

Asset-Backing Method:

Since the valuation is made on the basis of the assets of the company, it is known as Asset-Basis or Asset-Backing Method. At the same time, the shares are valued on the basis of real internal value of the assets of the company and that is why the method is also termed Intrinsic Value Method or Real Value Basis Method.

This method may be made either

- (i) On a going/continuing concern basis; and
- (ii) Break-up value basis.

In the case of former, the utility of the assets is to be considered for the purpose of arriving at the value of the assets, but, in the case of the latter, the realizable value of the assets is to be taken. Under this method, value of the net assets of the company is to be determined first.

Thereafter, the net assets are to be divided by the number of shares in order to find out the value of each share. At the same time, value of goodwill (at its market value), investment (non-trading assets) are to be added to net assets. Similarly, if there are any preference shares, those are also to be deducted with their arrear dividends from the net assets.

However, this following step should carefully be followed while calculating Net Assets or the Funds Available for Equity Shareholders:

- (a) Ascertain the total market value of fixed assets and current assets;
- (b) Compute the value of goodwill (as per the required method);
- (c) Ascertain the total market value of non-trading assets (like investment) which are to be added;
- (d) All fictitious assets (viz, Preliminary Expenses, Discount on issue of Shares/Debentures, Debit-Balance of P&L A/c etc.) must be excluded;
- (e) Deduct the total amount of Current Liabilities, Amount of Debentures with arrear interest, if any, Preference Share Capital with arrear dividend, if any.
- (f) The balance left is called the Net Assets or Funds Available for Equity Shareholders.

The following chart will make the above principle clear:

ADVERTISEMENTS:

| Computation of Net Assets | | Rs. |
|---|-----|---|
| Net Assets | | |
| Fixed Assets (Market Value) | | * * |
| Investments (Market Value) | | * * |
| Current Assets (Market Value) | | * * |
| Goodwill, if any (Market Value) | | * * |
| | | <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> |
| | | * * |
| Less: | | |
| Current Liabilities | * * | |
| Debentures | * * | |
| Prof. Share Capital (with arrear Dividend) | * * | — |
| Net Assets/Funds available for Equity Shareholders | | <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> <u> * * </u> |
| ∴ Intrinsic Value of each share = $\frac{\text{Funds available for equity shareholders}}{\text{Number of equity shares}}$ | | |

Alternatively:

Net Assets = Share Capital + Reserves and Surplus Revaluation – Loss on Revaluation

Applicability of the Method:

- (i) The permanent investors determine the value of shares under this method at the time of purchasing the shares;
- (ii) The method is particularly applicable when the shares are valued at the time of Amalgamation, Absorption and Liquidation of companies; and
- (iii) This method is also applicable when shares are acquired for control motives.

1: From the following Balance Sheet of Sweetex Ltd. you are asked to ascertain the value of each Equity Share of the company:

| Liabilities | Rs. | Assets | Rs. |
|---|---|-----------------------|--|
| 20,000 Equity Shares of Rs. 10 each, fully paid | 2,00,000 | Goodwill | 30,000 |
| 1,000, 6% Preference Shares of Rs. 100 each, fully paid | 1,00,000 | Land and Building | 1,00,000 |
| Reserves | 60,000 | Plant and Machinery | 1,20,000 |
| Sundry Creditors | 40,000 | Investments (at cost) | 60,000 |
| Provision for Taxation | 20,000 | Stock | 50,000 |
| Other Liabilities | 10,000 | Debtors | 40,000 |
| | <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> | Cash at Bank | 24,000 |
| | 4,30,000 | Preliminary Expenses | 6,000 |
| | | | <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> <u> 4,30,000 </u> |

For the purpose of valuing the shares of the company, the assets were revalued as: Goodwill Rs. 50,000; Land and Building at cost plus 50%, Plant and Machinery Rs. 1, 00,000; Investments at book values; Stock Rs. 80,000 and Debtors at book value, less 10%.

Solution:

| | Rs. | | Rs. |
|---|-----------------|--------------------------------------|-----------------|
| Net Assets: | | Alternative Approach: | |
| Goodwill | 50,000 | Equity Share Capital | 2,00,000 |
| Land and Building (Rs. 1,00,000. + Rs. 50,000) | 1,50,000 | Reserve | 60,000 |
| Plant and Machinery | 1,00,000 | | <u>2,60,000</u> |
| Investments | 60,000 | Less: Preliminary Expenses | 6,000 |
| Stock | 80,000 | | <u>2,54,000</u> |
| Debtors (Rs. 40,000 – Rs. 4,000) | 36,000 | Add: Profit on Revaluation | |
| Cash at Bank | 24,000 | Goodwill | 20,000 |
| Less: Current Liabilities | <u>5,00,000</u> | (Rs. 50,000 – Rs. 30,000) | |
| Sundry Creditors | 40,000 | Land and Building | 50,000 |
| Prov. for Taxation | 20,000 | (Rs. 1,50,000 – Rs. 1,00,000) | |
| Other Liabilities | 10,000 | Stock | 30,000 |
| | <u>70,000</u> | (Rs. 80,000 – Rs. 50,000) | <u>1,00,000</u> |
| Less: Preference Share Capital | 1,00,000 | | <u>3,54,000</u> |
| | <u>4,30,000</u> | Less: Loss on Revaluation | |
| Funds available for Equity Shareholders | <u>3,30,000</u> | Plant & Machinery | 20,000 |
| | | (Rs. 1,20,000 – Rs. 1,00,000) | |
| | | Debtors | 4,000 |
| | | (Rs. 40,000 – Rs. 36,000) | <u>24,000</u> |
| | | Funds available for Eq. Shareholders | <u>3,30,000</u> |

Intrinsic Value of each share = Funds available for Equity Shares/Total Number of Shares

Intrinsic Value of shares = Rs. 3,30,000/20,000

= Rs. 16.50.

Intrinsic Value of Shares on the Basis of Valuation of Goodwill

Illustration 2:

X Ltd. presented the following Balance Sheet as on 31st March 2010:

| Balance Sheet as at 31 March 2010 | | | |
|--|-----------------|-------------------------------|-----------------|
| <i>Liabilities</i> | <i>Rs.</i> | <i>Assets</i> | <i>Rs.</i> |
| Share Capital | | Land and Building | 1,00,000 |
| 1,00,000 Equity Shares of Rs. 10 each, fully paid | 1,00,000 | Plant and Machinery | 2,00,000 |
| Profit and Loss A/c | 1,50,000 | Investments (M.V. Rs. 80,000) | 1,00,000 |
| Capital Reserve | 50,000 | Stock | 1,00,000 |
| General Reserve | 1,50,000 | Debtors | 80,000 |
| 8% Debentures | 1,00,000 | Cash at Bank | 70,000 |
| Creditors | 50,000 | | |
| Other Liabilities | 50,000 | | |
| | <u>6,50,000</u> | | <u>6,50,000</u> |

Additional Information:

(a) Land and Building and Plant and Machinery were revalued at Rs. 150,000 and Rs. 2,28,000, respectively.

(b) Investments were valued at market value.

(c) Stock to be taken at Rs. 80,000 and Debtors subject to a deduction @ 10% for bad debts.

(d) Net profit (before Tax) for the last five years were: Rs. 50,000; Rs. 70,000; Rs. 80,000; Rs. 1,00,000 and Rs. 1,25,000.

(e) Normal Rates of Return 10%.

(f) Goodwill to be valued at 5 years' purchase of Super-Profit.

(g) Rate of tax 50%.

Ascertain the Intrinsic Value of Shares.

Solution:

| | | Valuation of Goodwill | |
|-----------------------------------|---|------------------------------|-----------------|
| Capital Employed | | Rs. | Rs. |
| Land and Building | | 1,50,000 | |
| Plant and Machinery | | 2,28,000 | |
| Stock | | 80,000 | |
| Debtors (80,000 – 10%) | | 72,000 | |
| Cash and Bank | | 70,000 | |
| | | <hr/> | 6,00,000 |
| Less : Current Liabilities | | | |
| Creditors | | 50,000 | |
| Other Liabilities | | 50,000 | |
| | | <hr/> | 1,00,000 |
| | Net Asset/Capital Employed | | <u>5,00,000</u> |
| | Normal profit @ 10% on Rs. 5,00,000 = Rs. 50,000 | | |

| | Rs. | Rs. | | Rs. | Rs. |
|---------------------|------------------|-----------------|--|------------------|-----------------|
| General Reserve | 2,00,000 | — | | | |
| Profit and Loss A/c | 3,00,000 | — | | | |
| Debtors | 1,00,000 | — | | | |
| Creditors | 1,00,000 | 50,000 | | | |
| | <u>12,00,000</u> | <u>1,50,000</u> | | <u>12,00,000</u> | <u>1,50,000</u> |

X Ltd. agrees to take over Y Ltd.

Find out the ratio of exchange of shares on the basis of the intrinsic values.

Solution:

(a) Calculation of Intrinsic Value of Shares:

| | X Ltd. | Y Ltd. |
|------------------------------------|--|---|
| | Rs. | Rs. |
| <i>Assets taken :</i> | | |
| Fixed Assets | 7,00,000 | 1,00,000 |
| Investments | 3,00,000 | — |
| Current Assets | 2,00,000 | 50,000 |
| | <u>12,00,000</u> | <u>1,50,000</u> |
| <i>Less : Current Liabilities</i> | | |
| Debtors (assume short-term) | 1,00,000 | — |
| Creditors | <u>1,00,000</u> | <u>50,000</u> |
| | 2,00,000 | 50,000 |
| Net Assets | <u><u>10,00,000</u></u> | <u><u>1,00,000</u></u> |
| | | |
| ∴ Intrinsic Value per Share | $= \frac{\text{Rs. } 10,00,000}{50,000}$ | $= \frac{\text{Rs. } 1,00,000}{10,000}$ |
| | $= \text{Rs. } 20$ | $= \text{Rs. } 10$ |

Ratio of Exchange

Net assets of Y Ltd/ Intrinsic value of X Ltd
 $100000/20=5000$ shar

Ratio=5000:10000=5:10=1:2

Net assets of Y Ltd. should be divided by the intrinsic value of X Ltd. in order to calculate the number of shares to be issued on the basis of which they said ratio can be ascertained.

| | |
|--|---|
| Net Assets of Y Ltd. amount to | Rs. |
| Intrinsic value of X Ltd. | 1,00,000 |
| | 20 |
| ∴ Number of shares of X Ltd. to be issued = | $\frac{\text{Rs. } 1,00,000}{20} = 5,000$ |

Thus, the ratio of exchange is 5,000 shares of X Ltd. for 10,000 shares of Y Ltd. i.e., the ratio is 1 : 2 or 1 share of X Ltd. is equal to 2 shares of Y Ltd.

