THE INSTITUTE OF CHARTERED ACCOUNTANTS OF PAKISTAN

Final Examinations Summer 2004

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BUSINESS FINANCE DECISIONS

(MARKS 100)
(3 hours)

Q.1 Swat Cottages was in the business of providing low cost cottages to families who arrive for vacations in Swat. The company decided to introduce this concept to the Kaghan Valley too. In this regard it decided to invest in building cottages adjacent to the Kaghan river. However due to cash flow constraints it was not possible for it to build the cottages on its own. Thus it decided to rent mobile cottages from Mobile Home Company.

Mobile Home Company agreed to provide them the requested cottages at a reasonable rate of Rs. 3000 per week. However the company should know latest by early Saturday morning how many mobile cottages Swat Cottages would require in the following week. Swat Cottages, has decided to charge Rs. 3500 a week as rent for these cottages.

The basic problem arises as to how many cottages should the company order. Should it order 10 (considered minimum), 11, 12, 13 or 14 (considered maximum).

An analysis of its prior experience of 200 weeks in the Swat Valley yielded the following:

No. of cottages rented	No. of weeks
10	26
11	50
12	60
13	44
14	20
	200

Required:

Being the Financial Controller of Swat Cottages, the Chief Executive Officer has requested you to advise him as to how many cottages should be ordered to maximize the profit for a year. **(10)**

Q.2 Buyout Limited is involved in managing a small airport under license from the government to allow traffic of small propeller aircrafts in the area. Major investors group of the company has decided to dis-invest from this business which has resulted in an opportunity for the management buyout. The arrangement is to sell all the facilities to the MBO team. However, the operating license will be leased to MBO team for an irrevocable term of 20 years against an annual payment. This payment for the first year of operations will be Rs. 750,000 and will thereafter be adjusted to the level of revenues earned in every year in relation to the revenues earned in first year.

Profit and loss account of the company for the latest year is given hereunder:

	Note	Rs.'000
Revenue from		
- landings	1	11,863
- aircraft parking	2	684
- other services	3	450
		12,997
Operating costs	4	(8,899)
Profit before interest		4,098

The following further information is available:

1 The airport is operating throughout the year with 5 flights landing per day. An amount of Rs.6,500 is charged as 'landing fee' per flight. This fee is regulated by the government and a 3% increase is allowed every year. The average number of aircrafts landing per day is expected to become 6 from year 3 and 7 from year 5.

2 An aircraft is parked for an average of half an hour before re-flying. A fee of Rs. 750 per hour is charged for parking. This rate is expected to remain constant.

3 This represents the revenue from general maintenance services performed for the aircrafts. Revenue from such services is expected to grow at a rate of 10% p.a.

4 Operating costs include a fixed portion of Rs.5 million. Remaining costs are a function of revenue. An amount of Rs.1.20 million is included in fixed costs representing charge of senior management which can be outsourced for Rs.750 thousand per year after the buyout by MBO. Fixed costs are expected to grow at a rate of 5% p.a. other than the amount of depreciation which, for the given year was Rs. 1 million. A capital replacement of Rs. 3 million is required at the end of year 3 which will result in depreciation expense increasing by Rs.350 thousand per annum from year 4.

5 Taxation rate is expected to remain at the current 35% for the foreseeable future.

A price of Rs. 40 million has been agreed between the representatives of the management employees (MBO team). The funding has been arranged as follows:

	Rs '000	
Equity		
MBO Team	5,000	
Other Investors	2,000	
Total equity	7,000	
Debt		
Long Term	13,000	Term – 20 years @ 8.50% p.a. repayable from the end of year 11 in ten equal principal installments. The loan will be payable in full at the end of 5th year if the company fails to achieve a debt to equity ratio of 1:1 by then.
Medium Term	15,000	Term – 10 years @ 7.50% p.a. repayable from the end of year 2 i.e. after a grace period of one year. Repayment being 5%, 10%, 15% and 20% of principal for the first four repayments and then 10% of principal per year for 5 years.
Bridge Financing	5,000	Term – 5 years @ 9% p.a. Repayable in five equal principal installments from the end of first year.
Total Debt	33,000	
	40,000	

Required:

Demonstrate, taking into account the cash position, whether the MBO team will be able to meet the covenants attached with the Long Term Loan. **(20)**

Q.3 Gearing is an important consideration for the lenders. List and briefly explain how imposing covenants as to gearing can address a lender's risk. **(05)**

Q.4 Multi Branch Company (MBC) is an entity involved in the import of products from U.K. and Singapore to Karachi. For convenience in business operations, it operates through branches in London and Singapore. The company has to keep funds available in liquid form at all three locations to meet its daily requirement of expense payments.

