Certified Finance and Accounting Professional Stage Examination

The Institute of Chartered Accountants of Pakistan

6 June 2023
3 hours – 100 marks
Additional reading time – 15 minutes

Business Finance Decisions

Instructions to examinees:

(i) Answer all **FIVE** questions.
(ii) Answer in **black** pen only.

Q.1 Agro Products Ltd (AP) is a listed company located in the Punjab province. The company currently grows two types of crops: Kharif crops, such as cotton and rice, which are sown in May and harvested in October, and Rabi crops such as wheat and mustard, which are sown in November and harvested in April. The crops are sold to customers located in Pakistan.

There have been some recent changes at board level and, consequently, a new strategic plan has been agreed. The plan is to expand the business and increase the production of wheat and cotton. Both products have a high global demand, and the new plan would enable the company to enter the export market. To accelerate the expansion, the company would prefer to acquire an existing company, ideally one that already grows at least one of these crops.

A target company, Ardah Ltd (Ardah) has been identified. Ardah currently farms wheat and so is seen as an ideal company to acquire. There have been some preliminary discussions between the two companies and Ardah has shared its cashflow forecast for the year ending 31 May 2024. The forecast shows a pre-tax operating cashflow of Rs. 4,500 million.

Ardah is not operating at full capacity and AP plans to introduce cotton crops to maximise the productivity of the farms. This would be phased in over the first five years after acquisition. Consequently, after the year ending 31 May 2024, AP expects forecasted pre-tax operating cashflows to increase by Rs. 700 million per year for the next four years. After this, the pre-tax operating cashflows are estimated to grow at 2% per annum.

The acquisition would also generate some initial savings. Ardah's head office would be closed and sold, generating after-tax proceeds of Rs. 2,400 million. Office based staff would be made redundant leading to annual pre-tax cost savings of Rs. 75 million. These savings are expected to continue indefinitely. The after-tax cost of redundancy is expected to be Rs. 120 million and would be payable immediately.

Some of Ardah's farming equipment is old and inefficient and would need to be replaced. The replacement programme would commence immediately at a cost of Rs. 1,000 million. Given the specialist nature of the equipment, it qualifies for 100% tax depreciation in the year of acquisition. In each subsequent year, Rs. 100 million would be set aside for capital maintenance; this figure is net of any savings from tax depreciation.

AP does not anticipate any additional costs in respect of working capital.

Ardah has Rs. 20,000 million of irredeemable debt, which carries a coupon of 8% per annum. AP would continue to service this debt after the acquisition.

Ardah is quoted on the Pakistan Stock Exchange. The following market information has been made available:

Average return on the Pakistan Stock Exchange	16%
Return on risk free government bonds	9%
Ardah equity beta	0.857
Ardah market capitalisation	Rs. 25,000 million
Applicable tax rate	29%

The AP board has not published information concerning the potential acquisition and, so far, the discussions with Ardah have been confidential. The board is concerned that the release of this information might impact the share price of Ardah.

Required:

(a) Using the free cashflow to equity method of business valuation, determine the maximum percentage premium that AP should pay Ardah's shareholders to acquire 100% of the business. Assume that the acquisition will take place in June 2023. **(11)**

(b) Briefly explain whether AP board's concerns regarding Ardah's share price are valid, and how this might impact the negotiation to acquire Ardah. **(03)**

(c) Briefly advise the board of the exchange rate risk that will arise when AP commences exporting and the techniques that the board can use to manage this risk.
(Do not include calculations in your answer) **(05)**

Q.2 Bahtic Developments Ltd (BD) is a property investment company located in Punjab; the company is listed on the Pakistan Stock Exchange. BD has recently divested some assets that did not align with the company's strategic objectives. Consequently, BD has surplus cash of Rs. 10,000 million to reinvest. There are four suitable investment projects that the board is considering; the detail of each project is shown below.

West Tower Residence in Multan

West Tower Residence (WTR) is Phase 2 of a larger project that comprises four tower blocks of residential apartments. WTR is an 18-floor apartment tower, spread over 15 kanals of land. The site will accommodate 50 apartments of various sizes and will include a gym and other commercial-use space on the ground floor.

