SOLUTIONS TO END-OF-CHAPTER QUESTIONS CHAPTER 7

RECALL AND REVIEW

Question 7.1

(a) Ordinary shares may receive no dividends at all in a period even if the company makes a profit during that period. On the other hand, preference shares must receive the fixed dividend payout before any dividends are paid to ordinary shareholders. Since Anne requires a steady income, preference shares seem to be the option better suited to her needs.

(b) Preference shareholders must receive their fixed dividend payout before ordinary shareholders are paid any dividends. Thus, if in any given period the profit is only sufficient to make the payments due to preference shareholders, ordinary shareholders will receive no dividends in that period. Furthermore, on the liquidation of the company, any money available for shareholders after all creditors' claims have been settled will first be repaid to preference shareholders before any payments are made to ordinary shareholders. On the other hand, the dividends paid to preference shareholders are fixed. Once their fixed preference dividend has been paid, preference shareholders are not entitled to any further share of the profit available. Dividends payable to ordinary shareholders are limited only by the balance on the retained earnings account of the company, so ordinary shareholders could receive very high dividends as well as receiving no dividend at all. While ordinary shareholders enjoy full voting rights at all company general meetings, preference shareholders have no right to vote in any general meetings of the company.

Question 7.2

There are various factors to consider in this financing decision:

- Risk. Repayments of the bank loan and interest payments must be made on a regular basis. These payments must be made regardless of how the business is performing, whether it has made any profits and converted those profits into cash with which to make the loan repayments and the payments of interest. Dividends are paid to shareholders only if the company has made a profit. Should the expansion plan generate losses, then no dividends will be payable as dividends can only be paid out of retained earnings. The bank loan option is therefore riskier than converting to public limited company status and raising the required funds from the shareholders.
- Control. Issuing shares to the public will dilute the current shareholders' control as a result of the increase in the number of shares in issue. Taking out a loan will have no impact on the control of the company and current shareholders will be able to benefit fully from any increased profits as a result of the expansion plan.

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- Accountability. Converting the company to public limited company status will result in a large increase in statutory reporting requirements. Annual reports will have to be made to external shareholders and there will be a large increase in the directors' accountability to those external shareholders. There is a risk that the company expansion plan does not work out as expected and that the current directors are replaced with a new set of directors at the annual general meeting. The current shareholder-directors would then lose complete control of the company and its direction.

DEVELOP YOUR UNDERSTANDING

Question 7.3

Annual interest received on the bond: £200,000 × 5% = £10,000

Annual dividend from the investment in the 50 pence preference shares: £200,000 = 400,000 preference shares of 50 pence each × 3 pence per share = £12,000

Annual dividend from the investment in the 25 pence ordinary shares: £200,000 = 800,000 ordinary shares of 25 pence each × 2 pence per share = £16,000

Therefore, the investor should invest in the 25 pence shares to maximise income from the £200,000 investment. The investor should also be aware that the ordinary shares are the riskiest of the three possible investments as they may generate no dividend at all and, should the company go into liquidation, the investor may lose all of the £200,000 investment. Alternatively, the dividend per share on the ordinary shares may increase and the value of the shares may also increase, potentially raising the income and capital value of the ordinary shares. The income from the bond and the preference shares, however, will remain the same for each year.

Question 7.4

Borrowing from the bank at 5% per annum: £3,000,000 × 5% = £150,000 annual cost

Ordinary shares of 40 pence each: number of ordinary shares with a par value of 40 pence each = £3,000,000 ÷ 0.40 = 7,500,000 shares × £0.019 = £142,500 annual dividend

Preference shares of 60 pence each: number of preference shares with a par value of 60 pence each = £3,000,000 ÷ 0.60 = 5,000,000 shares × £0.0315 = £157,500 annual dividend

Therefore the ordinary shares option will require the lowest cash outlay.

Alternatively, you might have compared the interest or dividend rates on each financing method. The interest on the loan is payable at 5%. The required dividend rate on the ordinary shares is equivalent to a 4.75% return (1.9 pence ÷ 40 pence) while the return on the preference shares is 5.25% (3.15 pence ÷ 60 pence). Therefore the % return on the ordinary dividend is the lowest and will provide the lowest financing cost.

