TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean
Model Question 2020

Full Marks: 100
Pass Marks: 50
Time: 4 Hrs

MBS / Second Semester / FIN 510: Financial Management

Candidates are required to answer all the questions in their own words as far as practicable. Figures in brackets indicate full marks.

Group "A"

Case Analysis

1. **Carefully read the following case and analytically answer the questions given below:** ***[30]***

Mohan Sharma was brought in as assistant to Himalaya Company's Chairman, who had the task of getting the company back into a sound financial position. Company's 2018 and 2019 balance sheets and income statements, together with projections for 2020, are shown in the following tables. Also the tables show the 2018 and 2019 financial ratios, along with industry average data. The 2020 projected financial statement data represent company's best guess for 2020 results, assuming that some new financing is arranged to get the company into sound position.

Balance Sheets of Himalaya Company

Assets	**2018**	**2019**	**2020**
Cash	Rs 9,000	Rs 7,282	Rs 14,000
Short-term investments	48,600	20,000	71,632
Accounts receivable	351,200	632,160	878,000
Inventories	715,200	1,287,360	1,716,480
Total current assets	**Rs 1,124,000**	**Rs 1,946,802**	**Rs 2,680,112**
Gross fixed assets	Rs 491,000	1,202,950	Rs 1,220,000
Accumulated depreciation	(146,200)	(263,160)	(383,160)
Net fixed assets	Rs 344,800	Rs 939,790	Rs 836,840
Total assets	**Rs 1,468,800**	**Rs 2,886,592**	**Rs 3,516,952**
Liabilities and Equity	**2018**	**2019**	**2020**
Accounts payable	Rs 145,600	Rs 324,000	Rs 359,800
Notes payable	200,000	720,000	300,000
Accruals	136,000	284,960	380,000
Total current liabilities	**Rs 481,600**	**Rs 1,328,960**	**Rs 1,039,800**
Long-term debt	Rs 323,432	Rs 1,000,000	Rs 500,000
Common stock (100,000 shares)	460,000	460,000	1,680,936
Retained earnings	203,768	97,632	296,216
Total equity	Rs 663,768	Rs 557,632	Rs 1,977,152
Total Liabilities and equity	**Rs 1,468,800**	**Rs 2,886,592**	**Rs 3,516,952**

Income Statements of Himalaya Company

	2018	2019	2020
Sales	Rs 3,432,000	Rs 5,834,400	Rs 7,035,600
Less: Cost of goods sold	Rs 2,864,000	Rs 4,980,000	Rs 5,800,000
Other expenses	340,000	720,000	612,960
Depreciation	18,900	116,960	120,000
Total operating costs	**Rs 3,222,900**	**Rs 5,816,960**	**Rs 6,532,960**
EBIT	Rs 209,100	Rs 17,440	Rs 502,640
Less Interest expenses	62,500	176,000	80,000
EBT	Rs 146,600	(Rs 158,560)	Rs 422,640
Less Taxes (40%)	58,640	(63,424)	169,056
Net income	**Rs 87,960**	**(Rs 95,136)**	**Rs 253,584**
Other data:			
Stock price	Rs 8.50	Rs 6.00	Rs 12.17
Shares outstanding	100,000	100,000	250,000
EPS	Rs 0.88	(Rs 0.951)	Rs 1.014
DPS	Rs 0.22	Rs 0.11	Rs 0.22
Tax rate	40%	40%	40%
Book value per share	Rs 6.638	Rs 5.576	Rs 7.909
Lease payments	Rs 40,000	Rs 40,000	Rs 40,000

Ratio Analysis

Financial Ratios	**2018**	**2019**	**2020**	**Industry Average**
Current ratio	2.3	1.5	----	2.5
Quick ratio	0.8	0.496	----	1.2
Inventory turnover	4.8	4.5	----	5.5
Days sales outstanding	37.3	39.6	----	40 days
Fixed assets turnover	10.0	6.2	----	6.5
Total assets turnover	2.3	2.0	----	2.5
Debt ratio	54.8%	80.7%	----	50.0%
Times interest earned	3.3	0.1	----	6.2
Profit margin	2.6%	–1.6%	----	3.6%
Basic earning power	14.2%	0.6%	----	17.8%
ROA	6.0%	–3.3%	----	9.0%
ROE	13.3%	–17.1%	----	17.9%
Price/earnings (P/E)	9.7	–6.3	----	16.2
Price/cash flow	8.0	27.5	----	7.6
Market/book	1.3	1.1	----	2.9

Mohan examined monthly data for 2019 (not given in the case), and he detected an improving pattern during the year. Monthly sales were rising, costs were falling, and large losses in the early months had turned to a small profit by December. Thus, the annual data looked somewhat worse than final monthly data. Also, it appeared to be taking longer for the advertising program to get the message across, for the new sales offices to generate sales, and for the new manufacturing facilities to operate efficiently. In other words, the lags between spending money and deriving benefits were longer than company's managers had anticipated. For these reasons, Mohan and the chairman see hope for the company-provided it can survive in the short run.

