THE INSTITUTE OF CHARTERED ACCOUNTANTS OF PAKISTAN

Final Examinations Winter 2002

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BUSINESS FINANCE DECISIONS **(MARKS 100)**
Module F Paper F-19 **(3 hours)**

Q.1 Yaseen Textiles Ltd., a company listed on the Karachi Stock Exchange is evaluating a 100% acquisition of Yacoob Textiles (Pvt) Limited.

The relevant facts are as follows:

Yaseen Textiles Ltd. has been listed on the Stock Exchange for the last 5 years. Key extracts of its financial statements are as follows:

Rs million

Sep 30	1998	1999	2000	2001	2002
Paid-up Capital (Par Value Rs 10 per share)	100	100	100	100	100
Reserves	100	130	160	150	120
Borrowings	150	150	150	150	150
Financial Charges	27	27	27	27	27
Earnings after tax	75	80	80	40	20

In 1998, Yaseen Textiles Ltd had issued a Term Finance Certificate of Rs 150 million, paying profit at the rate of 18% per annum, which is to be redeemed in its entirety on December 31, 2002. Currently, the TFC is being traded at 20% premium on the secondary market.

The Beta factor of Yaseen Textiles Ltd is 1.5 and the market risk premium of shares is 6%. The shares of Yaseen Textiles Ltd. are currently trading at a Price Earnings multiple of 4.5, which has increased over the last 6 months due to increase in the value of the Stock Market.

Yaseen Textiles Ltd's has traditionally been selling to the export market. However, the requirements of Yaseen Textiles Ltd.'s key buyers have changed in response to changing fashions in the West, and they now require cotton and polyester weave fabrics. However Yaseen's machinery is not able to produce the high quality of blended fabrics that is required. Consequently, it has begun selling its traditional pure cotton fabrics in the domestic market at much reduced prices. This has resulted in the reduction in its profitability over the last 2 years.

The owner of Yacoob Textiles (Pvt) Ltd. wishes to sell his business and retire from active working life due to health reasons. However he wishes to sell his business as a going concern in order that his employees, who have been very loyal to him for many years, are not left without a job. Yacoob Textiles (Pvt) Ltd. has traditionally been producing fabrics for the domestic markets, but had made a strategic intent to venture into export market as well. Therefore it recently acquired a plant that manufactures blended fabrics to international standards. However due to its new presence in international markets its export sales are still insignificant.

The extracts of Yacoob Textiles (Pvt) Ltd. financial statements for the year ended September 30, 2002 are as follows:

	Rs. in million
Paid up capital (par value purchase Rs.10)	50
Reserves	25
Borrowings	25
Earning after tax	25

The Price Earnings Ratio of two other companies that manufacture and sell blended fabrics in the international and domestic markets are 8 and 7.

The due diligence commissioned by Yaseen Textiles on Yacoob Textiles (Pvt) Ltd. has revealed the following items not included in the accounts or in the cash flow projections:

- A local debtor has become bankrupt and it is unlikely that Yacoob Textiles (Pvt) Ltd. will be able to recover its outstanding loan of Rs 3 million.
- A former employee has recently won a judgment in court for unfair dismissal, with a penalty awarded of Rs 2 million.
- Credit sale of Rs 2 million has been incorrectly recorded, against stock samples costing Rs 1.5 million sent for exhibition in Europe.

The extracts of next 5-year projections of Yacoob Textiles Ltd are as follows:

Rs million

September 30	**2003**	**2004**	**2005**	**2006**	**2007**
Earning after tax	40	45	50	55	60
Depreciation	20	20	20	20	20
Capital expenditure	10	10	75	25	25
Provision for doubtful debt (Balance Sheet)	0	0	5	5	5
Working capital (Balance Sheet)	3	6	9	12	15

Assume no adjustments to pre-tax profit for tax purposes. After 2007, cash flows shall be Rs 40 million in perpetuity.

After acquisition of Yacoob Textile (Pvt) Ltd. there will be synergies of Rs 10 million per annum through reduction of 10% of the combined work force. Also, 50% of the capacity of the Yaseen Textile Ltd. will become redundant after the acquisition. This capacity can be sold in the open market for Rs 30 million, whereas its current net book value is Rs. 40 million.

