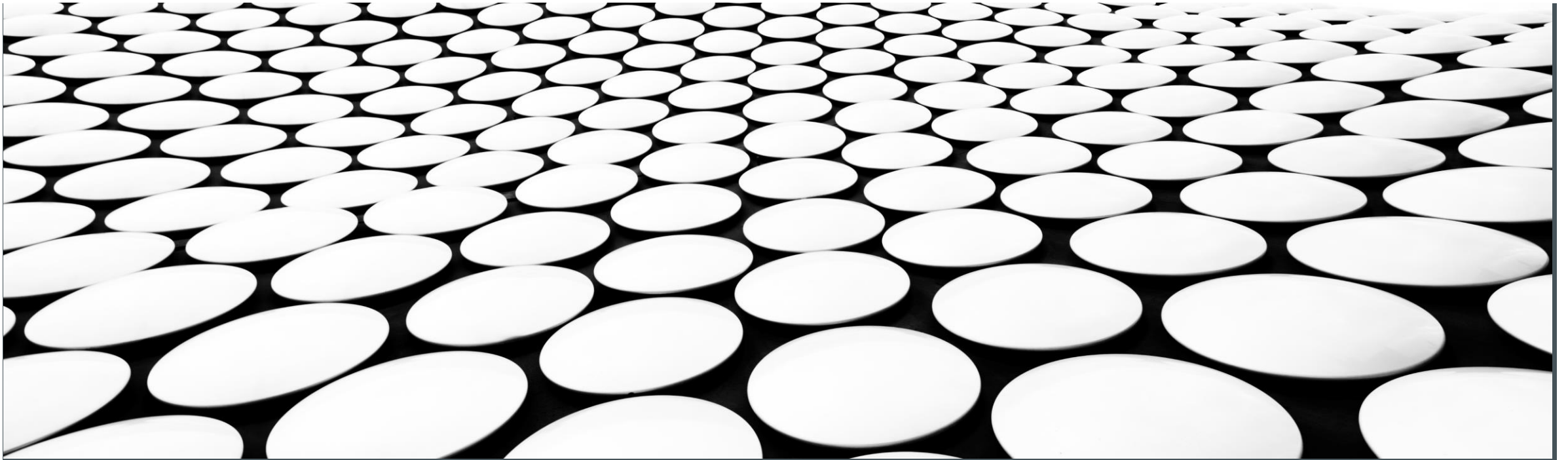

FINANCE FOR NON-FINANCE MODULE VII – ENTERPRISE VALUATION – THE CONCEPT

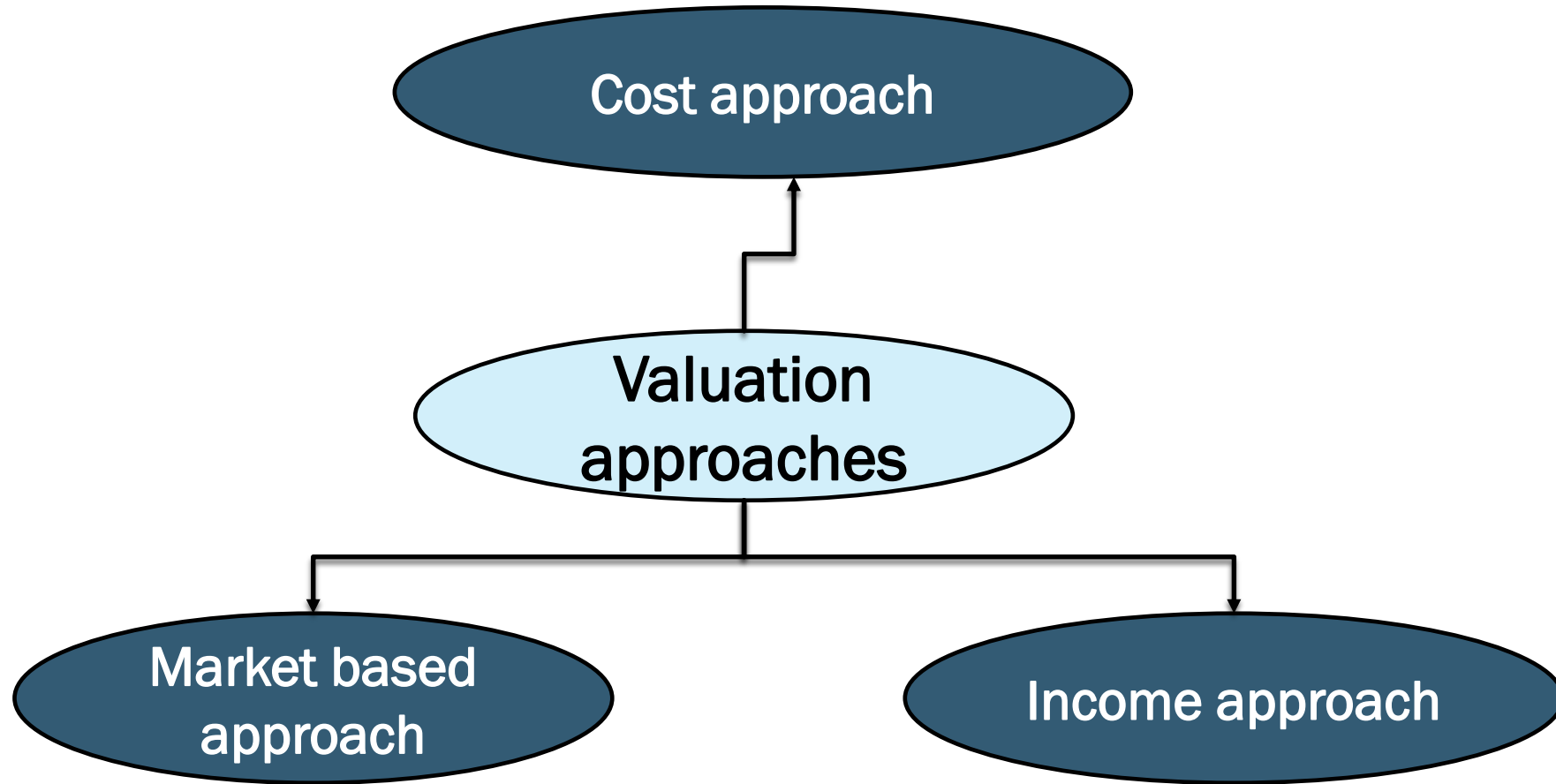
BY B D CHATTERJEE *FCA, ACMA, ACS, DIP (IFR) ACCA – UNITED KINGDOM*