B. Yield-Basis Method:

Yield is the effective rate of return on investments which is invested by the investors. It is always expressed in terms of percentage. Since the valuation of shares is made on the basis of Yield, it is called Yield-Basis Method. For example, an investor purchases one share of Rs. 100 (face value and paid-up value) at Rs. 150 from a Stock Exchange on which he receives a return (dividend) @ 20%.

| | |
|--|---|
| Yield may be calculated as: | |
| Yield | = $\frac{\text{Normal Profit}}{\text{Capital Employed}} \times 100$ |
| Note: Practically, yield may also be termed as: Expected Yield, Normal Rate of Return/Earning, Rate of Fair Return, Rate of General Expectations, Estimated Rate for Capitalisation, etc. | |

Under Yield-Basis method, valuation of shares is made on;

(i) Profit Basis;

(ii) Dividend Basis.

(i) Profit Basis:

Under this method, at first, profit should be ascertained on the basis of past average profit; thereafter, capitalized value of profit is to be determined on the basis of normal rate of return, and, the same (capitalized value of profit) is divided by the number of shares in order to find out the value of each share.

Step I

The following procedure may be adopted:

| | |
|---------------------------------------|---|
| Capitalised Value of Profit | = $\frac{\text{Profit}^1}{\text{Normal rate of Return}} \times 100$ |
| Value of each equity share | = $\frac{\text{Capitalised Value of Profit}}{\text{Number of Shares}}$ |
| Or, Value of each equity share | = $\frac{\text{Profit}}{\text{Normal rate of Return} \times \text{Number of Equity Shares}} \times 100$ |

Illustration 4:

Two companies, A Ltd. and B. Ltd., are found to be exactly similar as to their assets, reserves and liabilities except that their share capital structures are different:

The share capital of A. Ltd. is Rs. 11,00,000, divided into 1,000, 6% Preference Shares of Rs. 100 each and 1,00,000 Equity Shares of Rs. 10 each.

The share capital of B. Ltd. is also Rs. 11,00,000, divided into 1,000, 6% Preference Shares of Rs. 100 each and 1,00,000 Equity Shares of Rs. 10 each. .

The fair yield in respect of the Equity Shares of this type of companies is ascertained at 8%.

The profits of the two companies for 2009 are found to be Rs. 1, 10,000 and Rs. 1, 50,000, respectively.

Calculate the value of the Equity Shares of each of these two companies on 31.12.2009 on the basis of this information only. Ignore taxation.

| Particulars | A Ltd | B Ltd |
|---|--------|-------------|
| Profits (Given) | 110000 | 150000 |
| - Preference Dividend (100000*6/100) | 6000 | <u>6000</u> |
| Profits to equity share holders | 104000 | 144000 |

Step 1 Capitalised value of profit= profit/NRR

Company A =104000/8%=104000*100/8=1300000 Comp B=144000/8%=1800000

Step 2 Value of equity share = Capitalised value of share/ number of equity shares

Company A=1300000/100000=13

Company B=1800000/100000=18

Illustration 5:

From the following information of J. Adams Co. Ltd. compute the value of its equity share by capitalisation of earning method:

| Balance Sheet as at 31.12.04 | | | | | |
|--|------------------|----------------------|-----------|----------|------------------|
| <i>Liabilities</i> | Rs. | <i>Assets</i> | | | Rs. |
| Share Capital | | Fixed Assets at cost | | | |
| Equity Shares of Rs. 10 each | 5,00,000 | Less: Depreciation | | 6,00,000 | |
| Reserve & Surplus | 1,50,000 | Current Assets | | 5,75,000 | |
| 10% Debentures (Issued at par on 1.1.2000, Redeemed at par on or before 2009) | 3,00,000 | Preliminary Expenses | | 25,000 | |
| Current Liabilities | 2,50,000 | | | | |
| | <u>12,00,000</u> | | | | <u>12,00,000</u> |
| | 31.12.00 | 31.12.01 | 31.12.02 | 31.12.03 | 31.12.04 |
| | Rs. | Rs. | Rs. | Rs. | Rs. |
| Sales | 9,00,000 | 11,00,000 | 14,00,000 | 8,00,000 | 16,00,000 |
| Expenses | 3,50,000 | 5,80,000 | 6,00,000 | 3,10,000 | 8,00,000 |
| Interest on Loan | 20,000 | 40,000 | 50,000 | 60,000 | 20,000 |
| Interest on Debenture | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 |

It is the usual practice of the company to transfer Rs. 30,000 every year to General Reserve. Assume rate of Taxation is at 50% and the rate of normal earnings at 12.5%.

Show workings also.

Working Note: Calculation of profits

| Particulars | 2000 | 2001 | 2002 | 2003 | 2004 |
|------------------------|----------------|----------------|----------------|-----------------|----------------|
| Sales | 900000 | 1100000 | 1400000 | 800000 | 1600000 |
| Expenses | (350000) | (580000) | (600000) | (310000) | (800000) |
| Interest on Loan | (20000) | (40000) | (50000) | (60000) | (20000) |
| Interest on debentures | <u>(30000)</u> | <u>(30000)</u> | <u>(30000)</u> | <u>((30000)</u> | <u>(30000)</u> |
| Profit | 500000 | 450000 | 720000 | 400000 | 750000 |

Working note 2

| | |
|---------------------------------|-------------------|
| Average profits=2820000/5= | 564000 |
| -Tax 50% | = <u>(282000)</u> |
| Profit after Tax | 282000 |
| Transfer to general reserve | <u>(30000)</u> |
| Profits to equity share holders | <u>252000</u> |

Calculation of Value of Share

Step I Capitalised value of profit= Profit/NRR=252000/12.5%=2016000

Step 2 Value of Equity share = capitalised value of profit/No. of equity shares
 =2016000/50000=40.32

(ii) Dividend Basis:

Valuation of shares may be made either (a) on the basis of total amount of dividend, or (b) on the basis of percentage or rate of dividend:

(a) On the basis of total amount of Dividend:

$$\text{Capitalised Value of Profit} = \frac{\text{Divisible Profit, i.e. Total amount of Dividend}}{\text{Normal Rate of Return, i.e. Yield}} \times 100$$

$$\therefore \text{Value of each Equity Share} = \frac{\text{Capitalised Value of Profit}}{\text{Number of Equity Shares}}$$

Or,
$$\text{Value of each Equity Share} = \frac{\text{Divisible Profit} \times 100}{\text{Normal Rate of Return} \times \text{No. of Equity Shares}}$$

(b) On the basis of percentage or Rate of Dividend:

$$\text{Value of each Equity Share} = \frac{\text{Rate of Dividend}}{\text{Normal Rate of Return}} \times \text{Paid-up Value of each Equity Share}$$

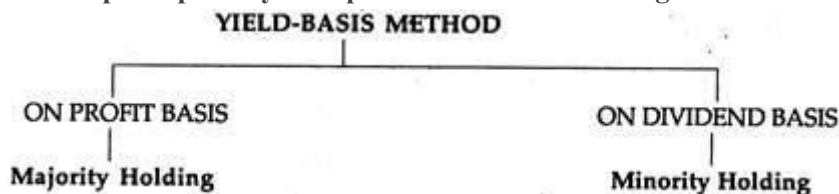
When the Rate of Dividend is not given

$$\text{Rate of Dividend} = \frac{\text{Profit}}{\text{Equity Share Capital (Paid-up)}} \times 100$$

Whether Profit Basis or Dividend Basis method is followed for ascertaining the value of shares depends on the shares that are held by the respective shareholders. In other words, the shareholders holding minimum number of shares (i.e., minority holding) may determine the value of his shares on dividend basis since he has to satisfy himself having the rate of dividend which is recommended by the Board of Directors, i.e., he has no such power to control the affairs of the company.

On the contrary, the shareholders holding maximum number of shares (i.e., majority holding) has got more controlling rights over the affairs of the company including the recommendation for the rate of dividend among others. Under the circumstances, valuation of shares should be made on profit basis. In short, Profit Basis should be followed in the case of Majority Holding, and Dividend Basis should be followed in the case of Minority Holding.

The same principle may be represented in the following form:



Note:

Yield-Basis Method may also be termed as:

Market Value Method; Profit Basis/Income Basis Method;

Earning Capacity Method etc.

Value of share under yield basis:

Illustration 6:

On December 31, 2009 the Balance Sheet of MA KALI Ltd. disclosed the following position:

| <i>Liabilities</i> | | <i>Rs.</i> | <i>Assets</i> | | <i>Rs.</i> |
|---------------------------------|--|-----------------|----------------|--|-----------------|
| Issued Capital in Rs. 10 shares | | 4,00,000 | Fixed Assets | | 5,00,000 |
| Reserves | | 90,000 | Current Assets | | 2,00,000 |
| Profit and Loss Account | | 20,000 | Goodwill | | 40,000 |
| 5% Debentures | | 1,00,000 | | | |
| Current Liabilities | | 1,30,000 | | | |
| | | <u>7,40,000</u> | | | <u>7,40,000</u> |

The Net Profit for the three years were:

| | <i>Rs.</i> |
|------|------------|
| 2007 | 51,600 |
| 2008 | 52,000 |
| 2009 | 51,650 |

Of which 20% was placed to Reserve, this proportion being considered reasonable in the industry in which the company is engaged and where a fair investment return may be taken at 10%. Compute the value of the company's share under yield-basis method.

