Lesson 19

Valuation, Principles And Framework

Key Concepts One Should Know

- Valuation
- Net present value
- Ind AS for valuation

Learning Objectives

To understand the:

- Importance of valuation
- Methods/ Approaches of valuation
- Relation between WACC and NPV
- Relation between WMCC and NPV
- Indian Accounting Standard (Ind AS)
- Ind AS applicable for valuation

Lesson Outline

- Introduction
- Areas where valuation is used
- Approaches of valuation
- Asset Approach
- Income Approach
- Market Approach
- Indian Accounting Standard
  - Ind AS 32
  - Ind AS 33
  - Ind AS 113
- LESSON ROUND-UP
- TEST YOURSELF

INTRODUCTION

Knowing what business is worth and what determines its value is prerequisite for intelligent decision-making. Corporate valuations form the basis of corporate finance activities including capital-raising, mergers & acquisitions (M&A) and also to meet regulatory/accounting requirements or for voluntary purpose. The rapid globalization of the world economy has created both opportunities and challenges for organizations leading to uncertainty blowing across global markets and raising the importance of independent valuations all over the world. Justifying the value of businesses has grown more complex and challenging it has been accepted that valuation is not an exact science; it depends upon a number of factors like purpose, stage of business, past financials, industry scenario, management and promoters strengths.

Valuation is more of an art-based on professional experience of the valuer rather than a science-based empirical studies and logics. Business valuation is the process of determining the "Economic Worth" of a company based on its Business Model under certain assumptions and limiting conditions and subject to data available on the valuation date. It is an important concept in corporate finance and business management. Supposing a business is for sale, how does one know what is the real value of that business is? More basically, how does a business owner know the net value of his business, or how is valuing a business for sale accomplished?

AREAS WHERE VALUATION IS USED

Areas	Description
Mergers & Acquisitions	Valuation is an important aspect in M& A. It not only assists business owners in determining the value of their business, but also helps them to maximize the value of their business considering a sale, merger, acquisition, joint venture, or strategic partnership.
Succession Planning	Succession to family members: In planning for the transfer of family business to the next generation. Succession to employees: For many closely held businesses, the sale of the business to one or more key employees is often a viable succession strategy. Succession to outside parties: It comprises mergers, acquisitions, purchase and sale of businesses.
Going Public	In general, when a new company goes for an Initial Public Offering (IPO), it is doing that in order to generate capital to grow its business. In such circumstances, a question arises as to how to evaluate the fair value of such a stock. The Indian Capital Market follows a free pricing regime and thus the accurate pricing of an IPO is of immense importance.
Dispute Resolution	Valuation is an increasingly important aspect of many commercial disputes. Before deciding how to manage a dispute, it is necessary to determine the likelihood of a successful outcome and the potential stake involved. Judicial precedents are also available that affect the selection of valuation methodologies and applicability of discounts/ premiums.

Voluntary Assessment : At times, the management wants to know the true and fair value of the business for which they undertake the exercise of voluntary assessment for their internal management purposes and future decision-making.

The art of valuation lies in identifying the key value drivers and key risk areas after analyzing the following:

- Nature of Business, its history, future prospects, and growth potential
- Promoters and management background
- Core Team strength
- Profitability strategies

- Competitive landscape and differentiation
- Economic outlook and industry trend
- Purpose of valuation and size of transaction

Generally Acceptable Methodologies of Valuation

A number of business valuation models can be constructed that utilize various methods under the broad business valuation approaches. Most treatises and court decisions encourage the valuer to consider more than one method, which must be reconciled with one another to arrive at a conclusion. Understanding of the internal resources and intellectual capital of the business being valued is as important as the economic, industrial and social environment. The choice of the appropriate valuation approach (or approaches) to be used in a given valuation project is based on the judgment of the valuer. The valuer's choice of methods is determined by the characteristics of the business to be valued, the purpose and use of the valuation and its report, the pattern of historical performance and earnings of the subject company, the company's competitive market position, experience and quality of management, the availability of reliable information requisite to the various valuation methods, the marketability of equity ownership interest to be valued, and others. These factors are summarized below:

- History and nature of the business
- Industry and general economic outlook
- Book value and financial condition
- Earning capacity
- Dividend-paying capacity
- Prior sales and size of the block of stock; and
- Comparisons to similar publicly traded guideline companies.

CONCEPTUAL FRAMEWORK OF VALUATION

The term 'valuation' implies the task of estimating the worth/value of an asset, a security or a business. The price an investor or a firm(buyer) is willing to pay to purchase a specific asset/security would be related to this value.

Obviously, two different buyers may not have the same valuation for an asset/business as their perception regarding its worth/value may vary; one may perceive the asset/business to be of higher worth(for whatever reason) and hence may be willing to pay a higher price than the other. A seller would consider the negotiated selling price of the asset/business to be greater than the value of the asset/business he is selling.

In the case of business valuation, the valuation is required not only of tangible assets(such as plant and machinery, land and building, office equipment, etc.) but also of intangible assets(say, goodwill, brands patents, trademark and so on); equally important in this regard is the value of the human resources that run/manage the business.

The following concepts of value are explained in this section:(i) book value. (ii) market value, (iii) intrinsic value, liquidation value, (v) replacement value, (vi) salvage value, (vii) value of goodwill (viii) going concern value and (ix) fair value.

(i) Book Value: Book value refers to the financial sum/amount at which as asset is shown in the balance sheet of a firm. Generally, the sum is equal o the initial acquisition cost if an asset less accumulated depreciation. Accordingly, this mode of valuation of assets is as per the going concern principle of accounting. In other words book value of an asset shown in balance does not reflect its current sale value.

In the context of business, book value refers to total book value of all valuable assets (excluding fictitious assets, such as accumulated losses and unwritten part of deferred revenue expenditures, like advertisement, preliminary expenses, cost of issue of securities) less all external liabilities (including preference share capital). The concept, in literature, is also referred to as net worth.

(ii) **Market Value:** Market value refers to the price at which as asset can sold in the market. The concept can, evidently, be applied with respect to tangible assets only; intangible assets (in isolation), more often than not , do not have any sale value. Viewed from the perspective of the business unit as a whole, it refers to the aggregate market value (as per stock market quotation) of all equity shares outstanding, Being so, it is possible to use this concept only in the case of listed companies.

(iii) **Intrinsic/Economic Value**: As per concept, in the case of business intended to be purchased, its valuation is equivalent to the present value of incremental future cash inflows after taxes likely to accrue to the acquiring firm, discounted at the relevant risk adjusted discount rate, as applicable to the acquired business. Clearly, the present value indicates the maximum price at which the business can be acquired.

(iv) **Liquidation Value:** As the name suggests, liquidation value represents the price at which each individual asset can be sold if business operations are discontinued in the wake of liquidation of the firm. In operational terms, the liquidation value of a business is equal to the sum of (i) realisable value of assets and (ii) cash and bank balances minus the payments required to discharge all external liabilities. In general, among all measures of value, the liquidation value of an asset/or business is likely to be the least.

