The Institute of Chartered Accountants of Pakistan

Business Finance Decisions

Final Examination	6 June 2012
Summer 2012	100 marks - 3 hours
Module F	Additional reading time - 15 minutes

Q.1 Mac Fertilizer Limited (MFL) is a listed company and is engaged in the business of manufacturing of phosphate fertilisers. MFL intends to diversify its operations by manufacturing and distributing steel products. This diversification would require an investment of Rs. 3,600 million for establishing the plant and meeting the working capital requirement. MFL plans to finance the investment as follows:

- 55% of the investment would be financed by issuing Term Finance Certificate (TFCs) carrying interest at 12% per annum and repayable in 2018.
- The balance amount would be generated by issuing right shares at Rs. 65 per share.

Extract of MFL's statement of financial position as at 31 December 2011 is given below:

Equity and liabilities	Rs. in million	Assets	Rs. in million
Share capital (Rs. 10 each)	7,000	Non-current assets	50,000
Retained earnings	23,000		
TFCs (Rs. 100 each)	28,000	Current assets	40,000
Current liabilities	32,000		
	90,000		90,000

The existing TFCs carry mark up @ 11.5% per annum and are due for redemption at par in 2016.

Currently, MFL's shares and TFCs are traded at Rs. 80 and Rs. 102.50 respectively. Equity beta of the company is 1.3.

The proposed investment has been evaluated at a discount rate of 17% which is based on existing cost of equity plus a premium that takes cognisance of the risks inherent in the steel industry. However, there are divergent views among the directors regarding the discount rate that has been used.

- Director A is of the view that the premium charged to reflect the risk in the steel industry is too low. He is of the opinion that the company's existing weighted average cost of capital is more appropriate discount rate for evaluation of this investment.
- Director B suggests that the discount rate should be representative of the steel industry. He has provided the following data pertaining to a listed company, Pepper Steel Limited (PSL).
  - 900 million shares of Rs. 10 each are outstanding which are currently being traded at Rs. 35.
  - Long term loan amounted to Rs. 8,000 million obtained from local banks at the average rate of 13%.
  - Equity beta of the company is 1.5.

You have been appointed as the Lead Advisor by an Investment Bank working on this transaction. You have obtained the following information:

Interest rate for 6-months treasury bills	8%
Market return	13%
Applicable tax rate for all companies	30%

Debt beta of MFL and PSL is assumed to be zero.

Required:
Compute the discount rate based on suggestions given by Directors A and B and discuss which suggestion is more appropriate. ***(19 marks)***

Q.2 CB Investment Limited (CBIL) has identified various projects for investments. Details of the projects are as follows:

Projects	A	B	C	D	E	F
Initial investment required now (Rs. in million)	(300)	(120)	(240)	(512)	(800)	(400)
Forecasted annual net cash inflows (Rs. in million)	150	50	140	256	440	300
Discount rate (based on risk involved in the project)	10%	11%	12%	11%	13%	14%
Project duration (years)	4	5	3	6	3	2
Year from which net cash inflows would commence	1	2	1	3	1	1

Other relevant information is as follows:
(i) Project A and B are mutually dependent and are non-divisible.
(ii) Project C can be scaled down but cannot be scaled up.
(iii) Project D, E and F are mutually exclusive. They cannot be scaled down but can be scaled up.

Total financing available with the company is Rs. 1,000 million. It may be assumed that all cash flows would arise at the beginning of the year.

Required:
Determine the most beneficial investment mix. ***(20 marks)***

Q.3 Beta Limited (BL) is engaged in the business of manufacturing and marketing of high quality plastic products to the large departmental stores in Pakistan and United Arab Emirates. BL is presently experiencing a decline in sales of its products. Market research carried out by the Marketing Department suggests that sustained growth in sales and profits can be achieved by offering a wide range of products rather than a limited range of quality products. In this regard, BL is considering the following two mutually exclusive options:

Option I : Introduce low quality products in the market

Following information has been worked out by the Chief Financial Officer of the company:

Net present value using a nominal discount rate of 13%	Rs. 82 million
Discounted payback period	3.1 years
Internal rate of return	10.5%
Modified internal rate of return	13.2% approximately

Option II : Import variety of plastic products from China

BL would buy in bulk from Chinese suppliers and sell it to the existing customers. The projected net cash flows at current prices after acceptance of this option are as follows:

	Year 0	Year 1	Year 2	Year 3	Year 4
Against import from China (US$ in million)	(25.00)	(20.00)	(21.33)	(22.33)	(20.67)
From operation in UAE (US$ in million)	-	22.47	24.15	25.23	23.37
From operations in Pakistan (Rs. in million)	-	333	350	414	450

The following information is also available:
(i) The current spot rate is Re. 1=US$ 0.0111.
(ii) BL evaluates all its investment using nominal rupee cash flows and a nominal discount rate.
(iii) Inflation in Pakistan and USA is expected to be 10% and 3% per annum respectively.

Tax may be ignored.