VALUATION APPROACHES

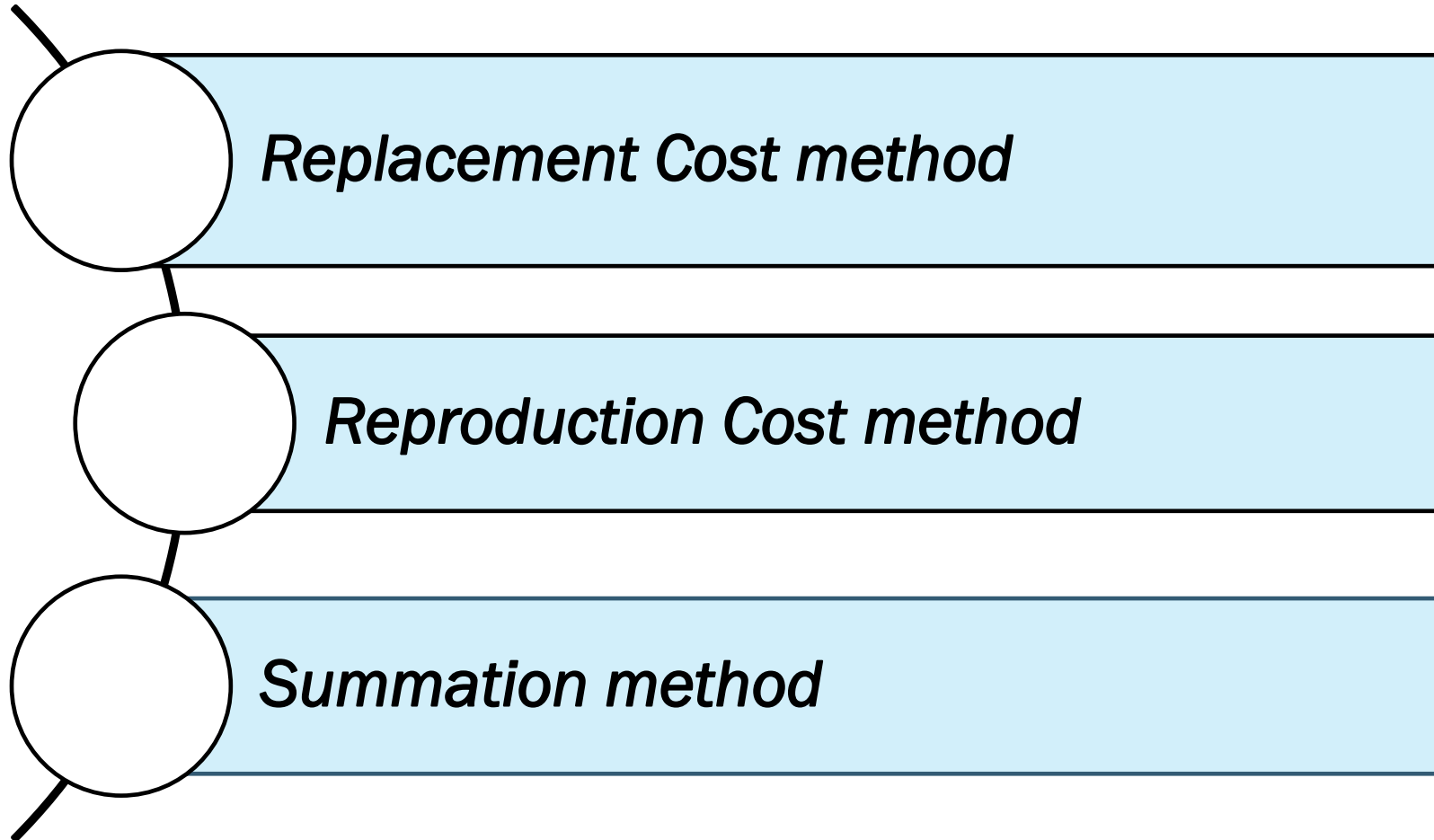
VALUATION APPROACHES



COST (NET ASSET) APPROACH

- ❑ This approach is also called Asset based approach, which is synonymous to asset accumulation approach, net asset value approach, the adjusted book value method and the asset build up method.
- ❑ The objective of this method is to study and assess values to the company's assets and liabilities to generate value of the business. In this approach, the substance value, which assets minus liabilities must be positive. If however, liabilities are higher than assets, then this method loses its relevance.
- ❑ The drawback of this approach is that it uses balance sheet carrying values which are quite different from the real value, especially for assets when these are depreciated over their useful lives. In such cases the real value would represent the fair market value of the assets as ascertained in open market.

COST (NET ASSETS) APPROACH



REPLACEMENT COST METHOD

- ❑ This method also known as ‘Depreciated Replacement Cost Method’ involves valuing an asset based on the cost that a market participant shall have to incur to recreate an asset with substantially the same utility (comparable utility) as that of the asset to be valued, adjusted for obsolescence.

- ❑ The steps involved in valuing an asset under this method are as under:
 - (a) estimate the costs that will be incurred by a market participant for creating an asset with comparable utility as that of the asset to be valued;
 - (b) assess whether there is any loss on account of physical, functional or economic obsolescence in the asset to be valued; and
 - (c) adjust the obsolescence value, if any as determined under (b) above from the total costs estimated under (a) above, to arrive at the value of the asset to be valued

REPRODUCTION COST METHOD

- ❑ This method involves valuing an asset based on the cost that a market participant shall have to incur to recreate a replica of the asset to be valued, adjusted for obsolescence.

- ❑ The steps involved in valuing an asset under this method are as under:
 - (a) estimate the costs that will be incurred by a market participant for creating a replica of the asset to be valued;
 - (b) assess whether there is any loss of value on account of physical, functional or economic obsolescence in the asset to be valued; and
 - (c) adjust the obsolescence value, if any as determined under (b) above from the total costs estimated under (a) above, to arrive at the value of the asset to be valued.