(v) **Replacement Value:** Normally, replacement value is the cost of acquiring a new asset of equal utility and the usefulness. The concept is normally useful in valuing tangible assets such as office equipment and furniture and fixtures, which do not contribute towards the revenue of the business firm.

(vi) **Salvage Value:** Salvage value represent realisable scrape value on the disposal of assets after the expiry of their economic useful life. The concept may be employed to value assets such as plant and machinery, contributing towards revenues of the firm. Salvage value should be the net of removal costs.

(vii) **Value of Goodwill:** Viewed in the economic sense, the business firm can be said to have 'real' goodwill in case it earns rate of return(ROR) on invested funds higher than the ROR earned by the similar firms(with the same level of risk). In the operational terms, goodwill results when the firm earns excess (may be referred to as 'super') profits. Defined in this way the value of goodwill is equivalent to the present value of super profits (likely to accrue, say for 'n' number of years in future), the discount rate being the required rate of return applicable to such business firms.

In the case of mergers and acquisition decisions, the value of goodwill paid is equal to the net difference between the purchase price paid for the acquiring business (say, Rs 100 crore) and the value of assets acquired net of liabilities the acquiring firm has undertaken to pay for (say, Rs.90 crore; the value of goodwill is Rs. 10 crore.

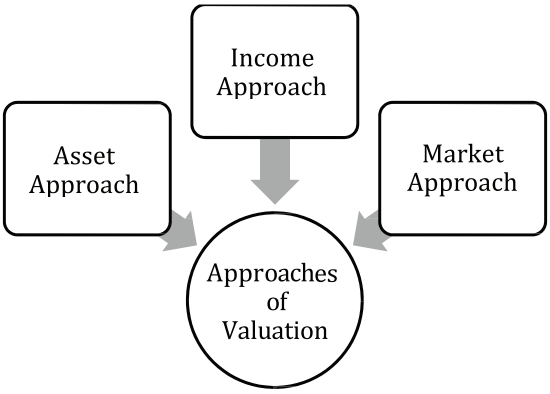
(viii) **Going Concern Value:** This concept applies to a business firm as an operating unit. The going concern value of a firm is based primarily on how profitable its operations would be as a continuing entity.

The procedure for establishing the going concern value usually consists of two steps. First, a projection is made about maintainable income from business as a going entity. Second, the maintainable income is translated into a going concern value by applying a suitable capitalisation factor. To illustrate, suppose the maintainable income of Rs.10,00,000 is projected for a firm and a capitalisation rate of 15 percent is deemed appropriate. The going concern value of the firm then would be:

$$\frac{\text{Rs. } 10,00,000}{0.15} = \text{Rs. } 66,66,667$$

(ix) **Fair Value:** The concept of 'fair' value draws heavily on the value concepts enumerated above; in particular, book value, intrinsic value and market value; the fair value is hybrid in nature and often is the average of these three values.

APPROACHES OF VALUATION



There are broadly three approaches of valuation:

- Asset Approach
- Income Approach
- Market Approach

1. ASSET APPROACH

The asset-based approach focuses on the company's net asset value (NAV), or the fair-market value of its total assets minus its total liabilities to determine what it would cost to recreate the business. There is some room for interpretation in the asset approach in terms of deciding which of the company's assets and liabilities to include in the valuation, and how to measure the worth of each.

The asset-based approach is best used when a business is non-operating or has been generating losses, and the company's focus is its holding investments or real estate. The adjusted net asset method is commonly used for estimating the value of the business. The diff between the fair market value of the company's total assets and the fair market value of its total liabilities determines its fair market value. This technique also includes the value of all of the business's intangible assets and liabilities, such as goodwill and pending litigations.

The cost based approach, the primary emphasis places upon the fair market value of the assets and liabilities of a business. As a result, this approach uses various methods that consider the value of individual assets and liabilities including intangible assets. The most well-known method in this approach relies upon reported balance sheet assets and liabilities generally termed as book value. It should be recognized, however as per the book value concept assets are reported in accordance with various accounting conventions that may or may not accurately reflect fair market value.

It is further classified into :

(a) Net Asset Value

The total value of the assets of a company less its liabilities is its net asset value. For the purpose of valuation, the usual thing to do is to divide the net assets by number of shares to get the net assets per share. This is the asset value belonging to each share in the same way as the price-earning ratio measures the profit per share.

Net asset value is useful for shares valuation in sectors where the company value come from the held assets rather than the stream of profit that was generated by the company business. The examples are property companies and investment trusts. Both are convenient ways wherein the investors can buy diversified bundles of the assets they hold.

The assets' value can be obtained at book value or market prices and used depending on the circumstances and the sector. Some assets need to be excluded. One example of this is the tangible book value of NAV.

The value as per NAV is arrived as follows

Total assets	xx
(excluding miscellaneous expenditure & debit balance in P&L)	
Less: Total Liabilities	xx
NAV	xx
OR	
Share Capital	xx
Add: Reserves	xx
Less: Miscellaneous expenses	xx
P& L (Dr balance)	xx
NAV	xx

$$\text{value per share} = \frac{\text{NAV}}{\text{No. of shares}}$$

Illustration 1.

Following is the balance sheet of A Ltd. as on 31st March, 2017:

Particulars	**Amount (Rs.)**
I. EQUITIES AND LIABILITIES	
1. Shareholders' funds	
(a) Share Capital	
Authorized, Issued subscribed and paid-up capital	
14% Preference shares of Rs. 100 each	7,50,000
Equity shares of Rs. 10 each, fully called up and paid up 15,00,000	22,50,000
(b) Reserve and surplus	
General reserve	9,00,000
2. Non-current liabilities	
15% Debentures	7,00,000
3. Current Liabilities	
Current liabilities	5,00,000
TOTAL	43,50,000
II. ASSETS	
1. Non-current Assets	
(a) Fixed Assets	
Tangible Assets & intangible Assets	32,50,000
(b) Investment	6,00,000
2. Current Assets	
Misc-Current Assets	5,00,000
TOTAL	**43,50,000**

Calculate under Net Assets method

(a) Discharge 15% debentures at a premium of 10%

(b) Fixed assets 10% above the book value

(c) Investments at par value

(d) Current assets at a discount of 10%.

Solution:

Net Asset Method:	(in '000's)
Value of assets :	
Fixed assets (32,50,000 + 10%)	35,75
Investments	6,00
Current assets (5,00,000 – 10%)	4,50
Total assets	46,25
Less: Liabilities :	
15% debentures (7,00,000 + 10%)	7,70
Current liabilities	5,00
	33,55

Illustration 2.

