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# FINANCIAL MANAGEMENT

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This paper consists of **THREE** questions (100 marks).

1. Ensure your candidate details are on the front of your answer booklet. You will be given time to sign, date and print your name on the answer booklet, and to enter your candidate number on this question paper. You may not write anything else until the exam starts.
2. Answer each question in black ballpoint pen only.
3. Answers to each written test question must begin on a new page and must be clearly numbered. Use both sides of the paper in your answer booklet.
4. The examiner will take account of the way in which answers are presented.
5. When the assessment is declared closed, you must stop writing immediately. If you continue to write (even completing your candidate details on a continuation booklet), it will be classed as misconduct.

**A Formula Sheet and Discount Tables are provided with this examination paper.**

## IMPORTANT

Question papers contain confidential information and must NOT be removed from the examination hall.

You **MUST** enter your candidate number in this box.

**DO NOT TURN OVER UNTIL YOU ARE  
INSTRUCTED TO BEGIN WORK**

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## 1 Goldstone Victoria plc

The management of Goldstone Victoria plc (GV) is considering the purchase of new equipment at one of its production centres which would enable the company to expand its operations over a three year period. GV has a year end of 30 September and estimates (together with explanatory notes) of the impact of the investment (hereafter referred to as GV52) are shown below:

	£'000
Cost of equipment – to be purchased on 30 September 2016	1,200
Sale proceeds of equipment – to be sold on 30 September 2019	620
Additional annual rent (Note 1)	80
Additional annual fixed costs (Note 2)	660

### Notes

- (1) The rent is payable in advance and the first payment is due on 30 September 2016
- (2) The fixed costs for each of the three years to 30 September 2019 include these three items:

	£'000
Bank interest payable on a loan to cover the cost of the equipment	92
Fixed cost allocated to GV52 out of Head Office overheads	68

A depreciation charge for the new machinery, using the straight-line method of depreciation over four years, which includes a full year's depreciation charge in the year of purchase.

### Sales

The first sales from GV52 will not commence until its second year of operation (ie year to 30 September 2018). GV estimates the following in both of the years to 30 September 2018 and 2019:

Annual sales units	88,000
Selling price per unit	£40
Variable cost per unit	£25

### Working capital

An investment of £340,000 for additional working capital will be necessary once sales commence. This will need to be in place at the start of the year. This will increase to £350,000 in the following year and GV's management feels that this working capital investment will be fully recovered at the conclusion of GV52.

### Capital allowances

GV's new equipment will attract capital allowances, but is/will be excluded from the general pool. The equipment will attract 18% (reducing balance) tax allowances in the year of expenditure and in every subsequent year of ownership by the company, except the final year. In the final year, the difference between the machinery's written down value for tax purposes and its disposal proceeds will be either (i) treated by the company as an additional tax relief, if the disposal proceeds are less than the tax written down value, or (ii) be treated as a balancing

charge to the company, if the disposal proceeds are more than the tax written down value.

**Other assumptions**

- (1) The corporation tax rate will be 21% per annum and will be payable in the same year as the cash flows to which it relates.
- (2) All cash flows occur at the end of the relevant trading year.
- (3) GV uses a cost of capital of 8% per annum for appraising its investments.

**Requirements**

- 1.1 Advise GV's management whether it is beneficial, in net present value terms, to proceed with the GV52 investment on 30 September 2016. **(17 marks)**
- 1.2 Calculate and comment on the sensitivity of your advice in part (a) to changes in:
  - (a) The expected annual sales (in units) and calculate the break-even sales units
  - (b) The estimated sales proceeds of the equipment
  - (c) Rent **(12 marks)**
- 1.3 How might the principles of shareholder value analysis (SVA) be applied to the project? **(6 marks)**

**Total: 35 marks**

**Note.** Ignore inflation.

## 2 Brent plc

A friend of yours has investments in two companies, Brent plc (Brent) and Evisson plc (Evisson), and has concerns about their respective financing and dividend decisions.

