



National University of Science and Technology

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTING

FINAL EXAMINATION PAPER: 2012/2013

DATE: MAY 2013

**SUBJECT: FINANCIAL MANAGEMENT:
CAC 4204**

TIME ALLOWED: THREE (3) HOURS

MARKS: 100

INSTRUCTIONS TO CANDIDATES

1. Answer ALL questions
2. Use the examination book provided
3. Use black or blue pen
4. Begin each question on a new page
5. Submit all answer books and
6. Maths tables are provided

QUESTION 1 [25 MARKS]

A and Z both operate department stores in Europe. They operate in similar markets and are generally considered to be direct competitors. Both companies have had similar earnings records over the past ten years and have similar capital structures. The earnings and dividend record of the two companies over the past six years is as follows:

	A			Z		
Year to 31 March	EPS cents	DPS cents	Average share price	EPS cents	DPS cents	Average share price
2008	230	60	2,100	240	96	2,200
2009	150	60	1,500	160	64	1,700
2010	100	60	1,000	90	36	1,400
2011	-125	60	800	-110	0	908
2012	100	60	1,000	90	36	1,250
2013	150	60	1,400	145	58	1,700

Note. EPS = Earnings per Share and DPS = Dividends per Share

A has had 25 million shares in issue for the past six years. Z currently has 25 million shares in issue. At the beginning of 2012, Z had a 1 for 4 rights issue. The EPS and DPS have been adjusted in the above table.

The Chairman of A is concerned that the share price of Z is higher than his company's, despite the fact that A has recently earned more per share than Z and frequently during the past six years has paid a higher dividend.

Required

(a) Discuss:

- i. The apparent dividend policy followed by each company over the past six years and comment on the possible relationship of these policies to the companies' market values and current share prices; and [6]
- ii. Whether there is an optimal dividend policy for A that might increase shareholder value. [6]

(b) Forecast earnings for A for the year to 31 March 2014 are \$40 million. At present, it has excess cash of \$2.5 million and is considering a share repurchase in addition to maintaining last year's dividend. The Chairman thinks this will have a number of benefits for the company, including a positive effect on the share price.

Advise the Chairman of A of:

- i. How a share repurchase may be arranged [4]
- ii. The main reasons for a share repurchase [4]
- iii. The potential problems of such an action, compared with a one-off extra dividend payment, and any possible effect on the share price of A [5]

QUESTION 2 [25 MARKS]

ABC, a listed company, runs a chain of 26 garden centres which sell plants, gardening implements and a range of other gardening products. It is listed on an international stock exchange and it has an accounting year end of 30 June.

The company plans to open three new garden Super Centres in 2013. Unlike existing stores, they will also sell garden furniture.

Each of the three new stores will cost \$6 million to build and each will carry \$3.5 million of stocks. The following budgeted summary statement of financial position at 30 June 2012 (which excludes the three new Super Centres) was presented at a meeting of the board:

	\$m
Land and buildings	26
Other non-current assets	13
Inventory	16
Receivables	1
Cash	1
	57
Share capital (\$1shares)	10
Accumulated profits	20
Loans	24
Trade creditors	3
	57

The statement of financial position valuation for land and buildings reflects their current market values.

Chief Executive

'I believe that we should raise new equity to finance the new Super Centres. Our share price has risen from \$4 a year ago to \$6 today. I believe that we should take advantage of this high share price and issue shares now in case the share price falls again. Moreover, our dividend yield is only 3% – this is cheap finance at low risk.'

Non-Executive Director

'I am not keen on raising new external finance. We should use our retained profits of \$20 million to finance most of the new land, buildings and inventory. To finance the remaining amount, we should sell the least profitable of our existing garden centres. This approach will save all the issue costs and all the uncertainty involved in raising new external finance.'

Finance Director

'I am in favour of raising new debt to finance the expansion. The return on these new Super Centres is bound to be greater than the cost of debt, so a profit is assured, and thus the risk is minimal.'

There are two alternatives:

Alternative 1: Issue \$30 million of 7% corporate bonds. These would be issued on 1 July 2012 at a 5% discount and would be repayable on 30 June 2017 at their nominal value. Interest would be payable annually in arrears on 30 June each year.

