GX2312

Ollscoil na hÉireann, Gaillimh

National University of Ireland, Galway

Semester One Examinations, 2000/2001

First Year Master of Information Technology Degree Examination

Financial Management AY505

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Time Allowed: Two and a half hours

Candidates should answer any three questions
All questions carry equal marks

Present Value Interest Factor Tables Attached

Question 1:

Compucall Plc. produces and sells a range of high technology mobile telephones. The company has recently developed a prototype of a satellite powered phone which represents a technical breakthrough and is superior to machines being developed by competitors. The company is considering commercial production of this new phone, and the following information is available:

- Compucall has spent £260,000 in development costs on the new phone over the past three years. This accumulated amount will be written of in the financial accounts over the next four years on a straight line basis. Full tax relief on this expenditure was obtained in past tax years.

- Production equipment costing £400,000 will be required immediately for commercial production. This capital cost will be depreciated for tax purposes on a straight line basis over the four year life of the project, ignoring residual value. This equipment is expected to have a cash residual value of £20,000 in four years time.

- If the new production equipment is purchased, some existing machines will be sold immediately for an estimated £30,000. Otherwise, they will be sold in four years time for £10,000. These machines are now fully depreciated for tax purposes.

- Sales of the new phone are estimated at £400,000 in Year 1, rising to £600,000 in Year 2 and remaining at this level for Years 3 and 4. Contribution is estimated to be 40% of sales.

- Fixed overheads attributable to the new production activity are estimated at £40,000 per year, excluding depreciation.

- General administrative overhead will not increase as a result of the new phone project. However, company policy dictates that an allocation of general administrative overhead will be charged to all products. The allocation to be charged to the new product line is estimated at £30,000 per year.

- The project requires an immediate investment in working capital amounting to £80,000 and an additional investment in year 1 of £10,000.

- Compucall pays tax at a rate of 25% in the same year that profits are earned. Assume that the company has sufficient taxable profits arising from other product lines to fully absorb any tax losses arising on this project.

- The cost of capital for this project is estimated as 20%.

Cont'd..

Question 1, Cont'd...

You are required to:

(a) Prepare a statement of after-tax cash flows attributable to the project for each year of its four-year life.

(18 Marks)

(b) Calculate the Net Present Value and the Internal Rate of Return for this project, and for each criterion, recommend whether the project should be accepted.

(8 Marks)

(c) Briefly explain how expected inflation should be incorporated into the analysis of the project.

($7^{1/}{}_3$ Marks)

Total: ($33^{1/}{}_3$Marks)

Question 2

Drum Ltd. is considering offering a 2% cash discount to customers who pay within 10 days of the invoice date. At present, the company offers 30 days credit, but it does not offer a cash discount. However, the company's significant ongoing investment in outstanding debtors has motivated the Financial Controller to consider ways of reducing the company's debtors through earlier collection of outstanding amounts.

The following information is available:

- Annual sales on credit amount to £7,500,000 at present and are expected to remain at that level given present debtor policies. The average collection period is 80 days and bad debts amount to approximately 2% of sales. The average net contribution margin is estimated at 15% of sales revenue.
- The Financial Controller estimates that the proposed discount would be taken on 40% of sales and that the collection period for the remaining 60% of sales should remain at 80 days. She expects that the bad debts experience will not be affected by the change.
- The availability of the cash discount should increase annual sales by about 10%.
- The opportunity cost of funds invested in debtors is 10%.

Cont'd..

Question 2 cont'd..

As an alternative to the discount proposal, the Financial Controller is considering an offer of undisclosed factoring services. The factor is confident of improving the collections experience and agrees to remit the invoiced amount, less a factoring charge of 1.5%, 35 days after the date of invoice. Bad debts would continue to be the responsibility of Drum Ltd., but it is expected that the effectiveness of the factor in credit control and collections should reduce bad debts to 1% of sales. Administrative cost savings amounting to £30,000 per year are also expected if the factoring arrangement service is implemented.

You are required to: (Assume a 360-day year in all calculations)

a) Prepare calculations to estimate the net financials benefits of each of these proposals. Which course of action do you recommend?

(25 Marks)

b) In the context of deciding on an optimal credit extension policy, discuss the credit policy variables controllable by management.

($8^{1/}{}_3$ Marks)

Total: ($33^{1/}{}_3$Marks)

Question 3

The financial statements of Eurotech Ltd. for the two years ended 31 March 1999 and 31 March 2000 were as follows:

Profit and Loss Accounts for year ended:

	31/3/99	31/3/00
	£	£
Sales	500,000	600,000
Cost of sales	285,000	354,000
Gross profit	215,000	246,000
Wages and salaries	115,000	140,000
Depreciation	28,000	30,000
Advertising	5,000	25,000
Interest	12,000	12,000
	160,000	207,000
Net profit	55,000	39,000
Proposed Dividends	15,000	15,000
Retained profit	40,000	24,000

Cont'd..

Question 4

Oranswall Ltd. has recently completed a period of extraordinary growth due to the productivity of its personalised sportwear division. Earnings per share (EPS) have grown at an average compound annual rate of 15%, while dividends have grown at an 18% annual rate over the past ten years. The current dividend is £3 per share. Current earnings are £4 per share. Both earnings and dividends are expected to grow at an annual rate of 20% during the coming year, by 10% per annum for the following two years and by 5% per annum thereafter.

The company has also fully secured bonds in issue. These bonds "Oranswall Bonds" were issued on 1st January 1993 at £100 par value at a fixed rate of interest of 8%. They are due to mature on 1st January 2008. Interest is compounded and paid annually on 1st January.

You are required to:

a) Calculate the price you expect 1,000 Oranswall shares to sell for today if you require a 15% rate of return on equity for a firm of this risk level.

(12 Marks)

b) In the case of Oranswall Bonds, calculate the exact yield to maturity on the assumption that an investor purchased 10 bonds for £700 on 2nd January 1998.

(8 Marks)

c) Calculate the price an investor, requiring a 12% return on investment, would pay on 2nd January, 2001 for 10 Oranswall Bonds.

(8 Marks)

d) Briefly discuss the factors (if any) which make the valuation of common/ ordinary shares more complicated than the valuation of bonds.

($5^{1/}{}_3$ Marks)

Total: $33^{1/}{}_3$ Marks