Step I Calculation of Rate of Dividend

| | | |
|--|---|-----------------------------|
| A) Average Profits | = | $51600+52000+51650/3=51750$ |
| - Transfer to Reserve (51750*20%) | = | <u>10350</u> |
| - <u>Profit Available to share holders</u> | | 41400 |
| - <u>Preference share dividend</u> | | <u>Nil</u> |
| - <u>Profit Available to equity shareholders</u> | | 41400 |

B) Rate of dividend= Profit to equity shareholders/equity share capital *100
 $41400/400000*100=10.35$

Step II Value of equity share – Rate of dividend/normal rate of return * paid up value of each equity share

Value of each equity share= $10.35/10*10=10.35$ per share

Illustration 7:

Calculate the value of each Equity Share from the following information:

| | |
|--|----------|
| Share Capital | Rs, |
| 20,000 equity shares of Rs. 10 each, Rs. 8 per share paid-up | 1,60,000 |
| 1,000, 10% Preference Shares of Rs. 100 each, fully paid-up | 1,00,000 |
| Expected profit (before Tax and Pref. Dividend) | 1,00,000 |
| Normal Rate of Return | 10% |
| Rates of Tax @ 50% | |
| Transfer to Reserve @ 20% | |

Solution:

| | |
|--|---------------|
| Calculation of Rate of Dividend | Rs. |
| Profit (before Tax and Pref. Dividend) | 1,00,000 |
| Less: Income-Tax @ 50% | 50,000 |
| | <u>50,000</u> |
| Less: Transfer to Reserve @ 20% | 10,000 |
| | <u>40,000</u> |
| Less: Pref. Dividend @ 10% | 10,000 |
| | <u>30,000</u> |
| Available for equity shareholders | |

$$\begin{aligned} \text{Rates of Dividend} &= \frac{\text{Profits (available for equity shareholders)}}{\text{Equity Share Capital (Paid-up)}} \\ &= \frac{\text{Rs. } 30,000}{\text{Rs. } 1,00,000} \times 100 \\ &= 30\% \end{aligned}$$

Step I Rate of dividend

| | | |
|---------------------------------------|---|----------------|
| A) Average profits | = | 100000 |
| Tax expenses (50% of 100000) | = | <u>(50000)</u> |
| Profit after tax | | 50000 |
| - Transfer to Reserve 20% of 50000 | = | <u>(10000)</u> |
| - Profit to shareholders | | 40000 |
| - Preference dividend (10% of 100000) | | <u>(10000)</u> |
| Profit to equity share holders | | <u>30000</u> |

B) Rate of dividend = profit/equity share capital*100
 $30000/160000*100=18.75$

Step II Value of equity share = Rate of Dividend/NRR* Paid value of each equity share
 $18.75/10*8= \text{Rs } 15 \text{ per share}$

C. Fair Value Method (Dual Method)

There are some accountants who do not prefer to use Intrinsic Value or Yield Value for ascertaining the correct value of shares. They, however, prescribe the Fair Value Method which is the mean of Intrinsic Value Method and Yield Value Method. The same provides a better indication about the value of shares than the earlier two methods.

$$\therefore \text{Fair Value} = \frac{\text{Intrinsic Value} + \text{Yield Value}}{2}$$

Illustration 8:

The following is the Balance Sheet of X Co. Ltd. as on 31.12.2009:

| <i>Liabilities</i> | <i>Rs.</i> | <i>Assets</i> | <i>Rs.</i> |
|----------------------------------|-----------------|------------------------------|-----------------|
| <i>Share Capital:</i> | | Goodwill | 50,000 |
| Equity Shares of Rs. 10 each | 1,00,000 | Building | 1,50,000 |
| 12% Pref. Shares of Rs. 100 each | 1,00,000 | Plant | 1,00,000 |
| General Reserve | 60,000 | Investment in 10% stock | |
| Profit and Loss A/c | 40,000 | (Market value of Rs. 52,000, | 48,000 |
| 15% Debentures | 1,00,000 | Nominal value Rs. 50,000) | |
| Creditors | 80,000 | Stock | 60,000 |
| | | Debtors | 40,000 |
| | | Cash | 10,000 |
| | | Preliminary Expenses | 22,000 |
| | 4,80,000 | | 4,80,000 |

Ascertain the value of each equity share under Fair Value Method on the basis of the information given:

Assets are revalued as:

Building Rs. 3, 20,000, Plant Rs. 1, 80,000, Stock Rs. 45,000 and Debtors Rs. 36,000. Average Profit of the company is Rs. 1, 20,000 and 12½% of profit is transferred to General Reserve, Rate of taxation being 50%. Normal dividend expected on equity shares is 8% whereas fair return on capital employed is 10%. Goodwill may be valued at 3 years' purchase of super-profit.

Solution:

| | <i>Rs.</i> |
|--|------------|
| Calculation of Goodwill | |
| Total Net Assets | 3,20,000 |
| Building | 1,80,000 |
| Plant | 45,000 |
| Stock | 36,000 |
| Cash | 10,000 |
| | 5,91,000 |
| <i>Less:</i> Current Liabilities: | |
| Creditors | 80,000 |
| Capital Employed | 5,11,000 |
| | |
| ∴ Normal Profit Rs. 51,100 (i.e. Rs. 5,11,000 × $\frac{10}{100}$) | |

Actual Profit

| | Rs. |
|---|----------------------|
| Average Profit | 1,20,000 |
| Less : Non-trading Income (i.e. income from investment) @ 10% on Rs. 50,000 | <u>5,000</u> |
| | 1,15,000 |
| Add : Debenture Interest | <u>15,000</u> |
| | 1,30,000 |
| Less : Pref. Dividend | <u>12,000</u> |
| | 1,18,000 |
| Less : Taxation @ 50% | <u>59,000</u> |
| | 59,000 |
| Less : Transfer to Reserve @ $12\frac{1}{2}\%$ | <u>7,375</u> |
| | <u><u>51,625</u></u> |

$$\begin{aligned}\text{Super-Profit} &= \text{Actual Profit} - \text{Normal Profit} \\ &= \text{Rs. } 51,625 - \text{Rs. } 51,100 \\ &= 525\end{aligned}$$

$$\therefore \text{Value of Goodwill} = \text{Rs. } 525 \times 3 = \text{Rs. } 1,575 \text{ or Rs. } 1,600$$

Valuation of Shares.

Asset-Backing Method

| | Rs. |
|---|------------------------|
| Sundry Assets (as above) | 5,11,000 |
| Add: Investments | 48,000 |
| Add: Goodwill | <u>1,600</u> |
| Funds available for Equity Shareholders | <u><u>5,60,600</u></u> |

$$\begin{aligned}\text{Intrinsic Value of Share} &= \frac{\text{Rs. } 5,60,600}{10,000} \\ &= \text{Rs. } 56.06\end{aligned}$$

Yield-basis

$$\begin{aligned}\text{Value of Share} &= \frac{\text{Rate of Dividend}}{\text{Normal Rate of Return}} \times \text{Paid-up Value of each Share} \\ &= \frac{8}{10} \times \text{Rs. } 10 \\ &= \text{Rs. } 8.\end{aligned}$$

Note : In the present problem we can also apply 'Profit Basis Method' instead of 'Dividend Basis'.

Fair Value

$$\begin{aligned}\text{Fair Value} &= \frac{\text{Intrinsic Value} + \text{Yield-basis}}{2} \\ &= \frac{\text{Rs. } 56.06 + \text{Rs. } 8.00}{2} \\ &= \text{Rs. } 32.03.\end{aligned}$$

D. Return on Capital Employed Method:

Under this method, valuation of share is made on the basis of rate of a return (after tax) on capital employed. Rates of return are taken on the basis of predetermined/expected rates of return which an investor may expect on the investments. After ascertaining this expected earnings, we are to determine the capital sum for such a return.

Thus, we are to follow the following procedure one by one:

- (a) Ascertain the expected (maintainable) profit (after adjustments, if any);
- (b) Ascertain the normal rate of return on capital employed for a similar business;
- (c) At last, on the basis of expected rate of return, capitalize the (maintainable) profit.

Valuation of Shares: Need and Methods (With Illustrations)

Methods for Evaluating the Value of Shares:

Net Assets Basis or Intrinsic Value:

Illustration 1:

The following are the balances taken from the balance sheet of John Engineering Ltd. as on 31st March, 2012:

| | |
|---|------------------|
| <i>Liabilities</i> | ₹ |
| 1,50,000 Equity Shares of ₹ 10 each, fully paid up | 15,00,000 |
| 2,00,000 Equity Shares of ₹ 10 each, ₹ 6 paid up | 12,00,000 |
| 60,000 12% Cumulative Preference Shares of ₹ 10 each, fully paid-up | 6,00,000 |
| Long Term Secured Loan | 14,00,000 |
| Trade Payables | 6,50,000 |
| | <u>53,50,000</u> |
| <i>Assets</i> | ₹ |
| Land and Buildings | 23,00,000 |
| Furniture, Fixtures and Fittings | 3,90,000 |
| Profit and Loss Account | 13,00,000 |
| Inventories | 8,30,000 |
| Trade Receivables | 4,10,000 |
| Balance with Bank | 1,20,000 |
| | <u>53,50,000</u> |

The current value of land and buildings is ₹ 30,00,000 and that of furniture, fixtures and fittings is ₹ 2,50,000. Stock is valued at ₹ 9,11,000. Debtors are expected to realise only 90% of their book value. You are informed that preference dividend has not been paid for the last five years. Calculate the intrinsic value per equity share by the net assets method.

[B.Com.(Hons.) Delhi, 2001- Modified]

Solution :

| | ₹ |
|---|-------------------------|
| Current value of land and buildings | 30,00,000 |
| Current value of furniture, fixtures and fittings | 2,50,000 |
| Value of inventories | 9,11,000 |
| Debtors, 90% of ₹ 4,10,000 | 3,69,000 |
| Balance with Bank | 1,20,000 |
| National call on 2 lakh equity shares @ ₹ 4 per share | <u>8,00,000</u> |
| | ₹ 54,50,000 |
| Less : Long term loan | 14,00,000 |
| Trade payables | <u>6,50,000</u> |
| Net assets | <u>34,00,000</u> |
| Less : Preference share capital | <u>6,00,000</u> |
| Intrinsic value of 3,50,000 equity shares | <u><u>28,00,000</u></u> |

Intrinsic value of one fully paid equity share = ₹ 28,00,000 / 3,50,000 = ₹ 8

Intrinsic value of one equity share on which ₹ 6 have been paid up = ₹ 8 – ₹ 4 = ₹ 4

Yield Basis or Market Value. Investors are interested in income and hence the price they will be prepared to pay will depend upon the size of the dividends that can be expected. The formula for calculating market value, therefore, is:—

$$\frac{\text{Dividend in terms of rupees}}{\text{Normal rate of return}} \times 100$$

or $\frac{\text{Rate of Dividend}}{\text{Normal rate of return}} \times \text{the denomination to which the rate applies.}$

Suppose, a company has issued shares of ₹ 100 each on which ₹ 40 have been paid. The company declares a dividend of 30%. The amount per share comes to ₹ 12. On the basis of normal rate of return of 20%, the market value of the share will be ₹ 60:—

$$₹ \frac{12}{20} \times 100 = ₹ 60. \text{ Or, applying the other formula } ₹ 40 \times \frac{30}{20} = ₹ 60.$$

T

Illustration 2:

From the following information, calculate the value of an equity share:

(i) The subscribed share capital of a company consists of 10 lakh 13% preference shares of Rs 10 each and 20 lakh equity shares of Rs 10 each. All the shares are fully paid up.

