The Institute of Chartered Accountants of Pakistan

Business Finance Decisions

Final Examinations
Module F – Summer 2011

Reading time – 15 minutes

June 8, 2011
100 marks – 3 hours

Q.1 (a) GER Auto Parts Limited is engaged in the manufacture of automobile spare parts. GER's summarised financial statements for the year ended December 31, 2010 are as follows:

Balance Sheet

Equity and Liabilities	**Rupees**	**Assets**	**Rupees**
Share capital (Rs. 10 each)	1,250,000	Fixed assets	7,500,000
Reserves	5,250,000	Inventory	750,000
Long term debt	2,500,000	Receivables	875,000
Current liabilities	625,000	Cash	500,000
	9,625,000		9,625,000

Income Statement

		Rupees
Sales of 12,500 units		11,718,750
Variable costs		(7,812,500)
Fixed costs		(1,750,000)
Interest expense	(10%)	(250,000)
Profit before tax		1,906,250
Tax	(35%)	(667,188)
Net profit		1,239,062

Owing to competitive pressures, GER plans to reduce the prices of existing products by 6%. However, variable and fixed costs (excluding interest) are expected to increase by 5% and 10% respectively. Interest rate is floating and is expected to increase to 10.6% per annum.

Required:
Calculate the amount of sales that GER should achieve in the following year to enable it to maintain its existing total leverage. Show how this change would affect the operating and financial leverages. ***(07 marks)***

(b) GER's management is also considering to launch a new product. Based on market research, it has identified the following options:

	Option 1 **Product X**	**Option 2** **Product Y**
Investment required (Rs.)	3,000,000	7,000,000
Unit price (Rs.)	15,000	5,000
Fixed cost (Rs.)	200,000	300,000
Expected sales (units)	200	1,000
Variable costs (% of sales)	78%	73%

The management plans to invest in any one of these options. The investment would be financed through long term debt which is available at 12% per annum.

Required:
Calculate the impact of each of the above options on GER's operating and financial leverages for the year ending December 31, 2011. Which option would you recommend and why? *(You may assume that implementation of the above options would have no impact on the sales of existing products as computed in (a) above).* ***(08 marks)***

Q.2 The Trustees of FR Co-operative Housing Society are planning to invest its surplus funds in different open end mutual funds. Details of proposed investments along with market information gathered from a stock analyst are as follows:

	Mutual Funds		
	A	B	C
▪ **Information on proposed investment**			
Date of investment	1-Jul-11	1-Aug-11	1-Sep-11
Amount of investment	Rs. 500,000	Rs.1,000,000	Rs. 500,000
Estimated net asset value on acquisition	Rs. 10.50	Rs. 10.00	Rs. 9.70
Estimated net asset value as on December 31, 2011	Rs. 10.40	Rs. 10.00	Rs. 9.90
▪ **Expected dividends** *(during the investment holding period)*			
Cash dividend to be received	Rs. 9,500	Rs. 15,000	-
Bonus to be received	10%	5%	5%
▪ **Funds characteristics**			
Front end load (Buying load)	3.00%	2.00%	1.50%
Back end load (Selling load)	1.00%	0.00%	2.00%
Sharpe ratio	0.71	0.31	0.16
Correlation with benchmark indices	0.75	0.92	0.83
▪ **Expected performance of benchmark indices**			
Benchmark index	KSE 100	KSE 30	KMI 30
Total annual return %	16	17	12
Standard deviation of annual returns	0.10	0.18	0.13

The yield on 1-year treasury bills is 9%.

Required:

(a) Estimate the effective annual yield which FR would earn, from the date of investment up to December 31, 2011.

(b) In respect of each fund, evaluate whether it would achieve the return in accordance with its risk profile. ***(15 marks)***

Q.3 In order to reduce the cost of electricity consumption, HIN Textile Mills Limited has decided to install a gas generator and discontinue the power supply being obtained from a utility company. The gas generator which would meet their requirements would cost Rs. 80 million. The following two proposals are being considered by HIN:

Option 1: Offer from BAL Leasing Company Limited

BAL has offered a three year lease at a quarterly rent of Rs. 7.46 million payable in arrears. In addition, HIN would be required to pay a security deposit of Rs. 10 million at the time of signing the lease agreement. Generator will be transferred to HIN at the end of the lease term, against the security deposit.