Brent, a large engineering conglomerate, is listed on the London Stock Exchange and its current ordinary share price is £3.20. It has been trading for over 25 years and is planning to raise additional finance in order to take advantage of growth potential in some of its markets. Extracts from its most recent financial statements are shown below:

### EXTRACT FROM BRENT PLC BALANCE SHEET AT 31 MAY 2016

	£m
Issued ordinary shares £0.50 par	220
Retained profits	390
	<u>610</u>
7% Debentures (2026) at nominal value	220
	<u>830</u>

### EXTRACT FROM BRENT PLC INCOME STATEMENT YEAR ENDED 31 MAY 2016

	£m
Profit before interest and taxation	<u>260</u>

Brent's directors estimate that the company needs to raise £110m for its expansion plans. The additional funding would be raised via either (i) a one-for-ten rights issue of ordinary shares priced at £2.50 per share or (ii) an issue of 6% debentures at par, redeemable in 10 years' time.

Brent's directors have prepared two estimates of the impact of their plans to raise the extra funding:

- They will lead to a 15% increase in the company's profit before interest and taxation for the year to 31 May 2017.
- They will have a net present value of £120m.

The directors believe that the rights issue will not affect Brent's current price earnings ratio. However they are concerned that the debenture issue will be viewed negatively and that the company's price earnings ratio would fall by 20%. No other changes in the price earnings ratio are expected over the next year.

Your friend is concerned about the impact of the two alternative financing schemes on Brent's share price and is unsure why the issue of debentures might be viewed negatively.

Assume a corporation tax rate of 21%. Currently the only interest paid by Brent is on its 7% debentures in issue.

Your friend also emailed you as follows:

As you know I've also got a few shares in Evisson and I wondered if you could explain this newspaper article that I read recently:

'Evisson, the publishing firm, yesterday became the latest company to scrap its dividend. A large number of major UK companies could cut their dividends this year and some believe that payouts could fall by a fifth, which is far worse than in the last major UK recession. It will be interesting to see how investors react to this. Will there be the usual anger and subsequent fall in share values?'

What I don't understand is, why would Evisson's shareholders be angry? I'd have thought that the company is being prudent, the market will react positively to this and so the share price shouldn't fall.

### **Requirements**

- 2.1 Assuming Brent makes a rights issue of shares, calculate for your friend the theoretical ex-rights price of an ordinary share in Brent:
- (a) Ignoring the estimated net present value figure
  - (b) Taking the estimated net present value figure into account **(3 marks)**
- 2.2 Using the directors' estimates regarding the growth in Brent's profit before interest and taxation figure and its price earnings ratio, calculate the price of an ordinary share in Brent in one year's time assuming:
- (a) A rights issue is made
  - (b) A debenture issue is made **(11 marks)**
- 2.3 Explain to your friend why the issue of debentures might be viewed negatively and the impact such an issue might have on Brent. Your answer should be supported by reference to relevant theories. **(7 marks)**
- 2.4 Assuming a rights issue is made, discuss the ethical issues that a professional accountant in public practice should be aware of when providing corporate finance advice to Brent which is also an assurance client of the firm. **(7 marks)**
- 2.5 With reference to relevant theories, prepare a response for your friend on the subject of Evisson's dividends. **(7 marks)**

**Total: 35 marks**

### 3 Wooton Airtech

Wooton Airtech (Wooton) specialises in supplying aircraft landing gear to companies in the aerospace industry. Its directors are considering how best to manage the financial risk of two transactions.

#### Transaction 1

It is now 9 June 2016 and the spot rate is US\$1.4305/£. MWA Inc (MWA), a US aircraft manufacturer, is a new customer and its first payment to Wooton (\$1,675,000) is due on 20 August 2016. Wooton's management is considering using traded options, futures or a forward exchange contract to hedge the August receipt from MWA. The following information has been collected:

**Table 1 – Prices for market traded currency options (US) on 9/6/14 (sterling £31,250 contracts)**

Exercise price (\$/£)	June 2016		September 2016	
	Calls	Puts	Calls	Puts
1.4450	0.69	1.35	1.14	1.57

Premiums are cents per £

**Table 2 – Sterling futures prices on 9/6/14 (sterling £62,500 contracts)**

June 2016	\$1.4316/£
September 2016	\$1.4349/£
December 2016	\$1.4382/£

Wooton has approached its bank for a forward exchange contract to mature on 20 August and has been quoted the following discount to the current spot rate.