(ii) The average annual profits of the company after providing depreciation but before taxation are Rs 1,80,00,000. It is

considered necessary to transfer Rs 34,50,000 to general reserve before declaring any dividend. Rate of taxation is 30%.

(iii) The normal return expected by investors on equity shares from the type of business carried on by the company is 20%.

Illustration 3:

C. Ltd. started its business on 1st April, 2009. On 31st March, 2012, its balance sheet in a summarised form was as follows:

C Ltd.
Balance Sheet as on 31st March, 2012

| <i>Particulars</i> | <i>Note No.</i> | <i>Amounts as on 31st March, 2012</i> |
|------------------------------------|-----------------|---|
| I. Equity and Liabilities | | |
| (1) <i>Shareholders' funds</i> | | |
| (a) Share capital | 1 | 40,00,000 |
| (b) Reserves and surplus | 2 | 5,25,000 |
| (2) <i>Non-current liabilities</i> | | |
| (a) Long-term borrowings | 3 | 15,00,000 |
| (3) <i>Current liabilities</i> | | |
| (a) Trade payables | | 8,20,000 |

| | | |
|-------------------------------|---|------------------|
| (b) Short-term provisions | 4 | 1,55,000 |
| | | <u>70,00,000</u> |
| II. Assets | | |
| (1) <i>Non-current assets</i> | | |
| (a) Fixed assets | | 30,00,000 |
| (2) <i>Current assets</i> | | <u>40,00,000</u> |
| | | <u>70,00,000</u> |

Notes:

1. Share Capital

Authorised

?

Issued, Subscribed and Paid Up:

1 lakh 13% preference Shares of ₹ 10 each, fully paid up

10,00,000

3 lakh Equity Shares of ₹ 10 each, fully paid up

30,00,000

40,00,000

2. Reserves and Surplus

Profit Prior to Incorporation

₹

25,000

Surplus:

Profit for the year

5,50,000

Less: Preliminary Expenses

50,000

5,00,000

5,25,000

3. Long-term Borrowings

12% Debentures

15,00,000

4. Short-term Provision

Provision for Taxation,

on ₹ 5,00,000 @ 31%

1,55,000

The company is yet to declare its maiden dividend. A revaluation reveals that the fixed assets as on 31st March, 2012 are really worth ₹ 32,00,000. Calculate the intrinsic worth of the two classes of shares. Ignore corporate dividend tax.

Solution:

| | | |
|-----------------------------|-----------------|------------------|
| Net assets of the company: | ₹ | ₹ |
| Fixed Assets as revalued | | 32,00,000 |
| Current Assets | | <u>40,00,000</u> |
| | | 72,00,000 |
| <i>Less:</i> 12% Debentures | 15,00,000 | |
| Trade Payables | 8,20,000 | |
| Provision for Income Tax | <u>1,55,000</u> | |
| | | <u>24,75,000</u> |
| | | 47,25,000 |

Alternatively, net assets may be calculated as follows:—

| | |
|---|------------------|
| Preference Share Capital | 10,00,000 |
| Equity Share Capital | 30,00,000 |
| Profit Prior to Incorporation | 25,000 |
| Surplus i.e., Profit & Loss Account | 5,00,000 |
| Appreciation in the value of Fixed Assets | <u>2,00,000</u> |
| | <u>47,25,000</u> |

Intrinsic value of share

Step I Net assets available to equity share holders

| Particulars | Amount |
|-----------------------|-----------------------|
| Fixed Assets | 3200000 |
| Current Assets | <u>4000000</u> |
| Total Assets | 7200000 |

Liabilities

| | | |
|--|----------------------|-----------------------|
| Debentures | 1500000 | |
| Trade payables | 820000 | |
| Provision for Tax | <u>155000</u> | <u>2475000</u> |
| Net Assets | | 4725000 |
| Preference share capital | | <u>1000000</u> |
| Net asset to equity share holders | | 3725000 |

Step II Value of equity share = NAA TO ESH/No, of eq. sh.
 $\frac{3725000}{300000}$
= 12.42 per share

Illustration 4:

From the following particulars, calculate the fair value of an equity share assuming that out of the total assets, those amounting to Rs.

41,00,000 are fictitious.

(i) Share capital :

5,50,000 10% preference shares of ₹ 100 each, fully paid

55,00,000 Equity shares of ₹ 10 each, fully paid.

(ii) Liability to outsiders = ₹ 75,00,000

(iii) Reserves and surplus = ₹ 45,00,000

(iv) The average normal profit after taxation earned every year by the Company during the last five years = ₹ 85,05,000

(v) The normal profit earned on the market value of fully paid equity shares of similar companies is 12%. [C.S. (Inter), June, 2001]

Solution :

| | ₹ | ₹ |
|---|------------------|---------------------------|
| <i>Intrinsic value of shares :</i> | | |
| Preference share capital | | 5,50,00,000 |
| Equity share capital | | 55,00,00,000 |
| Reserves & surplus | | 45,00,00,000 |
| Liabilities to outsiders | | <u>75,00,00,000</u> |
| Gross assets | | 12,20,00,000 |
| <i>Less : Fictitious assets</i> | 41,00,000 | |
| Liabilities to outsiders | <u>75,00,000</u> | <u>1,16,00,000</u> |
| Assets available to shareholders | | 11,04,00,000 |
| <i>Less : Amount due to preference shareholders</i> | | <u>5,50,00,000</u> |
| Net assets available to equity shareholders | | <u>5,54,00,000</u> |
| Intrinsic value of an equity shares = $\frac{5,54,00,000}{55,00,000}$ | = ₹ 10.07 | |
| <i>Market value by capitalisation of profits :</i> | | ₹ |
| Average profits | | 85,05,000 |
| <i>Less : Preference dividend</i> | | 55,00,000 |
| Profit available to equity share holders | | <u>30,05,000</u> |
| Profits capitalised at 12% = ₹ 30,05,000 × 100 / 12 | | <u><u>2,50,41,667</u></u> |

Value of one equity share = ₹ 2,50,41,667 / 55,00,000 = ₹ 4.55

Fair value = ₹ $\frac{10.07 + 4.55}{2}$ = ₹ 7.31

$$\text{Fair value of equity share} = \frac{\text{intrinsic value} + \text{yield value}}{2}$$

Intrinsic value

Total assets = liabilities + capital

| | | |
|----------------------------|------------|-----------------|
| Preference share capital | 550000*100 | 55000000 |
| Equity share capital | 550000*10 | 5500000 |
| Reserves & Surplus | | 4500000 |
| Outside liabilities | | <u>7500000</u> |
| Total assets | | 122000000 |
| -Fictitious assets | | <u>4100000</u> |
| | | 117900000 |
| - Outside liabilities | | 7500000 |
| | | 110400000 |
| - Preference share capital | | <u>55000000</u> |
| Net assets to ESH | | 55400000 |

Value of equity share = $55400000 / 5500000 = 10.07$ per share

Yield Basis

| | |
|-------------------------|----------------|
| Step I Expected Profits | 8505000 |
| - Preference dividend | <u>5500000</u> |
| Profit available to ESH | 3005000 |

Step II

$$\begin{aligned} \text{Rate of dividend} &= \text{Profit to ESH} / \text{equity capital} * 100 \\ &= 3005000 / 55000000 * 100 \\ &= 5.46 \end{aligned}$$

Step III Value of equity share = Rate of Div* paid up each eq. share

Normal rate of return

$$\frac{5.46 \times 10}{12} = 4.55$$

12

Fair value of equity share = $(10.07 + 4.55) / 2 = 7.31$

Illustration 5:

On march 31, 2012, the balance sheet of Harsh Ltd. disclosed the following position.

Harsh Ltd.
Balance Sheet as on 31st March, 2012

(₹)

| Particulars | Note No. | Amounts as on 31st March, 2012 |
|------------------------------------|----------|--------------------------------------|
| I. Equity and Liabilities | | |
| (1) <i>Shareholders' fund</i> | | |
| (a) Share capital | 1 | 4,000 |
| (b) Reserves and surplus | 2 | 3,100 |
| (2) <i>Non-current liabilities</i> | | |
| (a) Long-term borrowings | 3 | 1,000 |
| (b) Current liabilities | | 1,300 |
| | | <u>9,400</u> |
| II. Assets | | |
| (1) <i>Non-current assets</i> | | |
| (a) Fixed assets | | |
| (i) Tangible assets | 4 | 5,000 |
| (ii) Intangible assets | 5 | 4,000 |
| (2) <i>Current assets</i> | | <u>9,400</u> |

Notes:

| | |
|---|--------------|
| | ₹ |
| 1. Share Capital | |
| Authorised | ? |
| Issued, Subscribed and Paid Up: | |
| 4 lakh Equity Shares of ₹ 10 each, fully paid | <u>4,000</u> |
| 2. Reserve and Surplus | 1,500 |
| General Reserve | 1,200 |
| Surplus | <u>2,700</u> |
| 3. Long-term Borrowings | |
| 13% Secured Debentures | <u>1,000</u> |
| 4. Tangible Assets | |
| Sundry Tangible (Fixed) Assets | <u>5,000</u> |
| 5. Intangible Assets | |
| Goodwill | <u>400</u> |

On the abovementioned date, the tangible fixed assets were independently valued at ₹ 3,500 thousand and goodwill at ₹ 500 thousand. The net profits for the three years were : 2009-10, ₹ 1,032 thousand; 2010-2011, ₹ 1,040 thousand; and 2011-2012, ₹ 1,033 thousand of which 20 per cent was placed to General Reserve, this proportion being considered reasonable in the industry in which the company is engaged and where a fair return on investment may be taken at 18 per cent. Compute the value of the company's share by (a) the net assets method and (b) the yield method. Ignore taxation.

