



## FINAL EXAMINATION

December 2009

F-P18(BVM)

Syllabus 2008

### Business Valuation Management

Time Allowed: 3 Hours

Full Marks: 100

*The figures in the margin on the right side indicate full marks.*

*Answer Question No. 1 which is compulsory carrying 25 marks and any five from the rest.*

1. (a) In each of the Questions given below, one out of four is correct. Indicate the correct answer (2 marks each): 2×5
- (i) Which of the following statements is false?
- (1) There are two potential sources of cash flows from owning a stock. ✓
  - ☒ (2) An investor will be willing to pay a price today for a share of stock up to the point that this transaction has a zero NPV.
  - (3) An investor might generate cash by choosing to sell the shares at some future date.
  - ☒ (4) Because the cash flows from stock are known with certainty, we can discount them using the risk-free interest rate.
- (ii) When discounting dividends you should use?
- ☒ (1) the weighted average cost of capital. ✓
  - (2) the after-tax weighted average cost of capital.
  - (3) the equity cost of capital.
  - (4) the before-tax cost of debt.
- (iii) Which of the following statements is correct?
- (1) Actions which increase net income will always increase net cash flow.
  - ☒ (2) One way to increase EVA is to maintain the same operating income with less capital.
  - (3) One drawback of EVA as a performance measure is that it mistakenly assumes that equity capital is free.
  - ☒ (4) Answers (1) and (2) are correct.
- (iv) Which of the following statements is most correct?
- ☒ (1) The constant growth model takes into consideration the capital gains earned on a stock.
  - (2) It is appropriate to use the constant growth model to estimate stock value even if the growth rate never becomes constant.
  - (3) Two firms with the same dividend and growth rate must also have the same stock price. ✗
  - (4) Statements (1) and (3) are correct. ✗
- (v) Which of the following statements is correct?
- ☒ (1) Although some methods of estimating the cost of equity capital encounter severe difficulties, the CAPM is a simple and reliable model that provides great accuracy and consistency in estimating the cost of equity capital.
  - (2) The DCF model is preferred over other models to estimate the cost of equity because of the ease with which a firm's growth rate is obtained.



- (3) The bond-yield-plus-risk-premium approach to estimating the cost of equity is not always accurate but its advantages are that it is a standardized and objective model.  $\checkmark$
- (4) Depreciation-generated funds are an additional source of capital and, in fact, represent the largest single source of funds for some firms.

(b) State whether the following statements are true or false:

2x5

- (i) The corporate valuation model cannot be used for a company that doesn't pay dividends.  $\checkmark$  (6)
- (ii) Free cash flows should be discounted at the weighted average cost of capital to find the value of a company's operations.  $\checkmark$
- (iii) An ESOP can be used to improve worker productivity and to prevent hostile take-overs.  $\checkmark$
- (iv) In a synergistic merger, the post-merger value exceeds the sum of the separate companies' pre-merger values.  $\checkmark$
- (v) Since the basic rationale for any operating merger is synergy, in planning such mergers, the development of accurate proforma cash flows is the single most important aspect of the analysis.  $\checkmark$

(c) Fill in the blanks by using the words/phrases given in the brackets:

1x5

- (i) The \_\_\_\_\_ Asset Monitor is a management tool for organizations that wish to track and value their \_\_\_\_\_ assets. (tangible/intangible)
- (ii) The cash flows associated with common stock are \_\_\_\_\_ to evaluate due to the uncertainty and variability associated with them. (easy/difficult)  $\checkmark$
- (iii) When a corporation's shares are owned by a \_\_\_\_\_ individuals who are associated with the firm's managements, we say that firm is "closely held". (few/many)
- (iv) Post-merger control and the \_\_\_\_\_ are two of the most important issues in agreeing on the terms of a merger. (negotiated price/calculated price)
- (v) A theory that explains why the total value from the combination resulted from a merger is greater than the sum of the values of the component companies operating independently is known as \_\_\_\_\_ theory. (synergy/hubris/agency)  $\checkmark$

2. Define each of the following terms (any three):

5x3

- (a) Real Options;
- (b) Efficient Market Hypothesis;  $\checkmark$
- (c) Investment Timing Options;
- (d) Operating Current Assets;
- (e) Value of Operations;
- (f) Stock Option.