Balance Sheet of X Ltd as on 31.3.2018

Liabilities	Amount	Assets	Amount
Equity share capital of Rs. 100 each	1,00,000	Land & Building	30,000
6% Debentures of Rs. 10 each	20,000	Plant & Machinery	1,10,000
Reserve Fund	34,000	Stock	16,000
Dividend Equalization reserve	4,000	Debtors	14,000
Employee's Provident Fund Trade	3,000	Cash	3,000
Creditors	10,000		
Profit & Loss A/c	2,000		
	1,73,000		1,73,000

The assets of X Ltd are valued at 10% less with the exception of land & building which are valued at book value.

Company to receive 5% of net valuation of the business as goodwill.

Solution:

Particulars	**Rs.**
Assets as per balance sheet	1,73,000
Less: 10% reduction excluding	
Land & building and cash	(14,000)
	1,59,000

Less: Liabilities	
6% debentures	20,000
Trade creditors	10,000
Employees P.F	3,000
Add: goodwill (5%)	1,26,000
NAV	6,300
	1,32,300

(B) Price to Book Multiple Method

The application of this method is similar to that of the P/E multiple method. Since the book value of equity is essentially the amount of equity capital invested in the firm, this method measures the market value of each dollar of equity invested.

This method can be used for

- companies in the manufacturing sector which have significant capital requirements;
- companies which are not in technical default (negative book value of equity);

The Price/Book Value Multiple of Comparable Company is arrived as follows:

Step 1- Weighted Average Market Price
Step 2- Divide by: Value per share as per Net Assets Value
Step 3- Price/Book Value Multiple

Illustration 3

NCH Corporation, which markets cleaning chemicals, insecticides and other products, paid dividends of Rs.2.00 per share in 2017 on earnings of Rs.4.00 per share. The book value of equity per share was Rs.40.00, and earnings are expected to grow 6% a year in the long term. The stock has a beta of 0.85, and sells for Rs.60 per share. (The treasury bond rate is 7%.) .Based upon these inputs, estimate the price/book value ratio for NCH.

Solution:

Dividend Payout Ratio = 2/4 = 50%

Return on Equity = 4/40 = 10%

Cost of Equity = 7% +0.85 * 5.5% = 11.68%

Expected Growth Rate = 6%

Price/Book Value Ratio = (.1) (.5)(1.06)/(.1168 - .06) = 0.93

A simpler solution might be the following:

Price/Book Value Ratio = (.10 - .06)/(.1168 - .06) = 0.70

(This solution takes into account the relationship between ROE and g, i.e., g=b(ROE)

2. INCOME OR EARNING APPROACH

The Income-based method of valuations works on the premise that the current value of any business is a function of the future value that an investor can expect to receive from purchasing all or part of the business. In other words, the value of the business must be related to the profits it will earn and the cash it will generate in the future.

It is further divided into two methods :

(a) Discounted Cash Flow Method (DCF) - DCF expresses the present value of the business as a function of its future cash earnings capacity. In this method, the appraiser estimates the cash flow of any business after all operating expenses, taxes, and necessary investments in working capital and capital expenditure is being met. Valuing equity using the free cash flow to stockholders requires estimating only free cash flow to equity holders, after debt holders have been paid off. This method is more appropriate when future returns are expected to be substantially different from current operations. It usually has two stages, the first stage involves a discreet forecast of future earnings or cash flow to be discounted to the present using a discount rate, and the second stage involves the construction and discounting of a terminal value. The terminal value is determined when the entity's future return stream is expected to achieve a stable long-term growth.

It is a method of valuing a project, company, or asset using the concepts of the time value of money. All future cash flows are estimated and discounted by using cost of capital to give their present values (PVs). The sum of all future cash flows, both incoming and outgoing, is the net present value (NPV), which is taken as the value of the cash flows in question.

PV of future sum = $FV/(1+r)n$
OR
$= FV \times PVF(r,n)$

PV of a series of Equal Future cash flows or Annuity
= Annuity Amount x PVAF (r,n)

Illustration 4.

Assume that a deposit to be made at year zero into an account that will earn 8% compounded annually. It is desired to withdraw Rs. 5,000 three years from now and Rs. 7,000 six years from now. What is the size of the year zero deposit that will produce these future payments.

Solution:

PV = FV x PVF(r,n)

= Rs. 5,000 x PVF(8%,3) + Rs 7,000 x PVF(8%,6)

= Rs. 5,000 x (0.794) + Rs. 7,000 x (0.630)

= 3,970 + 4,410 = Rs. 8,380

Illustration 5

Machine A costs Rs. 1,00,000 payable immediately. Machine B costs Rs. 1,20,000 half payable immediately and half payable in one year's time. The expected cash receipts are :

Year(at end)	Machine A (in Rs.)	Machine B (in Rs.)
1	20,000	60,000
2	60,000	60,000
3	40,000	80,000
4	30,000	
5	20,000	

At 7% opportunity cost, which machine should be selected on the basis of NPV?

Solution: Machine A **Machine B**

Year	Cash flow(Rs.)	PVF	PV(Rs.)	Cash flow(Rs.)	PVF	PV (Rs.)
0	- 1,00,000	1.000	-1,00,000	-60,000	- 1.000	-60,000
1	20,000	0.935	18,700	-60,000	0.935	-56,100
				60,000	0.935	-56,100
				60,000	0.873	52,380
2	60,000	0.873	52,380	80,000	0.816	48,960
3	40,000	0.816	32,640			
4	30,000	0.763	22,890			
5	20,000	0.713	14,260			
NPV			40,870			41,340

Machine B is having higher NPV and may be selected.

Illustration 6.

A corporate firm has employed a total capital of Rs. 1,000 lakh (provided equally by 10 percent debt and 5 lakh equity share capital of Rs.100 each), its cost of equity is 14 percent and is subject to corporate tax rate of 40 percent.

Further, suppose the following are projected free cash flows (FCF) to all investors of the firm for 5 years:

Year-end	Rs. lakh
1	300
2	200
3	500
4	150
5	600

Compute (i) valuation of firm and (ii) valuation from the perspective of equity holders. Assume 10 percent debt is repayable at the year-end 5 and interest is paid at each year-end.

