



Institute of Incorporated Public Accountants

**Financial Management
Module 14
Monday 29th. August
2011
10am – 1pm**

Section A: All three questions to be attempted.

Section B: Two of the following three questions to be attempted.

Present Value tables are attached at the end of this paper.

Time Allowed: 3 Hours

Section A: All three questions to be attempted

Section A (70 marks in Total)

Question 1

AnimalPharma Plc, (APP), a manufacturer of veterinary medicines for farm animals, wishes to estimate its current cost of capital.

The following figures have been extracted from their most recent accounts:

	€000	€000
Fixed assets		17,000
Investments		3,500
Current Assets	11,400	
Less - current liabilities	<u>9,500</u>	
		<u>1,900</u>
		<u>22,400</u>
Ordinary Share Capital:		
Issued - 1,000,000 @ €1		1,000
Reserves		<u>9,550</u>
Shareholders' funds		10,550
8% Irredeemable Debentures		6,000
6% Preference Shares		5,000
Deferred taxation		250
Corporation Tax		<u>600</u>
		<u>22,400</u>

The current market value of APP's ordinary shares is €12.50 per share cum-dividend. APP's beta is 1.4, the risk-free rate is 3 percent, and the return on the ISEC index (the market proxy) is 8 percent. An annual dividend of €800,000 is due for payment shortly. The 8% debentures are irredeemable and are trading at a current market value of €106.00, a €6.00 premium above their issue price of €100. Semi-annual interest of €4m has just been paid on the debentures.

The 6% preference shares are trading at a current market value of €6.00, a €1.00 premium above their issue price of €5.00. Interest has just been paid on these preference shares. There have been no issues or redemptions of ordinary shares or debentures during the past five years and corporation tax rate remains at 12.5%. Assume that tax relief on the debenture interest arises at the same time as the interest payment.

Required

- Calculate the cost of capital that APP should use as a discount rate when appraising new marginal investment opportunities. **(13 marks)**
- Explain when firms should discount projects using (i) the cost of equity (ii) the WACC instead and (iii) when should they use neither? You may use the information and your results in parts (a) as examples. **(6 marks)**
- Discuss what type of covenants might be attached to bonds? **(3 marks)**
- From the perspective of the companies that issue the bonds, briefly discuss the advantages and disadvantages to companies of covenants. **(3 marks)**

(25 marks in Total)

Question 2

The Horto Energy Co. Ltd. is based in the country of Carti and operates biofuel energy plants in less developed countries. It is considering the following investment in the country of Doung. Build a biofuel energy plant in Doung and operate it for three years after which the plant would be turned over for free to the government of Doung.

The project would require an immediate outlay of D£250 million Doung pounds. In addition maintenance and other variable costs for the plant would cost D£25 million this year, (year zero) rising by 14% p.a. thereafter. Revenue would start in year one at D£200 million. The energy regulator in Doung has agreed to allow energy prices to rise by the rate of inflation in Doung less 12% p.a.

The Doung Tax authorities will allow investors in green energy plants to write off their investment over three years on a straight line basis. In Doung the general rate of inflation is expected to be 15% p.a. and the corporate tax rate to stay at 30% over the life of the project.

To discourage short term destabilising speculative investments, only 75% of after-tax funds can be repatriated in the first two years of the projects life. On top of this, to encourage reinvestment in Doung, there is a remittance (repatriation of funds) tax of 20% on all funds sent out of Doung. Therefore 25% of any positive cash flows during this period must be invested in Doung Government bonds which pay a real rate of interest of 4%.

As the project life is three years, Horto Energy Co. Ltd. intends to repatriate back to Carti any remaining funds, including the proceeds of the sale of the bonds, in year three. In its home country of Carti the general rate of inflation is expected to be 10% p.a. over the life of the project. The Government of Carti levies corporate tax rate at 35% on all profits, wherever they are earned. However as Carti and Doung has a double taxation agreement, any taxes paid in Doung can be set aside on taxes due in Carti. Currently 0.70 Carti Dollars equals one Doung pound, i.e. C\$0.70 = D£1.00.

The Carti Government bonds pay a real rate of interest of 4%. However a risky project of this type will require an appropriate discount rate of 6%, in real terms, in Carti Dollars.

Required:

Calculate the Net Present Value of the project to Horto Energy Co. and recommend whether they should accept the project or not. Clearly show and explain where necessary your workings and state any assumptions you have made.

