PGDM & PGDM (IB), 2019-21

BUSINESS ANALYSIS AND VALUATION

DM 411 / IB 412

Trimester – IV, End-Term Examination, September 2020

Time allowed: 2 & 1/2 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.

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

Section A

A 1. FarmFit Co manufactures heavy agricultural equipment and machinery which can be used in difficult farming conditions. FarmFit Co's chief executive has been investigating a significant opportunity in Bangladesh, where FarmFit Co has not previously sold any products. The government of Bangladesh has been undertaking a major land reclamation programme and FarmFit Co's equipment is particularly suitable for use on the reclaimed land. Because of the costs and other problems involved in transporting its products, FarmFit Co's chief executive proposes that FarmFit Co should establish a plant for manufacturing machinery in Bangladesh. He knows that the Bangladesh government is keen to encourage the development of sustainable businesses within the country.

Initial calculations suggest that the proposed investment in Bangladesh would have a negative net present value of $1·01 million. However, FarmFit Co's chief executive believes that there may be opportunities for greater cash flows in future if the Bangladesh government expands its land reclamation programme. The government at present is struggling to fund expansion of the programme out of its own resources and is looking for other funding. If the Bangladesh government obtains this funding, the chief executive has forecast that the increased demand for FarmFit Co's products would justify $15 million additional expenditure at the site of the factory in three years' time. The expected net present value for this expansion is currently estimated to be $0.

The relevant cost of capital is 12% and the risk free rate is 4%. The chief executive has estimated the likely volatility of cash flows at a standard deviation of 30%.

Consider these values:

D1 = -0.1630, D2 = -0.6826

Required:
Assess, showing all relevant calculations, whether FarmFit Co should proceed with the significant opportunity. The Black Scholes pricing model may be used, where appropriate.
(CILO 3)

OR

A 2. Please consider the following data:

Name of Company	**P/E**	**EV/EBIT**	**EV/EBITDA**
Get Fit	22.5x	15.3x	14.1x
Workout Co.	27.1x	21.3x	19.9x
Health Fitness Center	18.0x	14.4x	13.9x
Fit for Fun	23.2x	16.0x	15.1x
The Crossfit Club	24.1x	17.2x	15.8x
Average	*23.0x*	*16.8x*	*15.8x*

P&L Items (in USD mln)	**Sports World Co.**
EBIT	10.2
EBITDA	11.7
Net Earnings	3.5
Debt	100

Estimate of the enterprise value of Sports World Co. using the P/E multiple. Also comment on the precautions you would like to take while choosing comparable companies for multiple valuation.
(CILO 3)

A 3. Major Ltd., a listed company producing motor cars, wants to acquire Nuvo Ltd., an engineering company involved in producing innovative devices for cars. Major Ltd. is keen to incorporate some of Nuvo Ltd.'s innovative devices into its cars and thereby boosting sales revenue.

The following financial information is provided for the two companies:

	Major Ltd.	Nuvo Ltd.
Current share price	INR 58.00	24.00
Number of issued shares	210 million	200 million
Equity beta	1.2	1.2
Asset beta	0.9	1.2

It is thought that combining the two companies will result in several benefits. Free cash flows to firm of the combined company will be INR 216 million in current value terms, but these will increase by an annual growth rate of 7% for the next four years, before reverting to an annual growth rate of 3% in perpetuity. In addition to this, combining the companies will result in cash synergy benefits of INR 20 million per year, for the next four years. These synergy benefits are not subject to any inflationary increase and no synergy benefits will occur after the fourth year.

The debt-to-equity ratio of the combined company will be 40:60 in market value terms and it is expected that the combined company's cost of debt will be 4.55%. The corporation tax rate is 20%, the current risk free rate of return is 2% and the market risk premium is 7%. It can be assumed that the combined company's asset beta is the weighted average of Major Ltd.'s and Nuvo Ltd.'s asset betas, weighted by their current market values.

Required:

Estimate the additional equity value created by combining Nuvo Ltd. and Major Ltd., based on the free cash flows to firm method. Comment on the results obtained and briefly discuss the assumptions made.
(CILO 2)

OR

A 4. Consider the following company financials:

Amounts in mln dollars	31-12-18	31-12-19	31-12-20	31-12-21	31-12-22	31-12-23	31-12-24
	actuals	*forecast*	*forecast*	*forecast*	*forecast*	*forecast*	*forecast*
Balance sheet							
Goodwill	208	208	208	208	208	208	208
Tangible fixed assets	234	246	263	276	290	301	310
Inventories	90	95	102	107	112	117	120
Accounts Receivable	172	180	193	202	213	221	228
Other operating short term assets	23	25	26	28	29	30	31
Cash	42	42	37	37	36	41	50
Total	**769**	**796**	**829**	**858**	**888**	**918**	**947**
Equity	234	246	259	272	286	301	317
Interest bearing debt	312	312	312	312	312	312	312
Operating provisions	26	31	36	41	46	51	56
Accounts Payable	158	166	178	187	196	204	210
Other operating short term liabilities	39	41	44	46	48	50	52
Total	**769**	**796**	**829**	**858**	**888**	**918**	**947**
Profit & Loss Account							
Revenues	780	819	876	920	966	1,005	1,035
- Cost of goods sold	452	475	508	534	560	583	600
Gross margin	**328**	**344**	**368**	**386**	**406**	**422**	**435**
- Personnel cost	117	123	131	138	145	151	155
- Other operating cost	62	66	70	74	77	80	83
EBITDA	**149**	**155**	**167**	**174**	**184**	**191**	**197**
- Depreciation	31	33	34	36	37	39	41
EBITA	**118**	**122**	**133**	**138**	**147**	**152**	**156**
- Amortization	0	0	0	0	0	0	0
EBIT	**118**	**122**	**133**	**138**	**147**	**152**	**156**
- Interest	16	16	16	16	16	16	16
PBT	**102**	**106**	**117**	**122**	**131**	**136**	**140**
- Taxes	26	27	29	31	33	34	35
Net profit	**76**	**79**	**88**	**91**	**98**	**102**	**105**

A private equity firm considers acquiring the company on 31/12/2018 and uses multiples valuation. It will use 4x the 2018 EBITDA of debt to finance the acquisition at the entry date.

The private equity firm targets to exit the company after 5 years at the end of 2023 and expects to realise an exit EBITDA-multiple of 7.5x. Because all intermediate cash flows the firm will generate are used to repay the debt, you may assume that the expected net debt level at the end of 2023 will be 40% of the initial debt level at entry. Calculate the maximum enterprise value and equity investment the PE is willing to invest at the entry date when the private equity-house targets an IRR of 25%.
(CILO 2)

A 5. Pick the company, you had chosen for your group project and explain in details that why your selected assumptions regarding the future prospects of the company, may go wrong.
(CILO 1)

OR

A 6. Ultimate Telecommunications Ltd. is a firm in significant financial trouble. The firm reported an EBITDA of - INR 100 million last year on revenues of INR 1000 million. You expect revenues to grow 30% a year for the next 3 years and the EBITDA as a percent of revenues to be –5% in year 1, 5% in year 2 and 25% after that. The firm has substantially over invested in plant and equipment in the last few years and will reduce its capital expenditures to INR 50 million a year for the next 3 years, while depreciation will remain at INR 100 million a year for the next 3 years. Non-cash working capital is expected to be 5% of revenues. After year 3, the firm will grow 4% a year forever, and maintain a return on capital of 10%. The cost of capital will be 12% for the next 3 years and 10% thereafter. Assume no tax benefits of carry forwarded losses.

Estimate the value of the firm today. (CILO 1)

Section B

Prime Ltd., a large listed company, has a number of subsidiaries in different industries but its main line of business is developing surveillance systems and intruder alarms. It has decided to sell a number of companies that it considers are peripheral to its core activities.

One of these subsidiary companies is Vision Ltd., a company involved in managing the congestion monitoring and charging systems that have been developed by Prime Ltd. Vision Ltd. is a profitable business and it is anticipated that its revenues and costs will continue to increase at their current rate of 8% per year for the foreseeable future.

Vision Ltd.'s managers and some employees want to buy the company through a leveraged management buy-out. An independent assessment estimates Vision Ltd.'s market value at $81 million. The managers and employees involved in the buy-out will invest $12 million for 75% of the equity in the company, with another $4 million coming from a venture capitalist for the remaining 25% equity.

NeverSayNo Bank has agreed to lend the balance of the required funds in the form of a 9% loan. The interest is payable at the end of the year, on the loan amount outstanding at the start of each year. A covenant on the loan states that the following debt-equity ratios should not be exceeded at the end of each year for the next five years:

Year	1	2	3	4	5
Debt/Equity (%)	350%	250%	200%	150%	125%

Shown below is an extract of the latest annual statement of profit or loss for Vision Ltd.:

	$000
Sales Revenue	60,000
Materials and consumables	12,000
Labour costs	22,000
Other costs	4,000
Taxable Profit	6,000
Taxation	1,500
Retained Earnings	4,500

As part of the management buy-out agreement, it is expected that Prime Ltd. will provide management services costing $12 million for the first year of the management buy-out, increasing by 8% per year thereafter.

The current tax rate is 25% on profits and it is expected that 25% of the after-tax profits will be payable as dividends every year. The remaining profits will be allocated to reserves. It is expected that Vision Ltd. will repay $3 million of the outstanding loan at the end of each of the next five years from the cash flows generated from its business activity.

Required: (CILO 1)

a. Forecast statement of profit or loss for the five-year period.
b. Assess whether the debt-equity covenant imposed by NeverSayNo Bank on Vision Ltd. will be breached over the five-year period.