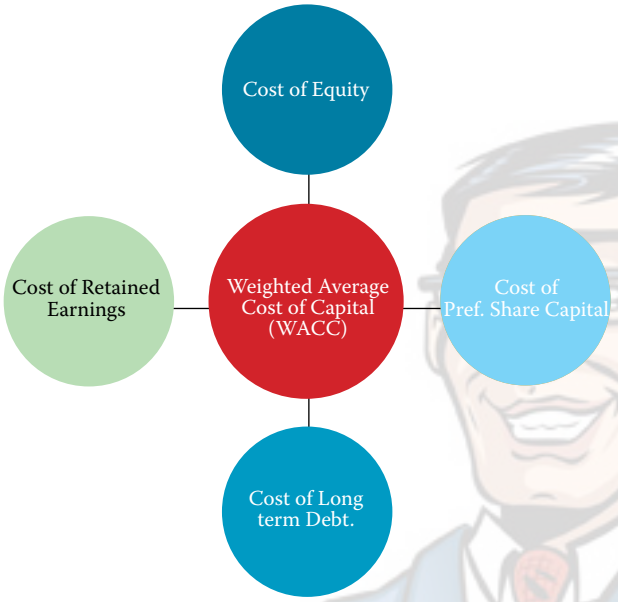
Cost of capital is the return expected by the providers of capital (i.e. shareholders, lenders and the debt-holders) to the business as a compensation for their contribution to the total capital. It is also known as Discount rate, Minimum rate of return etc. It can also be stated as the opportunity cost of an investment, i.e. the rate of return that a company would otherwise be able to earn at the same risk level as the investment that has been selected.

Sources of Capital:

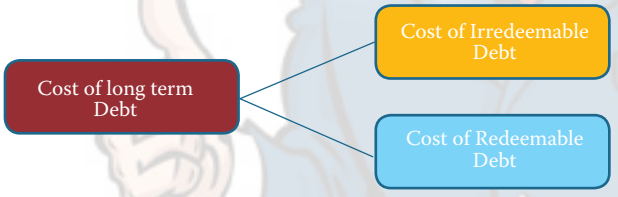


Determination of the Cost of Capital:

Explicit/ Implicit: The cost of capital can either be explicit or implicit. The cash outflow of an entity towards the utilization of capital which is clear and obvious is termed as explicit cost of capital. On the other hand, Implicit cost is the cost which is actually not a cash outflow but it is an opportunity loss of foregoing a better investment opportunity by choosing an alternative option.



Cost of Long term Debt:



Cost of Irredeemable Debentures: Cost of debentures not redeemable during the life time of the company

$$K_d = \frac{I}{NP}(1-t)$$

Where,
K_d = Cost of debt after tax
I = Annual interest payment
NP = Net proceeds of debentures or current market price
t = Tax rate

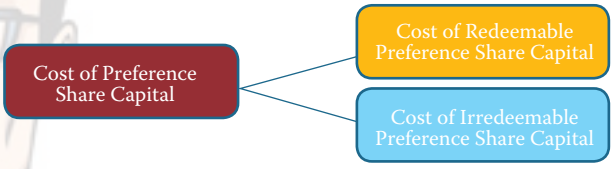
Cost of Redeemable Debentures: If the debentures are redeemable after the expiry of a fixed period, the cost of debentures would be:

$$K_d = \frac{I(1-t)+\frac{(RV-NP)}{n}}{\frac{(RV+NP)}{2}}$$

Where,
I = Interest payment
NP = Net proceeds from debentures in case of new issue of debt or Current market price in case of existing debt.
RV = Redemption value of debentures
t = Tax rate applicable to the company
n = Life of debentures

Cost of Preference Share Capital:

The preference share capital is paid dividend at a specified rate on face value of preference shares. Payment of dividend to the preference shareholders are not mandatory but are given priority over the equity shareholder. The payment of dividend to the preference shareholders are not charged as expenses but treated as appropriation of after tax profit. Hence, dividend paid to preference shareholders does not reduce the tax liability to the company.



Cost of Irredeemable Preference Shares:

$$(Kp) = \frac{PD}{P_0}$$

Where,
PD = Annual preference dividend
P_0 = Net proceeds in issue of preference shares

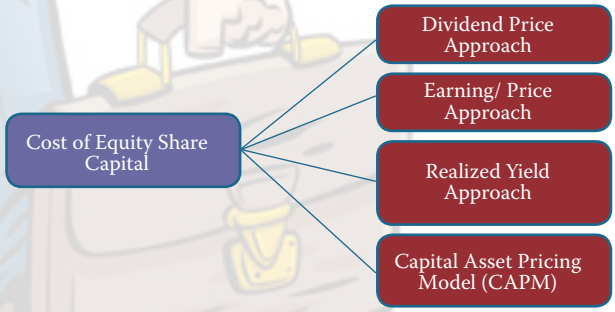
Cost of Redeemable Preference Shares

$$(Kp) = \frac{PD+(RV+NP)/n}{\frac{RV+NP}{2}}$$

Where,
PD = Annual preference dividend
RV = Redemption value of preference shares
NP = Net proceeds on issue of preference shares
n = Life of preference shares

Cost of Equity Share Capital:

Cost of equity capital is the rate of return which equates the present value of expected dividends with the market share price. Different methods are employed to compute the cost of equity share capital which are as



Dividend Price Approach with Constant Dividend

$$Ke = \frac{D}{P_0}$$

Where,
Ke = Cost of equity
D = Expected dividend
P_0 = Market price of equity (ex- dividend)

Dividend Price Approach with Constant Growth

$Ke = \frac{D_1}{P_o} + g$

Where,

$D_1 = [D_0 (1+ g)]$ i.e. next expected dividend
P_0 = Current Market price per share
g = Constant Growth Rate of Dividend

Earning/ Price Approach with constant Earning:

$K_e = \frac{E}{P}$

Where,

E = Current earnings per share
P = Market share price

Earnings/ Price Approach with Growth in Earnings:

$K_e = \frac{E}{P} + g$

Where,

E = Current earnings per share
P = Market price per share
g = Annual growth rate of earnings.