Assume the following present value factors:

Year 1	Year 2	Year 3	Year 4	Year 5	Annuity
0.886	0.785	0.696	0.617	0.547	4.262

The Corporate Tax Rate is 35% and the rate offered on government securities is 10%.

Required:

(a) Calculate the cost of capital, applying the Capital Asset Pricing Model of Yaseen Textiles Ltd., for determining the acquisition price of Yacoob Textiles (Pvt) Ltd. **(04)**

(b) Determine the value of Yacoob Textiles (Pvt) Limited based upon the following techniques:

i. Price Earnings Multiple **(02)**
ii. Break-up value **(04)**
iii. Discounted Cash Flows without considering synergies, and using the weighted average cost of capital **(06)**
iv. Briefly state the merits and demerits of each of the above valuation methods **(06)**

(c) Discuss the options that Yaseen Textile Ltd. has for raising financing for the acquisition. Calculations are not required **(06)**

Q.2 Amir has bought a call option to purchase shares in Jeewan Fibres Ltd. with a strike price of Rs 50. The premium paid by Amir was Rs. 5. Determine if Amir should exercise the option and the potential gain or loss to Amir when the strike price is:

i. Rs 60
ii. Rs 45
iii. Rs 50 **(03)**

Q.3 Following are the details of non-performing advances of a bank:

Company	Facility	Outstanding Principal	Outstanding interest	Overdue since
		(Rupees in	million)	
A Ltd	Short-term loan	20	2	300 days
B Ltd	Long-term loan	25	1	one year
C Enterprises	Long-term loan	12	0.5	2 ½ years
D & Co	Long-term lease	10	0.5	365 days

The facilities of A Ltd and B Ltd were restructured a year ago when both the facilities were 2 years overdue. D & Co has not paid lease rentals of Rs 1 million since last one year. Bank holds following securities against each facility:

Company	Nature of Security	Market value	Forced sale value
		(Rupees in million)	
A Ltd	Shares of listed co's	2	2
	Mortgaged property	20	14
B Ltd	Hypothecation of stocks	25	20
C Enterprises	Mortgaged property	12	9
D & Co	Leased assets	12	8

Assume that all interest amounts are already held in suspense.

Required:

You are required to calculate the provision required under the Prudential Regulations. **(10)**

Q 4 To meet the current shortfall in the demand and supply of power in the city, your city government is considering foreign investment to set up 200 Megawatt power generation unit. There are three foreign power companies which are interested in the project. The project shall be awarded to the company with good track record of power generation having sufficient resources to set up and run the project for 10 years. The project shall run on fuel-based diesel engines using heavy furnace oil to be imported from Middle East.

The project needs capital investment of US$ 200 million which shall be arranged by the company running the project. The debt equity ratio allowed for this project is 80:20. The company shall be entitled to repatriate dividends and equity, however, the equity shall only be repatriable at the end of 10^{th} year. The income of the project shall be exempt from all taxes. The government intends to fix a price of electricity to be purchased from the company for 10 years which shall yield a return on equity of 10% (in US$ terms). At the end of 10^{th} year the government shall take over the project upon payment of equity amount to the foreign owners.

Based on the forecast, the government shall be able to buy 80% of the yearly electrical output of the project. The output to be bought is estimated to be 1,401,600 Megawatt Hours (MwH) per annum. Therefore the government shall guarantee the purchase of 1,401,600 MwH per annum.

The price to be paid per Megawatt Hour of electrical output purchased from the company shall be split into three components, which are as follows:

- Base Rate
- Fuel Rate
- O&M Rate

Base Rate shall repay the capital investment plus returns thereon whereas the Fuel and O&M Rates shall pay the cost of fuel and running costs of the project respectively. All of these rates shall be denominated in US$.

Based on the risk profile of the project, it is estimated that the company shall be able to raise foreign debt @ LIBOR plus 2 % p.a. The principal should be repayable in 10 equal yearly instalments together with yearly interest payments.

Current prevailing rate of LIBOR is 3% p.a. which is expected to grow in future. To protect the company from any adverse movement in LIBOR, the company could hedge its interest rate risk at a cost of 2% p.a.

Fuel Rate is based on the cost of furnace oil which has 90% positive correlation with crude oil prices. The cost of furnace oil is currently US$160 per ton. If the plant is kept in good condition, one ton of furnace oil produces 5 MwH electrical output. Fuel Rate shall be determined every year with reference to the average price of Gulf Crude Oil quoted in Dubai during the year compared with the price of Gulf Crude Oil on Jan 1 of year 1.