Mohan must prepare an analysis of where the company is now, what it must do to regain its financial health, and what actions should be taken. Your assignment is to help him answer the following questions.

a. Why are ratios useful? What are the five major categories of ratios?

b. Calculate the 2020 current and quick ratios based on the projected balance sheet and income statement data. What can you say about the company's liquidity position in 2018 and 2019, and as projected for 2020? We often think of ratios being useful (1) to managers to help run business, (2) to bankers for credit analysis, and (3) to stockholders for stock valuation. Would these different types of analysts have an equal interest in the liquidity ratios?

c. Calculate the 2020 inventory turnover ratio, days sales outstanding (DSO), fixed assets turnover, and total assets turnover. How Does Company's utilization of assets stack up against that of other firms in its industry?

d. Calculate the 2020 debt ratio and times-interest-earned. How does company compare with the industry with respect to financial leverage? What can you conclude from these ratios?

e. Calculate the 2020 profit margin, basic earning power, return on assets, and return on equity. What can you say about these ratios?

f. Calculate the 2020 price/earnings ratio, price/cash flow ratio and market/book ratio. Do these ratios indicate that investors are expected to have a high or low value of the company?

Group "B"

Long Answer Questions

Answer any THREE questions: ***[3 × 15 = 45]***

2. Why do you think that value maximization is an appropriate objective of the firm? Does it lead to maximization of the wealth of shareholders? Does an attempt by the management to maximize value of the firm benefit the society? Explain.

3. Nowadays, everyone is looking for a quick bite. At present there are many companies offering a variety of ready to eat snacks. But there have been many reports cautioning us about the unhygienic and unhealthy constituents in these snacks. The growing demand of snacks among youth and children and the absence of a healthier alternative, caught your attention. With the vision of providing better and healthier snacks you launched you own company "Healthy Snacks Pvt. Ltd". There are two mutually exclusive business proposals: Project A and Project B. You have to evaluate these proposals and find the better proposal.
Project A, the proposal of setting up company's own manufacturing plant involves initial investment of Rs 25, 00,000. Project B, the proposal of outsourcing the production to another firm, involves an initial investment of Rs 15,00,000. The market analyst forecasted the following cash flow estimates for two projects over four years of period.

Year	Cash Flow After Tax	
	Project A	**Project B**
1	Rs 9,00,000	Rs 7,00,000
2	9,00,000	5,00,000
3	9,00,000	3,50,000
4	9,00,000	400,000

Depreciation, salvage values, net working capital requirements, and tax effects are all included in these cash flows. Based on the subjective risk assessments, both projects have risk characteristics that require a return of 10 percent. You must now determine which of the projects should be accepted.

a. What do you mean by the payback period? Calculate the payback period for Project A and B. According to the payback criterion, which project do you accept? ***[4]***

b. What do you mean by the term net present value (NPV)? Determine the NPV of each project. According to NPV, which project should be accepted? ***[6]***

c. Define the term internal rate of return (IRR). What is each project's IRR? According to IRR, which project should be accepted? Explain. ***[5]***

4. Consider the probability distribution of alternative rates of return associated with Stock S and Stock T given in the following table

State of economy	Probability	Rate of Return	
		Stock S	**Stock T**
1	0.3	20%	0%
2	0.4	15	40
3	0.3	10	40

a. Calculate the expected return and standard deviation of Stock S and Stock T.

b. If you form a portfolio of Stock S and Stock T comprising 60 percent wealth in Stock S and the rest in Stock T, calculate the risk and return of your portfolio. Are you able to diversify the risk forming the portfolio?

c. Calculate risk minimizing weight of Stock S and Stock T. Compare risk and return of minimum variance portfolio with risk and return of the portfolio formed in part 'b'.

5. On January 1, 2018, the total assets of the Shikhar Company were Rs 270 million. The firm's present capital structure, which follows, is considered to be optimal. Assume that there is no short-term debt.

Long-term debt	Rs 135,000,000
Common equity	135,000,000
Total liabilities and equity	Rs 270,000,000

New bonds will have a 10 percent coupon rate and will be sold at par. Common stock, currently selling at Rs 250 a share, can be sold to net the company Rs 225 a share. Stockholders' required rate of return is estimated to be 12 percent, consisting of a dividend yield of 4 percent and an expected growth rate of 8 percent. Retained earnings are estimated to be Rs 13.5 million. The marginal tax rate is 40 percent. Assuming that all asset expansion (gross expenditures for fixed assets plus related working capital) is included in the capital budget, the rupee amount of the capital budget, ignoring depreciation, is Rs 135 million.

a. To maintain the present capital structure, how much of the capital budget must Shikhar finance by equity? How much of the new equity funds needed must be generated internally? Externally?

b. Calculate the cost of each of the equity components.

c. Calculate the WACC (1) below and (2) above the break in the MCC schedule. [4+5+6]

Group "C"

Short Answer Questions

Answer any FIVE questions: ***[5 × 5 = 25]***

6. What are the financing policies of current assets? How long-term and short-term funds are used under aggressive financing policy?

7. How do you measure business risk and financial risk? Explain.

8. Describe the concept of behavioural finance.

9. Himalayan Export Limited issued a 15-year, 10% annual coupon bond 5- years ago. Market interest rate since the bond issued had been increased significantly. Today, the market interest rate on similar risk class bond is 12%. What is the bond's current price? How does market interest rate affect the value of a bond?

10. Himalaya Herbal Company's common stock just paid a dividend of Rs 60 a share. The dividend is expected to grow at constant rate 6 per year for ever. Investors' required rate of return is 15 percent. Also calculate dividend yield and capital gain yield for the first year.

11. Mega Printing Company has the following shareholders' equity account:

Common stock (100,000 shares @ Rs 100)	Rs 10,000,000
Additional paid-in capital	5,000,000
Retained earnings	15,000,000
Shareholders' equity	Rs 30,000,000

The current market price of the stock is Rs 300 per share.

a. What will happen to this account and to number of shares outstanding if company declares a 20 percent stock dividend?

b. In the absence of an informational or signaling effect, what would be new selling price of common stock after the 20 percent stock dividend?