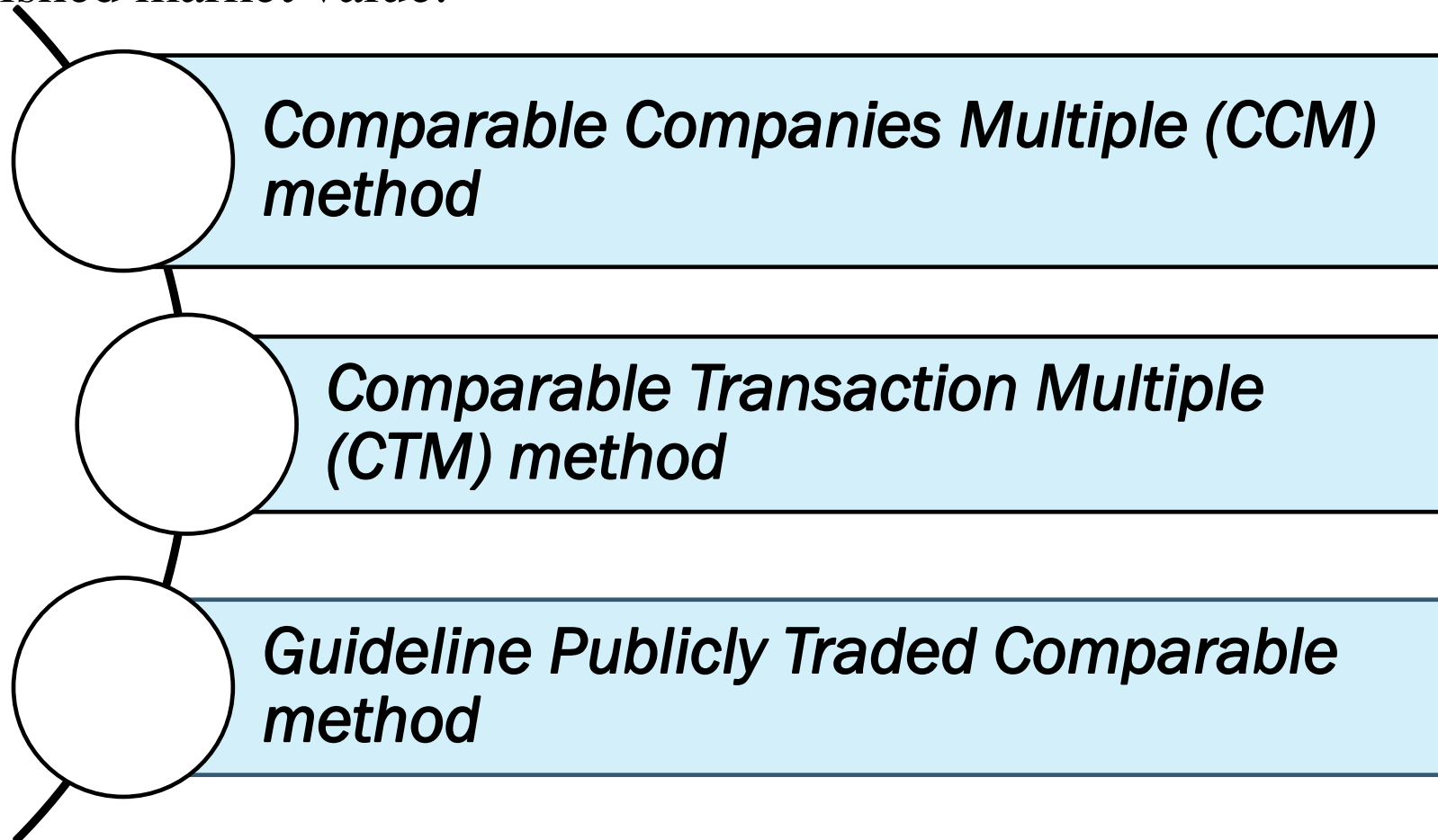
SUMMATION METHOD

- This method is also referred to as the underlying asset method, and is typically used for investment companies or other types of assets or entities for which value is primarily a factor of the values of their holdings.

- The key steps in the summation method are:
 - (a) value each of the component assets that are part of the subject asset using the appropriate valuation approaches and methods, and
 - (b) add the value of the component assets together to reach the value of the subject asset.

MARKET BASED APPROACH

This approach determines enterprise value by comparing one or more aspects of the subject enterprise to the similar aspects of other entities which have established market value.



COMPARABLE COMPANIES MULTIPLE METHOD

Comparable Companies Multiple Method, also known as Guideline Public Company Method, involves valuing an asset based on market multiples derived from prices of market comparables traded on active market.

COMPARABLE TRANSACTIONS MULTIPLE METHOD

Comparable Transaction Multiple Method, also known as ‘*Guideline Transaction Method*’ involves valuing an asset based on transaction multiples derived from prices paid in transactions of asset to be valued/market comparables (comparable transactions).

COMPARABLE TRANSACTIONS MULTIPLE METHOD AND COMPARABLE TRANSACTION MULTIPLE METHOD COMPARED

Comparable Companies Multiple (CCM) Method	Comparable Transaction Multiple (CTM) Method
(a) identify the market comparables;	(a) identify comparable transaction appropriate to the asset to be valued;
(b) select and calculate the market multiples of the identified market comparables;	(b) select and calculate the transaction multiples from the identified comparable transaction;
(c) compare the asset to be valued with the market comparables to understand material differences; and make necessary adjustments to the market multiple to account for such differences, if any;	(c) compare the asset to be valued with the market comparables and make necessary adjustments to the transaction multiple to account where differences, if any existed;
(d) apply the adjusted market multiple to the relevant parameter of the asset to be valued to arrive at the value of such asset; and	(d) apply the adjusted transaction multiple to the relevant parameter of the asset to be valued to arrive at the value of such asset; and
(e) if value of the asset is derived by using market multiples based on different metrics/parameters, the valuer shall consider the reasonableness of the range of values.	(e) if valuation of the asset is derived by using transaction multiples based on different metrics or parameters, the valuer shall consider the reasonableness of the range of values and exercise judgement in determining a final value.

GUIDELINE PUBLICLY TRADED COMPARABLE METHOD

- ❑ The guideline publicly traded method utilises information on publicly-traded comparables that are the same or similar to the subject asset to arrive at an indication of value.

- ❑ The key steps in this method are depicted as under:
 - (a) identify the valuation metrics/comparable evidence that are used by participants in the relevant market,
 - (b) identify the relevant guideline publicly traded comparables and calculate the key valuation metrics for those transactions,
 - (c) perform a consistent comparative analysis of qualitative and quantitative similarities and differences between the publicly traded comparables and the subject asset,
 - (d) make necessary adjustments, if any, to the valuation metrics to reflect differences between the subject asset and the publicly traded comparables,
 - (e) apply the adjusted valuation metrics to the subject asset, and
 - (f) if multiple valuation metrics were used, weight the indications of value.