Realized Yield Approach:

According to this approach, the average rate of return realized in the past few years is historically regarded as 'expected return' in the future. It computes cost of equity based on the past records of dividends actually realised by the equity shareholders.

Capital Asset Pricing Model Approach (CAPM):

$K_e = R_f + ß (R_m - R_f)$

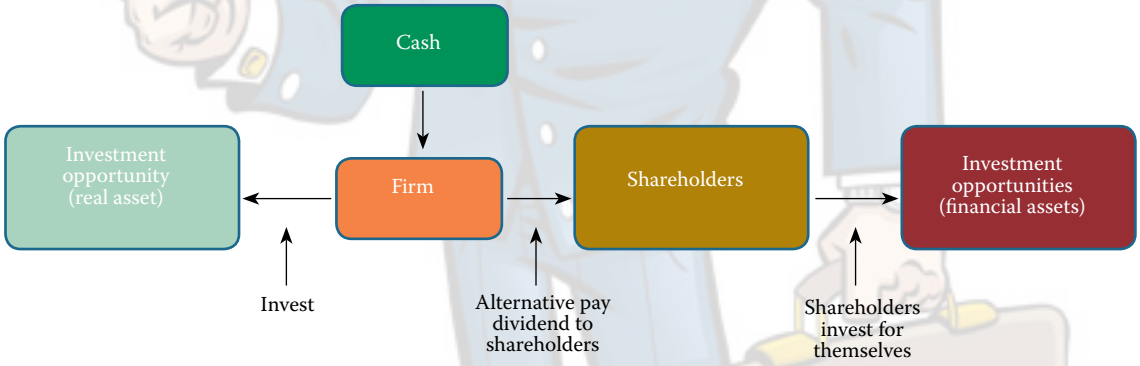
Where,

K_e	=	Cost of equity capital
R_f	=	Risk free rate of return
ß	=	Beta coefficient
R_m	=	Rate of return on market portfolio
$(R_m - R_f)$	=	Market premium

Cost of Retained Earnings

Like another source of fund, retained earnings involve cost. It is the opportunity cost of dividends foregone by shareholders.

In absence of any information on personal tax (t_p):
Cost of Retained Earnings (K_s) = Cost of Equity Shares (K_e)
If there is any information on personal tax (tp): $K_s = Ke - t_p$



Weighted Average Cost Of Capital (WACC):

It is an average rate of return expected by all contributors of capital taking the weight of each element of capital to total capital

WACC (K_o) = (% Debt × K_d) + (% Preff. Capital × K_p) + (% Equity Capital × K_e)

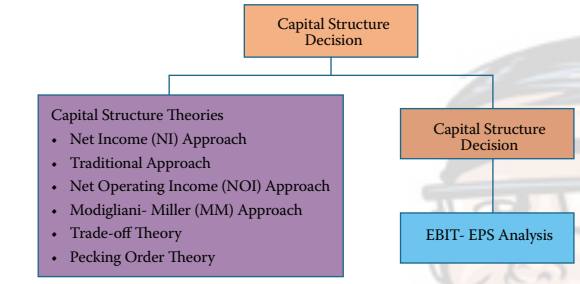
Marginal Cost of Capital:

It is the cost of raising an additional rupee of capital. Since the capital is raised in substantial amount in practice, marginal cost is referred to as the cost incurred in raising new funds.

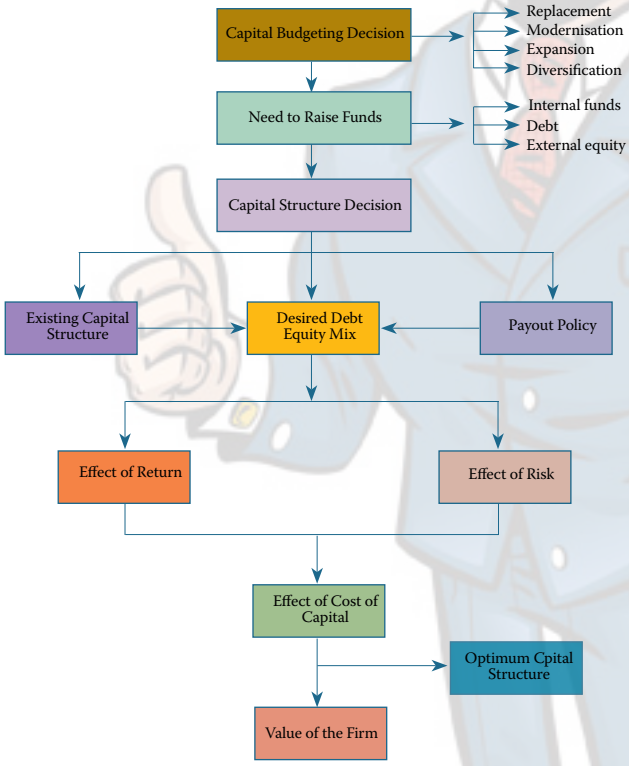
To calculate the marginal cost of capital, the intended financing proportion should be applied as weights to marginal component costs. The marginal cost of capital should, therefore, be calculated in the composite sense. The marginal weights represent the proportion of funds the firm intends to employ.

FINANCING DECISIONS-CAPITAL STRUCTURE

Chapter Overview

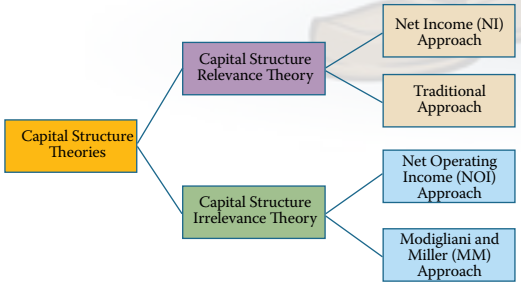


Capital Structure decision refers to deciding the forms of financing (which sources to be tapped); their actual requirements (amount to be funded) and their relative proportions (mix) in total capitalisation.