Question 7.5

800,000 ÷ 2 = 400,000 total number of shares to be issued under the rights issue.

400,000 ÷ 2 = 200,000 number of shares issued by the end of September 2021.

200,000 × £1.50 par value = £300,000 to be added to ordinary share capital.

200,000 × (£1.80 issue price – £1.50 par value) = £60,000 to be added to share premium.

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The equity section of Robin plc's statement of financial position at 30 September 2021 should now look like this:

Equity	**£000**
Ordinary shares ((800,000 + 200,000) shares with a par value of £1.50)	1,500
Share premium (£600,000 + £60,000)	660
Retained earnings	900
Total equity	3,060

» Question 7.6

Thomson plc: equity

	01/07/2021	**15/07/2021**	**20/07/2021**	**10/08/2021**	**24/12/2021**
Number of ordinary shares in issue	4,000,000	4,500,000	5,400,000	5,400,000	5,400,000
	£	**£**	**£**	**£**	**£**
Ordinary share capital	800,000	900,000	1,080,000	1,080,000	1,080,000
Share premium	50,000	100,000	100,000	100,000	100,000
Preference share capital	—	—	—	200,000	200,000
Retained earnings	650,000	650,000	470,000	470,000	196,000
Total equity	1,500,000	1,650,000	1,650,000	1,850,000	1,576,000

Notes and workings

15 July 2021:

- Number of shares issued: 500,000.
- Additional ordinary share capital: 500,000 × £0.20 = £100,000. Ordinary share capital is now £800,000 + £100,000 = £900,000.
- Additional share premium: 500,000 × (£0.30 issue price – £0.20 par value) = £50,000. Share premium is now £50,000 + £50,000 = £100,000.
- The issue of shares has no effect on the retained earnings which remain at £650,000.

20 July 2021:

- Number of ordinary shares in issue at 20 July 2021: 4,000,000 (number of shares in issue at 1 July 2021) + 500,000 (number of shares issued on 15 July 2021) = 4,500,000.
- Number of ordinary shares issued under the bonus issue: 4,500,000 ÷ 5 = 900,000.
- Number of ordinary shares in issue: 4,500,000 + 900,000 = 5,400,000.
- Additional ordinary share capital: 900,000 × £0.20 = £180,000. Ordinary share capital is now £900,000 + £180,000 = £1,080,000.

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- Bonus issues are made at the par value of the shares issued and capitalise retained earnings (turn retained earnings into share capital). £180,000 is debited to share capital to reflect the bonus issue of shares. Retained earnings are now £650,000 – £180,000 = £470,000. As bonus issues are made at the par value of the shares issued, there is no effect on the share premium which remains at £100,000.

10 August 2021:

- Number of preference shares issued: 200,000.
- Issue price of each preference share: £1.00, the par value of the preference shares.
- Preference share capital is now: £0 + (200,000 × £1.00) = £200,000.
- The issue of the preference shares has no effect on the ordinary share capital, share premium or retained earnings.

24 December 2021:

- Number of ordinary shares in issue: 5,400,000.
- Dividend per ordinary share: £0.05.
- Ordinary dividends paid: 5,400,000 × £0.05 = £270,000.
- Preference dividend paid: £200,000 × 4% × 6/12 = £4,000.
- Total dividends paid: £270,000 ordinary dividend + £4,000 preference dividend = £274,000.
- Dividends paid are debited to retained earnings (Debit retained earnings, Credit cash).
- Retained earnings is now £470,000 – £274,000 = £196,000.
- Dividends paid have no effect on the ordinary share capital, share premium or preference share capital accounts.