(10)

3. (a) From the annual report 2009 of Precision Tools Limited, the following information has been collected:

Profit and Loss Account of Precision Tools Ltd. for the year ending on 31st March 2009.

|                                                       | (Rs. in crores)                                     | 31st March 2009 |
|-------------------------------------------------------|-----------------------------------------------------|-----------------|
| <b>INCOME:</b>                                        |                                                     |                 |
| Net Sales                                             |                                                     | 1,665.40        |
| Other Income                                          |                                                     | 265.50          |
|                                                       | <b>Total Income</b>                                 | <b>1,930.90</b> |
| <b>EXPENDITURE:</b>                                   |                                                     |                 |
| Generation, Administration and Other Expenses         |                                                     | 121.80          |
| Employees Remuneration and Benefits                   |                                                     | 628.10          |
|                                                       |                                                     | 749.90          |
|                                                       | <b>Profit Before Depreciation, Interest and Tax</b> | <b>1,181.00</b> |
| Depreciation                                          |                                                     | 238.70          |
|                                                       |                                                     | 942.30          |
| <b>Profit Before Interest and Tax</b>                 |                                                     | <b>942.30</b>   |
| Interest and Finance Charges                          |                                                     | 486.80          |
|                                                       |                                                     | 455.50          |
| <b>Profit Before Tax and Prior Period Adjustments</b> |                                                     | <b>455.50</b>   |
| Prior Period Adjustments (Net)                        |                                                     | 8.40            |
|                                                       |                                                     | 447.10          |
|                                                       | <b>Profit Before Tax</b>                            | <b>447.10</b>   |
| Provision for Tax                                     |                                                     | 3.70            |
|                                                       |                                                     | 443.40          |
|                                                       | <b>Profit After Tax</b>                             | <b>443.40</b>   |
| P and L Balance brought forward                       |                                                     | 871.20          |
|                                                       |                                                     | 1,314.60        |
| <b>Total Profit Available for Appropriations</b>      |                                                     | <b>1,314.60</b> |
| <b>Appropriations</b>                                 |                                                     |                 |
| <b>Dividend:</b>                                      |                                                     |                 |
| Proposed Final Dividend                               |                                                     | (30.00)         |
| Corporate-Dividend Tax                                |                                                     | (3.10)          |
| Appropriation from profit to reserve                  |                                                     | (1,110.00)      |
| Amount written back from bonds redemption reserve     |                                                     | 242.20          |
|                                                       |                                                     | 413.70          |
| <b>Balance Carried to Balance Sheet</b>               |                                                     | <b>413.70</b>   |

Assume that the company follows a 'Constant Dividend Payout Policy' and it is committed to maintain the same. Number of shares outstanding as on 31-03-2009 is 5 crores. Net worth of the company as on 31-03-2009 is Rs. 3,100.58 crores and its cost of equity is 15%. Find the value of the equity shares of Precision Tools Limited. Use Constant Growth Model for valuation.

- (b) A share of face value of Rs. 10 presently sells for Rs. 80. It is estimated that it will pay a dividend of 50% at the end of the year. Its beta is 1.2. If risk-free rate of interest is 6% and the expected rate of return on the market portfolio is 16% then what do investors expect the share to sell for at the end of the year? (Assume that CAPM works in the market).

4. Sound Health Systems Ltd. is operating in the health sector and is having about 40 hospitals—general, special and super-specialty—across India. The Balance Sheet of the Company, as reported in its Annual Report, 2008 given below:

**Balance Sheet of Sound Health Systems Limited as at 31st March**

(Rs. in Lakhs)

| Particulars                                     | 2007             | 2008             |
|-------------------------------------------------|------------------|------------------|
| <b>SOURCE OF FUNDS</b>                          |                  |                  |
| <b>SHAREHOLDERS' FUNDS</b>                      |                  |                  |
| Share Capital (a) + (d) + (f)                   | 20,767.01        | 23,826.65        |
| 12% Redeemable Preference Shares (b)            | —                | 15,000.00        |
| Reserves and Surplus                            | 17,447.58        | 23,264.66        |
| <b>LOAN FUNDS</b>                               | 38,214.59        | 62,091.31        |
| Secured Loans                                   | 22,658.93        | 14,698.38        |
| Unsecured Loans (only 10.1% not)                | 16,180.69        | 2,562.39         |
| Interest on Loans Payable (c) x                 | 2,000.00         | 1,000.00         |
|                                                 | 40,839.62        | 18,260.77        |
| <b>TOTAL</b>                                    | <b>79,054.21</b> | <b>80,352.08</b> |
| <b>APPLICATION OF FUNDS</b>                     |                  |                  |
| <b>FIXED ASSETS</b>                             |                  |                  |
| Gross Block                                     | 14,269.32        | 13,164.92        |
| Less: Depreciation                              | 4,063.70         | 5,079.83         |
| <b>Net Block</b>                                | 10,205.62        | 8,085.09         |
| Capital Work-in-Progress                        | 681.95           | 45.00            |
|                                                 | 10,887.57        | 8,130.09         |
| <b>INVESTMENTS</b>                              | 47,566.83        | 31,068.93        |
| <b>CURRENT ASSETS, LOANS AND ADVANCES</b>       |                  |                  |
| Inventories                                     | 238.36           | 248.10           |
| Sundry Debtors (g) bad debt 80 lakh             | 3,086.89         | 3,558.87         |
| Cash in Hand and at Bank                        | 122.54           | 488.45           |
| Loans and Advances                              | 7,079.79         | 26,718.94        |
| Other Current Assets                            | 212.24           | 677.31           |
|                                                 | 10,739.82        | 31,691.67        |
| <b>Less: CURRENT LIABILITIES AND PROVISIONS</b> |                  |                  |
| Creditors (-25.1% (20.1%) & not share)          | 3,566.67         | 3,636.92         |
| Provisions                                      | 430.71           | 561.54           |
|                                                 | 3,997.38         | 4,198.46         |
| <b>Net Current Assets</b>                       | 6,742.44         | 27,493.21        |
| <b>PROFIT AND LOSS ACCOUNT</b>                  | 13,857.37        | 13,659.85        |
| <b>Total</b>                                    | <b>79,054.21</b> | <b>80,352.08</b> |

