

FINANCIAL MANAGEMENT

July-August 2025

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. The directors of Dhaka limited are considering opening a factory to manufacture a new product. Detailed forecast of the product's expected cash flows have been made, and it is estimated that an initial capital investment of Tk. 2.5 million is required. The company's current (31 December 2024) authorized share capital consists of 4 million ordinary shares, each with a nominal value of Tk. 0.25. During the last five years the number of shares in issue has remained constant at 3 million, and the market price per share at 31 December 2024 is Tk. 1.35 ex-dividend.

The company pays only one dividend each year (on 31 December) and dividends for the last five years have been as follows:

Year	2020	2021	2022	2023	2024
Dividend per share	Tk. 10.0	Tk. 10.8	Tk. 11.6	Tk. 13.6	Tk. 13.6

Dhaka Limited currently has in issue of Tk. 800,000 8% debentures redeemable at on 31 December 2028. The current market price of these debentures is Tk. 82.50 ex-interest, and the interest is payable in one amount each year on 31 December. The company also has outstanding a Tk. 900,000 bank loan repayable on 31 December 2032. The rate of interest on this loan is variable, being fixed at 1.5% above the bank's base rate which is currently 15%.

Requirements:

- a) Calculate the weighted average cost of capital (WACC) for Dhaka Limited as at 31 December 2024 8
- b) Explain briefly to the directors of Dhaka Limited what assumptions they are making if the WACC calculation in (a) above is used to discount the expected cash flows of the project. 4
- c) Describe the practical problems that might be encountered when attempting to compute the WACC for a large Bangladeshi listed company. 5
2. a) You are the lead analyst at Horizon Strategic Advisory, a boutique financial consultancy advising institutional investors on capital market trends across South Asia. One of your recent assignments involves a strategic review of Shahjalal Textiles Ltd (STL), a listed company on the Dhaka Stock Exchange, that has just disclosed plans to merge with another firm in the textile sector.

On January 15 at 11:00 AM, STL issued a formal press release via its corporate website and simultaneously disclosed the merger to the exchange. Your team had been tracking STL closely due to prior informal signals suggesting consolidation within the sector. What happened next caught everyone's attention.

By 11:01 AM, STL's share price had surged 6%, sparking curiosity about how swiftly the market had reacted to the announcement. Later that afternoon, around 3:00 PM, institutional investors began trading STL shares heavily. Over the next five days, social media and digital news outlets amplified the story, triggering a wave of interest among retail investors. By January 22, STL's share price had risen 22% compared to its level just before the announcement.

Internally, your junior analysts debated which form of market efficiency this behavior reflected. Some argued that such a rapid price adjustment indicated strong-form efficiency, while others believed the delayed response by institutional investors and retail activity suggested otherwise. You've been asked to assess the situation for a briefing note to clients. To support your analysis,

you examine STL's historical performance leading up to the announcement. Monthly closing prices for the previous six months were as follows:

Month	Closing Price (BDT)
July	120.00
August	121.50
September	122.00
October	124.00
November	123.50
December	124.50

You calculated a standard deviation of 0.93% for STL's monthly returns over this period, while the average market return was 1.2% per month.

Requirements:

- i) Based on the timeline of events and price adjustments, critically evaluate which form of the Efficient Market Hypothesis (EMH) best explains the observed behavior. Refer specifically to STL's market performance and investor reactions. 4
- ii) Using the six months of closing prices prior to the merger announcement, compute the average monthly return for STL, and compare it with the market return. Interpret what this indicates about STL's performance in the context of capital market efficiency. 3
- iii) Discuss two practical implications of your analysis for professional investors operating in Bangladesh, one for institutional investors, and one for retail investors. 3

- b) Daisy Printers is one of the leading printing service provider in Chittagong. Due to recent huge demand of works, the Company is thinking to buy a machine that would increase its capacity. The machine will cost BDT 15 million. The machine has 5 useful life with no salvage value. Alternatively, Daisy can also take the lease from other printer Companies at an annual lease rental of BDT 4.5 million (payment will be made at the end of the year). Daisy was informed by a merchant bank that they can help daisy to issue a bond to finance the purchase of machine at annual rate of 11%. Daisy is paying tax @ 25% rate.

Requirements:

- i) Demonstrate whether Daisy should buy or lease the machine. 6
- ii) Differentiate between Sale and Leaseback and Leveraged Leases. 2

3. The finance director of USBangla, a rapidly expanding short haul airline company based in Bangladesh operating across the sub-continent, is considering how to hedge sales revenues of 60 million rupees, which are due to be received in 180 days. The company has been quoted the following exchange and interest rates by one of its relationship banks:

Spot rate (Rs./Tk.)	1.5642 - 1.5669
180 days forward rate (Rs./Tk.)	1.5808 - 1.5830
Rupee interest rate	5% per annum
Taka interest rate	4% per annum

A foreign currency dealer at the relationship bank has also provided an estimate for the finance director of the Rs./Tk. spot rate in 180 days. This estimate is 1.5622 – 1.5649. The bank is also quoting the following 180-day currency option strike prices each with an option premium of Tk. 20,000:

A put option on 60 million rupees at an exercise price (Rs./Tk.) of 1.5700

A call option on 60 million rupees at an exercise price (Rs./Tk.) of 1.5650

Requirements:

- a) Calculate the hedged value of the company's rupee receivables and explain, with reasons, which hedging strategy is preferable, if it decides to: 6
 - i) use a forward market hedge to manage its foreign currency exposure;
 - ii) use a money market hedge to manage its foreign currency exposure.
- b) Explain to the finance director how a currency option contract might be used to hedge the company's rupees receivables exposure in this situation and advise him of what action to take, having purchased the appropriate currency option, if in 180 days the spot rate for Rs./ Tk. is: 4
 - in line with forward market expectations;
 - in line with the foreign currency dealer's estimate.

4. a) Liberty Ceramics Ltd, a leading ceramic tile manufacturer based in Dhaka, is preparing for a BDT 600 million expansion to build a state-of-the-art kiln facility, targeting rising demand from the Middle East. To finance the project, the Treasury head, Mr. Rahman, has proposed a 5-year floating-rate term loan of BDT 360 million, linked to DIBOR + 2.75%, which minimizes upfront costs and aligns with the company's capital structure. However, with the central bank signaling a tightening monetary policy, interest rates are expected to rise, creating a risk of escalating debt servicing costs that could disrupt cash flows and margins.

To mitigate this risk, Mr. Chowdhury, the CFO, has recommended an interest rate swap. Under this derivative contract, Liberty would pay a fixed rate of 8.00% and receive floating payments tied to DIBOR + 2.75%, effectively converting the floating-rate loan into a fixed-rate obligation. The swap contract is structured with semi-annual settlements over the five-year term, aligning with the loan's interest payment schedule. This would provide cost certainty and protect against rising interest rates. However, the CFO acknowledged potential downsides, including counterparty risk and the opportunity cost of paying a fixed rate if interest rates decline.

Market indicators suggest DIBOR could rise to 6.5% in the first half of the year due to policy tightening, followed by a projected decline to 4.5% in the second half as inflationary pressures ease. Recent macroeconomic forecasts also point to a possible sustained rate drop to 3.5%, raising concerns about the long-term cost-effectiveness of the fixed-rate swap.

The board also explored alternative hedging strategies, such as interest rate caps and collars. After deliberation, the board tasked the finance team with evaluating the financial implications of the swap, including its impact on cash flows, risk exposure, and alignment with corporate governance principles. As a publicly listed firm, Liberty must comply with accounting standards such as IFRS 9, which require recognition and periodic valuation of derivative instruments on the balance sheet. The board emphasized the importance of transparency, risk oversight, and shareholder confidence in hedging decisions.

Requirements:

- i) If DIBOR rises to 6.5% in the first period and falls to 4.5% in the subsequent period, calculate Liberty's net payment under the swap for two consecutive settlement periods. 5
 - ii) Explain how an interest rate swap mitigates Liberty's exposure to floating-rate debt volatility. Compare the swap to alternative hedging strategies, such as interest rate caps or collars, in terms of cost, flexibility, and risk reduction. 3
 - iii) If DIBOR unexpectedly falls to 3.5% for the remainder of the swap period, evaluate the financial and strategic implications for Liberty. Discuss how the use of derivatives aligns with corporate governance principles, including transparency, risk oversight, and shareholder confidence. 3
- b) Alpha Electronics Ltd. exports air conditioners to Spain by importing all the components from USA. The company is exporting 50,000 units at a price of Euro 800 per unit. The cost of imported components is \$ 700 per unit. The fixed cost and other variables cost per unit are BDT 1,500 and BDT 1,800 respectively. The cash flows in Foreign currencies are due in six months. The current exchange rates are as follows:

BDT/Euro	115.50/116.50
BDT/\$	110.5/111.5

After six months the exchange rates turn out as follows:

BDT/Euro	121.0/122.0
BDT/\$	117/118

Requirements:

You are required to:

- i) Calculate loss/gain due to transaction exposure. 3
- ii) Alpha receives alternative proposal as sales price will be BDT 92,300 per unit to be paid today in BDT and the purchase price will then have to be settled immediately. 3
- iii) Calculate the profits under each scenario and suggest what the Company should do. 3

5. Alpha Inc., a prominent US-based multinational corporation specializing in high-tech consumer electronics, is contemplating establishing a wholly-owned subsidiary in Bangladesh. This strategic move aims to capitalize on the rapidly growing South Asian market and mitigate increasing competitive pressures from local manufacturers and other MNCs. The proposed project involves setting up a state-of-the-art manufacturing facility.

Initial Investment Details:

- The initial project cost, primarily comprising plant and machinery including installation, is estimated to be **US\$ 900 million**.
- Net working capital requirements for the new subsidiary are estimated at **US\$ 90 million**.
- The company uses the straight-line method of depreciation.