WTR is a joint venture with another property investment company, Golba Investments Ltd (Golba). Golba has already completed Phase 1 of the residential apartment project; however, due to difficulties with other projects, Golba has not been able to raise sufficient finance to start Phase 2 of the development plan. BD has been invited as a 50% joint venture partner.

The project is due to start imminently and is expected to be completed in three years' time. The total cost of Phase 2 is estimated at Rs. 12,000 million. Capital would be invested in three equal tranches with the first instalment due as soon as possible, and the remaining payments due after one and two years respectively.

Golba anticipates that half of the apartments will be sold 'off plan' during the construction phase. Cash generated from the off-plan deposits is expected to be Rs. 1,000 million in two years' time. Off-plan sales will complete when the project ends in three years' time generating further cash proceeds of Rs. 6,000 million.

The remaining half of the apartments and commercial space would be completed at the end of the three-year period. These would be leased on long-term leases and should generate annual cash profits of Rs. 1,000 million indefinitely. Lease payments would be due in advance and would commence as soon as the space is completed.

Hotel Paradise in Karachi
This investment is a continuation of an ongoing relationship with the Hotel Paradise chain of hotels (HP). As with previous developments, BD will fund the initial construction of the hotel and, once complete, provide a property lease and management service to the hotel chain. Due to the repeat nature of this project, the cashflows are relatively easy to predict.

The hotel will cost Rs. 7,850 million that will be incurred immediately. The construction will take one year to complete. BD owns an option to purchase and builds on the land and so construction can start straight away. Once complete, BD anticipates annual cash profits of Rs. 1,100 million; these cash profits will continue for the foreseeable future.

Lionsgate Mall in Peshawar
This investment is the upgrade of an existing shopping mall, Lionsgate Mall owned and managed by BD. The site needs improvement and so a full refurbishment would commence straight away and take a year to complete. Many of the units are empty but the occupiers of those remaining units would need to be compensated for loss of earnings during the one-year renovation period.

In total, the costs of renovation and compensation would be Rs. 3,150 million. This would be paid straight away. Once the improvements are completed, the BD board expects to fill all the units within the mall and increase annual cash profits from Rs. 1,000 million (existing) to Rs. 1,580 million for the foreseeable future.

Raiwand Road Lahore
The last project is the development of new residential housing on Raiwand Road, Lahore. The project is known internally as Raiwand Road (RR). The site will be developed under two identical phases, each phase involving the construction and sale of 35 houses.

Phase 1 can start straight away as BD has obtained planning permission for the development. Phase 1 would be completed after a year. Work on Phase 2 will start straight after the completion of Phase 1 and again would be completed after a year.

The current plans show each phase comprising twenty-five, 10 marla houses and ten, 1 kanal houses. The expected cost is Rs. 20 million for a 10 marla house and Rs. 50 million for a 1 kanal house. Costs will be incurred at the start of each phase.

Given the demand for housing, the board anticipate that all houses will be sold upon completion. The cash sales are expected to be Rs. 30 million for a 10 marla house and Rs. 85 million for a 1 kanal house.

Investment appraisal
BD accepts projects that generate a positive net present value when discounted at a 12% cost of capital. Assume that all cash flows are stated net of taxation and ignore inflation. BD can earn a return of 5% on any surplus funds.

Required:
(a) Determine the optimal investment strategy for BD's surplus funds assuming the investment opportunities are not divisible and no additional finance is available at the current time. You should assume that investment capital is available, without restriction, in future years. **(15)**

Raising new finance
Strategically, the board would like to invest in all four opportunities and is considering raising additional finance of Rs. 4,000 million at 'Year 0' to facilitate this.

There are two options under consideration: a 10% ten-year bank loan or a one-for-ten rights issue. The board anticipate that issue costs will be 3% of the funds needed, regardless of which method is selected; the funds raised should be sufficient to cover these issue costs.

The board would like to understand how the new finance will impact the financial statements and some of the key ratios.