(Adapted C.A. Inter)

Solution:

| | ₹ '000 | ₹ '000 |
|--|--------------|--------------|
| (a) Net Assets Method | | |
| Goodwill as revalued | | 500 |
| Sundry Tangible Fixed Assets as revalued | | 3,500 |
| Current Assets as per balance sheet | | <u>4,000</u> |
| | | 8,000 |
| <i>Less:</i> 13% Debenture | 1,000 | |
| Current Liabilities | <u>1,300</u> | <u>2,300</u> |
| Net Assets | | <u>5,700</u> |
| Value per share = $\frac{\text{Net Assets}}{\text{No. of shares}}$ | | |
| = ₹ $\frac{5,700 \text{ thousand}}{400 \text{ thousand}}$ | | |
| = ₹ 14.25 | | |

| | | |
|---|---|--------------|
| (b) Yield Method | | ₹ '000 |
| Total profits for the last three years = ₹ (1,032 + 1,040 + 1,033) thousand | = | <u>3,105</u> |
| Average profits for the last three years = ₹ $\frac{3,105 \text{ thousand}}{3}$ | = | 1,035 |
| <i>Less:</i> Transfer to General Reserve @ 20% | = | <u>207</u> |
| Average profits after transfer to General Reserve | = | <u>828</u> |
| Expected return on equity share capital | | |

$$= \frac{\text{Expected Profit}}{\text{Paid up Equity Share Capital}} \times 100$$

$$= \frac{828 \text{ thousand}}{4,000 \text{ thousand}} \times 100 = 20.7\%$$

$$\text{Value per share} = \frac{\text{Expected Rate}}{\text{Normal Rate}} \times \text{Paid up value of share}$$

$$= \frac{20.7}{8} \times 10 = ₹ 11.50$$

An Alternative Treatment:

Another method of valuing shares is based on earning per share (EPS) or net profit per equity share multiplied by the price earning ratio (PE Ratio). The PE Ratio is really the converse of the normal rate of return applicable to the company. For example, if the normal rate of return is 20%, the PE Ratio will be 5 i.e. $100 - 20$. If the net profit per share or EPS is Rs 7, the price of the share will be, for the PE Ratio of 5, Rs 35.

The above is a simple way of stating the point made already except that instead of dividend per share net profit per share is taken. One can see that if either of the two factors, EPS or PE ratio changes, the

price of the share will change. In the example given above, if the PE ratio becomes 4 i.e., normal rate of return is 25%, the share will be valued at Rs 28.

The PE Ratio is high where risk is low and low when risk is high, say, when in the capital employed loans preponderate.

Value based on Earnings of the Company:

Often, the dividend declared by a company is much less than the rate of its earning. Since accumulated profits are likely to be distributed sooner or later, in the form of bonus shares, usually the market price is likely to be based on the earnings of the company rather than the dividend. This provides a firm basis for valuation of shares, since this relates the value to the real efficiency, as measured by profitability of the company. The formula is:

$$\frac{\text{Rate of earning}}{\text{Normal rate of return}} \times \text{paid up value of share.}$$

$$\text{Rate of return} = \frac{\text{Profit earned}}{\text{Capital employed}}$$

It should be based on total capital employed (including long-term borrowings) and the profit figure should be before debenture interest, preference dividend, etc., but after income-tax. This valuation is quite appropriate for large blocks of shares; also when the dividend is much more than the rate of earning on capital.

Illustration 6:

Mr. Aggarwal who desire to invest Rs. 33,000 in equity shares in a public limited company seeks your advice as to the fair value of the shares. The following information is made available.

Paid up share capital:

14% Preference Shares of ₹ 100 each

Equity Shares of ₹ 10 each

₹
5,50,000

8,50,000

14,00,000

Average net profit of the business is ₹ 3,00,000. Expected normal yield is 20% in case of such equity shares. It is observed that the net tangible assets on revaluation are worth ₹ 1,00,000 more than the amounts at which they are stated in the books. Goodwill is to be valued at 3 years' purchase of the super profits, if any.

Give your workings of the fair value of equity shares and determine the number of shares which Mr. Aggarwal should purchase. Ignore income tax and dividend distribution tax.

Solution:

Computation of goodwill:

Average net profits of the business

₹
3,00,000

Less: Preference Dividend on ₹ 5,50,000 @ 14%

77,000

2,23,000

Less: Normal Return @ 20% on ₹ 8,50,000 + ₹ 1,00,000 = ₹ 9,50,000

1,90,000

Super Profits

33,000

Goodwill = ₹ 33,000 × 3 = ₹ 99,000.

Intrinsic value of an equity share:

Equity Share Capital

8,50,000

Add: Profit on revaluation of tangible fixed assets

1,00,000

Add: Goodwill

99,000

10,49,000

Value of 85,000 Equity Shares

Value of one Equity Share = ₹ 10,49,000 ÷ 85,000 = ₹ 12.34

Intrinsic Value (excluding goodwill) of one

$$\text{Equity Share} = \frac{9,50,000}{85,000} = ₹ 11.18$$

Value of an equity share on yield basis:

Profit

3,00,000

Less: Preference Dividend

77,000

2,23,000

$$\text{Earning per share} = \frac{2,23,000}{85,000} = ₹ 2.62$$

When expected normal yield is 20%, value of an equity share

$$= \frac{₹ 2.62}{2} \times 10 = ₹ 13.10$$

$$\text{Average of prices ascertained} = \frac{₹ 12.34 + ₹ 11.18 + ₹ 13.10}{3} = ₹ 12.21$$

$$\text{Number of shares to be purchased} = \frac{33,000}{12.21} = 2,702$$

Consider the following examples:

1. Two Companies A Ltd. and B Ltd. earn a profit of ₹ 2,00,000 each, the share capital consisting of 4,000 shares of ₹ 100 each. A Ltd. distributes 80% of the profit as dividend whereas B Ltd. distributes only 50% of the profits. The dividend per share in the two cases is ₹ 40 and ₹ 25 respectively. With an expectation of 20%, the market value of a share of A Ltd. would seem to be ₹ 200 i.e. $40/20 \times 100$ and that of B Ltd. ₹ 125 i.e., $25/20 \times 100$. This is clearly unsatisfactory since B Ltd. is following a better financial course so that it will have better strength to meet adverse circumstances.

Even if part of the reserve created each year is added to the distributed profit, the result will not be satisfactory. Suppose, $1/3$ of undistributed profit is added to the amount actually distributed, the amount per share will be:

$$\text{A Ltd.} \quad \frac{₹ 1,60,000 + (1/3 \times ₹ 40,000)}{4,000} = ₹ 43.33$$

$$\text{B Ltd.} \quad \frac{₹ 1,00,000 + (1/3 \times ₹ 1,00,000)}{4,000} = ₹ 33.33$$

The market value of the share of A Ltd. will still be much higher than that of B Ltd.

This could be rectified by taking the *earning* per share in each case and calculating the market value on that basis. The earning in each case is ₹ 50 per share and, on an expectation of 20%, the market value will be ₹ 250 per share. There are two qualifications.

- (a) The market expectation on a cash dividend will always be lower than on mere earnings per share, since the latter only raises an expectation that later the shareholder will benefit from good earnings. It is quite possible that against 20% yield on the basis of cash dividend, the market may expect a yield of 25% on the basis of earning depending upon the estimate as to how soon the company will make a distribution of built up reserves.
- (b) Financial prudence displayed by B Ltd. has still not been recognised — it will be recognised if the expected yield is raised in case of A Ltd. and lowered in case of B Ltd. — say 22% in case of A Ltd. and 18% for B Ltd.

2. Zed Ltd. has the following capital structure:

| | ₹ |
|---|-----------|
| 14% Preference Share Capital (Shares of ₹ 100 each) * | 5,00,000 |
| Equity Share Capital (Shares of ₹ 100 each) | 10,00,000 |
| Reserves | 5,00,000 |
| 12% Debentures | 5,00,000 |

The profit of the company (after taxation but before debenture interest) is ₹ 4,00,000; equity share of companies in the same class of business yield is 20%.

Ignoring dividend distribution tax, the rate of earning on equity capital is:

| | | |
|-----------------------------------|--------|-----------|
| | ₹ | ₹ |
| Profit | | 4,00,000 |
| Less: Debenture Interest | 60,000 | |
| Preference Dividend | 70,000 | |
| | | 1,30,000 |
| | | 2,70,000 |
| Equity Capital | | 10,00,000 |
| Rate of earning on Equity Capital | 27% | |
| Market Value based on this: | | |

$$\frac{27}{20} \times 100 = ₹ 135$$

However, the company is earning only 16% on the capital employed by it i.e.,

$$\frac{4,00,000}{25,00,000} \times 100$$

It is not likely therefore that the market will value the equity shares of the company on the basis of 27%, since it will not be safe to do so — the value is likely to be based on the earning ratio of 16% and may be ₹ 160, i.e., $16/20 \times 200$. This will be the minimum — it may be slightly higher, since the peculiar advantage to the equity shareholders, because of gearing of capital, will be evaluated.

3. Two companies, X Ltd. and Y Ltd. are assumed to be exactly similar not only as to assets, liabilities and reserves but also as to all other factors except that the arrangement of the share capital differs.

The share capital of X Ltd. is ₹ 21,00,000 divided into 20,000 12% preference shares of ₹ 100 each and 1,000 equity shares of ₹ 100 each, fully paid up. The share capital of Y Ltd. is ₹ 21,00,000 divided into 2,000 12% preference shares of ₹ 100 each and 19,000 equity shares of ₹ 100 each fully paid up.

The equity shares of the companies may be taken to represent a somewhat speculative industrial risk and the market yield is 20 per cent. The companies' profits and distributions are:

| | |
|-----------|------------|
| 2010-2011 | ₹ 7,84,000 |
| 2011-2012 | ₹ 2,52,000 |

There will be a greater fluctuation in the prices of equity shares of X Ltd. than in case of Y Ltd., as shown below:

| | <i>X Ltd.</i> | | <i>Y Ltd.</i> | |
|--|------------------|------------------|------------------|------------------|
| | <i>2010-2011</i> | <i>2011-2012</i> | <i>2010-2011</i> | <i>2000-2012</i> |
| | ₹ | ₹ | ₹ | ₹ |
| Profit | 7,84,000 | 2,52,000 | 7,84,000 | 2,52,000 |
| Less: Preference Dividend | 2,40,000 | 2,40,000 | 24,000 | 24,000 |
| Ignoring dividend tax, profit available for equity shareholders | 5,44,000 | 12,000 | 7,60,000 | 2,28,000 |
| Ignoring dividend distribution tax, dividend per equity share (available profits divided by the no. of shares) | 544 | 12 | 40 | 12 |
| General expectation being 20% market value of share | 2,720 | 60 | 200 | 60 |

This illustrates the effect which existence of preference shares has on the value of equity shares: (i) when the profits are high (ii) when they are low.