Solution:

Computation of overall cost of capital

Source of capital	After tax cost (%)	Weights	Total cost (%)
Equity	14	0.5	7
Debt	6*	0.5	3
Weighted average cost of capital (Ko)			10

*10% (1- 0.4 tax rate) = 6 percent

(i) Valuation of firm, based on Ko (Rs.lakh)

Year-end	FCFF	PV factor (0.10)	Total present value
1	300	0.909	272.70
2	200	0.826	165.20

3	500	0.751	375.50
4	150	0.683	102.45
5	600	0.621	372.60
Total present value			1288.45
Less: value of debt			500.00
Value of equity			788.45

(ii) Valuation of equity, based on Ke (Rs.lakh)

Year-end	FCFF to all investors	After tax payment to debt holders	FCFE to equity holders	PV factor (0.14)	Total present value
1	300	30*	270	0.877	236.79
2	200	30	170	0.769	130.73
3	500	30	470	0.675	317.25
4	150	30	120	0.592	71.04
5	600	530**	70	0.519	36.33
Total present value					792.14

* interest on Rs.500 lakh @10% = Rs.50 lakh; Rs50 lakh(1- 0.40)=Rs.30 lakh

**inclusive of debt repayment of Rs.500 lakh at year-end 5.

b) Capitalization of Earning Method

The capitalization method basically divides the business expected earnings by the so-called 'capitalization rate'. The idea is that the business value is defined by the business earnings and the capitalization rate is used to relate the two. This method is more appropriate when it appears that a company's current operations are indicative of its future operations, assuming of course, a normal growth rate. Under this method a stable level of earnings is divided by a capitalization rate in order to arrive at an operating value for the entity. Where net earnings are being capitalized, the capitalization rate is the net earnings discount rate less the average sustainable growth rate.

$$\text{Value} = \frac{\text{Net Operating Income}}{\text{Capitalization Rate}}$$

$$\text{Capitalization Rate} = \text{Discount Rate} - \text{Growth Rate}$$

Illustration 7

An investor wants to invest in an equity share of PKN Ltd. The company's last EPS was Rs. 50 per share and dividend payout ratio is 40%. The required rate of return from equity investment is 20%. Calculate the intrinsic value of equity if

(i) There is no growth in dividend.

(ii) Dividend are expected to grow at a constant rate of 18% p.a.

Solution:

We are given that EPS = Rs. 5

Dividend = 40%

So, last dividend (D0) = 40% of Rs. 5 = Rs. 20

(i) When there is no growth in dividend So,

D0 = D1 = Rs 20

$P0 = \frac{D1}{Ke}$

$= \frac{20}{0.20}$

= Rs. 100

Therefore, the intrinsic value is Rs. 100 when there is no growth in dividend.

(ii) When there is constant growth rate in dividend g = 18%

therefore, D1 = D0 (1+ g)

= 20 (1 + 0.18)

= 23.6

$P0 = \frac{D1}{Ke - g}$

= 23.6/ .20 - 0.18

= Rs. 1180

Therefore, the intrinsic value is Rs. 1180, when there is constant growth of 18%.

Illustration 8

Equity shares are currently selling at Rs. 60. The company is expected to pay a dividend of Rs. 3 with a growth rate of 8%. Find out the rate of return.

Solution:

P0 = Rs. 60 g= 8%

D1 = Rs.3

$P0 = \frac{D1}{Ke - g}$

Ke = D1 / P0 + g

= 0.05 + .08

= 0.13 or 13%

(ii) Cost of Debt

Kd = (Int x (1-t))

Where , Kd = Cost of Debt Int = Average Interest Rate t = Marginal rate of tax

Illustration 9

In Satija company, the value of 14% Debentures is Rs. 60,00,000 . Assume a tax rate is 50%. Compute the cost of debt.

Solution:

Kd = (Int x (1-t))

= 14 (1-.5)

= 7%

(iii) DCF – Discounting Rate

Weighted Average Cost of Capital (WACC)

D = Debt

E = Equity

Kd = Post tax cost of debt Ke = Cost of equity

Illustration 10

Satija company has following capital structure :

Equity Shares (4,00,000)	Rs. 80,00,000
10% Preference shares	Rs. 20,00,000
14% Debentures	Rs. 60,00,000

The share of the company currently sells for Rs. 25. It is expected that the company will pay a dividend of Rs. 2 per share which will give a growth at 7%. Tax rate is 50%. Calculate WACC.

Solution:

Cost of capital (c/c)

Kd = (Int x (1-t))

= 14 (1-.5)

= 7%

$Ke = \frac{D1}{P0} + g$

$= \frac{2}{25} + 0.07$

= 0.08 + 0.07

= 15%

Kp = 10%

Calculation of WACC

Source	Amount	Weight (W)	Specific c/c	W x c/c
Equity Shares 10%	80,00,000	0.500	0 .15	0 .07500
Preference shares	20,00,000	0.125	0 .10	0 .01250
14% Debentures	60,00,000	0.375	0 .07	0 .0265
	1,60,00,000			0.11375

WA CC = 11.37%

Marginal Cost of Capital

In practice, the investment proposal require funds to be raised from new internal/external sources thus, increasing the total funds also. When this happens, the cost of capital of additional funds is called Marginal Cost of Capital.

If the additional financing uses more than one source, say a combination of debt and preference share capital, then the WACC of new financing is called the Weighted Marginal Cost of Capital (WMCC).

Calculation of WMCC

WMCC is calculated on the basis of market value weights because the new funds are to be raised at the market values.

The specific cost of capital can be accurately calculated.

Illustration 11

A firm wishes to raise funds upto Rs. 10,00,000 and finds that its WMCC depends upon the amount of funds raised. The firm has set pattern for financing, i.e., 75% shareholders funds and 25% debt. The shareholders funds may be taken as consisting of retained earnings and capital. The following cost for each source have been estimated at different levels of financing from that source.

Source	Amount (Rs)	Cost
Shareholders Fund	Upto Rs 1,50,000	12%
	1,50,000 – 6,00,000	14%
	6,00,000 – 9,00,000	17%
	Upto Rs 1,00,000	7.15%
	1,00,000 – 2,00,000	8.57%
Bonds (Rate of Interest)	2,00,000 – 3,00,000	11.43%

Find out the WMCC at different breaking points given that

(i) the tax rate is 30%.

(ii) the retained earnings of Rs 1,50,000 will be provided by the current earnings at specific cost of capital of 12%.

(iii) additional needed shareholder funds will have to be raised by the issue of share capital.

Solution:

After tax specific cost of debt funds are:

7.15(1 - .3) = 5%

8.57(1 - .3) = 6%

11.43(1 - .3) = 8%

Percentage Composition of

Shareholders funds 75%

Bonds 25%

Breaking points at different levels of each source

Source	Amt(Rs.)	Weight	Break point (Rs.)	Total Funds (Rs.)	Specific c/c
Shareholder Funds	1,50,000	0.75	2,00,000	Upto 2,00,000	0.12
	6,00,000	0.75	8,00,000	2,00,000 – 8,00,000	0.14
	9,00,000	0.75	12,00,000	8,00,000 –12,00,000	0.17
	1,00,000	0.25	4,00,000	Upto Rs 4,00,000	0.05
	2,00,000	0.25	8,00,000	4,00,000 – 8,00,000	0.06
Bonds	3,00,000	0.25	12,00,000	8,00,000 – 12,00,000	0.08

Calculation of WMCC

Range (Rs.)	Source	Weight	C/C	Weight x c/c	WMCC
Upto Rs 2,00,000	SH funds	0.75	0.12	0.0900	
	Debt	0.25	0.05	0.0125	0.1025
2,00,000 – 4,00,000	SH funds	0.75	0.14	0.1050	
	Debt	0.25	0.05	0.0125	0.1175
4,00,000 – 8,00,000	SH funds	0.75	0.14	0.1050	
	Debt	0.25	0.06	0.0150	0.1200
8,00,000 –12,00,000	SH funds	0.75	0.17	0.1275	
	Debt	0.25	0.08	0.0200	0.1475

WMCC at different level of financing

Levels of financing	WMCC
Upto Rs 2,00,000	10.25%
2,00,000 – 4,00,000	11.75%
4,00,000 – 8,00,000	12.00%
8,00,000 -12,00,000	14.75 %

WMCC AND NPV

WMCC can be effectively used in the calculation of NPV by analyzing WMCC in conjunction with the firm's investment opportunities.