Extracts from BD's forecasted financial statements for the year ending 30 June 2024 show the following:

Statement of Financial Position

	Rs. in million
Share capital (Rs. 100)	1,000
Share premium	10,160
Retained earnings	99,150
10% debentures	40,200
	150,510

Statement of Profit or Loss

	Rs. in million
Operating profit	15,560
Interest	(4,020)
Profit before tax	**11,540**
Tax @ 29%	(3,347)
Profit after interest and tax	**8,193**

The forecasts have been prepared on the assumption that BD invests Rs. 10,000 million in the optimum way. Further, BD expects to have sufficient funds to invest in later years i.e. from year 1 onwards.

Required:

(b) Evaluate the two alternative sources of finance available to BD, and recommend the most suitable form of finance for BD. Include calculations that demonstrate the impact on interest cover, gearing (measured by the book value of debt/book value of debt and equity) and earnings per share for each alternative. **(15)**

Q.3 Mardi Ltd (Mardi) is an agricultural machinery manufacturer based in Karachi. The company is expanding and is considering an investment in a new manufacturing plant; the company will use existing finance to fund the expansion.

Capital structure

An extract from the latest statement of financial position shows the following:

	Rs. in million
Ordinary share capital (Rs. 100)	100
Retained earnings	4,415
11% debentures	1,935
	6,450

The unsecured debentures are redeemable at a 5% premium in five years' time. This debt is not considered to be risk free.

Cost of capital

Mardi is not a listed company. EX Ltd (EX) is a company which is listed on the Pakistan Stock Exchange that manufactures machinery for a variety of industries, including those in agriculture. The board of Mardi has historically used market data relating to EX to estimate Mardi's own cost of capital.

EX has an equity beta of 1.40. The market capitalisation of EX is Rs. 1,708 billion and the company also has debentures of Rs. 1,155 billion. Given EX's strong performance and position, the company has a AAA credit rating and so the debt can be assumed to be risk free.

Proposed expansion
Mardi's original expansion plan involved the acquisition of freehold premises near to the existing manufacturing plant. The legal fees incurred with this original acquisition were Rs. 5 million. Unfortunately, the due diligence work identified that there were structural problems with the building, and it was prudent to find a new solution.

A suitable leasehold property has now been identified. The lease agreement is for five years, the annual lease payment is Rs. 25 million payable in advance. Tax relief for the lease payment is given on an accruals basis.

New state-of-the-art equipment will be purchased at a cost of Rs. 100 million payable straight away. The equipment is expected to have a useful life of five years with no residual value.

Sales from the project are expected to be Rs. 60.25 million for the first year, based on current prices. The board anticipates annual volume growth of 5% per annum. Sales prices are expected to increase by 6% per annum for the first two years and 3% per annum for the remaining years.

Material costs associated with the project are estimated to be Rs. 10 million in current prices; material price inflation is expected to be 4% per annum for the foreseeable future. Labour and variable overhead costs are Rs. 8 million in the first year, again stated in current terms. The board forecasts that these costs will be subject to annual inflation at 2%.

The project will require investment in working capital which is expected to be 10% of sales.

Market information
The risk-free rate is 9% and the market premium is currently 7%. Applicable tax rate is 29% and is paid in the accounting period to which it relates.

Plant and machinery qualify for tax depreciation at a rate of 25% in the year of acquisition and 15% reducing balance in subsequent years; a balancing adjustment arises on sale.

Mardi is a very large and profitable company, so assume that any losses arising and tax saved on capital allowance arising as a result of proceeding with the project can all be relieved against other profits of the business in the year in which they arise, as they will lead to a tax saving for Mardi.

Required:
(a) Determine Mardi's current weighted average cost of capital using the book values of debt and equity. **(08)**
(b) Evaluate the proposed investment and recommend to the board if it should proceed. **(10)**

Q.4 The MCC Group of companies (MCC) carry out a range of businesses on a global basis. Three of the group companies have large USD and EUR contracts due for settlement in three months' time at the end of September. MCC's central treasury department will use the net USD receipts to settle the net EUR payments. The boards have asked that you illustrate how this can be achieved using a forward contract, money market hedge, futures contracts, and an over the counter (OTC) option contract.