Required:
Evaluate the two options using net present value, discounted payback period, internal rate of return and modified internal rate of return. Give brief comments on each of the above methods of evaluation and their relevance in the given situation. ***For the purpose of evaluation, assume that BL has a four year time horizon for investment appraisal.*** ***(17 marks)***

Q.4 FF International (FFI) is considering the opportunity to acquire CS Limited (CSL). You have been appointed as a consultant to advise the FFI's management on the financial aspects of the bid.

The latest summarized annual financial statements of CSL are given below:

Summarized Statement of Financial Position

	Rs. in million
Total assets	5,000
Share capital	2,000
Accumulated profit	150
Long term loan	700
Short term loan	1,300
Other current liabilities	850
	5,000

Summarized Income Statement

	Rs. in million
Sales	1,000
Less: Cost of sales	(430)
Gross profit	570
Selling and administration expenses	(250)
Financial charges	(280)
Profit before taxation	40
Taxation	(14)
Profit after taxation	26

You have also gathered the following information:

(i) CSL produces a single product X-201 and has a market share of 30%. A market survey conducted to identify the impact of increase or decrease in price has revealed the following relationship between price of X-201 and market share:

Increase / (decrease) in price	Market share
(10%)	45%
5%	23%
10%	20%

(ii) In order to increase production, CSL would have to invest Rs. 150 million in plant and machinery which would be financed through long term loan on terms and conditions similar to those of the existing long term loan, as specified in point (v) below.

(iii) Fixed production costs amount to Rs. 100 million which include depreciation of Rs. 75 million.

(iv) 80% of selling and administration expenses are fixed. Fixed costs include depreciation of Rs. 25 million and salaries of Rs. 160 million. After acquisition, FFI expects to reduce the staff in sales and administration by making one-time payment of Rs. 100 million. It would reduce the department's salaries by 25% and the remaining fixed costs by 30%.

(v) Long term loan carries mark- up @ 15% per annum. The balance amount of principal is repayable in five equal annual instalments payable in arrears.

(vi) Mark up on short term loan is 14% per annum. CSL has failed to meet certain debt covenants and therefore its bankers have advised CSL to reduce the short term loan to Rs. 1,000 million.

(vii) It is the policy of the company to depreciate plant and machinery at 20% per annum using straight line method. Accounting depreciation may be assumed to be equal to tax depreciation.

(viii) Working capital would vary at the rate of 40% of increase / decrease in sales.

(ix) Tax rate applicable to both companies is 30% and tax is payable in the same year. CSL has unutilized carry forward tax losses of Rs. 80 million.

(x) All costs as well as sales are expected to increase by 10% per annum.

(xi) Free cash flows of CSL are expected to grow at 5% per annum after Year 5.

(xii) Based on the risk analysis of this investment, the discounting rate is estimated at 18%.

Required:

(a) Discuss any ***two*** advantages and disadvantages of growth through acquisition. ***(04 marks)***

(b) Determine the following:
- Optimal sales level at which CSL's profit would be maximised. ***(05 marks)***
- Amount of cash flow gap at optimal level of sales during the first five years of acquisition. ***(14 marks)***

(c) Calculate the bid price that FFI may offer for the acquisition of CSL assuming that cash flow gap identified in (b) above would have to be filled by FFI by way of an interest free loan. ***(07 marks)***

Q.5 Assume that the date today is 1 June 2012. Alpha Automobiles Limited (AAL) has imported CNG kits from Japan and has to repay an amount of JPY 175 million in three months time.

AAL intends to hedge the contract against adverse movements in foreign exchange rates and its foreign exchange exposures. The following data are available:

Exchange rates quoted on 1 June 2012

	JPY 1	
	Buy	**Sell**
Spot rate	Rs. 1.9223	Rs. 1.9339
One month forward rate	Rs. 1.9335	Rs. 1.9451
Three month forward rate	Rs. 1.9410	Rs. 1.9493

Interest rates available to AAL

	Borrowing	**Investing**
Japan	5%	3%
Pakistan	8%	5%

JPY currency futures

Futures have a contract size of JPY 100,000 and the margin required is Rs. 1,000 per contract. Contract prices (Rupee per JPY) are as follows:

	JPY 1
July 2012	Rs. 1.9365
October 2012	Rs. 1.9421
January 2013	Rs. 1.9490

The contracts can mature at the end of the above months only.

Currency options

Options have a contract size of JPY 250,000. The premiums (paisa per Rupee) payable on various options and the corresponding strike prices are shown below:

Strike price	**Calls**		**Puts**	
	31 July 2012	**31 October 2012**	**31 July 2012**	**31 October 2012**
Rs.	---------------------------**Paisas**---------------------------			
1.90	2.88	3.55	0.15	0.28
1.91	1.59	2.32	1.00	1.85
1.92	0.96	1.15	2.05	2.95

Options are exercisable at the end of relevant month only.

Required:

Illustrate **four** methods by which Alpha Automobiles Limited might hedge its currency exposure. Recommend which method should be selected. ***(14 marks)***

(THE END)