TAKE IT FURTHER

Question 7.7

(a) £1 par value × 6% = £0.06 dividend per share × 100,000 shares = £6,000

(b) 100,000 ordinary shares × 10 pence + 100,000 ordinary shares × 20 pence = £30,000

(c) £45,000 retained earnings at 1 November 2020 + £50,000 profit for the year – £6,000 preference dividend – £30,000 ordinary dividends = £59,000 retained earnings at 31 October 2021

Question 7.8

(a) Amounts to be added to ordinary share capital and share premium in the statement of financial position in respect of the issue of ordinary shares on 1 May 2022:

- Par value of ordinary shares: 50 pence (Question 7.7)
- Issue price per share: £2.50 (£500,000 ÷ 200,000 shares)
- Therefore, the premium on each share issued = £2.50 (issue price) – £0.50 = £2.00
- Additional ordinary share capital: 200,000 shares × £0.50 = £100,000
- Additional share premium: 200,000 shares × £2.00 = £400,000

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(b) Total dividends, both ordinary and preference, to be paid in the year to 31 October 2022:

- Preference dividends: no change as no additional preference shares have been issued, so preference dividends remain at £6,000
- Ordinary dividends paid on 15 April 2022: 100,000 shares × £0.15 = £15,000 (new ordinary shares not issued until 1 May 2022, so there were only 100,000 ordinary shares in issue on 15 April 2022)
- Ordinary dividends paid on 15 October 2022: (100,000 shares + 200,000 shares) × £0.25 = £75,000
- Total ordinary dividends for the year to 31 October 2022: £15,000 (15 April 2022) + £75,000 (15 October 2022) = £90,000
- Total dividends, both preference and ordinary, to be paid in the year to 31 October 2022 = £6,000 (preference) + £90,000 (ordinary) = £96,000

(c) Expected balance on retained earnings at 31 October 2022 after dividends for the year have been paid:

- Retained earnings at 31 October 2021 from Question 7.7 (c): £59,000
- + £90,000 (profit for the year to 31 October 2022)
- – £96,000 (total ordinary and preference dividends for the year to 31 October 2022 from (b))
- = £53,000

››› Question 7.9

Calculate for Halyson plc:

(a) The number of bonus shares to be issued:

- 500,000 ordinary shares currently in issue
- Seven new shares for every two held
- So 500,000 × 7 new shares ÷ 2 = 1,750,000 new shares

(b) The par value of the bonus shares to be added to ordinary share capital:

- 1,750,000 × 25 pence = £437,500

(c) The number of ordinary shares to be issued in the rights issue:

- Number of shares in issue after the bonus issue: 500,000 (original) + 1,750,000 (bonus issue) = 2,250,000 shares
- Rights issue: five new ordinary shares for every three ordinary shares currently held
- Therefore, 2,250,000 ÷ 3 shares × 5 shares = 3,750,000 new ordinary shares issued in the rights issue

(d) The amount to be added to ordinary share capital and share premium as a result of the rights issue:

- 3,750,000 new shares issued in the rights issue from answer (c)
- Par value: 25 pence
- Therefore, par value of shares issued under the rights issue = 3,750,000 × £0.25 = £937,500
- Share premium on each share issued: £0.95 – £0.25 = £0.70
- Total share premium on the issue of 3,750,000 25 pence shares at £0.95 = 3,750,000 × £0.70 = £2,625,000

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(e) The preference dividend for the year to 30 June 2022:

- Preference dividend per share: £1 × 0.075 = £0.075
- Total preference dividend on 300,000 shares = 300,000 × £0.075 = £22,500

(f) The ordinary dividend for the year to 30 June 2022:

- Number of ordinary shares in issue at 30 June 2022: 500,000 (before bonus and rights issues) + 1,750,000 (bonus issue) + 3,750,000 (rights issue) = 6,000,000
- Ordinary dividend per share: £0.30
- Total dividend on ordinary shares at 30 June 2022 = 6,000,000 × £0.30 = £1,800,000

(g) The balance on the ordinary share capital account on 30 June 2022:

- 500,000 × £0.25 + £437,500 (b) (bonus issue) + £937,500 (c) (rights issue) = £1,500,000

(h) The expected balance on retained earnings at 30 June 2022:

- Balance at 1 July 2022: £5,200,000
- – £437,500 (b) (bonus issue)
- – £22,500 (e) (preference dividend)
- – £1,800,000 (f) (ordinary dividend)
- – £1,500,000 (loss for the year from the question)
- = £1,440,000

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