Capital Structure Theories:

The following approaches explain the relationship between cost of capital, capital structure and value of the firm



Net Income (NI) Approach:

According to this approach, capital structure decision is relevant to the value of the firm. An increase in financial leverage will lead to decline in the weighted average cost of capital (WACC), while the value of the firm as well as market price of ordinary share will increase. Conversely, a decrease in the leverage will cause an increase in the overall cost of capital and a consequent decline in the value as well as market price of equity shares

The value of the firm on the basis of Net Income Approach can be ascertained as follows:

V = Market Value of Equity + Market Value of Debt

$$\text{Overall cost of capital} = \frac{\text{EBIT}}{\text{Value of the Form}}$$

Traditional Approach:

This approach favours that as a result of financial leverage up to some point, cost of capital comes down and value of firm increases. However, beyond that point, reverse trends emerge. The principle implication of this approach is that the cost of capital is dependent on the capital structure and there is an optimal capital structure which minimises cost of capital.

Net Operating Income Approach (NOI):

Any change in the leverage will not lead to any change in the total value of the firm and the market price of shares, as the overall cost of capital is independent of the degree of leverage. As a result, the division between debt and equity is irrelevant.

As per this approach, an increase in the use of debt which is apparently cheaper is offset by an increase in the equity capitalisation rate. This happens because equity investors seek higher compensation as they are opposed to greater risk due to the existence of fixed return securities in the capital structure.

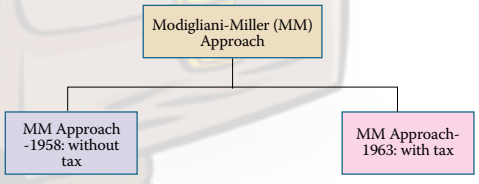
$$V = \frac{NOI}{K_O}$$

Where,

V = Value of the firm
NOI = Net operating Income
K_o = Cost of Capital

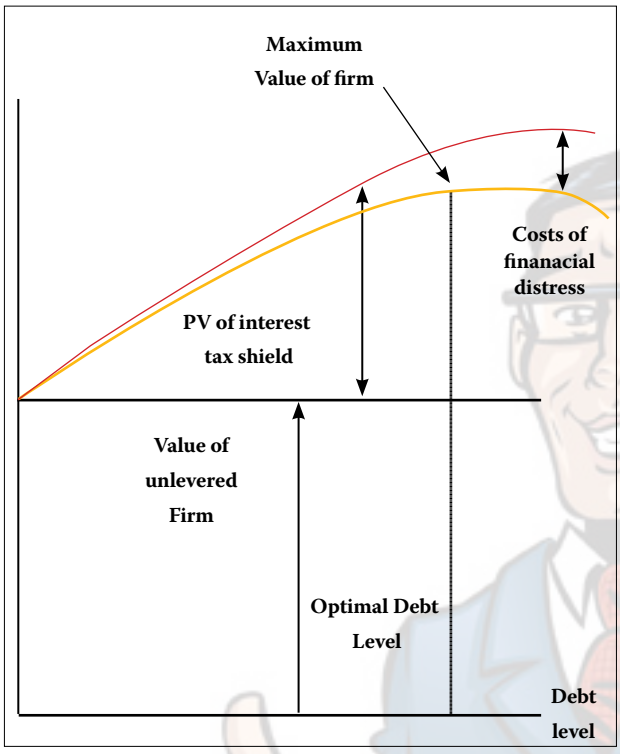
Modigliani-Miller Approach (MM):

The NOI approach is definitional or conceptual and lacks behavioral significance. It does not provide operational justification for irrelevance of capital structure. However, Modigliani-Miller approach provides behavioral justification for constant overall cost of capital and therefore, total value of the firm. This approach indicates that the capital structure is irrelevant because of the arbitrage process which will correct any imbalance i.e. expectations will chane and a stage will be reached where arbitrage is not possible.



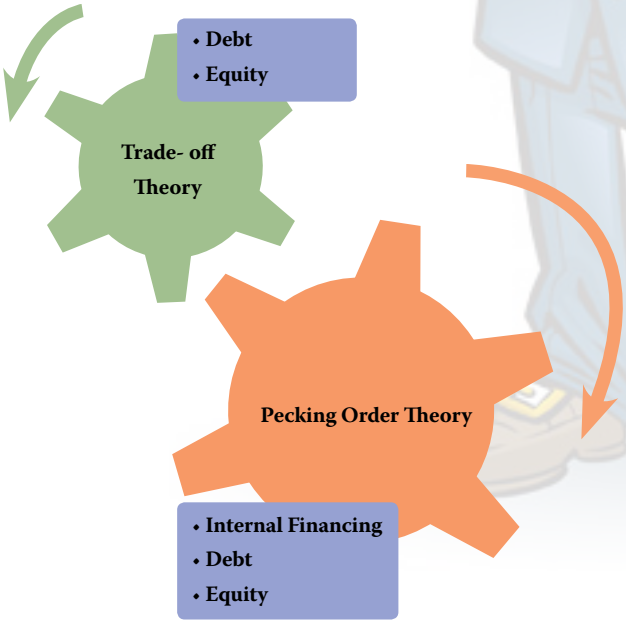
The Trade-off Theory:

The trade-off theory of capital structure refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits.



Pecking order theory:

This theory is based on Asymmetric information, which refers to a situation in which different parties have different information.



EBIT-EPS Analysis:

The basic objective of financial management is to design an appropriate capital structure which can provide the highest earnings per share (EPS) over the company's expected range of earnings before interest and taxes (EBIT).

EPS measures a company's performance for the shareholders. The level of EBIT varies from year to year and represents the success of a company's operations.