MBC has a policy of being very conservative about exposing itself to non-ability of payment in time, and hence has been following the below mentioned policy at all three branches.

An analysis of average cash payments is made alongwith the variation of these payments from the average. Free cash is kept with a current account to be enough to meet the sum total of the average daily payments and three times the deviation from the average. The latest average and deviation data is as follows:

Branch	**Currency**	**Mean Variation from Average (Standard Deviation)**	**Average Daily Payments**
Karachi Branch	Rs.	95,475	361,725
London Branch	£	375	1,575
Singapore Branch	S$	2,671	3,970

British Pounds and Singapore Dollars have a coefficient of correlation of 0.13 in their exchange rate movements. No such correlation exists between Rupee and British Pounds or Rupee and Singapore Dollars.

Information about current interest rates and exchange rates is:

Currency	**Interest Rate %**	**Exchange Rate – Rupees per currency**
Rs.	8.00	N / A
£	5.30	114.50
S$	6.70	33.50

MBC is exploring the opportunities of combining the above three different branch balances into one account with a multi national bank whereby the free cash will be kept in a Rupee based account in Karachi Branch, and instructions will be issued to the banker's London or Singapore Branch to release payments to the respective branches of MBC whenever required. This policy is not expected to expose MBC to any significant change in its foreign currency exposure as it already has to meet foreign currency expenses at its London and Singapore Branch through its Rupee based revenues earned through Karachi Branch. In the newer scenario, the banker is to charge a transfer fee of 0.008% of the total amount routed through him for payments to London and Singapore Branch of MBC. In case the balances are combined, the standard deviation can be calculated by taking the square root of $(a^2x^2+b^2y^2+c^2z^2+2r_{xy}.ax.by+2r_{yz}.by.cz+2r_{xz}.ax.cz)$, where

- a,b,c are the respective weightages of the payments at the three locations
- x,y,z are the standard deviation relating to payments at the three locations
- r_{xy}, r_{xz} and r_{yz} represent coefficient of correlation between exchange rate movements.

Required:
Assuming a 5 day week, evaluate the new proposal for its financial viability and compute the annual savings MBC is expected to have from this new arrangement. **(10)**

Q.5 Following is the balance sheet of Working Capital Limited as at December 31, 2003.

	Rs.		Rs.
Share Capital	9,000,000	Fixed Assets	10,000,000
Reserves	839,400	Goodwill	5,000,000
		Short Term Investments	2,000,000
Term Loan (12%)	8,000,000	Stocks	2,500,000
Creditors	1,000,000	Debtors	2,000,000
Taxation payable	1,662,000	Cash	1,162,000
Dividend payable	2,160,600		
	22,662,000		**22,662,000**

Company's turnover for 2003 was Rs.28.0 million. Fixed costs were Rs.7,500,000. This amount includes depreciation of Rs.1,000,000 as per company policy and Goodwill, which is being amortized over a term of 10 years at Rs.1,000,000 per annum. Company is subjected to a taxation rate of 35% with tax being paid one year in arrears. Company has a policy of paying out 70% of its earnings in the form of dividends.

Sales are expected to grow by 20% in the next year with new machine installation requirements of Rs.6,500,000. This will boost depreciation expenses to be 50% more than it was in the current period.

Rs. 1,000,000 worth of term loan principal is payable every year on 31st December alongwith the interest. Further, 80% of the company's sales are on credit terms.

Required:
Assuming that ratio of sales to Creditors, Stock, Debtors and variable cost remain the same. Compute the increase in funding requirement of the Working Capital Limited for the year ahead. **(15)**

Q.6 Paposh Limited (PL) is known for their hand made leather boots which it manufactures and sells in two types viz. ankle boot and full boot. Sami and Akhtar who started PL five years ago own and manage the company. The boots are made in a workshop to the rear of PL's retail outlet. The direct labour workforce is skilled.

The key tasks to master are cutting, stitching and finishing. It takes approximately eighteen months to train an employee up to the standard required. Currently there is no one under training and PL plans to start training of new employees from the start of second year.