Hedging policy
It is MCC policy to hedge EUR payments against the USD. USD receipts are offset against the hedged value of USD payments. Where there is a net receipt or payment in USD, then this is converted into PKR and settled at the spot rate at that time.

Group contracts due for settlement in three months' time
There are three group companies that have contracts requiring settlement in three months' time on 30 September 2023. The details are as follows:

	SBG Ltd	**TRK Ltd**	**PGY Ltd**
Payments	EUR 1,500,000		EUR 3,500,000
	USD 1,000,000		
Receipts		EUR 2,000,000	USD 2,000,000
		USD 2,500,000	

Other relevant information

30 June 2023	
Spot rate EUR/USD	0.9606 – 0.9625
Forward discount cents/USD	1.86 – 2.11
Spot rate PKR/USD	212.32 – 224.12
September Futures USD/EUR	1.0452 (EUR 20,000 contract size)
30 September 2023 (estimated)	
Spot rate EUR/USD	0.9797 – 0.9842
Spot rate PKR/USD	218.32 – 230.12
Futures USD/EUR	1.0198 (EUR 20,000 contract size)
The tick size is USD/EUR 0.0001	
Three-month interest rates (Quoted as annual rates)	
EUR	6.2% – 7.2% per annum
USD	4.7% – 5.6% per annum
OTC Option	
Premium	USD 25,000
Strike price	0.9850 EUR/USD

Required:
Explain with supporting calculations how MCC can hedge against exchange rate risk in relation to the group contracts requiring settlement in three months' time. **(15)**

Q.5 Stable Ltd (SL) is a pharmaceutical company based in Karachi. The company was formed eight years ago by Zayyir Hassan and Anwar Patel. Both had been colleagues working for a large pharmaceutical company. SL was financed by a combination of personal borrowing by the founders and a large injection of venture capital finance.

SL raised new finance through an IPO four years ago and is now listed on the Pakistan Stock Exchange. Zayyir and Anwar both own 20% of the company and the venture capital investors realised their investment at the time of the IPO. To date, SL has not paid any dividends to shareholders; the policy has always been to retain profits and reinvest in research and development to drive future growth.

SL's fortunes changed in 2020 when the company developed and patented a new vaccine which offered protection against a deadly virus. The demand for the vaccine was unprecedented, resulting in global sales and substantial earnings for 2021 and 2022.

The board met recently and Noor Arshad, the Chief Finance Officer, asked whether, given the recent high level of earnings, SL should pay a one-off dividend to the shareholders.

Ahmad Azmat, the Chief Operations Officer suggested that SL introduce a dividend policy such that a regular dividend is paid. He suggested that SL pay out 25% of post-tax earnings to shareholders as dividends.

Forecast earnings
The forecast earnings for the next four years are estimated based on the expected launch of new pharmaceutical products that are currently in the clinical trial phase. Earnings are estimated as follows:

Forecast years ending	**30 June 2024**	**30 June 2025**	**30 June 2026**	**30 June 2027**
	------------------------- Rs. in '000 -------------------------			
After tax earnings	410,000	500,000	550,000	580,000

Predicting growth in earnings beyond this period is harder as this depends on the outcome of current research work. A prudent estimate of 4% earnings growth per annum for the years ending 30 June 2028 and beyond has been suggested by Noor.

Market information

Current share price	Rs. 8,154
Issued shares	200,000
SL's equity beta	0.86
Market return	16%
Risk free return	9%

Zayyir and Anwar are aware that a company's dividend policy can influence the share price.

Required:
(a) Calculate the expected share price using the dividend valuation model assuming Ahmad's suggestion is implemented. Explain why this valuation is different to SL's current share price. **(08)**
(b) Evaluate the decision to return cash to shareholders through a change in dividend policy. Consider practical arguments together with any alternative ways to return cash to shareholders and recommend a suitable strategy for SL. **(10)**

(THE END)