1. A proposal may be considered desirable if its NPV discounted at WMCC is zero or positive.
2. NPV under constant WMCC
3. If a firm has constant WMCC, the different proposal may be evaluated on the basis of this WMCC. The proposal having highest NPV should be accepted.NPV and Increasing WMCC

   If the firm's WMCC has break points over increasing levels of new financing, then determining the optimal

capital budgeting procedure is a difficult task. As the firm increases the amount of investments, the return from the projects will decrease, since generally, the first project accepted has highest return, the next project selected will have next highest return and so on. In other words, the return on investment will decrease as the firm accepts more and more proposals. At the same time, the WMCC will increase because additional amount of new financing will be required. The firm would accept, therefore, the proposals upto the point where the WMCC is just equal to marginal return on investment. Beyond this point, the return will be less than the costs.

Illustration 12

A firm finds break points in its WMCC at the following levels of new financing:

Levels of Financing	WMCC
Rs 12,00,000	10%
Rs 18,00,000	12%
Rs 28,00,000	16%
Rs 36,00,000	21%

Analyze the above and set the acceptance criteria for the selection of the proposals.

Solution:

The information given about of the firm denotes that additional funds can be procured by the firm only at increasing WMCC. So, the firm has to decide as to which investment proposal be accepted and which are to be rejected.

In the first instance, the firm should evaluate the proposals which require funds upto Rs.12,00,000 only at the discount rate of 10%. Projects having positive NPV may be accepted. Then, it should proceed to evaluate those proposals which require funds upto Rs.18,00,000 at discount rate of 12% and so on.

Suppose the firm gets the following values of NPV at different financing constraints and different discount rates:

Levels of financing	NPV (Rs.)
12,00,000	5,00,000
18,00,000	9,00,000
28,00,000	15,00,000
36,00,000	13,00,000

So, the highest NPV of Rs.15,00,000 occurs when the firm accepts the proposal requiring funds of Rs. 28,00,000 and discounted at 16%. In the view of the objective of maximization of shareholders wealth, the optimal capital budgeting consists of the investment requiring funds upto Rs. 28,00,000 and returning a NPV of Rs. 15,00,000. The funds for these proposals may be raised at a specific cost of capital of 16%.

3. MARKET BASED APPROACH

Market Approach refers to the notion of arriving at the value of a company by comparing it to the market value of similar publicly listed companies. The comparison is based on certain financial ratios or multiples, such as the price to book value, price to earnings and EV/EBITDA, of the equity in question to those of its peers. This type of approach, which is popular as a strategic tool in the financial industry, is mainly statistical, based on historical data, and current market sentiments. This is also known as relative valuation method.

A market approach is a method of determining the appraisal value of an asset based on the selling price of similar items. The market approach is a business valuation method that can be used to calculate the value of property or as part of the valuation process for a closely held business. Additionally, the market approach can be used to determine the value of a business ownership interest, security or intangible asset. Regardless of what asset is being valued, the market approach studies recent sales of similar assets, making adjustments for differences in size, quantity or quality.

The market value, as reflected in the stock market quotations, is yet another means for estimating the value of a business.

The major problem of this method is that the market value of a firm is influenced not only by financial fundamentals but also by speculative factors. As a result, this value can change abruptly due to speculative influences, market sentiments and personal expectations.

Apart from the limited applicability of the method only to listed corporate enterprises, whose shares/securities are actively traded, the valuation of a business is not in tune with the going concern concept. Nevertheless, such a method of business valuation may be/is of immense usefulness in deciding swap ratios of shares in merger decisions.

a) Fair Market Value (FMV)

Fair Market Value (FMV) is, in its simplest expression, the price that a person reasonably interested in buying a given asset would pay to a person seriously interested in selling it for the purchase of the asset, or what the asset would fetch in the marketplace. To establish FMV, it must be assumed that prospective buyers and sellers are reasonably knowledgeable about the asset, that they are behaving in their own best interests, that they are free of undue pressure to trade and that a reasonable time period is given for completing the transaction.

Book value is the price paid for a particular investment or asset. Fair market value, on the other hand, is the current price at which that same asset can be sold. Book value and fair market value can work together to help investors determine how much they stand to gain or lose by selling off assets.

One way analysts try to identify the fair market value for a company is with a metric called the P/E (price to earnings) ratio. P/E Ratio is one of the most widely used tools for stock selection. It is calculated by dividing the current market price of the stock by its earning per share (EPS). It shows the sum of money you are ready to pay for each rupee worth of the earnings of the company. PE = Market price / EPS.

Fair Value = Expected or Standard P/E x Expected EPS

Step 1: Calculate the P/E ratio.

Step 2: Compare the P/E ratio for your company with other companies in the same industry. For instance, if you want to find the fair value for a bank, you must compare the P/E ratio to other P/E ratios in the banking industry.

Step 3: Interpret the meaning of the P/E ratio. A high P/E ratio means the company is overvalued and a low P/E ratio means the company is undervalued. For instance, if I own a company with a P/E ratio of 5 when the average P/E ratio for companies in the same industry is 3, I know that my stock is overvalued (more expensive).

Step 4: Adjust the stock price down to the average P/E ratio for the industry. If the average P/E ratio is 3, and the P/E ratio on my stock is 5 (current price Rs.10 / earnings per share Rs. 2), then I can use the P/E equation to find what the stock price would need to be in order to have a P/E ratio of 3. The equation is: New P/E ratio x Earnings per share. The answer is 3 x Rs. 2 or Rs. 6. The fair market value for this stock is Rs. 6, not Rs. 10.

Illustration 13

The expected EPS of a company for the current year is Rs. 6. In the industry the standard P/E ratio is 13 to 15. The company is in high growth stage. What is the best estimate of company's share price? Should the share be purchased?

Solution:

Since the company is in growth stage, we can assume that the appropriate P/E ratio is 15.

Therefore,

Share price = 15 x 6 = Rs. 90

If the actual price is lower than Rs. 90, then the share should be purchased.