The fair value of the generator, at the end of lease period is estimated at Rs. 20 million.

Operating and maintenance costs of the generator are estimated as follows:

Costs	Frequency	Rs. in million
Staff salary	Monthly	0.50
Lubricants and filters	Quarterly	1.00
Parts replacement	Half yearly	3.00
Overhaul	At the end of 2nd year	15.00

Option 2 : Offer from PUS Rental Services
PUS has also offered to sign a three year contract according to which HIN would pay quarterly rent of Rs. 11 million in arrears, with a 10% increase in each subsequent year. The lease rental would include the cost of maintenance and overhauling of the generator, which will be borne by PUS.

It may be assumed that HIN's cost of capital is equal to the IRR offered by BAL.

Required:
Evaluate which of the above proposals should be accepted by HIN. ***(Ignore taxation)*** ***(12 marks)***

Q.4 The management of JAP Recreation Club is evaluating the option to launch a restaurant that would serve complete meal to its members. Presently, it has a snack bar shop which sells snacks and drinks only.

A management consultant firm was hired at a fee of Rs. 85,000 to prepare the feasibility of the project. JAP's Accountant has extracted the following information from the consultant's report:

(i) The restaurant will be launched on the first day of the next year.

(ii) The club membership has been increasing at the rate of 5% per annum. As a result of this facility, it is expected that the rate would increase to 10% per annum.

(iii) The cost of equipment for the restaurant is estimated at Rs. 7,000,000. It would have a residual value of Rs. 510,000 at the end of its estimated useful life of four years.

(iv) It is estimated that during the first year, an average of 100 customers would visit the restaurant, per day. The number would increase in line with the increase in membership. The average revenue from each customer is estimated at Rs. 400 whereas variable costs per customer would be Rs. 260.

(v) Four employees would be appointed in the first year at an average salary of Rs. 200,000 per annum. A fifth employee would be hired from the third year.

(vi) The annual fixed overheads for the current year are estimated at Rs. 4.8 million. 15% of the fixed overheads are allocated to the snack bar. As a result of the establishment of the restaurant the annual expenditure would increase as follows:

	Rupees
Electricity and gas	340,000
Advertising	170,000
Repair and maintenance	85,000

After the establishment of restaurant, 20% of the overheads would be allocated to the restaurant whereas allocation to snack bar would reduce to 10%.

(vii) The snack bar is presently serving an average of 250 customers per day and the number is increasing in proportion to the number of members. If the restaurant is launched, the number of customers would reduce by 40% in the first year but would continue to increase in subsequent years in line with the member base. The average contribution margin from snack bar is Rs. 50 per customer.

(viii) The tax rate applicable to the company is 35% and it is required to pay advance tax in four equal quarterly instalments. JAP can claim tax depreciation at 25% under the reducing balance method. Any taxable losses arising from this investment can be set off against profits of other business activities.

(ix) JAP's post tax cost of capital is 17% per annum before adjustment for inflation. The rate of inflation is 10%.

Required:
Advise whether JAP should invest in the project. Assume that each year has 360 days. ***(16 marks)***

Q.5 ARA Venture Capital Limited specialises in acquiring loss making companies and converting them into profitable entities with the objective of disposing them subsequently.