INCOME BASED APPROACH

- ❑ This approach is commonly called Discounted Cash flow approach. It is universally accepted as by far the most appropriate method used for business valuations.

- ❑ According to the income-based approach the business valuer must make estimation of the following elements highlighted below:
 - (a) Estimation of business life expectancy
 - (b) Estimation of future income flows that a business will generate during its life expectancy
 - (c) Estimation of discount rate in order to calculate the present value of the estimated income flows.

BASES OF VALUATION

Historical cost	Assets are recorded at the amount of cash or cash equivalents paid or fair value of the other consideration given at the time of acquisition.
Current cost	Assets are carried at the amount of cash or cash equivalents that would have to be paid if the same or an equivalent asset were acquired currently.
Realizable (settlement) value	Assets are carried at the amount of cash or cash equivalents that could be currently be obtained by selling the asset in an orderly disposal, which is the result of an arm's length transaction between knowledgeable and willing parties less the cost of disposal.
Present value	Assets are carried at the present value of the estimated future net cash flows that the item is expected to generate in the normal course of business from the continuing use of an asset and from its disposal at the end of the useful life

BASES OF VALUATION *(International Valuation Standards 2017)*

Bases of valuation	Definition
Market Value	Market Value is the estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion
Market Rent	Market Rent is the estimated amount for which an interest in real property should be leased on the valuation date between a willing lessor and a willing lessee on appropriate lease terms in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion.
Equitable Value	Equitable Value is the estimated price for the transfer of an asset or liability between identified knowledgeable and willing parties that reflects the respective interests of those parties.
Investment Value/Worth	Investment Value is the value of an asset to a particular owner or prospective owner for individual investment or operational objectives.
Synergistic Value	Synergistic Value is the result of a combination of two or more assets or interests where the combined value is more than the sum of the separate values. If the synergies are only available to one specific buyer then Synergistic Value will differ from Market Value, as the Synergistic Value will reflect particular attributes of an asset that are only of value to a specific purchaser. The added value above the aggregate of the respective interests is often referred to as "marriage value."
Liquidation Value	Liquidation Value is the amount that would be realised when an asset or group of assets are sold on a piecemeal basis. Liquidation Value should take into account the costs of getting the assets into saleable condition as well as those of the disposal activity. Liquidation Value can be determined under two different premises of value: (a) an orderly transaction with a typical marketing period, or (b) a forced transaction with a shortened marketing period

BASES OF VALUATION

Bases of valuation	Definition
(a) Fair value	It 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 valuation date.
(b) Participant specific value	It is the estimated value of an asset or liability considering specific advantages or disadvantages of either of the owner or identified acquirer or identified participants.
(c) Liquidation value	It is the amount that will be realised on sale of an asset or a group of assets when an actual/hypothetical termination of the business is contemplated/assumed.



VALUATION METHODS

VALUATION METHODS

- The methods of valuation are highlighted as under:
 - Market based valuation method
 - Dividend Discount method
 - Discounted cash flows valuation method
 - Net Asset value method
 - Earnings method
 - Relative valuation method
 - Contingent claim valuation method
 - Economic Value Added (EVA)

MARKET BASED VALUATION METHOD

- This is the simplest way to value an enterprise traded publicly in a stock exchange. The company's stock can be bought and sold in that exchange. This method indicates the value of the subject company by comparing it to publicly traded companies in similar lines of business.