Existing Operations and Opportunity Cost:

- Currently, Alpha Inc. exports **4 million units** annually to Bangladesh at a unit price of **US\$ 150**. The variable cost per unit for these exports is **US\$ 70**.
- Existing working capital investment for the production and sale of these 4 million units through exports is **US\$ 30 million**.
- Due to the intensifying competition and the entry of new multinational players in Bangladesh, if Alpha Inc. *does not* proceed with the subsidiary, its export volume to Bangladesh is projected to decline to **2.5 million units** per year in the coming years.

Proposed Project Operating and Other Data (Bangladesh Subsidiary):

- The production capacity of the proposed project in Bangladesh will be **9 million units** per annum.
- The sales price per unit for products manufactured and sold in Bangladesh is projected to be **BDT 10,000**.
- Variable operating cost per unit of production in Bangladesh will be **BDT 4,500**.
- Additional cash fixed operating costs (incremental) will be **BDT 600 million** per annum.
- The project's share of allocated corporate overheads (fixed cost) will be **US\$ 6 million** per annum, based on the principle of ability to share and reflecting value provided by the parent company. This cost is payable to the parent company in USD.
- Expected useful life of the proposed plant is **five years**. The estimated salvage value of the plant at the end of Year 5 is **US\$ 50 million**.
- Applicable Corporate Income Tax rate in Bangladesh is **25%**.
- A withholding tax of **10%** will be levied on all repatriated profits by the Bangladeshi government.
- The required rate of return for such international projects, from the perspective of the US parent company, is **15%**.

Exchange Rate Information:

- The current spot exchange rate is **BDT 110 = US\$ 1**.
- The projected exchange rates for the next five years are as follows:
 - End of Year 1: BDT 115 = US\$ 1
 - End of Year 2: BDT 120 = US\$ 1
 - End of Year 3: BDT 125 = US\$ 1
 - End of Year 4: BDT 130 = US\$ 1
 - End of Year 5: BDT 135 = US\$ 1

Present Value Interest Factors (PVIF) @ 15% for five years:

Year	1	2	3	4	5
PVIF	0.8696	0.7561	0.6575	0.5718	0.4972

Requirements:

- CALCULATE the Net Present Value (NPV) of the proposed project from the perspective of Alpha Inc. (US parent company). 12
- Discuss two key non-financial strategic considerations that Alpha Inc. should take into account before making the final investment decision regarding the Bangladesh subsidiary. 3

6. Apex Technologies Ltd. is a mid-sized, privately held technology company that has maintained profitability over the past several years. The Chairman and majority shareholder has recently communicated his intention to exit the business due to evolving family and succession priorities. Upon hearing the announcement, the CEO, supported by other CXOs, expressed interest in acquiring the company. The Chairman welcomed the proposal and requested a formal valuation. The CEO recommended Internal valuation by the CFO, a qualified Chartered Accountant and valuation expert, reasoning that it would reduce the transaction costs. Nonetheless, an external valuation performed by a professional firm has been agreed upon. Extract from the financial statements of Apex Technology Limited (all amounts in BDT ‘000):

Balance Sheet (as of June 30, 2025):

Assets	BDT	Liabilities & Equity	BDT
Cash & Cash Equivalents	7,000	Current Liabilities	5,000
Accounts Receivable	8,000	Long-Term Debt	35,000
Property, Plant & Equipment	60,000	Equity	40,000
Inventory	5,000		
Total Assets	80,000	Total Liabilities & Equity	80,000

Income Statement (for the year ended June 30, 2025):

Particulars	BDT
Revenue	45,000
Cost of Goods Sold	(30,000)
Gross Profit	15,000
Operating Expenses	(6,000)
Operating Income	9,000
Interest Expense	(3,000)
Net Income Before Tax	6,000
Tax Expense (25%)	(1,500)
Net Income After Tax	4,500

Apex had an initial share capital of BDT 10,000 issued at BDT 10 per share, which increased to BDT 15,000 in 2020, maintaining the same face value. The company has consistently paid dividends at a rate of 20% for the past three years, a practice well-regarded by industry observers. The technology sector’s P/E ratio has fluctuated over the years, but recent data suggests a ratio of 8, with a five-year average of 7. In parallel, industry research indicates that the average dividend yield for comparable firms stands at 15%.

During due diligence, you as an external valuer noted that, the company’s receivables of BDT 2,000 were impaired due to recoverability concerns. Inventory, valued at BDT 5,000 on the balance sheet, had a realizable value of BDT 3,500. A pending legal case indicated a probable settlement cost of BDT 500. Office apartment was excluded from depreciation; under IAS 16, BDT 150 should have been charged this year, with accumulated depreciation of BDT 600.

Requirements:

- Using the adjusted financials, calculate Apex Technologies Ltd.’s share value under net asset, P/E, and dividend yield methods. Suggest a reasonable valuation range for negotiation. 14
- Explain the concept of a management buyout (MBO) and how it applies to Apex. Identify any ethical concerns arising from executives acquiring the company. 3
- As the external valuer, outline how you would ensure the valuation process is fair and professionally governed under relevant accounting and valuation standards. 3

---The End---