Sami and Akhtar are in the process of finalizing the production plan for the next two years. Among other problems they also face the short supply of leather in the first year and only have a quota of 8,888 square meters. From the next year leather would be in unlimited supply. The table below is a summary of key financial information per pair of boots:

	Ankle Boot (per pair)	**Full Boot** (per pair)
Leather used (square meters)	3	4
Cutting / stitching / finishing time (hours)	3	3
Sole material (Rs.)	95.00	95.00
Finishing material (Rs.)	5.50	14.50
Fixed costs (Rs.)	142.00	213.00
Selling price (Rs.)	920.00	1,050.00

PL also has a small amount of variable overhead to account for (such as power, consumables and postage). Sami estimates this at Rs. 10/- per direct labour hour.

PL can sell as many boots it manages to make. In the workshop it has three employees working full-time (a 40-hour week) and one other employee who works for 20 hours a week.

All four of these workers are on guaranteed weekly pay. They are paid on average Rs. 50/- per hour. You can assume a 50-week trading year for PL.

Fixed costs (ignoring workshop labour) have been applied to the three products on the basis of direct labour hours.

Leather is purchased in large skins – 30 square meters in size (of any colour) at the cost of Rs. 440/-. One-tenth of this on average is sub standard and it is therefore not used in boot production, but is sold as off cuts in the shop for Rs. 10 per square meter.

Required:

(a) For first year calculate the contribution margin in the following cases:

- If only ankle boots are produced;
- If only full boots are produced.

Also calculate the mix of products which would be most beneficial for PL. **(10)**

(b) For the second year calculate the mix of products which would be most beneficial for PL. **(03)**

Q.7 Your company is currently searching for avenues to invest its excess funds and has selected five stocks. You have gathered the following data from the stock broker:

Stock	Current Price	Expected Price after one year	Expected Dividend	Beta
	Rupees	Rupees	Rupees	
A	25	27	1.00	0.70
B	40	42	1.25	1.00
C	33	40	1.00	1.15
D	64	65	2.40	1.40
E	50	55	Nil	-0.30

The risk free rate of return is 8% and the return on market portfolio is 14%

Required:
The finance director has asked you to advise him regarding:

(a) the expected future rate of return on the stocks, and **(05)**
(b) whether the current share price overvalued, undervalued or at par. **(10)**

Q.8 Rehan Limited operates buses within the cities of Karachi, Lahore and Rawalpindi. For the purpose of expanding the business the management of Rehan Limited is considering the feasibility of starting inter city bus service between Lahore and Islamabad on motorway.

Accordingly, for the past two months Mr. Farooq – Managing Director of the company has been working with a management consultancy firm, drawing up a proposal for the board of directors. A summary of the proposal and the associated estimated costs and revenues are as follows:

(a) The bus service to be called Highway Express would commence its operations from January 01, 2005. It would be making six trips a day, three each from Lahore and Islamabad. One bus will do one trip per day which would take 6 hours (assume the distance to be 400 kilometers);

(b) The company would purchase six 50-seat buses at the cost of Rs. 1.50 million each. These 6-wheeler buses would have an estimated life of 5 years at the end of which it will be salvaged for Rs. 0.2 million each.

(c) Average fuel cost per trip will be Rs. 2,000/- with an increase of 4% per year.

(d) The company would be hiring bus terminal space in both the cities the expense of which would be Rs.10,000 per month.

(e) The driver, conductor and other support staff would be paid Rs.10,000 per month per bus with an annual increment of 10% per year.

(f) Advertising and marketing expenses would be Rs.15,000/- per month;

(g) Overheads amounting to Rs.20,000/- per month would be incurred;

(h) Apart from the above the Company estimates the following:

	2005	**2006**	**2007**	**2008**	**2009**
Average number of passengers per trip	30	30	35	35	40
Average repair and maintenance expense per bus per month (Rs.)	5,000	5,500	6,500	8,000	8,500
Price per ticket (Rs.)	120	130	135	135	140

The company charges depreciation on its vehicles over the period of 5 years on straight-line basis which is tax deductible. The tax rate applicable to the company is 35%. The company also replaces the tyres of its buses on every 72,000 kilometers. The cost of replacing the tyres is Rs.30,000/- per bus. For a number of years Rehan Limited has used a discount rate of 10% for any investment appraisal. You can assume that, unless otherwise stated all cash flows take place on the last day of each accounting period i.e. December 31.

Required:

Calculate the NPV of the proposal as at January 01, 2005 and advise the management accordingly. **(12)**

(THE END)