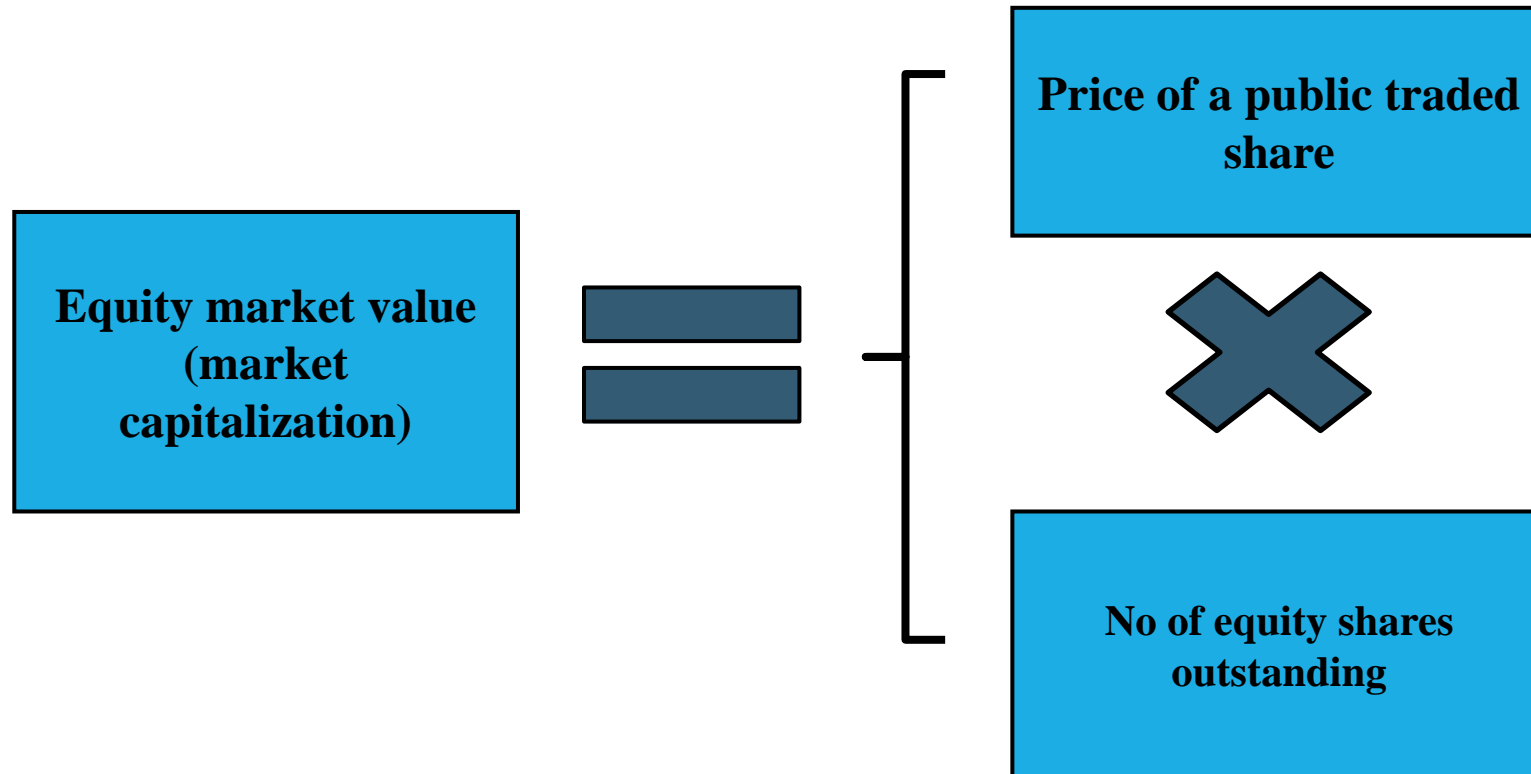


ILLUSTRATION I – MARKET BASED VALUATION METHODS

Stock price of X Ltd is Rs. 240 per share. Number of shares outstanding is 10 crores. What is the equity value of the enterprise?