Illustration 14

You are given the following information about a company

Recent EPS = Rs. 1.89 Growth rate (constant)= 6% Dividend payout ratio = 50% Required rate of return = 10%

After five years, the expected P/E ratio is 12.5. Calculate

(i) The intrinsic value of share at present

(ii) The expected selling price of share at the end of 5th year

(iii) The maximum price at which the investor should buy this share

Solution:

(i) E0 = 1.89 g = 6%

Ke = 10%

b = 0.50

$$Po = \frac{E1\ (1-b)}{Ke - g}$$

E1 = E0 (1 + g)

= 1.89(1 + 0.06)

= 2.0034

$$Po = \frac{2.0034\ (1 - 0.50)}{0.10 - .06}$$

= Rs. 25.04

Therefore, the intrinsic value is Rs. 25.04

ii) The expected P/E ratio at the end of 5th year = 12.5

Expected selling price at the end of 5th year will be:

P5 = P/E X EPS

= 12.5 x 1.89 (1 + 0.06)6

= 33.45

(iii) The maximum price an investor will be willing to pay would be the intrinsic value of this share, i.e., Rs. 25.04

Illustration 14.

A firm is currently paying a dividend of Rs. 2 per share. The rate of dividend is expected to grow at 5% for first five years and 10% thereafter. Find the value of share if the required rate of return is 15%.

Solution:

It must be noted that the annual dividends are paid after the close of the accounting year. Therefore, dividend just paid are Do, i.e., in the beginning of the current year.

Do = Rs. 2

g = 5% p.a for first five years

D1 = 2(1+ 0.05) = Rs. 2.10

Similarly, D2, D3, D4 , D5 can be calculated

Dividends for first five years are :

Dividend	PVF (15%, n)	PV of dividend
2.1	0.87	1.83
2.21	0.756	1.67
2.32	0.658	1.53
2.43	0.572	1.39
2.55	0.497	1.27
	Total	7.69

Now it is given that g = 10% from 6th year onwards

Therefore, D6 = 2.55 (1 + 0.10) = Rs. 2.81

Present value of P5 = $\frac{\text{D6 x PVF}}{\text{Ke – g}}$

= 2.81 / 0.15 – 0.10 x 0.497

= 27.88

Intrinsic Value (Po) = PV of dividend in 5 years + PV of P5

= 7.69 + 27.88

= Rs. 35.57

Illustration 15.

Darwin Ltd has the following details

ROE = 15%

Expected EPS = Rs. 5 Expected

DPS = Rs. 2

Required rate of return = 10% p.a

As a financial advisor, you are required to calculate its expected growth rate, its price, P/E ratio.

Solution:

EPS1 = Rs. 5

DPS1 = Rs. 2

Retention ratio is 60% (3/5) r = 15%

g= br = 0.60 (0.15) = 0.09

Ke = 10%

Po = 2/(0.10 – 0.09) = Rs 200

Now its P/E ratio is calculated below:

P/E ratio = Price / EPS 1

= 200/5 = 40

INDIAN ACCOUNTING STANDARD (Ind AS)

Indian Accounting Standard (abbreviated as Ind-AS) are the Accounting standards adopted by companies in India and issued under the supervision and control of Accounting Standards Board (ASB), which was constituted as a body in the year 1977. ASB is a committee under the Institute of Chartered Accountants of India (ICAI) which consists of representatives from government department, academicians, other professional bodies viz. ICAI, representatives from ASSOCHAM, CII, FICCI, etc., while formulating the accounting standards, ASB will give due consideration to standards issued by IASC and try to integrate them to the extent possible, in the light of the conditions and practices prevailing in India.

The Ind-AS are named and numbered in the same way as the corresponding International Financial Reporting Standards (IFRS). National Advisory Committee on Accounting Standards (NACAS) recommend these standards to the Ministry of Corporate Affairs (MCA). MCA has to spell out the accounting standards applicable for companies in India.

Procedures for Issuing Accounting Standards

Following is the procedure adopted by ASB for issuing Accounting Standards:

(a) ASB determines the broad areas requiring formulation of Accounting Standards and list them according to priority.

(b) An exposure draft is prepared with the help of a study group constituted for this purpose. Views of government, public sector undertakings, industry and other organizations are also obtained before formulating the Exposure Draft (ED).

(c) ED comprises the following:

  (i) A statement of concepts and fundamental accounting principles relating to the standard.

  (ii) Definition of the terms used in the standards.

  (iii) The manner in which the accounting principles have been applied for formulating the standard.

  (iv) The presentations and disclosures requirements in complying with the standard.

  (v) Class of enterprises to which the standard will apply.

  (vi) Date from which the standard will be effective.

(d) The Exposure Draft will be published in the professional journals and circulated otherwise to obtain views and comments. ASB after revising the standards submits the same to the council.

(e) The council will consider and, if necessary, amend the standards after consulting the ASB, then in its final form the council issues the standard under its authority.

Ind AS FOR VALUATION

Ind AS 33- Earnings per share

Objective

To prescribe principles for the determination and presentation of earnings per share, so as to improve performance comparisons between different entities in the same reporting period and between different reporting periods for the same entity.

Scope

- To companies that have issued ordinary shares to which Indian Accounting Standards (Ind ASs) notified under the Companies Act apply.
- An entity that discloses earnings per share shall calculate and disclose earnings per share in accordance with this Standard.

- When an entity presents both consolidated financial statements and separate financial statements prepared in accordance with Ind AS, the disclosures required by this Standard shall be presented both in the consolidated financial statements and separate financial statements.

Definition

- Anti dilution is an increase in earnings per share or a reduction in loss per share resulting from the assumption that convertible instruments are converted, that options or warrants are exercised, or that ordinary shares are issued upon the satisfaction of specified conditions.
- Dilution is a reduction in earnings per share or an increase in loss per share resulting from the assumption that convertible instruments are converted, that options or warrants are exercised, or that ordinary shares are issued upon the satisfaction of specified conditions.

Measurement

Basic earnings per share

- An entity shall calculate basic earnings per share attributable to ordinary equity holders of the entity and, if presented, profit or loss from continuing operations attributable to those equity holders.
- Basic earnings per share shall be calculated by dividing profit or loss attributable to ordinary equity holders of the entity (numerator) by the weighted average number of ordinary shares outstanding (denominator) during the period.

Earnings :-

Adjusted for

- After tax amount of preference dividend.
- Difference arising on the settlement of preference shares.
- Income/expense debited or credited to securities premium/other reserves that was otherwise required to be recognised in profit & loss in accordance with Ind As.