However, The EPS criterion ignores the risk dimension as well as it is more of a performance measure.

$$\frac{(EBIT-I_1)(1-t)}{E_1} = \frac{(EBIT-I_2)(1-t)}{E_2}$$

Where,

EBIT	=	Indifference point
E_1	=	Number of equity shares in Alternative 1
E_2	=	Number of equity shares in Alternative 2
I_1	=	Interest charges in Alternative 1
I_2	=	Interest charges in Alternative 2
T	=	Tax-rate
Alternative 1	=	All equity finance
Alternative 2	=	Debt-equity finance

Over- Capitalisation

- It is a situation where a firm has more capital than it needs or in other words assets are worth less than its issued share capital, and earnings are insufficient to pay dividend and interest.

Under Capitalisation

- It is just reverse of over-capitalisation. It is a state, when its actual capitalisation is lower than its proper capitalisation as warranted by its earning capacity.

FINANCIAL DECISIONS- LEVERAGES

Chapter Overview

- Analysis of Leverage
  - Business and Financial Risk
  - Types of Leverage
    - (i) Operating Leverage
    - (ii) Financial Leverages
    - (iii) Combined Leverages

In financial analysis, leverage represents the influence of one financial variable over some other related financial variable. These financial variables may be costs, output, sales revenue, Earnings Before Interest and Tax (EBIT), Earning per share (EPS) etc.

Business Risk and Financial Risk:

Risk facing the common shareholders is of two types, namely business risk and financial risk. Therefore, the risk faced by common shareholders is a function of these two risks, i.e. (Business Risk, Financial Risk).

Business Risk

- It refers to the risk associated with the firm's operations. It is the uncertainty about the future operating income (EBIT), i.e. how well can the operating incomes be predicted?

Financial Risk

- It refers to the additional risk placed on the firm's shareholders as a result of debt use i.e. the additional risk a shareholder bears when a company uses debt in addition to equity financing.

Types of Leverage:

There are three commonly used measures of leverage in financial analysis. These are

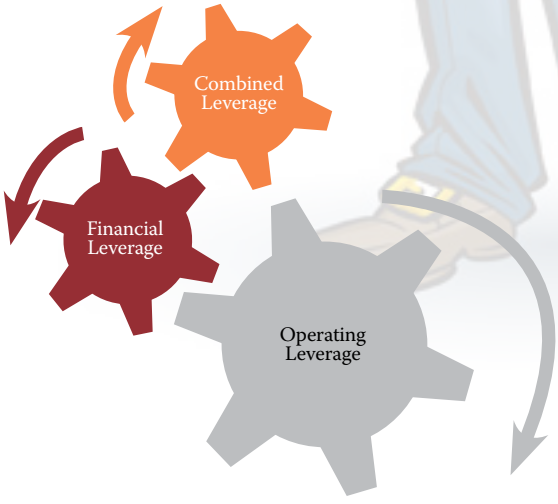


Chart Showing Operating Leverage, Financial Leverage and Combined Leverage

Profitability Statement			
Sales	xxx		
Less: **Variable Cost**	(xxx)		
Contribution	xxx	Operating Leverage	Combined Leverage
Less: **Fixed Cost**	(xxx)		
Operating Profit/ EBIT	xxx	Financial Leverage	
Less: **Interest**	(xxx)		
Earnings Before Tax (EBT)	xxx		
Less: **Tax**	(xxx)		
Profit After Tax (PAT)	xxx		
Less: **Pref. Dividend (if any)**	(xxx)		
Net Earnings available to equity shareholders/ PAT	xxx		
No. Equity shares (N)			
Earnings per Share (EPS) = (PAT ÷ N)			

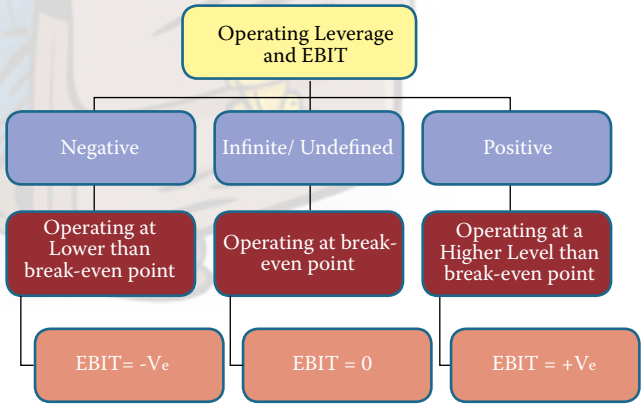
Operating Leverage:

Operating leverage (OL) maybe defined as the employment of an asset with a fixed cost in the hope that sufficient revenue will be generated to cover all the fixed and variable costs.

$$\text{Operating leverage} = \frac{\text{Contribution}}{\text{EBIT}}$$

$$\text{Degree of Operating Leverage (DOL)} = \frac{\%\text{ change in EBIT}}{\%\text{ change in Sales}}$$

Positive and Negative Operating Leverage:



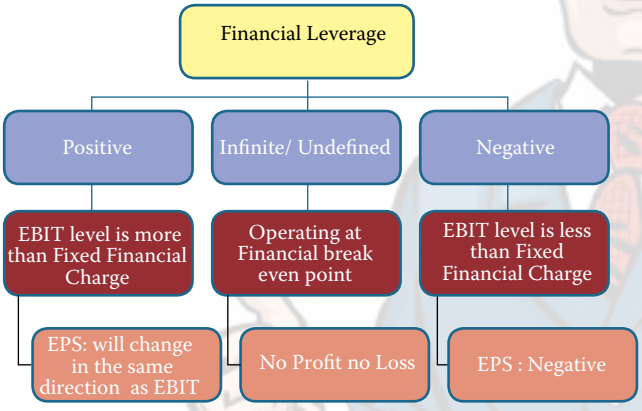
Financial Leverage:

Financial leverage (FL) maybe defined as 'the use of funds with a fixed cost in order to increase earnings per share.' In other words, it is the use of company funds on which it pays a limited return.

$$\text{Financial leverage} = \frac{\text{EBIT}}{\text{EBT}}$$

$$\text{Degree of Financial Leverage (DFL)} = \frac{\%\text{ change in EPS}}{\%\text{ change in EBIT}}$$

Positive and Negative Financial Leverage:



Combined Leverage:

Combined leverage

- It maybe defined as the potential use of fixed costs, both operating and financial, which magnifies the effect of sales volume change on the earning per share of the firm.