Illustration 7:

Tee Ltd. belong to an industry in which equity shares sell at per on the basis of 18% yield provided the net tangible assets of the company are 250% of the paid up capital and provided the total distribution of profits dose not exceed 50% of the profits. The dividend rate fluctuates from year to year in the industry.

The balance sheet of Tee Ltd. stood as follows on 31st March, 2012:

Tee Ltd.
Balance Sheet as on 31st March, 2012

(₹)

| Particulars | Note No. | Amounts as on 31st March, 2012 |
|------------------------------------|----------|--------------------------------------|
| I. Equity and Liabilities | | |
| (1) <i>Shareholders' funds</i> | | |
| (a) Share capital | 1 | 14,00,000 |
| (b) Reserves and surplus | 2 | 3,80,000 |
| (2) <i>Non-current liabilities</i> | | |
| (a) Long-term borrowings | 3 | 4,00,000 |
| (3) <i>Current liabilities</i> | | |
| (a) Trade payables | | 4,00,000 |
| (b) Short-term provisions | 4 | 4,00,000 |
| | | <u>29,80,000</u> |
| II. Assets | | |
| (1) <i>Non-Current assets</i> | | |
| (a) Fixed assets | | |
| (i) Tangible assets | | 16,00,000 |
| (ii) Intangible assets | 5 | 1,00,000 |
| (b) Non-current investments | 6 | 1,50,000 |
| (2) <i>Current assets</i> | | |
| | | <u>11,30,000</u> |
| | | <u>29,80,000</u> |

Notes:

₹

1. Share Capital

Authorised

?

Issued and Subscribed:

60,000 14% Preference shares of ₹ 10 each

6,00,000

1 lakh Equity Shares of ₹ 10 each

10,00,000

16,00,000

Called and Paid-up

60,000 14% Preference Shares of ₹ 10 each

fully called and paid-up

6,00,000

1 lakh Equity Shares of ₹ 10 each,

₹ 8 per share called and paid-up

8,00,000

14,00,000

2. Reserve and Surplus

₹

Surplus

4,00,000

Profit for the year

Less: Preliminary Expenses

20,000

3,80,000

| | |
|-----------------------------------|------------------|
| 3. Long-term Borrowings | |
| 12% Debentures | <u>4,00,000</u> |
| 4. Short-term Provisions | |
| Provisions for Income Tax | <u>4,00,000</u> |
| 5. Intangible Assets | |
| Goodwill | <u>1,00,000</u> |
| 6. Non-current Investments | |
| Government Securities | <u>11,30,000</u> |

The company has been earning on the average ₹ 8,00,000 as profit after interest but before taxation which is 50%. The rate of dividend on equity shares has been maintained at 25% in the past years and is expected to be maintained.

Determine the probable market value of the equity shares of the company. The tangible fixed assets may be taken to be worth ₹ 17,20,000. Ignore corporate dividend tax.

Solution:

| | |
|---|-----------|
| Adjustment of expected yield | % |
| The yield as given | 18 |
| <i>Add:</i> For lower asset backing in case of Tee Ltd. as compared to the industry — 15% against 250% see note (i) | 1 |
| For higher proportion of profit distributed — 71% compared to 50% for the industry | ½ |
| For shares being partly paid up | <u>½</u> |
| | 20 |
| <i>Less:</i> For stability in dividend in Tee Ltd. as compared to fluctuating dividend in the industry | <u>1</u> |
| Probable appropriate yield for the equity shares in Tee Ltd. | <u>19</u> |

Probable market value:

$$\text{Based on actual dividend} = ₹ \frac{8 \times 25}{19} = ₹ 10.53$$

$$\text{Based on earnings ratio} = ₹ \frac{8 \times 18.43}{19} = ₹ 7.76$$

[See note (iii)]

The two values set the maximum and minimum limits of the market price, the lower one being appropriate for the long run and the upper limit being appropriate for the immediate future.

Note:

| | | |
|--|-----------------|------------------|
| (i) Net tangible assets backing for equity shares: | ₹ | ₹ |
| Fixed Assets less Depreciation | | 17,20,000 |
| Government Securities | | 1,50,000 |
| Current Assets | | <u>11,30,000</u> |
| | | 30,00,000 |
| <i>Less:</i> 12% Debentures | 4,00,000 | |
| Current liabilities and provisions | <u>8,00,000</u> | <u>12,00,000</u> |
| Net worth | | 18,00,000 |
| <i>Less:</i> Preference Capital | | <u>6,00,000</u> |
| Net tangible assets available for equity shares | | <u>12,00,000</u> |
| Equity Share Capital | | 8,00,000 |

| Ratio of net tangible assets to equity capital | | 150% |
|--|-----------------|------------------|
| | ₹ | ₹ |
| (ii) <i>Ratio of distributed profits earned:</i> | | |
| (a) Profit, as given | | 8,00,000 |
| Less: Income Tax @ 50% | | <u>4,00,000</u> |
| Available Profit | | <u>4,00,000</u> |
| (b) Profit distributed | | |
| Preference Dividend — | | |
| 14% on ₹ 6,00,000 | 84,000 | |
| Equity Dividend — | | |
| 25% on ₹ 8,00,000 | <u>2,00,000</u> | 2,84,000 |
| Ratio of (b) to (a) | | 71% |
| (iii) <i>Earning ratio in Tee Ltd.:</i> | | |
| Profit after tax | | 4,00,000 |
| Add: Debenture Interest (after effect of income tax) | | <u>24,000</u> |
| | | <u>4,24,000</u> |
| <i>Capital Employed:</i> | | |
| Preference Capital | 6,00,000 | |
| Equity Capital | 8,00,000 | |
| General Reserves less Preliminary Expenses | 3,80,000 | |
| Debentures | 4,00,000 | |
| Appreciation in tangible fixed assets | <u>1,20,000</u> | <u>23,00,000</u> |
| Rate of return = $\frac{4,24,000}{23,00,000} \times 100$ | | |
| = 18.43% (subject to depreciation on appreciation in fixed assets) | | |
| Note: Goodwill is a valuable asset since profits are being earned. | | |

Illustration 8:

Capital structure of Lot. Ltd. as at 31.3.2012 was as under:

| | ₹ in lakhs |
|---|------------|
| Equity share capital — fully paid shares of ₹ 10 each | 10 |
| 10% preference share capital | 5 |
| 15% debentures | 8 |
| Reserves | 4 |

Lot Ltd. earns a profit of ₹ 5 lakhs annually on an average before deduction of interest on debentures and income-tax which works out to 40%.

Normal return on equity shares of companies similarly placed is 12% provided :

(a) Profit after tax covers fixed interest and fixed dividends at least 3 times.

(b) Capital gearing ratio is .75.

(c) Yield on share is calculated at 50% of profits distributed and at 5% on undistributed profits.

Lot Ltd. has been regularly paying equity dividend of 10%.

Compute the value per equity share of the company. [C.A. (Final), Nov. 1998 Modified]

Solution :

| | |
|--|-----------------|
| (i) Profit for calculation of interest and fixed dividend coverage : | ₹ |
| Average profit before interest and taxation | 5,00,000 |
| Less : Debenture interest, ₹ 8,00,000 × 15/100 | 1,20,000 |
| | <u>3,80,000</u> |

| | |
|------------------------------------|----------|
| | ₹ |
| Less : Tax @ 40% | 1,52,000 |
| Profit after interest and taxation | 2,28,000 |
| Add back : Debenture interest | 1,20,000 |
| | 3,48,000 |

(ii) Calculation of interest and fixed dividend coverage :

| | |
|-------------------------------------|----------|
| Fixed interest and fixed dividend : | |
| Debenture interest | 1,20,000 |
| Preference dividend | 50,000 |
| | 1,70,000 |

Fixed interest and fixed dividend coverage = $\frac{3,48,000}{1,70,000} = 2.05$ times

Interest and fixed dividend coverage 2.05 times is less than the prescribed three times.

(iii) Capital gearing ratio :

Equity Share Capital + Reserves = ₹ 10,00,000 + ₹ 4,00,000 = ₹ 14,00,000
 Preference Share Capital + Debentures = ₹ 5,00,000 + ₹ 8,00,000 = ₹ 13,00,000
 Capital Gearing Ratio = $\frac{13,00,000}{14,00,000} = 0.93$ (approximately)
 Ratio 0.93 is more than the prescribed ratio of 0.75.

(iv) Yield on equity shares :

| | | |
|---|----------|----------|
| | ₹ | ₹ |
| Average profit after interest and tax | | 2,28,000 |
| Less : Preference dividend | 50,000 | |
| Equity Dividend @ 10% on ₹ 10,00,000 | 1,00,000 | 1,50,000 |
| Undistributed profit | | 78,000 |
| 50% of distributed profit (50% of ₹ 1,00,000) | | 50,000 |
| 5% of undistributed profit (5% of ₹ 78,000) | | 3,900 |
| | | 53,900 |

Yield on equity shares = $\frac{53,900}{10,00,000} \times 100 = 5.39\%$

(v) Expected yield of equity shares :

| | |
|--|-------|
| Normal return | 12.00 |
| Add : For low coverage of fixed interest and fixed dividends (2.05 < 3), say | 0.50* |
| Add : For high capital gearing ratio (0.93 > 0.75), say | 0.50* |
| | 13.00 |

* One may take some other reasonable per centage.