Solution

Equity market value (market capitalisation) of X Ltd is as under:

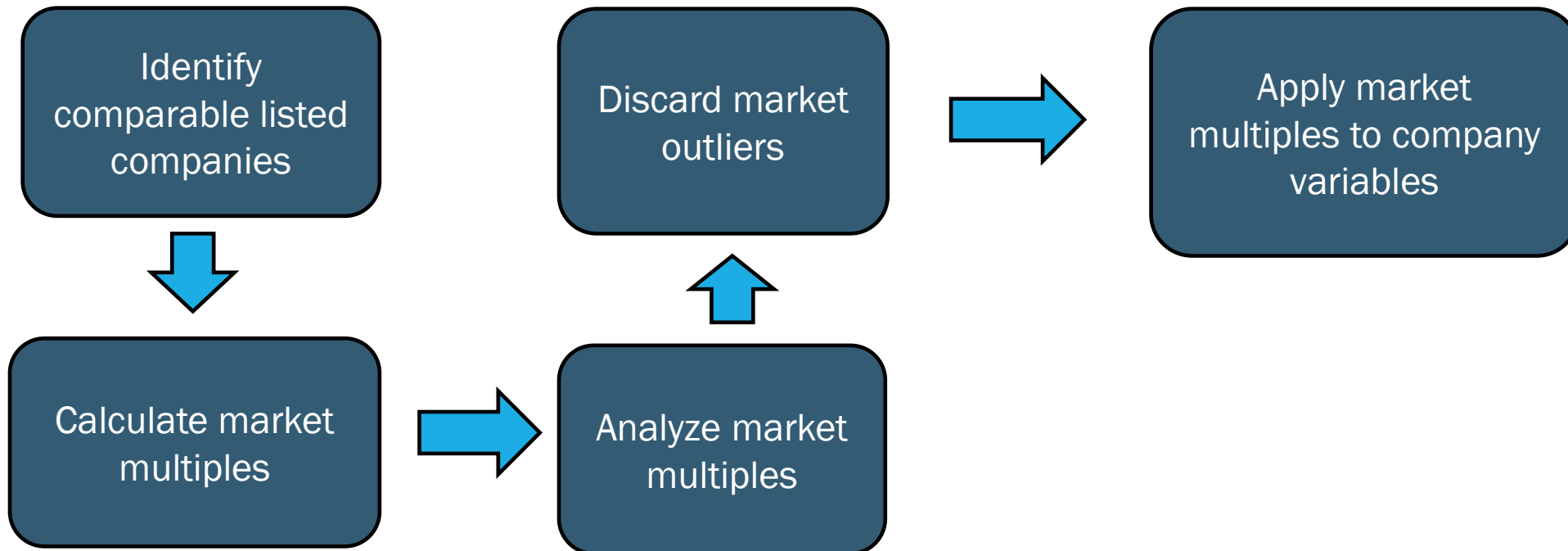
= Market price per share x No. of shares outstanding