Degree of Combined Leverage = DOL X DFL

$$\text{Degree of Combined Leverage (DCL)} = \frac{\%\text{ change in EPS}}{\%\text{ change in Sales}}$$

Financial Leverage as 'Trading on Equity'

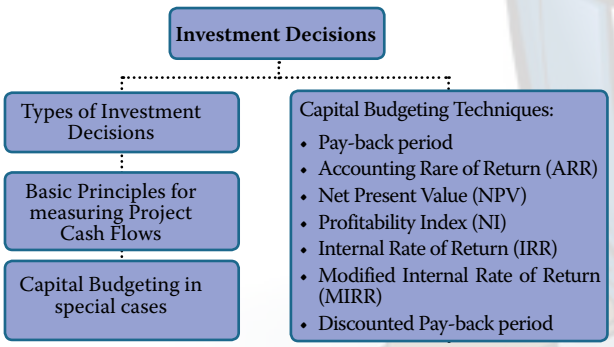
- Financial leverage indicates the use of funds with fixed cost like long term debts and preference share capital along with equity share capital which is known as trading on equity. When the quantity of fixed cost fund is relatively high in comparison to equity capital, it is said that the firm is "trading on equity".

Financial Leverage as a 'Double edged Sword'

- On one hand when cost of 'fixed cost fund' is less than the return on investment financial leverage will help to increase return on equity and EPS. However, when cost of debt is more than the return it will affect return of equity and EPS unfavourably. This is why financial leverage is known as "double edged sword".

INVESTMENT DECISIONS

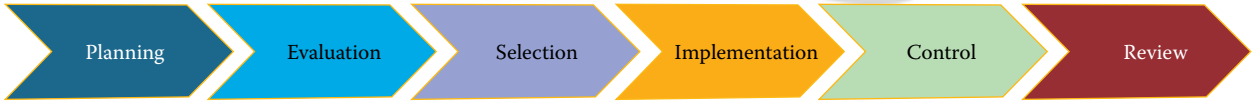
Chapter Overview:



Capital Budgeting involves

- Identification of investment projects that are strategic to business overall objectives;
- Estimating and evaluating post-tax incremental cash flows for each of the investment proposals; and
- Selection of an investment proposal that maximizes the return to the investors

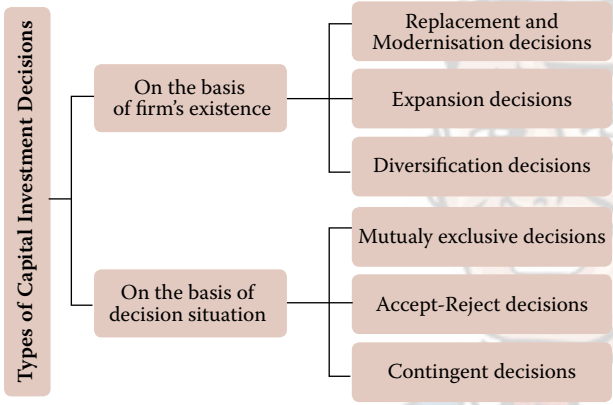
Capital Budgeting Process:



FINANCIAL MANAGEMENT

Chapter Overview

Generally, capital investment decisions are classified in two ways. One way is to classify them on the basis of firm's existence. Another way is to classify them on the basis of decision situation.



Estimation of Project Cash Flows

Capital Budgeting analysis considers only incremental cash flows from an investment likely to result due to acceptance of any project. Therefore, one of the most important tasks in capital budgeting is estimating future cash flows for a project.

Calculating Cash Flows

Particulars	No Depreciation is Charged	Depreciation is Charged
	(₹ Crore)	(₹ Crore)
Total Sales	***	***
Less: **Cost of Goods Sold**	***	***
	***	***
Less: **Depreciation**	-	***
Profit before tax	***	***
Tax @ 30%	***	***
Profit after Tax	***	***
Add: Depreciation*	-	***
Cash Flow	***	***

* Being non-cash expenditure, depreciation has been added back while calculating the cash flow.

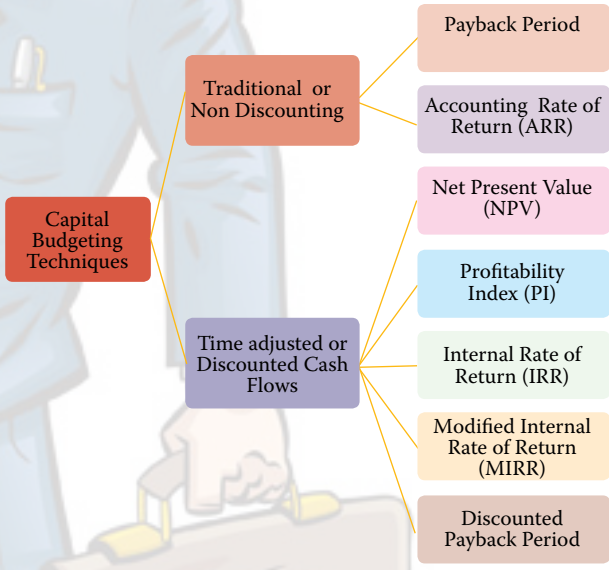
Statement showing the calculation of Cash Inflow after Tax (CFAT):

Sl. no.		(₹)
1	Total Sales Units	xxx
2	Selling Price per unit	xxx
3.	Total Sales [1 × 2]	xxx
4.	Less: Variable Cost	xxx
5.	Contribution [3 - 4]	xxx
6.	Less: Fixed Cost	
	(a) Fixed Cash Cost	xxx
	(b) Depreciation	xxx
7.	Earning Before Tax [6 - 7]	xxx
8.	Less: Tax	xxx
9.	Earning After Tax [7-8]	xxx
10.	Add: Depreciation	xxx
11.	Cash Inflow After Tax (CFAT) [9 +10]	xxx

Capital Budgeting Techniques:

In order to maximise the return to the shareholders of a company, it is important that the best or most profitable investment projects are selected as the results for making a bad long-term investment decision can be both financially and strategically devastating, particular care needs to be taken with investment project selection and evaluation.