Alternative 2: Raise a bank loan of \$28.5 million on 1 July 2012. The interest rate would be 5% per annum for the first 3 years and 10% per annum for the following 3 years. The loan would be repayable on 30 June 2018.

Interest would be payable annually in arrears on 30 June each year. Assume that interest paid can be relieved for tax at a rate of 30%. Assume tax is payable at the end of the year in which the taxable profits arise and sufficient profits exist to set off all interest payments.

Required

- (a) Calculate the after-tax cost of debt for each of the two alternatives. [8]
- (b) Identify any further factors that would need to be considered, other than the cost of debt, before choosing between these two alternatives. [6]
- (c) Write a memorandum to the board, as a member of ABC's treasury department, which discusses the financing options for expansion put forward at the board meeting. In so doing, evaluate the comments of the directors. [11]

QUESTION 3 [25 MARKS]

P & T is a private manufacturing company. The company owns patents for certain luxury skin care products which it manufactures and sells to the wholesale market. It is also actively involved in research and development (R&D) of new products. P & T has a pre-tax cost of debt of 3.0% and gearing (debt/debt + equity) of 40%, based on its best estimate of the market values of debt and equity.

P & T is currently considering a number of different possible investment projects, proposed by both the R&D and manufacturing departments.

When evaluating proposed investments, P & T has previously always used a discount rate of 10% to discount expected future cash flows. However, the new Financial Director (FD) has challenged this and has suggested that the company should derive a weighted cost of capital (WACC) using the capital asset pricing model (CAPM). This WACC could then be used as the discount rate in future investment appraisal decisions. The Managing Director (MD) has asked the FD to justify this proposal and to calculate a more appropriate WACC for P & T.

The FD of P & T has identified a company, T & T, which operates in the same industry. T & T has an equity beta of 2.4 and gearing (debt/debt + equity) of 30% based on market values.

Additional information:

- The long term market risk premium can be assumed to be 4.0%.
- The risk free rate is 1.0%.
- Corporate income tax is charged at 35%.
- Debt betas for both P & T and T & T can be assumed to be zero.

Required:

- (a) Calculate a WACC for P & T using T & T's beta. [6]
- (b) Write a report to the Managing Director, advising P & T on the benefits and drawbacks of using the WACC calculated in part (a) above as the discount rate in investment appraisal. [7]
- (c) Explain:
 - i. The difference between systematic and unsystematic risk. [4]
 - ii. The components of the CAPM formula. [4]
 - iii. The theoretical relationship between these components shown by the CAPM formula. [4]

QUESTION 4 [25 MARKS]

R & T is a publicly-owned and funded health organisation based in the Far East. It is reviewing a number of interesting possibilities for new development projects in the area and has narrowed down the choice to the five projects detailed below. R & T is aware that government budget restrictions may be tighter in a year's time and so does not want to commit to a capital budget of more than \$30 million in year 1. In addition, any project cash inflows in year 1 may be used to fund capital expenditure in that year. There is sufficient capital budget remaining in year 0 to enable all projects to be undertaken. Under government funding rules, any unused capital in year 0 cannot be carried over to year 1 and no interest may be earned on unused capital. No borrowings are permitted.

R & T assesses capital projects at a hurdle rate of 15% based on the equity beta of health-based companies in the private sector.

	Cash outflows	Cash inflows	
	Year 0	Year 1	
Project	\$ million	\$ million	\$ million
A	9	16	4 from year 1 in perpetuity
B	10	10	4 from year 2 in perpetuity
C	10	12	5 in years 1 to 10
D	8	5	6 in years 3 to 7
E	9	8	2 in years 1 to 5 5 in years 6 to 15

Notes

- i. The projects are not divisible
- ii. Each project can only be undertaken once
- iii. Ignore tax

Required

- (a) Advise R & T on the best combination of projects based on an evaluation of each project on the basis of both:

- i. NPV of cash flows; [9]
- ii. A profitability index for use in this capital rationing analysis. [9]

(b) **Discuss**

- i. Whether or not capital rationing techniques based on NPV analysis are appropriate for a publicly-owned entity such as R & T. [3]
- ii. As a publicly-owned entity, what other factors R & T should consider and what other analysis it should undertake before making a final decision on which project(s) to accept. [4]

END OF EXAMINATION PAPER