The estimates for the running cost of the project for the first year are as follows:

	Rupee based	**US$ based**
Salaries and allowances	5,000,000	500,000
Spares and stores	2,000,000	800,000
Lubricants costs	200,000	50,000
Plant upkeep	2,400,000	-
Office running expenses	2,400,000	-
Others	2,300,000	-

The above cost structure shall remain valid during the period of 10 years. Yearly O&M Rate shall be indexed in line with the movement in average yearly Pakistan CPI Index and average yearly US CPI Index with reference to these indices on Jan 1 of year 1.
Current exchange rate of US$ / Rupee is 60.

Required:
The government has hired you as a consultant for this project. Using the above information and cash flows, you are required to work out the following:

a)	WACC of the project	**(03)**
b)	Base rate/MwH using the 10 year cash flows relating to capital investment (in US$)	**(08)**
c)	Cost of furnace oil/MwH (in US$)	**(03)**
d)	Fuel rate/MwH formula considering the future variations in Gulf Crude oil prices through indexation	**(02)**
e)	Project Running Cost/MwH (in US$)	**(02)**
f)	O&M rate/MwH formula considering the weighted average future variations in respective CPI indices and foreign exchange parity between Rupee and US$ through indexation	**(02)**

(Ignore the effect of depreciation in your workings)

Q 5 Following are the balance sheets and profit & loss accounts of two competitor companies:

Balance Sheet	**Chand Ltd**	**Moon Ltd**
	(Rs in thousand)	
Assets		
Cash and marketable securities	68,332	142,558
Trade debtors	39,550	75,680
Stock in trade	195,588	40,995
Net long term assets	12,350	22,450
Total assets	315,820	281,683
Liabilities		
Short term bank loans	55,320	20,500
Creditors	56,660	23,520
Accrued liabilities	34,680	18,440
Long term debt	22,230	44,590
Total liabilities	168,890	107,050
Shareholders' equity		
Share capital	92,000	95,000
Retained earnings	54,930	79,633
	146,930	174,633
	315820	281683
Profit & Loss account		
Sales	700,800	750,400
Cost of goods sold	563,333	623,980
Gross margin	137,467	126,420
Selling and administrative expenses	51,908	61,798
Depreciation	6,300	6,680
Miscellaneous expenses	8,244	14,770
Profit before interest & tax	71,015	43,172
Interest on short term loan	5,532	2,050
Interest on long term loan	2,680	4,019
Profit before tax	62,803	37,103
Taxation	22,140	13,080
Profit after tax	40,663	24,023

Tax rate applicable on the companies is 35%.

Required:

Calculate the relevant ratios of the two companies.

i) As a supplier, which company you would like to extend credit to?
ii) As a credit manager, to which company you would be willing to grant a short-term facility?
iii) As a banker, to which company you would be most likely to extend long term loan?
iv) As an investor, in which company's share you would like to invest? **(20)**

Q.6 Jabbar Ltd is considering whether to accept one or two major new investment opportunities, Project 1 and Project 2. Each project would require an immediate outlay of Rs 50 million and Jabbar Ltd. expects to have enough resources available to undertake only one of them.

The finance manager of the company believes that returns from existing activities and from the new projects will depend on which of three economic environments prevails during the coming year. (that is cash flows to be received at the end of the year plus project value at that time) and the probabilities of the three possible environments, are as follows:

	X	Y	Z
Probability of environment	0.3	0.3	0.4
	Rs 000	Rs 000	Rs 000
Returns from Project 1	75,000	50,000	100,000
Returns from Project 2	60,000	55,000	45,000
Aggregate returns from existing portfolio of projects	50,000	40,000	70,000

The company has a current market value of Rs 100 million. The finance manager believes that the risk and returns per Re of market value of their existing activities are similar to those for the stock market as a whole, including their dependence on whichever economic environment prevails. The current rate of interest on government securities is 6%.

Required:

a) Use the capital asset pricing model to prepare calculations showing which, if either, of the two proposed projects should be accepted. **(15)**
b) State the drawbacks of the Capital Asset Pricing Model? **(02)**
c) State the advantages of the Capital Asset Pricing Model? **(02)**

Ignore inflation and taxation

(THE END)