THE INSTITUTE OF CHARTERED ACCOUNTANTS OF PAKISTAN

Professional Examinations Summer 2002

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STRATEGIC FINANCIAL MANAGEMENT **(MARKS 100)**
PE-2 (PAPER-2) **(3 hours)**

Q.1 Mingora Limited wants to change the firms credit policy from 2/10,n30 to 2/10,n40 effective July 1, 2002. The company is confident that the proposal relaxation will result in a 20% increase over the otherwise expected annual sales of Rs. 403,468 with the old policy. All sales are made on credit. The historical payment pattern under the present credit terms are as follows:

- 45% of customers take advantage of the discount and pay off their accounts in 10 days.
- 53% of customers forgo the discount, but pay off their accounts in 30 days.
- The remaining 2% of customers pay off their accounts in 100 days.

Mingora expects that under the new credit policy:

- 45% of customers will still take advantage of the discount and pay off their accounts in 10 days.
- 52% of customers will forgo the discount and pay off their accounts in 40 days.
- 3% of customers will pay off their accounts in 100 days.

Bad debt expenses are expected to rise from 2 percent to 3 percent with the change in credit policy. Assume (i) any increase in the current assets will be financed by short-term finance at an interest rate of 6 percent; (ii) long-term interest rate is 8 percent; (iii) income tax rate is 40 percent; (iv) cost of capital for Mingora is 10 percent (v) cost of goods sold and other operating expenses are Rs.214,560 and Rs.86,458 respectively under the old policy.
The projected balance sheet items (other than Accounts Receivable) under the old policy would be as follows:

	Rs.		Rs.
Cash & marketable securities	130,626	Accounts payable	52,372
Inventory	42,906	Short term finance	604
Plant & equipment, net	185,965	Long-term debt	30,068
Share capital	70,000	Share premium	64,200
Retained earnings	167,014		

Also assume that the cost of goods sold and other operating expenses in the income statement and all current assets and current liability items vary directly with sales. Ignore interest on Additional Funds Needed (AFN).

Required: (a) Develop projected income statements and balance sheets under the old and new policies **(10)**

(b) Calculate the incremental cash flow for the year 2002-2003. **(04)**

Q.2(a) The Yaqeen Limited optimal capital structure calls for 40% debt and 60% common equity. The interest rate on its debt is a constant 12%; its cost of equity from retained earnings is 16%; the cost of equity from new issue of share capital is 18%; and its tax rate is 40%.

Yaqeen has the following investment opportunities:

Project	**Cost Rs.(M)**	**IRR**
1	5	22%
2	5	14%
3	5	11%

Yaqeen expects to have net income of Rs.7 million.

Required: If Yaqeen bases its dividends on the residual policy, what will its pay out ratio be? **(10)**

Q.2(b) Gulzar Company is just starting operations. The firm will produce Alpha which will sell for Rs.88 each. Fixed cost are Rs.2 million per year, and variable costs are Rs.8 per unit of production. The company expects to sell 31,250 Alpha per year, and its effective tax rate is 40 %. Gulzar needs Rs.2 million to build production facilities, obtain working capital and start operations. If Gulzar borrows part of the money, the interest charge will depend on the amount borrowed as follows:

Amount borrowed (Rs)	Debt in capital structure %	Interest rate on Total amount borrowed %
200,000	10	8.00
400,000	20	8.50
600,000	30	9.00
800,000	40	14.00
1,000,000	50	18.00
1,200,000	60	25.00

It is expected that Gulzar can sell its shares at a price of Rs.20 per share on the initial offering, regardless of how much debt the company uses. However, once it commences operation, its price will be determined as a multiple of its earning per share. The multiple (or the P/E ratio) will depend on the capital structure as follows:

Debt/Assets	P/E
0.0	12.5
10.0	12.0
20.0	11.5
30.0	10.0
40.0	8.0
50.0	6.0
60.0	5.0

Required: What is Gulzar's optimal capital structure, which maximises share price, as measured by the debt/assets ratio? **(10)**

Q 3 Jays Ltd is considering to develop a new product. Following are the figures relating to its feasibility:

Initial investment	Rs 10 million
Sales volume (per annum)	30,000 units
Sales revenue (per annum)	Rs 15 million
Product life	3 years
Variable cost	Rs 200 per unit
Fixed cost (per annum)	Rs 3 million

Jays Ltd's cost of capital is 12%, calculate Jays Ltd sensitivities to various variables in the product using NPV method. Also mention the factor to which the product is most sensitive. **(12)**

Q 4 Style Marketing Ltd is considering two proposals for acquisition of five cars for its marketing executives on lease. The cost of one car is Rs 1.25 million. The company has a policy to terminate the lease at the time the executives are relocated to other offices. The proposals are as follows:

Unicorn Leasing:

Lease term	3 years
Rental payments	quarterly in advance
Security deposit	10% of cost of cars to be adjusted against sale proceeds of the car at the end of lease term
Quarterly Rentals	Rs 123,400 per car
Early termination clause	Early termination penalty @ 10% of outstanding principal. Further, security deposit shall not be refunded. The lease can be terminated any time after the first quarter

Alps Leasing:

Lease term	3 years
Rental payments	quarterly in advance
Security deposit	10% of cost of cars to be adjusted against sale proceeds of the car at the end of lease term
Quarterly Rentals	Rs 124,220 per car
Early termination clause	The terminal value of the car would be the value of all the remaining rentals discounted at the rate which is $1/4^{th}$ of the IRR. Further, security deposit shall not be refunded. The lease can be terminated after payment of 2 rentals

Required: If two of the executives of Style Marketing are relocated after 18 months and their leases are terminated at no other gain/loss on termination except as mentioned above.
Calculate company's effective IRR on the transaction for all 5 cars for both the options and compare them to work out the best option. **(12)**

Q 5 Daimaru Company Ltd, a leading car manufacturing company is considering to build a new type of luxurious car Costa VX. Costa VX will have a new aero-dynamic design with a new technology which will decrease fuel consumption by $1/3^{rd}$ as compared to the existing models in the market. The target launch date for Costa VX is Jan 1, 2004. The initial study has shown the following important figures as at Jan 1, 2002:

i)	Designing research cost		Rs 60 million
ii)	Technological research cost		Rs 120 million
iii)	Cost of moulds and shifting of production lines to suit Costa VX		Rs 60 million
iv)	Manufacturing cost (material labour and Overheads including admin overheads)		Rs 300,000 per car
v)	Average selling and distribution cost		Rs 20,000 per car
vi)	Advertising and publicity cost		
	First 2 years starting 2003	-local market	Rs 50 million per annum
		-foreign market	US$ 1 million per annum
	Subsequently	-local market	Rs 20 million per annum
		-foreign market	US$ 250,000 per annum

The timing of cash flows of above costs are as follows:
(i) and (ii) equally from Jan 1, 2002 till June 30, 2003.
(iii) during the third quarter of 2003.
(iv) and (v) equally during the years of manufacturing of cars.

All the above cash flows are evenly distributed throughout the year occurring at the beginning of the each quarter.

It is estimated that the production time for each car will be one week, although the manufacturing of the first batch shall start during the last month of 2003, however, it may be assumed that its cash flow will occur on Jan 1, 2004. The production and sale of cars is also evenly distributed throughout the year.

To finance the project, the company will arrange six year term loan of US$5 million @ 6% per annum, payable quarterly at the beginning of each quarter, to be acquired on Jan 1, 2004. The loan shall be repaid on December 31, 2009. The current US$/Rupee exchange rate is Rs 60.

The principal amount of term loan will have to be hedged during the first three years after which the export sale revenue shall provide natural hedging to the loan. The company uses forward contracts to hedge its foreign currency exposure. The cost of hedging during the first three years is estimated to be 10% per annum. The cost of hedging should be calculated with reference to the average exposures required to be hedged, which are as follows:

1st year	US$ 5.0 million
2nd year	US$ 4.5 million
3rd year	US$ 4.0 million

Based on the initial study it is estimated that the company will be able to sell 6,000 cars per annum. The life cycle of Costa VX in the local market is expected to be three years after which the export market will compensate for the drop in local market for the next three years. After six years it will take major changes in the basic model which will require fresh investment.

The company expects to make profits of Rs 100 million before tax each year during the six years life of the product. Assume that the company uses 20% rate of return to discount its similar projects.

Required: Calculate the price of the car to be determined on January 1, 2004 using NPV method. **(22)**

Q 6. Pakistan Post Office (PPO) the state owned postal service in the country is considering a proposal to replace its existing manual processes with computerized systems, which will include automated sorting of mails and parcel tracking system. This will involve heavy investment in IT, which will phase-out the existing manual operations in two years time. Based on a study conducted by independent consultants last year, the amount of estimated loss to PPO due to lack of efficient services is Rs 250 million per annum. The main reasons for this loss are:

- loss of business to other efficient postal/courier companies
- low productivity
- high staff cost

The IT budget proposal submitted to the Chairman for approval showed an expenditure of Rs 1.2 billion in two years time. The Chairman has turned down the proposal with the remarks that the cost is too high.

Required: You, being the Finance Director of PPO, are required to prepare a report (in form of an office memo) to the Chairman justifying the investment in IT. Your report must include the following:

- Significance of technology in postal/courier industry
- Importance of Information System/IT strategy in an organisation
- IT strategy of PPO
- SWOT analysis in favour of investment in IT **(20)**

(THE END)