= Rs. 240/- x 10 crores

= Rs. 2400 crores.

MARKET BASED VALUATION METHOD

- ❑ Common equity level multiples could also be:
 - (a) Price/Earnings Ratio (P/E)
 - (b) Price/tangible book value (P/B)



DIVIDEND DISCOUNT METHOD

- ❑ From the standpoint of the shareholder who buys and holds stocks, the cash flows received at any point in time, are the dividends paid on it and the market price of the share at that point.
- ❑ The present value of a share is nothing but the future value of dividends receivable on that share.
- ❑ There are three versions of this model that are used to determine the intrinsic value of a share of stock:
 - (i) the constant (or no-growth) dividend model,
 - (ii) the constant dividend with growth model and
 - (iii) the two stage (or two phase) dividend growth model. Two stage growth relates to high growth in the first stage followed by constant low growth till the end. This is ideally meant for firms which plough back more profit and pay only residual amount as dividend.

DIVIDEND DISCOUNT METHOD

I. The constant (or no-growth) dividend model

The formula is: $P = D_t / K_e$

Where, P = Intrinsic value

D_t = Expected dividend

K_e = Cost of equity or expected return

DIVIDEND DISCOUNT METHOD

II. the constant dividend with growth model

The formula is:

$$P = D_t / (K_e - g)$$

Where, P = Intrinsic value

D_t = Expected dividend

K_e = Cost of equity or expected return

g = constant dividend growth rate

DIVIDEND DISCOUNT METHOD

III. the two stage (or two phase) dividend growth model. Two stage growth relates to high growth in the first stage followed by constant low growth till the end. This is ideally meant for firms which plough back more profit and pay only residual amount as dividend.

The formula is:

$$P = \sum_{t=1}^{\infty} [D_0 (1+g_1)^t / (1 + K_e)^t] + D_t (1+g_2)^t / (K_e - g_2) [1 / (1 + K_e)^t]$$

Where, P = Intrinsic value = PV of dividends + PV of price

D_t = Expected dividend

K_e = Cost of equity or expected return

g₁ = initial dividend growth rate

g₂ = Steady dividend growth rate

ILLUSTRATION II – DIVIDEND DISCOUNT METHOD

Alpha Ltd is a company operating in a mature industry. Currently, its EPS is Rs. 6.75. Alpha's dividend payout ratio is 60% and ROE is 10% and both of these are expected to be the same in the near future. The beta of the company is 0.86. The treasury bill rate is 9.86% and the average return from the market is 15.26%.

Required:

Calculate the intrinsic value of Alpha Ltd using the Dividend Discount model.

Solution

To find out the intrinsic value we use the following formula:

$$\begin{aligned} P_0 &= (D_0 (1 + g)) / (k - g) \\ \text{a) } EPS_0 &= \text{Rs. } 6.75 \\ \text{Dividend payout} &= 60\% \\ &= \text{Rs. } 6.75 \times 0.60 \\ D_0 &= \text{Rs. } 4.05 \\ \text{(b) Growth} &= (1 - \text{dividend payment}) \times \text{ROE} \\ &= (1 - 0.6) \times 10\% \\ &= 0.4 \times 10\% \\ &= 4\% \\ \text{(c) } K &= R_f + \text{Beta} (R_m - R_f) \text{ (using CAPM)} \\ &= 0.0986 + 0.86 (0.1526 - 0.0986) \\ &= 14.504\% \end{aligned}$$

DISCOUNTED CASH FLOW METHOD

- ❑ Discounted Cash Flow method has its foundation in the present value concept and the time value of money.
- ❑ In this method the value of any asset is the present value of expected future cash flows that the asset generates.
- ❑ To carry out valuation in this method, we need to
 - (a) Estimate the life of the asset
 - (b) Estimate the cash flows during the life of the asset
 - (c) Estimate the discount rate to apply to these cash flows to get present value

NET ASSET VALUE METHOD

- ❑ The net asset value method estimates value as the net cash remaining if all assets are disposed of to get the best possible price for each asset and all liabilities are paid with the proceeds.
- ❑ Assets and liabilities are adjusted to their individual appraised values.
- ❑ The net result is the value arrived at for the total enterprise.

