

FINANCIAL MANAGEMENT

Nov-Dec 2023

Time allowed- 3:30 hours

Total marks- 100

[N.B. - The figures in the margin indicate full marks. Questions must be answered in English. Examiner will take account of the quality of language and of the manner in which the answers are presented. Different parts, if any, of the same question must be answered in one place in order of sequence.]

Marks

1. Reza Ali has graduated from BUET and dreamed to start his own startup. Suddenly his father who was a successful entrepreneur in the area of household engineering items died and he became inheritance of BDT 3,000 mn.

Mr. Pallab who was the business partner of Reza's father offered him to invest his wealth into his business with a guaranteed return of 15% per annum. His investment will be entirely paid off at the end of 6th year along with 7% additional amount on initial investment.

This offer is so lucrative and certain that Reza is hesitant to decide whether he should be given up on his dream or taking a challenge to pursue his dream. His friend Usha who recently came back to Bangladesh after completing her post-grad from Harvard came up with the following business plan:

Saudi Arab (KSA) is a very good country for penetrating household engineering items as there are very few competitions over there. Following data has been gathered based on market research:

Initial investment to set up a manufacturing Company in KSA (Reza Electronics KSA, REKSA.) is:

In Saudi Riyal (SAR) ('000)

Description	Now	Year 1
Land	10,000	-
Building	7,500	15,000
Machinery	-	20,000
Working capital	-	27,500

Production and sales of REKSA will commence in Year 2 and is estimated at 15,000 units. An increase of 6,000 units is planned to be achieved by the end of Year 3. A further increase of 5,000 units is to be achieved at the end of Year 4 and then it is expected to remain at the same level for another 2 years until the operation is totally disposed of to a foreign company, due to expected outdated technology, for an estimated purchase consideration of USD 6.5 million (after tax realisable value) receivable at the end of Year 6. The working capital will be realised by REKSA at the end of Year 7, which will be free of tax.

The selling price and variable costs per unit have been estimated to be SAR 6,000 and SAR 3,300 respectively at current prices. Administrative, selling and distribution costs of REKSA will be maintained at 7.5% of the total contribution each year. Tax allowable depreciation in KSA on machines is at a rate of 20% per annum on the reducing balance method. No other assets will qualify for tax allowable depreciation. Income tax is payable on tax adjusted profits at a rate of 20%.

REKSA will be managed and controlled from Bangladesh by opening a Company in Bangladesh, Reza Electronics Bangladesh, REBAN which will be taxed at 22.5%. The operational costs of REBAN will be met from royalty revenue receivable from REKSA agreed at USD 25,000 per annum, remitted at the end of each year starting from Year 2 for a period of five years. The administrative and other expenses of REBAN have been estimated (at current prices) at BDT 1.0 mn in Year 2, BDT 1.5 mn in Year 3 and then at BDT 1.9 mn per year for another 3 years.

Inflation rates per annum and exchange rates for each of the next six years are expected to change in line with purchasing power parity (PPP).

	Bangladesh	KSA	USA
Current inflation rate	9%	3%	4%

Exchange rates

	BDT/USD	SAR/USD
Current inflation rate	110	3.75

Entire project will be funded from equity, that is no debt. The current beta factor for the same business in Bangladesh has been calculated as 1.0. The Saudi operation will have 20% higher risk profile. Reza

expects an extra 3% of return over his calculated cost of capital based on the Capital Asset Pricing Model (CAPM) for any local investments, and a further 2% for any investment that is exposed to exchange rate fluctuations. The risk free rate in Bangladesh is assumed to be 9% and the expected market risk premium is 3%.

As a full bilateral trade agreement exists between Bangladesh and Saudi Arab, there are no foreign currency exchange restrictions. Income tax is payable and capital allowance is receivable one year in arrears.

Requirements:

- a) i) Calculate the cost of equity (K_e) for local investor; 2
 - ii) Calculate NPV of proposal made by Mr. Pallab to invest in his business for a guaranteed return; 4
 - b) Calculate (1) SAR exchange rates (2) Working capital in SAR (3) Depreciation and tax benefit thereon in SAR (4) Purchase consideration in SAR (5) Royalty income in Taka (6) Royalty cost in SAR. 6
 - c) i) Calculate the cost of equity for foreign investment; 2
 - ii) Calculate the accounting profit after tax and Cash profit after tax for KSA operations; 4
 - d) Calculate NPV of the business proposal made by Usha; 5
 - e) Advise Reza which proposal he should accept with a view to maximizing his wealth. Also advise him what qualitative matters he should consider besides the numeric expected results. 4
2. Panama Limited has always maintained a policy of no gearing. Other companies in Panama's market sector have average gearing ratios (measured as debt/equity by market values) of 45%, with a maximum of 55%, and an average interest cover of 4 times, with a minimum of 2.5. The finance director of Panama is considering raising the BDT 100 crore by either a rights issue or by the company new borrowing and issuing debentures.

The details of the alternative sources of finance are as follows:

Rights Issue: The 100 crore would be raised by a 1 for 1 rights issue, priced at a discount on the current market value of Panama's ordinary shares.