There are a number of techniques available for appraisal of investment proposals and can be classified as presented below:



Payback Period:

The payback period of an investment is the length of time required for the cumulative total net cash flows from the investment to equal the total initial cash outlay.

$$\text{Payback period} = \frac{\text{Total initial capital investment}}{\text{Annual expected after-tax net cash flow}}$$

Accounting (Book) Rate of Return (ARR):

The accounting rate of return of an investment measures the average annual net income of the project (incremental income) as a percentage of the investment.

$$\text{Accounting rate of return} = \frac{\text{Average annual net income}}{\text{Investment}} \times 100$$

Net Present Value Technique (NPV):

The net present value technique is a discounted cash flow method that considers the time value of money in evaluating capital investments.

$$NPV = \sum_{t=1} \frac{C}{(1+k)} - I$$

Where,

C = Cash flow of various years
K = discount rate
N = Life of the project
I = Investment

Profitability Index /Desirability Factor/ Present Value Index Method (PI):

In comparing alternative proposal of comparing, we have to compare a number of proposals each involving different amounts of cash inflows. One of the methods of comparing such proposals is to work out what is known as the '*Desirability factor*', or '*Profitability index*' or '*Present Value Index Method*'.

$$\text{Profitability Index (PI)} = \frac{\text{Sum of discounted cash in flows}}{\text{Initial cash outlay or Total discounted cash outflow (as the case maybe)}}$$

Decision Rule:

If PI ≥ 1	**Accept the Proposal**
If PI ≤ 1	Reject the Proposal

In case of mutually exclusive projects; project with higher PI should be selected.

Internal Rate of Return Method (IRR):

Internal rate of return for an investment proposal is the discount rate that equates the present value of the expected net cash flows with the initial cash outflow.

$$LR + \frac{\text{NPV at LR}}{\text{NPV at LR- NPV at HR}} \times (HR-LR)$$

Where,

LR = Lower Rate

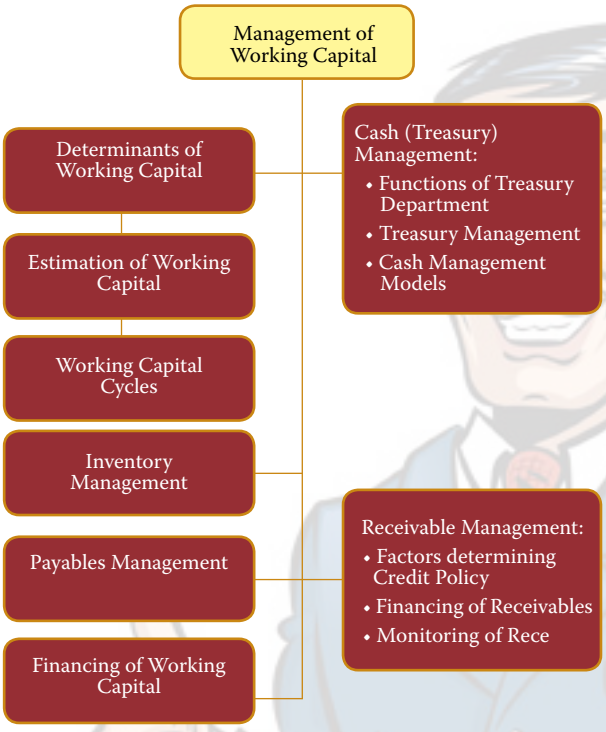
HR = Higher Rate

Summary of Decision criteria of Capital Budgeting techniques:

Techniques		For Independent Project	For Mutually Exclusive Projects
Non-Discounted	**Pay Back**	(i) When Payback period ≤ Maximum Acceptable Payback period: **Accepted** (ii) When Payback period ≥ Maximum Acceptable Payback period: **Rejected**	Project with least Payback period should be selected
	Accounting Rate of Return (ARR)	(i) When ARR ≥ Minimum Acceptable Rate of Return: **Accepted** (ii) When ARR ≤ Minimum Acceptable Rate of Return: **Rejected**	Project with the maximum ARR should be selected.
Discounted	**Net Present Value (NPV)**	(i) When NPV > 0: **Accepted** (ii) When NPV < 0: **Rejected**	Project with the highest positive NPV should be selected
	Profitability Index(PI)	(i) When PI > 1: **Accepted** (ii) When PI < 1: **Rejected**	When Net Present Value is same, project with Highest PI should be selected
	Internal Rate of Return (IRR)	(i) When IRR > K: **Accepted** (ii) When IRR < K: **Rejected**	Project with the maximum IRR should be selected

MANAGEMENT OF WORKING CAPITAL

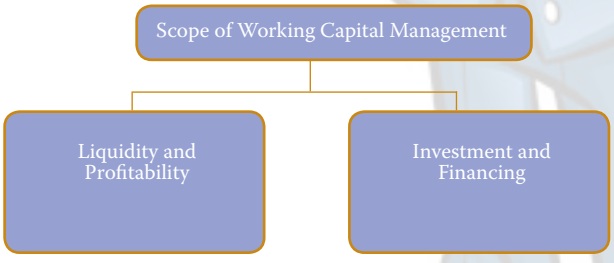
Chapter Overview



Working Capital: In accounting term working capital is the difference between the current assets and current liabilities.