Discount      –0.55c

#### Requirements

3.1 Assuming a spot rate of \$1.4296/£ on 20 August 2016, calculate the sterling receivable by Wooton if, to hedge its receipt from MWA, it uses:

- (a) Traded currency options;
- (b) Sterling futures (assuming that the quote for the future on 20 August 2016 is the same as the spot rate on that date); or
- (c) A forward exchange contract. **(12 marks)**

3.2 With reference to your calculations in part 3.1, advise Wooton's management on how it should proceed. **(7 marks)**

#### Transaction 2

Wooton's directors are planning to invest £500,000 of the MWA receipt for a three-month period, starting at the end of August 2016. With previous similar transactions the directors have used a forward rate agreement (FRA) to hedge the interest rate risk involved. This time, however they are planning to use interest rate futures.

The current deposit rate on 9 June 2016 is 5.5% pa and the current price of September three months futures is 93.25. The standard contract size is £500,000.

## Requirements

3.3 Demonstrate how Wooton could use interest rate futures to hedge the financial risk if at the end of August 2016:

(a) Interest rates have fallen by 1.25% and the futures price has moved by 1.25%

(b) Interest rates have risen by 1.5% and the futures price has moved by 1.25% **(7 marks)**

3.4 Advise Wooton's directors of the key issues to be taken into account when deciding whether to employ interest rate futures or FRAs to protect against financial risk. **(4 marks)**

**Total: 30 marks**

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# Appendices

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## FORMULAE AND DISCOUNT TABLES

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### Formulae you may require

#### (a) Discounting an annuity

The annuity factor: 
$$AF_{1 \rightarrow n} = \frac{1}{r} \left[ 1 - \frac{1}{(1+r)^n} \right]$$

Where      AF = annuity factor  
              n = number of payments  
              r = discount rate as a decimal

#### (b) Dividend growth model: $k_e = \frac{D_0(1+g)}{P_0} + g$

Where       $k_e$  = cost of equity  
               $D_0$  = current dividend per ordinary share  
              g = the annual dividend growth rate  
               $P_0$  = the current ex-div price per ordinary share

#### (c) Capital asset pricing model: $r_j = r_f + \beta_j (r_m - r_f)$

Where       $r_j$  = the expected return from security j  
               $r_f$  = the risk free rate  
               $\beta_j$  = the beta of security j  
               $r_m$  = the expected return on the market portfolio

#### (d) $\beta_e = \beta_a \left( 1 + \frac{D(1-T)}{E} \right)$

Where       $\beta_e$  = beta of equity in a geared firm  
               $\beta_a$  = ungeared (asset) beta  
              D = market value of debt  
              E = market value of equity  
              T = corporation tax rate

**Note.** Candidates may use other versions of these formulae but should then define the symbols they use.

# DISCOUNT TABLES

<i>Interest rate pa</i>	<i>Number of years n</i>	<i>Present value of £1 receivable at the end of n years</i>	<i>Present value of £1 receivable at the end of each of n years</i>
1%	1	0.990	0.990
	2	0.980	1.970
	3	0.971	2.941
	4	0.961	3.902
	5	0.951	4.853
	6	0.942	5.795
	7	0.933	6.728
	8	0.923	7.652
	9	0.914	8.566
	10	0.905	9.471
5%	1	0.952	0.952
	2	0.907	1.859
	3	0.864	2.723
	4	0.823	3.546
	5	0.784	4.329
	6	0.746	5.076
	7	0.711	5.786
	8	0.677	6.463
	9	0.645	7.108
	10	0.614	7.722
10%	1	0.909	0.909
	2	0.826	1.736
	3	0.751	2.487
	4	0.683	3.170
	5	0.621	3.791
	6	0.564	4.355
	7	0.513	4.868
	8	0.467	5.335
	9	0.424	5.759
	10	0.386	6.145
15%	1	0.870	0.870
	2	0.756	1.626
	3	0.658	2.283
	4	0.572	2.855
	5	0.497	3.352
	6	0.432	3.784
	7	0.376	4.160
	8	0.327	4.487
	9	0.284	4.772
	10	0.247	5.019

<i>Interest rate pa</i>	<i>Number of years</i>	<i>Present value of £1 receivable at the end of n years</i>	<i>Present value of £1 receivable at the end of each of n years</i>
20%	1	0.833	0.833
	2	0.694	1.528
	3	0.579	2.106
	4	0.482	2.589
	5	0.402	2.991
	6	0.335	3.326
	7	0.279	3.605
	8	0.233	3.837
	9	0.194	4.031
	10	0.162	4.192

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