S6 Business, Accounting and Financial Management Practice Paper (Set 4): Financial Ratios, Working Capital, Cost of Capital and Dividend Policy

S6 Business, Accounting and Financial Management | Time: 75 minutes | Total: 100 marks | 29 questions

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1. Financial ratios and company valuation (18 marks)

Company A, year ended 31 March 2026: sales $5,000,000; cost of sales $3,500,000; net profit $400,000; total assets $2,500,000; equity $1,000,000; current assets $600,000 (inventory $250,000); current liabilities $400,000; 800,000 ordinary shares in issue; market price $5.00 per share.

1. (a) Calculate the gross profit margin.

Gross profit margin = ($5,000,000 – $3,500,000) ÷ $5,000,000 = 30.0%

2. (b) Calculate the net profit margin.

Net profit margin = $400,000 ÷ $5,000,000 = 8.0%

3. (c) Calculate the current ratio and the quick ratio.

Current ratio = $600,000 ÷ $400,000 = 1.50; quick ratio = ($600,000 – $250,000) ÷ $400,000 = 0.875

4. (d) Calculate the earnings per share and the price-earnings ratio.

EPS = $400,000 ÷ 800,000 = $0.50; P/E ratio = $5.00 ÷ $0.50 = 10.0 times

5. (e) Calculate the return on equity.

Return on equity = $400,000 ÷ $1,000,000 = 40.0%

6. (f) Calculate the return on assets and explain why it differs from the return on equity.

Return on assets = $400,000 ÷ $2,500,000 = 16.0%; the difference arises from financial leverage: with $1,500,000 of debt, a return earned above the cost of debt is magnified for shareholders.

2. Inventory and receivables management (16 marks)

Company B: opening inventory $200,000, closing inventory $250,000; cost of sales $3,500,000 for the year; closing receivables $300,000; credit sales $4,800,000; assume 365 days a year.

7. (a) Calculate the inventory turnover rate.

Average inventory = ($200,000 + $250,000) ÷ 2 = $225,000; inventory turnover = $3,500,000 ÷ $225,000 = 15.6 times

8. (b) Calculate the inventory turnover period in days.

Inventory turnover period = 365 ÷ 15.6 = 23.5 days

9. (c) Calculate the receivables turnover rate.

Receivables turnover = $4,800,000 ÷ $300,000 = 16.0 times

10. (d) Calculate the average collection period.

Average collection period = 365 ÷ 16.0 = 22.8 days

11. (e) If the average collection period were shortened to 20 days, estimate the cash released.

Daily credit sales = $4,800,000 ÷ 365 = $13,151; saving 2.8 days releases 2.8 × $13,151 = about $36,986

3. Capital structure and weighted average cost of capital (18 marks)

Company C: debt with market value $3,000,000 at a pre-tax cost of 6%; equity with market value $7,000,000 and a required return of 12%; profits tax rate 16.5%.

12. (a) Calculate the after-tax cost of debt.

After-tax cost of debt = 6% × (1 – 16.5%) = 5.0%

13. (b) Calculate the weights of debt and equity.

Total capital = $10,000,000; debt weight = 30%; equity weight = 70%

14. (c) Calculate the weighted average cost of capital.

WACC = 30% × 5.01% + 70% × 12% = 9.9%

15. (d) If the company borrows another $2,000,000 to buy back shares and the cost of equity rises to 14%, calculate the new WACC.

New weights are 50% each; WACC = 50% × 5.01% + 50% × 14% = 9.5%

16. (e) Comment on the effect of higher gearing on the cost of capital and financial risk.

Higher gearing lowers WACC from 9.9% to 9.5%, but interest and repayment obligations rise, raising bankruptcy risk and the return required by shareholders, so the cost of capital does not fall indefinitely.

4. Dividend policy and retained earnings (16 marks)

Company D: net profit $2,400,000; 1,200,000 ordinary shares in issue; current payout ratio 40%; market price $6.00 per share; next year investment plan requires $1,200,000.

17. (a) Calculate the earnings per share.

EPS = $2,400,000 ÷ 1,200,000 = $2.00

18. (b) Calculate the dividend per share.

Dividend per share = $2.00 × 40% = $0.80

19. (c) Calculate the dividend yield.

Dividend yield = $0.80 ÷ $6.00 = 13.3%

20. (d) Calculate the retained earnings under the current policy and state whether they cover the investment plan.

Retained earnings = $2,400,000 × 60% = $1,440,000, which covers the $1,200,000 investment.

21. (e) Under a residual dividend policy, calculate total dividends, the payout ratio and the dividend per share.

Total dividends = $2,400,000 – $1,200,000 = $1,200,000; payout ratio = 50%; dividend per share = $1

5. Loan amortisation and leasing (16 marks)

Company E needs equipment costing $800,000. Option 1: a loan of $800,000 at 6% per annum repaid by equal year-end instalments over 5 years (annuity factor at 6% for 5 years = 4.2124). Option 2: lease at $185,000 payable at each year end for 5 years.

22. (a) Calculate the annual loan instalment.

Annual instalment = $800,000 ÷ 4.2124 = $189,917

23. (b) Calculate the interest and principal portions in year 1.

Interest = $800,000 × 6% = $48,000; principal = $189,917 – $48,000 = $141,917

24. (c) Calculate the outstanding principal at the end of year 1.

Outstanding principal = $800,000 – $141,917 = $658,083

25. (d) Compare the total cash outflow of the two options and state the difference in asset ownership.

Total loan repayments = 5 × $189,917 = $949,586; total lease rentals = $925,000. Leasing costs less in cash but the equipment belongs to the lessor, while under the loan the company owns the equipment and can claim depreciation allowances.

6. Working capital and the cash conversion cycle (16 marks)

Company F: inventory period 40 days, receivables period 35 days, payables period 30 days; annual cost of sales $3,650,000; assume 365 days a year.

26. (a) Calculate the cash conversion cycle.

Cash conversion cycle = 40 + 35 – 30 = 45 days

27. (b) Calculate the daily operating cash outflow.

Daily cash outflow = $3,650,000 ÷ 365 = $10,000

28. (c) Calculate the working capital needed to finance the cycle.

Working capital needed = 45 × $10,000 = $450,000

29. (d) If the payables period is extended to 40 days, recalculate the cycle and the funding needed, and state the saving.

New cycle = 40 + 35 – 40 = 35 days; funding needed = 35 × $10,000 = $350,000; saving = $100,000

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