Debt issue: The 100 crore would be raised by an issue of 8% coupon debentures, redeemable at par on 30 June 2029. The gross redemption yield would be based on the current gross redemption yield of other debentures issued by companies in the industry. One such company is Atlantic Ltd. Details for Atlantic's debentures are as follows:

- Coupon 7%
- The current market price on 30 June 2023 is BDT 112 cum interest
- Redemption at par on 30 June 2027
- Tenure is 5 years

Further information regarding Panama:

- The forecast pre-tax operating profit for the year ending 30 June 2023 is 220 million
- The corporation tax rate is 20%
- The current share price at 30 June 2023 is BDT 20 ex-div
- The number of ordinary shares in issue is 100 million

Requirements:

- a) Assuming 1 for 1 rights issue is made on 1 July 2023:
 - i) Calculate the discount the rights price represents on Panama's current share price. 1
 - ii) Calculate the theoretical ex-rights price per share. 1
 - iii) Is the actual share price equal to the theoretical ex- rights price? 1
- b) Alternatively, assuming debt is issued on 1 July 2023:
 - i) Calculate the issue price per debenture and total nominal value of the debentures that will have to be issued to give a yield to redemption equal to that of Atlantic's debentures. 3
 - ii) What is the validity of using the yield to redemption of Atlantic debentures in the above calculation? 1
- c) Calculate the gearing and interest cover ratios of Panama Ltd. Advise Panama's finance director of the advantages and disadvantages of raising 100 crore by debt or equity or a combination of the two. 4
- d) State the likely reaction of Panama's shareholders and the stock market. 2

3. a) How is it possible that dividends are so important, but at the same time dividend policy is irrelevant? 1
- b) The bird-in-the-hand argument, which states that a dividend today is safer than the uncertain prospect of a capital gain tomorrow, is often used to justify high dividend payout ratios. Explain the fallacy behind this argument. 2
- c) Despite the theoretical argument that dividend policy should be irrelevant, the fact remains that many investors like high dividends. If this preference exists, a firm can boost its share price by increasing its dividend payout ratio. Explain the fallacy in this argument. 2
- d) Shofiq owns Neotech stock because its price has been steadily rising over the past few years and he expects this performance to continue. Shofiq is trying to convince Sarah to purchase some Neotech stock, but she is reluctant because Neotech has never paid a dividend. She depends on steady dividends to provide her with income.
- i) What preferences are these two investors demonstrating? 1
- ii) What argument should Shofiq use to convince Sarah that Neotech stock is the stock for her? 2
- iii) Why might Shofiq's argument not convince Sarah? 2
4. a) SR Noman, CFO of Charming Tourist Ltd., has created the firm's pro forma balance sheet for the next fiscal year. Sales are projected to grow by 10 percent to Tk. 420 million. Current assets, fixed assets, and short-term debt are 20 percent, 75 percent, and 15 percent of sales, respectively. Charming Tourist pays out 30 percent of its net income in dividends. The company currently has Tk. 120 million of long-term debt and Tk. 48 million in common stock par value. The profit margin is 9 percent.
- i) Construct the current balance sheet for the firm using the projected sales figure. 4
- ii) Based on Mr. Noman's sales growth forecast, how much does Charming Tourist need in external funds for the upcoming fiscal year? 3
- iii) Construct the firm's pro forma balance sheet for the next fiscal year and confirm the external funds needed that you calculated in part (b). 6
- b) The Siam Company has an ROE of 13.1 percent and a payout ratio of 40 percent.
- i) What is the company's sustainable growth rate? 2
- ii) Can the company's actual growth rate be different from its sustainable growth rate? Why or why not? 3
- iii) How can the company increase its sustainable growth rate? 2
5. a) A bank has quoted the following rates for dealing Forward Rate Agreements (FRAs):
- | | Bid | Offer |
|-------|------|-------|
| 3 v 6 | 6.59 | 4.56 |
- It is 24th September and your company wants to fix an interest rate for borrowing US\$ 1 million for three months from 24th December.
- Requirement:**
- What is the payment to be made on the FRA if the company entered a 3 v 6 FRA with a bank, assuming that interest rates rises to 7.65% from their current level of 4.5% 5
- b) ZN Ltd has a fixed rate of loan of Tk. 10 million at 14% , which must be redeemed in one year. The company is considering an interest rate swap with MM Ltd, which has a floating rate of loan of the same size at SOFR plus 1%. If the swap goes ahead, MM Ltd will pay ZN Ltd 13% and ZN Ltd will pay MM Ltd SOFR plus 1.5%. ZN Ltd could issue floating rate debt of SOFR plus 2% and MM Ltd could issue fixed rate debt at 13.5%
- There would be legal fees of Tk. 10,000 for each company if the swap is made.
- Requirements:**
- i) Would the swap benefits ZN Ltd (a) if SOFR is 12% for the next year and (b) if SOFR is 12% for the next six months, and 10% thereafter? 6
- ii) Could an alteration in the terms of the swap make it beneficial to both companies? Any benefits would be shared equally between them? 4

6. a) A company has just sold a computerized manufacturing systems to a Japanese car maker for 4,680 million yen receivable in three months' time. The company does not wish to bear the risk of fluctuating exchange rates and therefore intends to hedge the transaction on the forward exchange market at the following rates:

Spot	234.46 - 234.78 yen/Tk
Three months forward	2.72 - 2.56 yen premium

Requirement:

What amount of Taka will be received in three months' time?

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- b) Khulna Ltd has various long term investment in the USA

An extract from its balance sheet at 31 December 2022 is as follows. The exchange rate at that date was Tk. 92/US\$

	Tk.'000
Bangladesh assets	60,000
Overseas assets: US\$ 1 million @ Tk. 92/US\$	92,000
	152,000
Bangladesh loan	(110,000)
Net assets	42,000

Requirements:

- i) Determine the impact on the company's gearing if the exchange rate moved to Tk. 105/US\$ and reduced to Tk. 85/US\$. 6
- ii) Explain how any increase in gearing caused by exchange rate changes could be hedged by Khulna Ltd. 4

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