NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF COMMERCE
DEPARTMENT OF FINANCE
BACHELOR OF COMMERCE HONOURS DEGREE IN FINANCE
PART II – 2ND SEMESTER SUPPLEMENTARY EXAMINATION – AUGUST 2005
CORPORATE FINANCE II [CFI 2201]
TIME ALLOWED: 3 HOURS

QUESTION ONE

1. Assume that a firm currently views its capital structure as optimal. It has $3,000,000 of par value 9 percent bonds outstanding, with an annual before- tax yield to maturity of 8 percent required on a new issue. The bonds currently sell for $115%. The firm has 46,000 shares of common stock outstanding, currently selling for $40 per share. The firm expects to pay a $3.50 dividend per share one year from now, and is experiencing a 4.5 percent growth rate in dividends, which it expects to continue indefinitely. The firm's marginal tax rate is 40%, and it expects to be able to finance all new projects with debt and internal common equity.
   - (i) Explain why the firm's bonds are trading at a premium to par value. **[2]**
   - (ii) What is the firm's after-tax cost of debt? **[2]**
   - (iii) What is the firm's debt-to-equity ratio? How many more ordinary shares need to be issued in order to bring the firm's debt-to-equity ratio to 75%? **[2], [2]**
   - (iv) What is the firm's after-tax cost of common stock? Justify the method used and state an alternative method. **[2], [3]**
   - (v) Explain the disparity between the firm's after-tax costs of debt and common stock. **[2]**
   - (vi) What is the firm's weighted average cost of capital and explain its relevance. **[3], [2]**

QUESTION TWO

The summary forecast profit statement and balance sheet of the AB Co. Ltd for the next 12 months is as follows:

Summary Profit Forecast for the next 12 months

	$	$
Sales Income (100,000 units)		1,200,000
Less: Variable Costs	900,000	
Fixed Costs	150,000	1,050,000
Profit		150,000

Summary balance sheet

	$	$
Investment in fixed assets		1,500,000
Investment in working capital:		
Debtors	200,000	
Stock	80,000	
Cash	24,000	
	304,000	
Less: Creditors	60,000	244,000
Total investment		1,744,000

Profit as return on investment = 8.6%

The directors are concerned about the low return on investment, particularly because of the under-utilisation of the investment in fixed assets. There is little likelihood of significant alterations to selling prices and costs, and the only apparent way of improving the situation is increased sales. All sales are on credit and the company operates a very strict credit control procedure, which has virtually eliminated bad debts. Because of this, a number of potential customers have had to be refused and some existing customers have taken their business elsewhere. The suggestion has been made that a relaxation of the credit control policy could increase sales substantially. Specifically, if the company were to introduce a scheme whereby a 2% discount were given on accounts paid within ten days – at present no discount is given – and if the company were willing to accept "riskier" customers, the sales would increase by 40%. Probably 65% of the customers would avail themselves off the discount and the average collection period of the remainder would be half of what it is at present. Bad debts would be of the order of 2% - 6% of total sales.
Comment on the above situation **making full use of the information given** and highlighting any matters that should be brought to the attention of the directors. **[20]**

QUESTION THREE [20 Marks]

a. Explain the objectives of calculating the cost of capital and state the type of cost of capital relevant to each objective. [10]

b. Calculate the cost of capital for the following:

   i. Nasdaq Ltd has in issue some 30% $1,00 preference shares. These shares are currently trading at $1,80 on the ZSE. [2 ½]

   ii. Nasdaq is proposing to make a further issue of preference shares at $1,20 each and issue costs will amount to 5 cents per share [2 ½]

   iii. Nasdaq has been able to sell a new issue of 25 year bonds with a 50% coupon rate. The tax rate is 35%. [2 ½]

   iv. Given that Nasday is financed by preference shares and bonds only where the proportions are40% and 60% respectively, what would be the cost of capital? [2 ½]

QUESTION FOUR [30 Marks]

a. When does an efficient financial market exist? [4]

b. Suppose 75% of your portfolio is invested in the shares of Delta and the remainder in Inns. You expect that Delta and Inns will give returns of 25% and 30% respectively over the coming year. **Calculate the expected return of on your portfolio.** [3]

c. Is it true that diversification reduces risk? **Explain** [5]

d. Explain how market risk is measured. [5]

e. How is beta obtained? [2]

f. Discuss the factors that a Financial Manager would consider in formulating the working capital policies of a company? [10]

QUESTION FIVE

1. **A Company that undertakes capital restructuring would**

   A. Increase the amount of debt and equity proportionately.
   B. Change personnel in the finance department.
   C. Restructure the type of equipment used by the firm.
   D. Shift the mix of debt and equity.

2. **According to Modigliani and Miller [MM], arbitrage between leveraged and unleveraged firms will**

   A. Increase value as debt increases.
   B. Have no impact on value.
   C. Diminish value as debt increase.
   D. Hold value constant as debt increases.

3. **ROE and EPS are important performance measures to investors because they**

   A. Include both results of operating and financing effects.
   B. Indicate business risk.
   C. Identify the age of the firms capital equipment.
   D. Are not very hard to interpret.

4. **Northwest Publishing Company [NWP] sells this textbook for $70 each. The variable cost per book is $50. At current annual sales of 100,000 books, the publisher is just breaking even. It is estimated that if the authors` royalties are reduced, the variable cost per book will drop by $10. Assume authors` royalties are reduced and sales remain constant; how much more money can the publisher put into advertising [a fixed cost] and still break even?**

   A. $1,000,00
   B. $100,000
   C. $200,000
   D. None of the above

5. **A company has total sales of $150,000 and EBIT of $25,000. Its variable costs and fixed costs are $100,000 and $25,000, respectively. The company pays an interest of $15,000. This company's degree of operating leverage and degree of financial leverage are, respectively:**

A. 2.5 and 2.0
B. 2.0 and 2.5
C. 2.0 and 2.0
D. None of the above

6. The concept of leverage in managerial finance refers to:

A. The relationship between the senior managers and the members of the board of directors.
B. The retention of earnings to finance growth.
C. The use of fixed cost resources in the operation of the business.
D. The ability to sell a large quantity of product while producing much less.

7. Which of the following performance ratios best reflects the impact of business and financial risk on the residual owners of the company?

A. Dividend yield.
B. Net margin
C. Total asset turnover
D. Return on equity.

8. Amex Corporation produces and sells financial calculators for $40. The company has fixed operation cost of $10 million and estimates their variable cost/calculator at $6. What is the unit operating break-even point?

A. 250,000 calculators
B. $11,764,706 in sales
C. 294,118 calculators
D. Where fixed equals variable costs

9. Which of the following situations is likely to have the highest combined business and financial risk impact upon a business?

A. A new labor-intensive operation is funded with operating cash flows.
B. A fully automated plant is completed, funded with retained earnings.
C. A fully automated plant is completed, funded with the issuance of 10-year bonds.

D. An automated, but dated plant in the U.S. is closed and operations are resumed in a labor-intensive plant in Central America.

10. **The degree of operating leverage is a measure of the relative change in EBIT, given a change in:**

A. the number of units sold
B. Fixed costs
C. Sales
D. The price of the products.

[10]