Sound Health Systems Ltd. has not been performing well in the past and consequently, has suffered losses during the last few years. However, the management of the company strongly feels that the company can be again put on the path to sound financial health by having proper financial restructuring. Therefore, the following scheme of financial reconstruction is being devised:

- (a) Equity shares are to be reduced to Rs. 2 from Rs. 10 fully paid up.
- (b) The rate on preference share is to be reduced to 10% and the value thereof reduced to Rs. 50 from Rs. 100 fully paid up.
- (c) Lenders have agreed to forego interest payable to them as on March 31, 2008.
- (d) Creditors have agreed to forgo 25% of their claims and remaining amount will be converted into equity shares at a rate of Rs. 2 fully paid up but they have to be paid 20% of the amount due as on March 31, 2008 in cash immediately.
- (e) Unsecured loan lenders will take 10% of the amount as on March 31, 2008 and they have agreed to take the remaining amount after 4 years.
- (f) To meet the requirement of working capital of the company and to make payment to creditors and others, it is decided to issue 20 lakh shares of Rs. 2 each at a premium of Rs. 3 totalling Rs. 5 per share. The existing shareholders have decided to subscribe for them and the whole amount will be paid along with the application.
- (g) A provision of Rs. 80 lakh is to be made for doubtful debts on debtors.

You are required to show the impact of the said financial restructuring on the balance sheet of the company and also, prepare the new balance sheet assuming that the scheme has been successfully implemented. 15

5. What are different approaches to valuation of target companies? Explain in detail. 15

6. (a) The balance sheet of Reliance Industries is shown below. The value of operations as at 31-12-2008 is Rs. 65.1 Crores and there are 1 Crore shares of common equity. What is the price per share? 8
- Balance Sheet as at December 31, 2008 (Rs. in Lakhs)

| Assets                  |      | Liabilities and Equity       |      |
|-------------------------|------|------------------------------|------|
| Cash                    | 200  | Accounts payable             | 190  |
| Marketable securities   | 470  | Notes payable                | 650  |
| Accounts receivable     | 100  | Accruals                     | 510  |
| Inventories             | 200  | Total current liabilities    | 1350 |
| Total current assets    | 3670 | Long term bonds              | 1310 |
| Net plant and equipment | 2790 | Preferred stock              | 330  |
|                         |      | Common stock (per plus PIC)  | 1600 |
|                         |      | Retained earning             | 1870 |
|                         |      | Common equity                | 3470 |
| Total Assets            | 6460 | Total liabilities and equity | 6460 |

- (b) Explain how is it possible for sales growth to decrease the value of a profitable company. 7

Please Turn Over

7. An analyst prepared balance sheets for the years 2007 and 2006 as follows (Rs. in Crores).

|                       | 2007 | 2006 |
|-----------------------|------|------|
| Operating Assets      | 640  | 590  |
| Financial Assets      | 250  | 110  |
|                       | 890  | 700  |
| Financial debt        | 170  | 130  |
| Operating liabilities | 20   | 30   |
| Common equity         | 700  | 540  |
|                       | 890  | 700  |

50  
40  
190  
40  
(10)  
160  
190. ~~2006~~ for

The firm reported Rs. 100 Crores in comprehensive income from 2007 and no net financial income or expense?

- (a) Calculate the free cash flow for 2007. 5  
(b) How was the free cash flow utilized? 5  
(c) How can a firm with financial assets and financial liabilities have zero net financial income or expense. 5
8. A firm has the following summary balance sheet (Rs. in Crores):

|                             |     |
|-----------------------------|-----|
| Net Operating assets        | 441 |
| Net Financial Obligations   | 52  |
| Common Shareholder's Equity | 389 |

The firm is currently earning a return on net operating assets (RNOA) of 14 percent from sales of Rs. 857 Crores and after tax operating income of Rs. 60 Crores. Its required return on operations is 10%. Forecasts indicate that RNOA is likely to continue at the same level in the future with growth in sales of 3 per cent per year and growth in net operating assets to support the sales growth of 3 per cent per year. Management is considering a plan to introduce new products that are expected to increase the sales growth rate to 4 per cent a year and maintain the current profit margin of 7 per cent. But the plan will require additional investment in net operating assets that will reduce the firm's asset turnover to 1.67.

What effect will this plan have on the value of the firm?

15



— 2

— 3