Presently, ARA is planning to acquire 60% shareholdings in PUN Electric Supply Company. Its Financial Analyst has obtained the following information about PUN's operations:

(i) During the year ended December 31, 2010, total electricity demand and supply was Mwh 2.0 million, whereas the cumulative generation capacity of all the existing plants was Mwh 2.1 million. The demand for electricity is expected to grow at the rate of 5% per annum.
(ii) Cost of power generation per Kwh is Rs. 7 which is expected to increase by 8% per annum.
(iii) PUN's line losses for the year were 30%.
(iv) The Power Tariff Regulatory Authority has allowed PUN to determine the tariff so as to sell electricity at a margin of 10% above the average cost of generation. PUN is allowed to include line losses of up to 20% in the cost of generation. The price per unit is determined by the following formula:

(Total Cost + 10%) ÷ {Number of units produced × (1 – Permissible line losses %)}
where, one unit = 1 Kwh and 1 Mwh = 1,000 Kwh

(v) Revenue collection ratio for the year 2010 was 90% of the aggregate billing.
(vi) Other expenses, excluding depreciation and financial charges for 2010 amounted to Rs. 300 million and are expected to increase by 8% per annum.
(vii) Depreciation is charged on straight line method over the useful life of 20 years. Depreciation for the year 2010 amounted to Rs. 75 million.
(viii) PUN has running finance facilities of Rs. 3,000 million from various banks at an average mark-up of 13% per annum. The facilities utilized as of December 31, 2010 amounted to Rs. 2,785 million.
(ix) In order to meet the future requirements of electricity, PUN's management has already started work on a new generation plant that will be commissioned into operation by the end of 2012 and will increase the present capacity by 15%. Total cost of the new project will be Rs. 1,500 million and PUN had issued TFCs on January 1, 2011 at 14% per annum, to finance the project.
(x) The issued share capital of PUN as at December 31, 2010 consisted of 500 million shares of Rs. 10 each.

ARA intends to invest in PUN's infrastructure facilities to reduce line losses. It also plans to broaden the Recovery Department with the objective of improving the recovery ratio. The projected figures for the next five years are as follows:

Year ending December 31	2011	2012	2013	2014	2015
Capital expenditures (Rs. in million)	500	600	500	-	-
Additional staff cost in recovery department (Rs. in million)	15	17	18	20	22
Line losses	28%	25%	22%	20%	18%
Recovery ratios	92%	94%	96%	97%	97%

The planned capital expenditures would be incurred at the end of the year. ARA would provide a loan to PUN to finance the capital expenditures. The loan will be disbursed as required and carry a mark up of 10% per annum. It would be repayable on December 31, 2015.

In addition, ARA would provide guarantees to different banks to secure additional running finance facilities for PUN amounting to Rs. 8,000 million, at a mark up of 13% per annum.

ARA requires an IRR of 20% from its investment and expects to exit from this venture by selling its shareholdings at the P/E multiple of 16.

Required:
Determine the purchase consideration that ARA should be willing to pay for the acquisition of 60% shares in PUN. ***(Ignore taxation)*** ***(25 marks)***

Q.6 URD Pakistan Limited, a listed company, is presently considering to acquire 100% shareholdings of CHI Limited, an unlisted company, which is engaged in the same business.

The following information has been extracted from the latest audited financial statements of the two companies:

	URD	CHI
	----------Rs. in million----------	
Non-current liabilities – Term Finance Certificates	1,500	-
Share capital (Rs. 10 each)	400	200
Retained earnings	100	100
Net profit after tax	300	250

Tax rate applicable to both the companies is 35%.

The directors of URD believe that a cash offer for the shares of CHI would have the best chance of success. They are considering various options to finance this acquisition. The initial negotiations suggest that interest rate on debt financing would depend upon the debt equity ratio of the company as shown below:

Debt equity ratio (up to)	40:60	50:50	60:40	70:30
Interest rate	16%	17%	18%	20%

The shares of URD are currently traded at Rs. 52.50. According to the prevailing practice in the market, price earning ratios of unlisted companies are 10% less than those of listed companies.

Required:
Write a report to the Board of Directors, on behalf of Mr. Shah Rukh, the Chief Financial Officer of the company, discussing the following:

(a) Which of the following financing option should the company adopt?
  (i) The acquisition of CHI Limited is entirely financed by debt.
  (ii) The acquisition is financed by issue of debt and equity in the ratio of 60:40. The equity is to be generated by the issue of right shares at Rs. 45 per share.

(b) What other matters should be considered and what impact these may have on the decision arrived in (a) above? ***(17 marks)***

(THE END)