NET ASSET VALUE METHOD

The basic form of net asset valuation is shown below

Book value of assets		X
Less: Book value of liabilities		X
Book value of net assets		X
Less: Assets not taken over		X
Add: Liabilities not taken over		X
Add: Fair market value of assets taken over		X
Adjusted value of net assets	(A)	X
No. of shares	(B)	X
Value per share	$(A)/(B) = (C)$	X

ILLUSTRATION III – NET ASSET VALUE METHOD

Given below is the Balance Sheet of K Ltd as on 31.3.2023:

(Rs. in lakhs)

Liabilities	Amount	Assets	Amount
Share capital (Share of Rs.10)	100	Land & Building	40
Reserves and surplus	40	Plant & Machinery	80
Creditors	30	Investments	10
		Stock	20
		Debtors	15
		Cash at bank	5
	170		170

You are required to work out the value of the company's shares on the basis of net assets method and profit earning capacity (capitalisation) method and arrive at the fair price of the shares, by considering the following information:

- (a) Profit for the current year Rs.64 lakhs includes Rs.4 lakhs extraordinary income and Rs. 1 lakh income from investments of surplus funds; such surplus funds are unlikely to recur,
- (b) In subsequent years, additional advertisement expenses of Rs.5 lakhs are expected to be incurred each year
- (c) Market value of land & building and Plant & Machinery has been ascertained at Rs.96 lakhs and Rs.100 lakhs respectively. This will entail additional depreciation of Rs.6 lakhs each year.
- (d) Effective income tax rate is 30%
- (e) The capitalisation rate applicable to similar business is 16%.

ILLUSTRATION III – NET ASSET VALUE METHOD

Solution

Net Assets	Rs. in lakhs
Land & Building	96
Plant & Machinery	100
Investments	10
Stocks	20
Debtors	15
Cash at bank	5
Total Assets	246
Less: Creditors	30
Net Assets	216

Value per share

No. of shares = 100 lakhs/10 = 10 lakhs

Value per share = Net Asset/no. of shares

= Rs.216 lakhs/10 lakhs

= **Rs.21.60**

EARNINGS METHOD

- ❑ The earnings method includes capitalisation of earnings, capitalisation of excess earnings and present value of future earnings.
- ❑ The capitalisation of earnings method is among one of the most popular methods of valuation approaches.
- ❑ This method is generally in vogue when large blocks of shares are valued.

EARNINGS METHOD

In its basic form the earnings method would consider the following:

Particulars	Amount
Profit before tax	X
Less: Extra-ordinary income	x
Less: Investment income not likely to recur	x
Less: Additional expenses for forthcoming years - advertisement	x
Less: Depreciation	x
Expected earnings before taxes	X
Less: Income taxes at prescribed rate	X
Future maintainable profits (A)	X
Reasonable rate of return (capitalisation factor) (B)	X
Enterprise value (A)/(B) = (C)	X
No of shares (D)	X
Value per share (C)/(D) = (E)	X

RELATIVE VALUATION METHOD

- ❑ This method estimates the value of an asset by looking at the pricing of comparable.
- ❑ Assets relative to a common variable such as earnings, cash flows, book value or sales.
- ❑ Some important valuation matrix is shown below.

Quantity	X	Multiple	Value
Cash flow	X	Firm value/Cash flow of firm	Cash flow multiple = Value of firm
EBITDA	X	Firm value/EBITDA of firm	EBITDA multiple = Value of firm
Sales	X	Firm value/Sales value of firm	Sales multiple = Value of firm
Customers	X	Firm value/Customers	Customer multiple = Value of firm
Earnings	X	Price per share/earnings	Price earnings ratio = share price

CONTINGENT CLAIM VALUATION METHOD

- ❑ This is a revolutionary valuation model used to value assets the cash flows of which are contingent on occurrence of a future event.
- ❑ The examples are, an unknown oil rig, development of pharmaceutical drug, development of new product, innovation. In each of these cases there is high risk and uncertainty involved.
- ❑ This method uses option pricing models to measure the value of assets that have share option characteristics also. Some of these assets are traded financial assets like warrants and some of these options are not traded and are based on real assets e.g. projects, patents and oil reserves as mentioned above.

ECONOMIC VALUE ADDED METHOD

- ❑ It is a performance metric that calculates the creation of shareholder value.
- ❑ It distinguishes itself from traditional financial performance metrics such as net profit and EPS.
- ❑ EVA is the calculation of what profits remain after the cost of company's capital – both debt and equity – is deducted from operating profit.



THANK YOU!