PGDM & PGDM (IB), 2020-22

Business Analysis & Valuation
DM-411 & IB-411

Trimester – IV, End-Term Examination: September 2021

Time allowed: 2.5 Hours | Max Marks: 50

Roll No: ___________

Instruction: Students are required to write Roll No on every page of the question paper, writing anything except the Roll No will be treated as **Unfair Means.** In case of rough work please use answer sheet.
Make assumptions wherever necessary and write them down at the end of solution.

Sections	No. of Questions to attempt	Marks	Marks
A	3 Questions	10 Marks each	3*10 = 30
B	Compulsory Case Study	20 Marks	20
		Total Marks	**50**

SECTION A

1. You have been asked to value Venus Ltd., a company engaged in music industry. The company has estimated its free cash flows to equity and its cost of equity
for the next 4 years:

Year	1	2	3	4
EPS	$ 1.50	$ 1.80	$2.16	$2.59
FCFE per share	- $ 2.00	- $ 1.20	$ 0.34	$ 0.09

The earnings per share are expected to grow 6% a year after year 4, and net capital expenditures are expected to decline 50% after year 4. Sonata currently has a beta of 1.5 and no debt or working capital needs, but expects its beta to drop to 1 after year 4. The debt ratio will remain at 0%. The Risk free rate is 7%.

Estimate the value per share today. (CILO 1)

OR

2. A company is preparing a free cash flow forecast in order to calculate the value of equity and asks you to help.
The following information is available:
Sales: Current sales are INR 500 cr. Growth is expected to be 8% in year 1, falling by 2% pa (e.g. to 6% in year 2) until sales level out in year 5 where they are expected to remain constant in perpetuity.
The operating profit margin will be 10% for the first two years and 12% thereafter. Depreciation in the current year will be INR 7 cr. increasing by INR 1cr. pa over the planning horizon before levelling off. Capex is assumed to be of two kinds - replacement asset investment which is assumed to equal to depreciation and incremental investment in assets which is expected to be 8% of the increase in sales in year 1, 6% of the increase in sales in

each of the following two years, and 4% of the increase in year 4. No incremental asset investment be there beyond year 4.
Tax will be charged at 30% pa.
The WACC is 15%.
The market value of debt is INR 48 cr.
Calculate the value of equity. (CILO 1)

3. The finance director of Killpest Ltd. is concerned about the impact of capital structure on the company's beta and wishes to investigate the effect of different capital structures.
Market value of equity is Rs 458 million, and of debt Rs 305 million.
Killpest's equity beta is 1·4. The beta of debt may be assumed to be zero.
The risk free rate is 5·5% and the market return 14%.
Cost of Debt is unaffected by leverage and will remain at 10% pre-tax.
Tax rate is 30%
Determine the likely effect on the company's cost of capital and on equity beta if the company's capital structure was:
(i) 80% equity, 20% debt by market values;
(ii) 40% equity, 60% debt by market values. (CILO 2)

OR

4. TopFoods Ltd. a food processing company has come to you for some help in estimating a beta for their equity. The firm has been publicly traded for two years and the regression beta is 0.45. The firm is in two businesses, and you have collected the following information on them:

Comparable firms

Business	Revenues	Unlevered Beta	EV /Sales Ratio
Food Processing	INR 800 million	0.60	0.50
Restaurants	INR 200 million	1.20	3.00

EV = Enterprise value = Market value of equity + Market value of debt (includes leases) - Cash

TopFoods has 10 million shares outstanding, trading at INR 60 a share, INR 200 million in debt. The risk free rate is 7%, the equity risk premium is 8% and the firm has a rating of BBB (with a default spread of 2%). The marginal tax rate for all firms is 40%. Estimate the cost of equity and WACC for TopFoods. (CILO 2)

5. You have been asked to value the synergy in a merger by your boss who also happens to be an avid believer in EVA. You are given the following information on the two firms:
Grow & Prosper is a diversified consumer product company with $ 2 billion in capital invested, a return on capital of 13% and a cost of capital of 11%. The firm is assumed to be in stable growth and the EVA is expected to grow 5% a year in perpetuity.
BrandAdd is a smaller company that produces only perfumes. It has $ 500 million in capital invested, earning a return on capital of 16% with a cost of capital of 12%. This firm is also in stable growth and the EVA is expected to grow 5% a year in perpetuity
Both firms have 40% tax rates.
a. Value both the companies using the EVA approach.
b. As a result of the merger, you expect the firm to be able to lower its cost of capital to 10% (as a result of increased debt capacity) and to post an increase in the combined operating income of 10% (as a result of economies of scale). Estimate the value of synergy in this merger. (CILO 3)

OR

6 A. DCF valuation though a sound way of valuing an opportunity, may not be useful in all the business conditions. What are other value enhancement techniques you may use?

6 B. You are scanning a list of stocks in the specialty retail sector for bargains. The PE ratios, expected growth rates in earnings, risk levels and payout ratios (including both dividends and stock buybacks) are listed below:

Firm	Current PE	Expected Growth	Beta	Payout
A	45	30%	High	10%
B	15	10%	Low	40%
C	45	10%	High	10%
D	45	10%	Low	10%
E	15	30%	Low	40%
F	15	30%	High	40%

a. Which of these firms is most likely to be undervalued? (Choose only one firm)
b. Which of these firms is most likely to be overvalued? (Choose only one firm)
Undervalued: A firm trading at a PE much lower than it should be trading for
Overvalued: A firm trading at a PE much higher than it should be trading for. (CILO 3)

Section B

Management of A Ltd. Is thinking of buying out B Ltd. which is a private company in the same business line. A Ltd. assumes following performance of B Ltd. after acquisition.

	1	2	3	4	5
Revenues	690	794	913	1049	1207
Expenses	483	555	639	736	845
Depreciation	46	54	61	70	80
E B I T	161	185	213	245	282
Interest	110	100	90	80	70
P B T	51	85	123	165	212
Taxes	20	34	49	66	85
CAPEX	58	66	76	87	101
Increase in W.C.	35	40	46	52	60
Repayment of Debt	100	100	100	100	100

Purchase consideration is Rs. 1300 lakhs which will be mainly financed by debt of Rs. 1100 lakhs and balance in equity. Interest rate will be 10%, and an annual repayment of Rs. 100 lakhs will be done throughout the forecast period starting by the end of first year. Debt level left at the end of fifth year will be kept forever.
The assumed rate of corporation tax is 40% p.a. It is assumed that the cash flows received in fifth year will grow at the rate of 5% forever.
The risk free rate of interest is assumed to be 6% p.a., the return on a market portfolio is taken to be 13.5%, whilst an asset beta of 1.2 is used for purposes of the appraisal.
What will you advice to A Ltd.? (CILO 1)