Weighted average number of shares :-

- No. of ordinary share outstanding at the beginning of period.
- Adjusted by no. of outstanding shares bought back or issued.
- Multiplied by time weighting factor.
- Adjusted for events (other than the conversion of potential ordinary shares), that have changed the number of ordinary shares outstanding without a corresponding change in resources. (eg, share split , reverse share split(share consolidation) , bonus element in rights issue to existing shareholders)

Diluted earnings per share

- An entity shall calculate diluted earnings per share attributable to ordinary equity holders of the entity and, if presented, profit or loss from continuing operations attributable to those equity holders.
- Diluted earnings per share shall be calculated by dividing profit or loss attributable to ordinary equity holders of the entity (numerator) by the weighted average number of ordinary shares outstanding for the effects of all dilutive potential ordinary shares (denominator) during the period.

Earnings :-

Adjust the earnings calculated for the purpose of Basic EPS by the tax effect of

- Interest/dividends related to dilutive potential ordinary shares.
- Any other changes in income or expense that would result from the conversion of the dilutive potential ordinary shares.

Weighted average number of shares :-

- The weighted average number of ordinary shares as calculated for BEPS plus additional ordinary shares that would be issued on the conversion or exercise of potential ordinary shares.
- The potential ordinary shares shall be deemed to have been converted into ordinary shares at the beginning of the period or, if later, the date of the issue of the potential ordinary shares.
- If conversion/exercise options lapse during the period, the number of shares would be pro-rated for the part of the year that the potential common shares were outstanding, i.e. they are included in the calculation of diluted earnings per share only for the portion of the period during which they are outstanding.
- The dilutive weighted average common shares are calculated independently for each period presented(interim vs annual).
- Potential ordinary shares shall be treated as dilutive when, and only when, their conversion to ordinary shares would decrease earnings per share or increase loss per share from continuing operations.

Retrospective adjustment

- If the number of ordinary or potential ordinary shares outstanding increases as a result of a capitalisation, bonus issue or share split, or decreases as a result of a reverse share split, the calculation of basic and diluted earnings per share for all periods presented shall be adjusted retrospectively.
- If these changes occur after the reporting period but before the financial statements are approved for issue, the per share calculations for those and any prior period financial statements presented shall be based on the new number of shares.

Disclosure

If EPS is presented, the following disclosures are required :

- the amounts used as the numerators in calculating basic and diluted earnings per share, and a reconciliation of those amounts to profit or loss attributable to the entity for the period.
- the weighted average number of ordinary shares used as the denominator in calculating basic and diluted earnings per share, and a reconciliation of these denominators to each other.
- instruments (including contingently issuable shares) that could potentially dilute basic earnings per share in the future, but were not included in the calculation of diluted earnings per share because they are antidilutive for the period(s) presented.
- A description of those ordinary share transactions or potential ordinary share transactions, that occur after the reporting period and that would have changed significantly the number of ordinary shares or potential ordinary shares outstanding at the end of the period if those transactions had occurred before the end of the reporting period.

Ind AS 32 FINANCIAL INSTRUMENT PRESENTATION

What is Financial Instrument?

It can be a financial liability or an equity instrument. If it is an equity instrument then:

(a) It does not have any contractual obligation.

(b) It is either a non-derivative and if it is derivative, it is to be settled either in cash or by an asset for the fixed number of entity's own equity instruments.

In a situation, where an entity can exchange its own equity instruments top receive or deliver shares, then this arrangement/contract is not an equity instrument but a financial asset or financial liability.

Scope

This standard is applicable to all financial instruments except :

- Subsidiaries, joint ventures, associates, etc.
- Employees' benefits
- Insurance contracts
- Instruments where share-based payments are involved
- The standard applies to contracts to buy or sell non-financial instruments which can be settled in cash by some other financial instruments
- When a contract is readily convertible in cash
- A written option can only be settled in cash not otherwise.

Presentations

- The issuer of a financial instrument will classify the instrument either as an asset or as an equity instrument
- Under certain conditions, an issuer will define an equity instrument if it has no contractual obligations to deliver cash or financial asset of other entity or to exchange any assets / liabilities under favourable conditions. If the instrument is to settled with the issuer's own equity instrument then it is a non – derivative that includes no contractual obligation to deliver the entity's own equity, or if it is a derivative it would require settlement with a fixed amount of cash or a fixed number of shares of the entity.

Puttable Instruments

- These include contractual obligations for the issuer to repurchase or redeem instruments for cash or other financial asset when sold.
- If an instrument entitles the holder to a pro-rata share after payment of all liabilities on liquidation, the instrument is subordinate to all other instruments. A subordinate instrument has no priority over other claims to the assets. All subordinate instruments are puttable, and the formula to calculate the redemption price is the same in that class.
- Puttable instruments do not have any obligations apart from the contractual obligations by the issuer.

Settlement with Entity's Own Shares

In a settlement if an entity receives its own shares, then it is a financial asset or financial liability contract:

- It is a financial liability when the entity has to buy back its own shares for cash.
- A contract that requires delivery of an entity's own shares in exchange for cash or another asset, it is a financial asset.

Contingent Settlement Provisions

A contingent settlement requires a financial instrument to deliver cash or another financial asset on the happening of a certain event in the future which will render the instrument as a financial liability. Such events are beyond the control of the entity.

Interest, Dividends, Gains and Losses

- Interest, dividends, gains and losses relating to a financial instrument or a component which is a financial liability, shall be recognized in the P & L statement.
- Any dividend distributions to the holder of financial instruments long with any transaction costs shall be directly debited to equity, net of any income tax benefits.

- The issue cost of equity should be deducted from equity. These costs are typically legal, like accounting, etc.
- If dividends are classified as an expense, it should be presented in the statement of comprehensive income.
- The requirement of IAS 1 and IFRS 7 are to be complied with.

Offsetting a Financial Asset and a Financial Liability

A financial asset and a financial liability shall be set off and the net amount shall be presented in the financial statements under the following circumstances:

(a) There is a legal enforceable right of set off.

(b) The entity wants to settle on net basis or wants to realize asset and settle liability simultaneously.

But, if the transfer of an asset does not qualify for re-recognition, then the set off of asset and liability do not take place.

This standard requires a set off when doing so presents the future cash flows after settling two or three instruments.

Offsetting assets with liabilities is inappropriate when :

(a) Several instruments are used to emulate one instrument.

(b) Financial assets and liabilities have same primary risk exposure.

(c) Financial assets are pledged.

(d) Assets are set aside in trust.

(e) Obligations arising under an insurance contract.

Ind AS 113 - FAIR VALUE MEASUREMENT

Objectives

1. To determine Fair Value.
2. To set out a single Ind AS framework for measuring fair value.
3. To require disclosures with respect to fair value measurements.

Scope

This Ind AS applies when another Ind AS requires or permits fair value measurements or disclosures about fair value measurements.

Exclusion

This Ind-AS does not apply to the following:

1. Share-based payment transaction as per Ind AS 102
2. Leasing transactions within as per Ind AS 47, and
3. Measurements that have some similarities to fair value but are not fair value, such as net realisable value (NRV) in Ind AS 2,Inventories, or value in use in Ind AS 36, Impairment of Assets.