(vi) Value per equity share :

= $\frac{5.19}{13.00} \times ₹ 10 = ₹ 4.15$

Illustration 9:
Balance Sheet of A Ltd. as on 31.3.2012 was as under:

A Ltd.
Balance Sheet as on 31st March, 2012

(₹)

| Particulars | Note No. | Amounts as on 31st March, 2012 |
|----------------------------------|----------|--------------------------------------|
| I. Equity and Liabilities | | |
| (1) <i>Shareholders' funds</i> | | |
| (a) Share capital | 1 | 6,00,000 |
| (b) Reserves and surplus | 2 | 3,00,000 |
| (2) <i>Current liabilities</i> | | |
| (a) Trade payables | | 2,00,000 |
| | | <u>11,00,000</u> |
| II Assets | | |
| (1) <i>Non-current assets</i> | | |
| (a) Fixed assets | | |
| Tangible assets | 3 | 6,00,000 |
| (2) <i>Current assets</i> | | |
| Inventories | | 2,50,000 |
| Trade receivables | | 2,10,000 |
| Cash and Cash-equivalents | 4 | 40,000 |
| | | <u>11,00,000</u> |

Notes:

1. Share Capital

| | |
|---|-----------------|
| Authorised | ? |
| Issued and Subscribed: | |
| 70,000 Equity Share of ₹ 10 each | 7,00,000 |
| 10,000 14% Preference share of ₹ 10 each | 1,00,000 |
| | <u>8,00,000</u> |
| Called and Paid-up: | |
| 30,000 Equity Shares of ₹ 10 each fully called and paid up | 3,00,000 |
| 40,000 Equity Share of ₹ 10 each ₹ 5 each called and paid-up | 2,00,000 |
| 10,000 14% Preference Shares of ₹ 10 each fully called and paid up | 1,00,000 |
| | <u>6,00,000</u> |

2. Reserves and Surplus

| | |
|-----------------|-----------------|
| General Reserve | <u>3,00,000</u> |
|-----------------|-----------------|

3. Tangible (Fixed) Assets

| | |
|---------------------|-----------------|
| Plant and machinery | 5,00,000 |
| Furniture | 1,00,000 |
| | <u>6,00,000</u> |

4. Cash and Cash equivalents

| | |
|-------------------|---------------|
| Balance with Bank | <u>40,000</u> |
|-------------------|---------------|

Profit and dividend in last several years were as under:—

| Year ended | Profit before Tax ₹ | Equity Dividend |
|------------|------------------------|-----------------|
| 31.3.2012 | 6,40,000 | 36% |
| 31.3.2011 | 5,00,000 | 30% |
| 31.3.2010 | 3,92,000 | 24% |

Land and buildings are worth ₹ 4,00,000. Managerial remuneration is likely to go up by ₹ 40,000 p.a. Income tax may be provided at 40%. Equity shares of companies in the same industry with dividend rate of 20% are quoted at par.

Find the most appropriate value of an equity share assuming that:—

(a) Controlling interest is to be transferred.

(b) Only a few shares are to be transferred.

Ignore goodwill value, depreciation adjustment for revaluation dividend distribution tax and the need of transfer to General Reserve.

[Adapted C.A. (Final) May, 1998]

Solution:

Calculation of Average Maintainable Profit:

| Year ended | Profit before Tax ₹ | Weight | Product ₹ |
|---|------------------------|----------|------------------|
| 31.3.2012 | 6,40,000 | 3 | 19,20,000 |
| 31.3.2011 | 5,00,000 | 2 | 10,00,000 |
| 31.3.2010 | 3,92,000 | 1 | 3,92,000 |
| | | <u>6</u> | <u>33,12,000</u> |
| Average Profit | 33,12,000 ÷ 6 | | 5,52,000 |
| Less: Increase in Managerial remuneration | | | 40,000 |
| Profit before taxation | | | 5,12,000 |
| Less: Provision for taxation | | | 2,04,800 |
| Profit after taxation | | | 3,07,000 |
| Less: Preference dividend | | | 14,000 |
| Average Maintainable Profit | | | <u>2,93,200</u> |

Valuation of Controlling Interest

| | |
|---|------------------|
| Capitalization of maintainable profit @ 20% | ₹ |
| Capitalized value of equity interest ₹ 2,93,200 × 5 = | 14,66,000 |
| Add: Notional Call on partly paid shares | 2,00,000 |
| | <u>16,66,000</u> |
| No. of fully paid shares after national call | 70,000 |
| Value of each fully paid share 16,66,000/70,000 | 23.80 |
| Value of each partly paid share ₹ (23.80 – 5.00) | 18.80 |

Net Assets Method

| | | |
|------------------------------|----------|------------------|
| Sundry Assets | | 13,00,000 |
| Add: Notional Call on shares | | 2,00,000 |
| | | <u>15,00,000</u> |
| Less: Trade Payables | 2,00,000 | |
| 14% Preference Share Capital | 1,00,000 | 3,00,000 |
| Net Assets | | <u>12,00,000</u> |

| | | |
|---|-----------------------------|-----------|
| Value of fully paid share ₹ | $\frac{12,00,000}{70,000}$ | = ₹ 17.10 |
| Value of partly paid share ₹ (17.10 – 5.00) | | = ₹ 12.10 |
| Fair Value of fully paid share = ₹ | $\frac{(23.80 + 17.10)}{2}$ | = ₹ 20.45 |
| Fair Value of partly paid share = ₹ | $\frac{(18.80 + 12.10)}{2}$ | = ₹ 15.45 |

Valuation of a few shares

A few shares can be valued on the basis of dividend paid say at the average rate

$$\frac{36 + 30 + 24}{3} = 30\%$$

As the normal rate of dividend is 20%, fully paid up share can be valued at ₹ 15 each and partly paid up share at ₹ 7.50 each.

Illustration 10:

Surya Ltd. and its subsidiary Chandra Ltd. get their supply of some Raw Material from Akash Ltd. To coordinate their production on a profitable basis Surya Ltd. and Akash Ltd. agree between themselves each to acquire a quarter of shares in other's Authorised Capital by means of exchange of shares.

The terms are as follows:

Solution:

| | Surya Ltd. ₹ | Chandra Ltd. ₹ | Akash Ltd. ₹ |
|---|------------------------------------|-------------------|-----------------|
| <i>Assets</i> | | | |
| Freehold Properties | 6,00,000 | 2,00,000 | 4,00,000 |
| Plant & Machinery | 4,50,000 | 4,10,000 | 4,40,000 |
| Furniture and Fittings | 60,000 | 90,000 | 30,000 |
| Investment in 40,000 shares in Chandra Ltd. (4/5ths of net assets of Chandra Ltd.) | 7,36,000 | — | — |
| Current Assets | 5,40,000 | 5,00,000 | 5,90,000 |
| Dividend receivable from Chandra Ltd. | 80,000 | — | — |
| (A) | 24,66,000 | 12,00,000 | 14,60,000 |
| <i>Liabilities</i> | | | |
| 14% Debentures | 3,00,000 | — | — |
| Current Liabilities | 2,80,000 | 1,80,000 | 2,10,000 |
| Proposed Dividend | 2,00,000 | 1,00,000 | — |
| (B) | 7,80,000 | 2,80,000 | 2,10,000 |
| Net Assets (A) — (B) | 16,86,000 | 9,20,000 | 12,50,000 |
| Number of shares | 80,000 | — | 75,000 |
| Book Value per share | 21.08 | — | 16.67 |
| <i>Valuation of Akash Ltd.'s Shares on yield basis:</i> | | | |
| Estimated annual future profits | | | 2,10,000 |
| Less: 1/3rd profit retained for development | | | 70,000 |
| Profit available for dividend | | | 1,40,000 |
| Capitalised value of Akash Ltd.'s business @ 16% | $₹ 1,40,000 \times \frac{100}{16}$ | | = ₹ 8,75,000 |
| Number of share | | | = 75,000 |
| Hence, Value of one share = ₹ | $\frac{8,75,000}{75,000}$ | | = ₹ 11.67 |

Values taken for agreement to exchange shares between the two companies.

Surya Ltd.: ₹ 21.08 per share being the amount of Balance Sheet value which is higher than the quoted value of ₹ 14.00 per share.

Akash Ltd.: ₹ 16.67 per share being the amount to Balance Sheet value which is higher than the value calculated on yield basis, ₹ 11.67 per share.

Statement of Settlement

| | ₹ |
|---|----------|
| Shares allotted by Surya Ltd. to Akash Ltd. — | |
| 30,000 shares @ ₹ 21.08 | 6,32,400 |
| Shares allotted by Akash Ltd. to Surya Ltd. — | |
| 25,000 shares @ ₹ 16.67 | 4,16,750 |
| Loan by Surya Ltd. to Akash Ltd. | 2,15,650 |

Illustration 11:

You are asked to value shares as on 31st March, 2012 of a private company, engaged in engineering business, with a view to floating it as a public company.

The following information is extracted from the audited accounts:

| <i>Year ended 31st March</i> | <i>Net Profit before taxation</i> ₹ | <i>Salary of Managing Director</i> ₹ |
|------------------------------|--|---|
| 2006 | 23,40,000 | 7,20,000 |
| 2007 | 32,40,000 | 7,20,000 |

| | ₹ | ₹ |
|---|-----------------|-------------------------|
| Average Profits | | 45,60,000 |
| <i>Less</i> : Directors' fees | 1,80,000 | |
| Additional Depreciation (on revaluation) | | |
| 5% on Buildings (rate assumed) | 72,000 | |
| 15% on Plant and Machinery (rate assumed) | <u>2,70,000</u> | <u>5,22,000</u> |
| | | 40,38,000 |
| Income tax @ 30% on ₹ 40,38,000 i.e. ₹ 12,11,400 | | <u>12,11,400</u> |
| | | 28,26,600 |
| Transfer to general reserve, say @ 10% | | <u>2,82,660</u> |
| | | <u><u>25,43,940</u></u> |
| Dividend distribution tax is payable @ 15% . | | |
| Hence, profit available for dividend = ₹ 25,43,940 × 100/115 | | 22,12,122 |
| Profit per share = ₹ 22,12,122 / 3,60,000 = ₹ 6.14 | | |
| If expected dividend is 20%, price = ₹ 10 × 6.14/2 = Rs 30.70 | | |
| (iii) <i>Computation of value on the basis of capitalisation of profits :</i> | | |
| Average maintainable profit after tax | | 28,26,600 |
| Capitalised value @ say 20% = ₹ 28,26,600 × 100 / 20 | | 1,41,33,000 |
| Value of one share = ₹ 1,41,33,000 / 3,60,000 = ₹ 39.25 | | |

For transactions involving a small number of shares, value based on earnings and dividend is irrelevant but for those who want to purchase a large number of shares as a long-term investment, value on the basis of capitalisation of profits will be more appropriate.

Illustration 12:

Below is given the Balance Sheet of Devta Ltd. as at 31st March, 2012:

Devta Ltd.
Balance Sheet as on 31st March, 2012

(₹)

| <i>Particulars</i> | <i>Note No.</i> | <i>Amounts as on 31st March, 2012</i> |
|----------------------------------|-----------------|---|
| I. Equity and Liabilities | | |
| (1) <i>Shareholders' funds</i> | | |
| (a) Share capital | 1 | 29,40,000 |
| (b) Reserves and surplus | 2 | 8,60,000 |
| (2) <i>Current liabilities</i> | | |
| (a) Short-term borrowings | 3 | 6,00,000 |
| (b) Trade payables | | <u>18,50,000</u> |
| Total | | <u><u>62,50,000</u></u> |
| II. Assets | | |
| (1) <i>Non-current assets</i> | | |
| (a) Fixed assets | | |
| (i) Tangible assets | 4 | 37,00,000 |
| (ii) Intangible assets | 5 | 2,00,000 |
| (b) Non-current investments | | 8,00,000 |
| (2) <i>Current assets</i> | | |
| Inventories | | 5,50,000 |
| Trade receivables | | 9,00,000 |
| Cash and cash-equivalents | 6 | <u>1,00,000</u> |
| Total | | <u><u>62,50,000</u></u> |

The following further information is relevant:

- (i) In 2009-2010 a new machinery costing ₹ 1,00,000 was purchased but wrongly charged to revenue. No rectification has yet been made for above.
(ii) In 2010-2011, some old furniture (book value ₹ 50,000) was disposed of for ₹ 30,000.