(25 marks in total)

Formulas:

Fisher's (closed) proposition: Real rate of interest in country Z = $\left(\frac{(1+rZ)}{(1+iZ)}\right)^{-1}$

Interest Rate Parity: $F(A:1B)^t = S(A:1B) \times \left(\frac{(1+rA)}{(1+rB)}\right)^t$

Purchasing Power Parity: $F(A:1B)^t = S(A:1B) \times \left(\frac{(1+iA)}{(1+iB)}\right)^t$

Where: $F(A:1B)^t$ = Expected Future exchange rate, (units of A for 1 unit of B) at time t

$S(A:1B)$ = Current Spot Rate, (units of A for 1 unit of B)

rA = Nominal rate of interest in Country A

rB = Nominal rate of interest in Country B

rZ = Nominal rate of interest in Country Z

iA = Expected rate of inflation in Country A

iB = Expected rate of inflation in Country B

iZ = Expected rate of inflation in Country Z

Question 3

As a former recording artist who has had many hit records in the past, you currently manage your own music publishing company. Your old record company who own 50% of the rights to your old songs has offered you the choice of the following two deals:

Investment A

In return for allowing your old record company to use some of your old songs in their next series of compilations CD's they will pay you €300,000 each year for 10 years starting next year, (year 1). In addition they are proposing making a movie of your life that will hopefully result in a big increase in the popularity of your back catalogue. You forecast that in three years time, (year 3), when the film comes out, your profits after tax will increase by €750,000, rising by 4% each year forever thereafter.

All you have to do is pay 50% now, (year 0), towards the €5m cost of producing the film. But you would be entitled to half its profits. In PV terms you expect your investment in the film to breakeven i.e. NPV = 0.

Also you must pay a contribution towards a joint marketing campaign of your back catalogue. However the joint marketing campaign would only be needed just as the film is being finished, which would not be for two years from today, (year 2). Then they want €1.5m per annum until the marketing campaign is over in 7 years from today, (year 7), thus requiring 6 annual contributions of €1.5m, the first arising in two years time, (year 2).

Investment B

Alternatively your old record company has offered you the following deal:

In return for selling you back all rights to your music which would cost you €5m now, (year 0). They will pay you €500,000 each year for 20 years starting next year, (year 1). They would then buy back all your rights to your music for a final payout of €50m in 20 years time, (year 20).

A firm with a similar risk to you and with similar growth expectations of around 6% per annum, has just paid a dividend of €0.80 per share and is currently priced at €10.00 per share.

Required:

- a) Calculate the NPV of both investments and approximate the IRR of investment B. (Initially, use the company's cost of capital and an interest rate of 20% to start your calculation of the internal rate of return). Advise the company whether either Investment A or B or neither investment should be undertaken, showing all your workings. **(13 marks)**
- b) If the IRR from putting your money in a one year bank account was 3.5%, explain whether you would choose an NPV = zero one year project instead. In your answer explain what is meant by an NPV = zero project and state, in general terms, which method of investment appraisal NPV or IRR, you consider to be the most appropriate for evaluating investment projects in general and discuss the reasons why you picked this method of investment appraisal. **(7 marks)**
- (20 Marks in Total)**

Section B: two (2) of the following three (3) questions to be attempted

Section B (30 marks in Total)

Question 4

- a) "Before the credit crunch tenanted-pub firms ... borrowed cheaply in order to buy up back street boozers... But the debt crisis and the resulting slowdown have left the tenanted-pub industry nursing the hangover from hell." Financial Times November 27/28 2010.

Explain the term "overtrading". In your answer show how the financial backers could diagnose (or misdiagnose) the main symptoms of this condition, the various possible causes of such symptoms, and how tenanted-pub firms could overcome this situation. **(8 marks)**

- b) What are the 2 basic types of leases and what are the advantages and disadvantages of leasing? **(7 marks)**

(15 Marks in Total)

Question 5

- a) "Oil-rich Malaysia's sovereign wealth fund 1Malaysia Development Berhad (1MDB) ... has already invested in a number of real estate and infrastructure projects around the world, including a \$2.5bn joint venture with PetroSaudi and a scheme to create a carbon-neutral city in Malaysia". Sunday Independent Business Section, February 20 2011.

Compare the use of joint ventures as opposed to licensing for a firm that wishes to expand abroad and outline the advantages and disadvantages of both joint ventures and licensing. **(8 marks)**

- b) Outline the strategic reasons for Foreign Direct Investment, (FDI), for a firm wishing to expand. **(7 marks)**

(15 Marks in Total)

Question 6

Write short notes on **three (3)** of the following **six (6)** topics:

- i) Why the combining of the roles of the Chairman and the Chief Executive is considered undesirable.
- ii) The difference between transaction and translation risk in international trade.
- iii) The Equivalent Annual Cost approach to asset replacement.
- iv) The co-efficient of correlation as it relates to the two stock portfolio.
- v) The advantages of using currency swaps
- vi) The disadvantages of using currency swaps

(3 x 5 marks)
(15 marks in total)