Working Capital = Current Assets – Current Liabilities

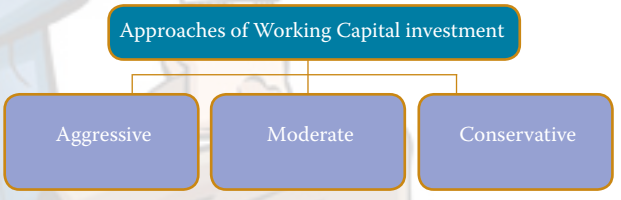
Scope of Working Capital Management



Liquidity vs Profitability: The trade-off between the components of working capital can be summarised as follows:

Component of Working Capital	Advantages of higher side (Profitability)	Trade-off (between Profitability and Liquidity)	Advantages of lower side (Liquidity)
Inventory	Fewer stock- outs increase the profitability.	Use techniques like EOQ, JIT etc. to carry optimum level of inventory.	Lower inventory requires less capital but endangered stock-out and loss of goodwill.
Receivables	Higher Credit period attract customers and increase revenue	Evaluate the credit policy; use the services of debt management (factoring) agencies.	Cash sales provide liquidity but fails to boost sales and revenue
Pre-payment of expenses	Reduces uncertainty and profitable in inflationary environment.	Cost-benefit analysis required	Improves or maintains liquidity.
Cash and Cash equivalents	Payables are honoured in time, improves the goodwill and helpful in getting future discounts.	Cash budgets and other cash management techniques can be used	Cash can be invested in some other investment avenues
Payables and Expenses	Capital can be used in some other investment avenues	Evaluate the credit policy and related cost.	Payables are honoured in time, improves the goodwill and helpful in getting future discounts.

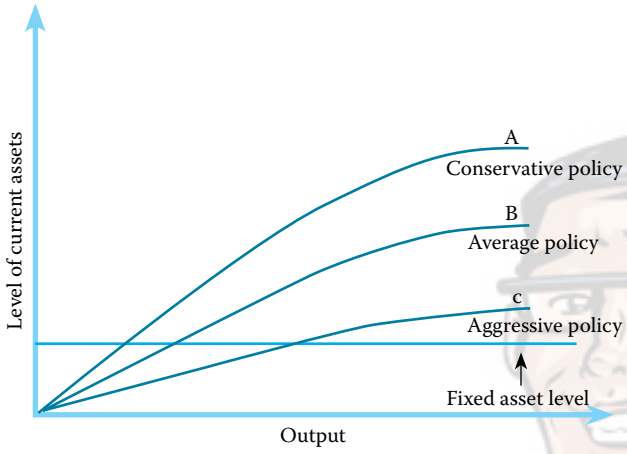
Investment and Financing



Aggressive
- Here investment in working capital is kept at minimal investment in current assets which means the entity does hold lower level of inventory, follow strict credit policy, keeps less cash balance etc.

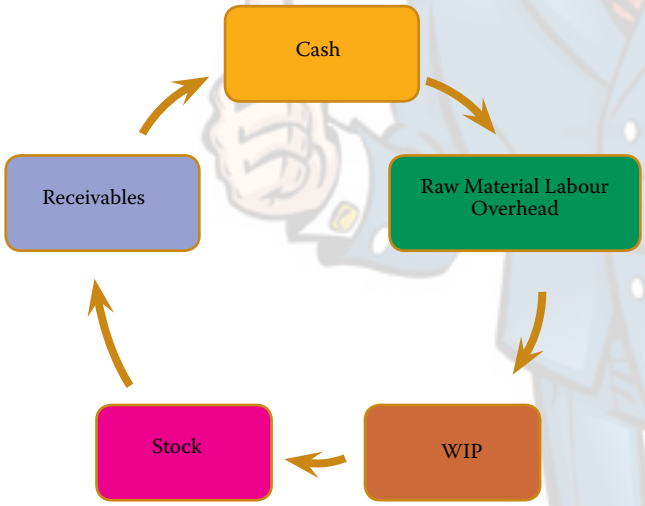
Conservative
- In this approach of organisation use to invest high capital in current assets. Organisations use to keep inventory level higher, follows liberal credit policies, and cash balance as high as to meet any current liabilities immediately.

Moderate
- This approach is in between the above two approaches. Under this approach a balance between the risk and return is maintained to gain more by using the funds in very efficient manner.



Operating/ Working Capital Cycle: Working Capital cycle indicates the length of time between a company's paying for materials, entering into stock and receiving the cash from sales of finished goods.

Working Capital Cycle



In the form of an equation, the operating cycle process can be expressed as follows:

Operating Cycle = R + W + F + D – C

Where,

R = Raw material storage period
W = Work-in-progress holding period
F = Finished goods storage period
D = Receivables (Debtors) collection period.
C = Credit period allowed by suppliers (Creditors).

The various components of Operating Cycle may be calculated as shown below:

(1)	Raw Material Storage Period	= Average stock of Raw material / Average Cost of Raw material Consumption per day
(2)	Work-in-Progress holding period	= Avg Work-in-progress inventory / Average Cost of Production per day
(3)	Finished Goods storage period	= Average stock of finished goods / Average Cost of Goods Sold per day
(4)	Receivables (Debtors) collection period	= Average Receivables / Average Credit Sales per day
(5)	Credit period allowed by suppliers (Creditors)	= Average Payables / Average Credit Purchases per day

Estimation of Amount of Different Components of Current Assets and Current Liabilities

(i) Raw Materials Inventory:

$$\frac{\text{Estimated Production (units)}}{\text{12 months / 365 days *}} \times \text{Estimated Cost per unit} \times \text{Average raw material storage period}$$

(ii) Work-in-Progress Inventory:

$$\frac{\text{Estimated Production (units)}}{\text{12 months / 365 days *}} \times \text{Estimated WIP cost per unit} \times \text{Average W-I-P holding period}$$

(iii) Finished Goods:

$$\frac{\text{Estimated Production (units)}}{\text{12 months / 365 days *}} \times \text{Estimated Cost of production per unit} \times \text{Average storage period}$$

(iv) Receivables (Debtors):

$$\frac{\text{Estimated Credit Sales unit}}{\text{12 months / 365 days *}} \times \text{Cost of sales (excluding depreciation) per unit} \times \text{Average collection period}$$

(v) Cash and Cash equivalents: Minimum desired Cash and Bank balance to be maintained