Fair Value Measurement

(a) Definition of Fair Value

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

(b) Fair Value Measurement – Approach

Ind AS 113 states that fair value measurement requires an entity to determine all of the following:

- **Asset/Liability:** The particular asset/liability that is subject to measurement maybe either a stand-alone asset/liability or a group of assets / group of liabilities / group of assets and liabilities.
- Principal / Most advantageous market: The principal (or most advantageous market) for the asset or liability.
- Non-financial assets: For a non-financial asset, the valuation premise that is appropriate for measurement (consistent with its highest and best use).

(c) Valuation Techniques

The valuation techniques consider the availability of data to develop inputs, and the level of the fair value hierarchy within which the inputs are categorized.

Principal Market Vs Most Advantageous Market

A fair value measurement assumes that the transaction to sell asset or transfer a liability takes place either:

(i) In the principal market of an asset or liability , or

(i) In the absence of the principal market, the most advantageous market of asset or liability

Principal market is the market with the greatest volume and the highest level of activity for the asset or liability. Different entities can have different principal markets as the access of an entity to some market can be restricted.

The most advantageous market is the market that maximizes the amount that would be received to sell the asset, or minimizes the amount that would be paid to transfer the liability.

(d) Fair Value Measurement – Valuation Techniques

(i) Market Approach

- Market Multiples similar publicly listed companies (Revenue, EBITDA, EBIT, Price to Book, etc. adjusted for differences in growth, risk and profitability)
- Guideline Transactions in the market in the same industry as the subject Company

(ii) Cost Approach

- Reflects the amount that would be required to replace the service capacity of an asset.
- For Non-financial assets=Current Replacement Cost + Obsolescence

(iii) Income Approach

- Present Value Techniques (e.g. Discounted Cash Flow Method when valuing a business)
- Option Pricing Models (e.g. Black Scholes, Monte Carlo Simulation and Binomial models in valuing ESOP or put/call options).
- Multi-Period Excess Earnings Method (e.g. Valuing the primary intangible asset in the business)
- Relief-from-royalty Method (e.g. Valuing Brand or IP)
- With-and-without Method (e.g. Valuing Non-Compete agreements)

Fair Value Measurement – Fair Value Hierarchy

Ind AS 113 establishes a fair value hierarchy that transfers inputs to valuation techniques in 3 levels.

(i) Input Level 3 (unobservable)

Inputs that reflect management's own assumptions about the assumptions that a market participant would make (E.g. Projected cash flows used to value a business or non-controlling interest in an unlisted entity)

(ii) Input Level 2 (Indirectly observable)

- Prices in active markets for similar assets / liabilities, quoted prices for identical / similar items in markets that are not active
- Inputs other than quoted prices (e.g. – interest rates, yield curve)

(iii) Input Level 1 (Directly observable)

Quoted prices in active markets for identical assets / liabilities (e.g. Quoted prices for an equity security on the BSE/ NSE).

Disclosures In Financial Statements

An entity shall disclose information that helps users of its financial statements assess both of the following:

(a) For assets and liabilities that are measured at fair value on a recurring or non-recurring basis in the balance sheet after initial recognition, the valuation techniques are used to develop those measurements.

(b) For recurring fair value measurements using significant unobservable inputs (Level 3),the effect of the measurements on profit or loss or other comprehensive income for the period.

LESSON ROUND-UP

- Corporate valuations form the basis of corporate finance activity including capital raising, M&A and also to meet regulatory / accounting requirements or for voluntary purpose.
- Business Valuation is the process of determining the "Economic Worth" of a company based on its Business Model under certain assumptions and limiting condition and subject to data available on the valuation date.
- The Indian Capital Market follows a free-pricing regime and thus the accurate pricing of an IPO is of immense importance.
- There are broadly three approaches to valuation: Asset approach, Income approach, Market approach The adjusted net asset method is commonly used for estimating the value of the business.
- Net asset value is useful for shares valuation in sectors where the company value comes from the held assets rather than the stream of profit that was generated by the company business.
- The Income-based method of valuations is based on the premise that the current value of any business is a function of the future value that an investor can expect to receive from purchasing all or part of the business.
- If the additional financing uses more than one source, say a combination of debt and preference share capital, the WACC of new financing is called the Weighted Marginal Cost of Capital (WMCC)
- WMCC can be effectively used in the calculation of NPV by analyzing WMCC in conjunction with the firm's investment opportunities.
- A market approach is a method of determining the appraisal value of an asset based on the selling price of similar items. The market approach is a business valuation method that can be used to calculate the value of property or as part of the valuation process for a closely held business.
- Indian Accounting Standard (abbreviated as Ind-AS) is the Accounting standard adopted by companies in India and issued under the supervision and control of Accounting Standards Board (ASB), which was constituted as a body in the year 1977.

TEST YOURSELF

1. Explain the areas where valuation is required.
2. Write short notes on
   (a) Ind AS 113
   (b) Fair Market Value
   (c) Relation between WMCC and NPV
3. Critically examine the earning approach to cost of equity share capital.
4. Explain Book value vs. Market value weights in cost of capital.
5. "Individuals do have a time preference for money". State the reasons for such a preference.
6. Calculate cost of capital in each of the following cases :
   (i) A 7 year Rs 100 bond of a firm can be sold for a net price of Rs 97.75 and is redeemable at a premium of 5%. The coupon rate of interest is 15% and tax rate is 55%.
   (ii) A company issues 10% irredeemable preference shares of Rs 105 (FV = 100)
   (iii) The current market value of a share is Rs 90 and the expected dividend at the end of current year is Rs 4.50 with a growth rate of 8%.

   (*Ans (i) 7.74% (ii)9.52% (iii) 13%*)

(7) What is the present value of cash flow of Rs 750 per year forever?
   (a) At an interest rate of 8%?
   (b) At an interest rate of 10%?

(*Ans (a) Rs 9375 (b) Rs 7500*)

The ABC company has the total capital structure of Rs 80,00,000 consisting of :

Particulars	**Weight (%)**
Ordinary shares (2,00,000 shares)	50%
10% Preference Shares	12.5%
14% Debentures	37.5%

The shares of the company sells for Rs 20. It is expected that company will pay next year the dividend of Rs 2 per share which will grow at 7% forever. Tax rate 50%. You are required to :

(a) Compute a weighted average cost of capital-based on existing capital structure :

(b) Compute the new weighted average cost of capital if the company raises an additional Rs 20,00,000 debt by issuing 15% debentures. This would result in increasing the expected dividend to Rs 3 and leave the growth rate unchanged, but the price of the share fall to Rs 15 per share.

(c) Compute the weighted average cost of capital if in (b) above, the growth rate increases to 10%.

(*Ans: (a) 17% (b) 15.4% (c) 27%*)