You are required to value each fully paid and partly paid equity share. (Depreciation is charged on machinery @15 percent on reducing system. Ignore all types of taxes and dividends).

[Adapted C.A. (Final) May, 1982]

Solution:

| | | |
|--|----------------------------------|------------------|
| | | ₹ |
| Value of net tangible assets as per working note no. (i) | | 40,01,836 |
| Value of goodwill as per working note no. (iii) | | 95,444 |
| Non-trading Investments | | 7,20,000 |
| Calls in Arrear ₹ 50,000 + ₹ 10,000 | | 60,000 |
| | | <u>48,77,280</u> |
| Less: Preference Share Capital | | <u>10,00,000</u> |
| | | <u>38,77,280</u> |
| Value of a fully paid equity share | $= ₹ \frac{38,77,280}{2,00,000}$ | = ₹ 19.39 |
| Value of a partly paid equity share | $= ₹ 19.39 - ₹ 2$ | = ₹ 17.39 |

Working Notes:

- (i) Net Tangible Operating Assets as on 31st March, 2012:—

| | | |
|---|------------------|------------------|
| | ₹ | ₹ |
| Fixed Assets | | |
| Land & Buildings | | 12,00,000 |
| Machinery (₹ 11,00,000 + ₹ 1,00,000 – ₹ 15,000 – ₹ 12,750 – ₹ 10,838) | | 11,61,412 |
| Furniture | | 6,00,000 |
| Vehicles | | 8,00,000 |
| | | <u>37,61,412</u> |
| Add: Appreciation @ 30% | | <u>11,28,424</u> |
| | | 48,89,836 |
| Trade Investments [90/100 (10/100 × 8,00,000)] | | 72,000 |
| Inventories (₹ 5,50,000 – ₹ 50,000) | | 5,00,000 |
| Trade Receivables (₹ 9,00,000 – ₹ 10,000) | | 8,90,000 |
| Balance with Bank | | 1,00,000 |
| | | <u>64,51,836</u> |
| Less: Bank Loan | 6,00,000 | |
| Trade payables | <u>18,50,000</u> | <u>24,50,000</u> |
| | | <u>40,01,836</u> |

Alternatively, the figure may be arrived at in the following manner.

| | |
|----------------------------------|-----------|
| | ₹ |
| Paid up Equity Share Capital | 19,50,000 |
| Paid up Preference Share Capital | 9,90,000 |
| General Reserve | 7,00,000 |
| Profit and Loss Account | 1,60,000 |

| | |
|--|------------------|
| Addition to Machinery Account by way of rectification of error | 61,412 |
| 30% appreciation in fixed assets | <u>11,28,424</u> |
| | 49,89,836 |

| | |
|---|------------------|
| | ₹ |
| <i>Less:</i> Reduction in Trade Investments | 8,000 |
| Reduction in Inventories | 50,000 |
| Reduction in Trade Receivables | 10,000 |
| Goodwill | 2,00,000 |
| Non-trading Investments | <u>7,20,000</u> |
| | <u>9,88,000</u> |
| | <u>40,01,836</u> |

Strictly, the average of the four years should be taken but the net tangible operating assets may be taken as the capital employed. It is nearer the average since it appears that at least a major part of 2011-2012 profits have been disposed of making the capital employed in the beginning more or less the same as at the end.

(ii) *Calculation of average profits:*

| | 2008-09 | 2009-10 | 2010-2011 | 2011-2012 |
|--|-----------------|------------------|------------------|------------------|
| | ₹ | ₹ | ₹ | ₹ |
| Profits as per books of account | 8,00,000 | 9,00,000 | 10,50,000 | 11,00,000 |
| <i>Add:</i> Capital expenditure in respect of machinery charged to revenue | — | + 1,00,000 | — | — |
| Loss on sale of furniture (assumed extra-ordinary item) | — | — | + 20,000 | — |
| | <u>8,00,000</u> | <u>10,00,000</u> | <u>10,70,000</u> | <u>11,00,000</u> |
| <i>Less:</i> Depreciation in respect of error in Machinery Account @ 15% | — | - 15,000 | - 12,750 | - 10,838 |
| Dividend on non-trading investment @15% | — | - 54,000 | - 1,08,000 | - 1,08,000 |
| Reduction in the value of inventories | — | — | — | - 50,000 |
| Bad debts | — | — | — | - 10,000 |
| | <u>8,00,000</u> | <u>9,31,000</u> | <u>9,49,250</u> | <u>9,21,162</u> |

Depreciation on addition to tangible fixed assets, other than machinery on account of revaluation has not been taken into account for want of details.

(iii) *Computation of Goodwill:*

| | |
|---|-----------------|
| | ₹ |
| Total Profit for four years after adjustments | 36,01,412 |
| Average Profit | 9,00,353 |
| <i>Less:</i> -Depreciation @ 15% on increase in the value of machinery ₹ 3,48,424 | <u>52,264</u> |
| | 8,48,089 |
| Normal Profit: 20% of ₹ 40,01,836 | <u>8,00,367</u> |
| Super Profits | 47,722 |
| Goodwill at two years, purchase | <u>95,444</u> |

Illustration 13:

Under the articles of a private company dealing in wines and tobacco, you as an auditor, have to fix annually the fair value of the shares.

At 31st March, 2012 Company's position was as follows:

Balance Sheet as on 31st March, 2012

(₹)

| <i>Particulars</i> | <i>Note No.</i> | <i>Amounts as on 31st March, 2012</i> |
|----------------------------------|-----------------|---|
| I. Equity and Liabilities | | |
| (1) <i>Shareholders' funds</i> | | |
| (a) Share capital | 1 | 5,00,000 |
| (b) Reserves and surplus | 2 | 7,05,000 |
| (2) <i>Current liabilities</i> | | |
| (a) Trade payables | | 48,000 |
| | | <u>12,53,000</u> |
| II. Assets | | |
| (1) <i>Non-current assets</i> | | |
| Fixed assets | | |
| (i) Tangible assets | 3 | 88,000 |
| (2) <i>Current assets</i> | | |
| (a) Current investments | 4 | 3,75,000 |
| (b) Inventories | | 4,50,000 |
| (c) Trade receivables | 5 | 2,80,000 |
| (d) Cash and cash equivalents | 6 | 60,000 |
| | | <u>12,53,000</u> |

Notes:

| | | |
|---|----------|-----------------|
| 1. Share Capital | ₹ | ₹ |
| Authorised | | ? |
| Issued, Subscribed and Paid-up: | | |
| 10,000 4% Preference Share of ₹ 10 each, fully paid-up | | 1,00,000 |
| 40,000 Equity Share of ₹ 10 each, fully paid-up | | 4,00,000 |
| | | <u>5,00,000</u> |
| 2. Reserve and Surplus | | |
| General Reserve | | 1,55,000 |
| Surplus i.e. credit balance of Profit & Loss Account | | |
| Balance as on 1st April, 2011 | 20,000 | |
| Profit for 2011-2012, before income tax | 5,30,000 | 5,50,000 |
| | | <u>7,05,000</u> |
| 3. Tangible Assets | | |
| Building | | 85,000 |
| Furniture | | 3,000 |
| | | <u>88,000</u> |
| 4. Current Investments | | |
| 10% Government Bonds, at cost (Face value, ₹ 4,00,000) | | 3,75,000 |
| | | <u>3,75,000</u> |
| 5. Trade Receivables | | |
| As per list of Trade Receivables | | 3,00,000 |
| Less: Provision for Bad and Doubtful Debts | | 20,000 |
| | | <u>2,80,000</u> |

The net assets of the company on 31st March, 2012 are:

| | | | |
|---|----------|----------|------------------|
| Buildings | | 5,65,000 | |
| Furniture | | 3,000 | |
| Goodwill | | 72,000 | |
| Investments <i>less</i> Provision | | 3,30,000 | |
| Inventories | | 4,50,000 | |
| Trade Receivables <i>less</i> Provision | | 2,80,000 | |
| Balance with Bank | | 60,000 | |
| | | | <u>17,60,000</u> |
| <i>Less:</i> Trade Payables | 48,000 | | |
| Preference Share Capital | 1,00,000 | | |
| Provision for Taxation | 1,59,000 | 3,07,000 | |
| Net Assets for Equity Shareholders | | | <u>14,53,000</u> |

₹

Number of Equity Shares 40,000

Intrinsic value per share ₹ 14,53,000/40,000 = ₹ 36.33

The market value of the shares will be calculated as under if

based on possible dividend on equity shares:—

| | |
|---|-----------------|
| Average profits as calculated value | 4,80,000 |
| <i>Less:</i> Taxation @ 30% | <u>1,44,000</u> |
| | 3,36,000 |
| <i>Less:</i> Preference dividend | <u>14,000</u> |
| | 3,22,000 |
| <i>Less:</i> Transfer to General Reserve because dividend rate exceeds 20% of net profits | <u>32,200</u> |
| | <u>2,89,800</u> |

Number of equity share being 40,000; the dividend per equity share = $\frac{2,89,800}{40,000} = ₹ 7.25$

The market value is ₹ $\frac{7.25}{20} \times 100 = ₹ 36.25$, say ₹ 36.

Value on earning basis

₹

| | |
|---|-----------|
| Capital employed | 13,36,500 |
| Profit earned (before preference dividend)* | 2,91,200 |

Rate of earning = $\frac{2,91,200}{13,36,500} \times 100 = 21.79\%$, say 22%

Value per share = ₹ $\frac{22}{20} \times 10 = ₹ 11$

The safest (long term) value that can be put on the equity shares is that on the basis of earnings ratio — the other two values have some unnatural elements. Intrinsic value is not relevant, since those who invest in shares do not have much interest in the assets behind the shares; they are interested in the income.

The market value based on maximum possible dividends is also unnatural since few companies will distribute all the profit earned by them — probably they will distribute only what the capital has earned. Hence, the value based on earnings ratio seems to be the fairest.