(vi) Trade Payables (Creditors):

$$\frac{\text{Estimated credit purchase}}{\text{12 months / 365 days *}} \times \text{Credit period allowed by suppliers}$$

(vii) Direct Wages:

$$\frac{\text{Estimated labour hours x wages rate per hour}}{\text{12 months / 365 days *}} \times \text{Average time lag in payment of wages}$$

(viii) Overheads (other than depreciation and amortization):

$$\frac{\text{Estimated Overheads}}{\text{12 months / 360 days *}} \times \text{Average time lag in payment of overheads}$$

**Number of days in a year may be taken as 365 or 360 days.*

Estimation of Working Capital Requirements

		Amount	Amount	Amount
I.	**Current Assets:**			
	Inventories:			
	- Raw Materials	---		
	- Work-in-process	---		
	- Finished goods	---	---	
	Receivables:			
	- Trade debtors	---		
	- Bills	---	---	
	Minimum Cash Balance		---	
	Gross Working Capital		---	---
II.	Current Liabilities:			
	Trade Payables		---	
	Bills Payables		---	
	Wages Payables		---	
	Payables for overheads		---	---
III.	**Excess of Current Assets over Current Liabilities [I – II]**			---
IV.	Add: Safety Margin			---
V.	**Net Working Capital [III + IV]**			---

MANAGEMENT OF RECEIVABLES

Approaches of Evaluation of Credit Policies

There are basically two methods of evaluating the credit policies to be adopted by a Company – Total Approach and Incremental Approach. The formats for the two approaches are given as under:

Statement showing the Evaluation of Credit Policies (based on Total Approach)

Particulars	*Present Policy*	*Proposed Policy I*	*Proposed Policy II*	*Proposed Policy III*
	₹	₹	₹	₹
A. Expected Profit:				
(a) Credit Sales	.....	.....	.....	.....
(b) Total Cost other than Bad Debts and Cash Discount				
(i) Variable Costs	.....	.....	.....	.....
(ii) Fixed Costs	.....	.....	.....	.....
	.....	.....	.....	.....
(c) Bad Debts	.....	.....	.....	.....
(d) Cash discount				
(e) Expected Net Profit before Tax (a-b-c-d)	.....	.....	.....	.....
(f) *Less:* Tax	.....	.....	.....	.....
(g) Expected Profit after Tax	.....	.....	.....	.....
B. Opportunity Cost of Investments in Receivables locked up in Collection Period	.....	.....	.....	.....
Net Benefits (A – B)	.....	.....	.....	.....

Statement showing the Evaluation of Credit Policies (based on Incremental Approach)

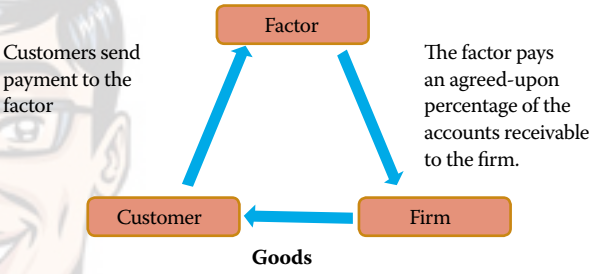
Particulars	*Present Policy days*	*Proposed Policy I days*	*Proposed Policy II days*	*Proposed Policy III days*
	₹	₹	₹	₹
A. Incremental Expected Profit:				
Credit Sales	.....	.....	.....	.....
(a) Incremental Credit Sales	.....	.....	.....	.....
(b) Less: Incremental Costs of Credit Sales				
(i) Variable Costs	.....	.....	.....	.....
(ii) Fixed Costs	.....	.....	.....	.....
(c) Incremental Bad Debt Losses	.....	.....	.....	.....
(d) Incremental Cash Discount	.....	.....	.....	.....
(e) Incremental Expected Profit (a-b-c-d)	.....	.....	.....	.....
(f) Less: Tax	.....	.....	.....	.....
(g) Incremental Expected Profit after Tax	.....	.....	.....	.....
	.....	.....	.....	.....
B. Required Return on Incremental Investments:				
(a) Cost of Credit Sales	.....	.....	.....	.....
(b) Collection Period (in days)	.....	.....	.....	.....

(c) Investment in Receivable (a x b/365 or 360)	.....	.....	.....	.....
(d) Incremental Investment in Receivables	.....	.....	.....	.....
(e) Required Rate of Return (in %)	.....	.....	.....	.....
(f) Required Return on Incremental Investments (d x e)	.....	.....	.....	.....
Incremental Net Benefits (A – B)	.....	.....	.....	.....

Financing of Receivables

(i) Pledging: This refers to the use of a firm's receivable to secure a short term loan.

(ii) Factoring: This refers to outright sale of accounts receivables to a factor or a financial agency.



The basic format of evaluating factoring proposal is given as under:

Statement showing the Evaluation of Factoring Proposal

	Particulars	₹
A.	**Annual Savings (Benefit) on taking Factoring Service**	
	Cost of Credit Administration saved	.....
	Bad Debts avoided	.....
	Interest saved due to reduction in Average collection period (Wherever applicable) [Cost of Annual Credit Sales × Rate of Interest × (Present Collection Period – New Collection Period)/360* days]	.....
	Total	.....
B.	**Annual Cost of Factoring to the Firm:**	
	Factoring Commission [Annual credit Sales × % of Commission (or calculated annually)]	.....
	Interest Charged by Factor on advance (or calculated annually)	.....
	[Amount available for advance or (Annual Credit Sales – Factoring Commission – Factoring Reserve)] × $\left[\frac{\text{Collection Period (days)}}{360^*} \times \text{Rate of Interest}\right]$	
	Total	.....
C.	**Net Annual Benefits/Cost of Factoring to the Firm:**	.....
	Rate of Effective Cost of Factoring to the Firm $= \frac{\text{Net Annual cost of Factoring}}{\text{Amount available for advance}} \times 100$ or $\frac{\text{Net annual Cost of Factoring}}{\text{Advances to be paid}} \times 100$	
	Advances to be paid = (Amount available for advance – Interest deducted by factor)	