NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF COMMERCE
DEPARTMENT OF FINANCE
BACHELOR OF COMMERCE HONOURS DEGREE IN
Accounting; Finance; Banking; Fiscal; Insurance & Risk Management; Actuarial Science; Marketing; Management.
PART II - FINAL EXAMINATIONS - JUNE 2010
CORPORATE FINANCE (CFI 2201)
TIME ALLOWED : 3 HOURS

INSTRUCTIONS

1. Section A is compulsory
2. Each question answered to be written on a separate sheet
3. Answer any other 3 questions in Section B.

Section A (Total 25 marks)

State whether the following statements are **True** or **False**

1. The par value of a bond is essentially independent of its market value.

2. The only variable that can cause the value of a bond to decrease or increase is a change in its required rate of return.

3. If the market price of a security is greater than the value assigned to the security by an investor, then the expected rate of return is greater than the required rate of return.

4. Above a critical level of EBIT, the firms earnings per share will be lower if greater degrees of financial leverage are employed.

5. The mix of **long** term sources of funds **only** are said to be the capital structure of a firm.

6. In practice a firm should invest retained earnings as long as required rate of return exceeds return on projects.

7. In a stock split, the only accounting change is the shifting of amounts from retained earnings to common stock par account.

8. The introduction of floatation costs to the 'dividend irrelevance ' concept favours the retention of earnings in the firm.

9. Under a sale and leaseback arrangement, a company gets a right to use an asset that it did not own previously.

10. At time of issuance , a convertible security is always priced lower than its conversion value.

11. In a forward contract, the **only** risk that is eliminated is price risk.

12. Trading on margin magnifies the return on equity for the investor.

13. When interest rates are likely to increase, the treasurer of a financial institution can increase net interest income by shortening maturity(tenor) of liabilities and increase maturity(tenor) of assets.

Multiple Choice section

Choose the most appropriate answer and indicate your answer by a, b, c, or d

14. Convertible bonds ;

(a) prohibit issuance of additional common stock.
(b) can never be repurchased by issuing firm.
(c) are often an indirect way of selling common stock
(d) have no advantage to the investor over straight debt.

15.A warrant carries a right for one common stock share and is exercisable at $20 per share. The current market price per share is $30, the minimum value of the warrant is ;

a) $10
b) $5
c) $50
d) Cannot be determined

16. Which of the following is not a benefit provided by the existence of an organized exchange?

a) Continuous market
b) helping business raise new capital
c) Keeping long-term prices of financial assets at a certain level
d) establishing and publicizing a fair security pricing system.

17.An operating leverage with a factor of 8 indicates that if sales ;

(a) Increase by 1% , EBIT increases by 1%
(b) decrease by 1% , EBIT decreases by 8%
(c) decrease by 1% , EBIT increases by 8%
(d) Increase by 8% , EBIT increases by 1%

18. All of the following variables are needed in the computation of cost of debt except:

(a) issuance cost
(b) tax rate for the firm
(c) growth rate of debt
(d) market value of debt

19.Everything else held constant, as investors required rate of return decreases, value of security ;

a) increases
b) decreases
c) remains the same
d) has no relationship with required rate of return.

20. Under the Capital Asset Pricing Model of securities valuation, the relevant risk is :

(a) Diversifiable risk
(b) Systematic risk
(c) Financial risk
(d) Standard deviation

21.In working capital management , the major objective of a credit policy is to:

(a) maximise sales
(b) minimize losses
(c) maximize profits
(d) a and b

22.Which of the following illustrates the use of an aggressive approach in working capital management.

(a) short term assets financed using long term liabilities.
(b) long term assets financed using long term liabilities.
(c) short term assets financed using short term liabilities
(d) b and c

23. All of the following indicate an increase in liquidity risk except;

(a) Increase of current assets to total assets ratio
(b) Increase of current liabilities to total assets ratio
(c) Increase in current liabilities to current asset ratio
(d) Decrease in current assets to total assets ratio

24. When interest rates are likely to increase in future , an investor is best advised to ;
a) invest in bonds with low duration now.
b) invest in bonds with high duration now.
c) invest in bonds with low credit rating now.
d) invest in bonds with high credit rating now.

25. The following features are advantages of futures contracts except :
a) exchange traded
b) standardized
c) elimination of counterparty risk
d) use by big traders

Section B (Total 75 marks)

Question 1(Total 25 marks)

(a) A Manufacturing company is considering a transaction under which it would acquire equipment to be used in the planned five year project at a cost of $102,000. Maintenance of the equipment is estimated to cost $5,400 annually. The available alternative is to lease it from a leasing company for five years at an annual rental charge of $12,000 with maintenance costs being met by the lessee. The equipment will have a residual value of zero after the five years. Depreciation is through the straight line method and lease payments for each year are paid in advance.

Cost of debt in the market is 8% before tax while the corporate tax rate is 42% throughout the lifespan of the equipment.

(i) Calculate the tax shield benefits and tax shield losses to the manufacturing company if it decides the lease the equipment. **(5 marks)**

(ii) With the aid of clear and relevant calculations, show whether it would make economic sense to lease the equipment or buy it outright. **(8 marks)**

(b) A 60-day Treasury bill issue is advertised by the Reserve Bank of Zimbabwe in which it seeks to raise $90 million. Five primary dealers submit their bids as detailed below:

Dealer	Bid rate	Amount to be invested($)
ABC Merchant	25%	10 m
Renaissance Merchant Bank	29%	17m
Genesis Inv Bank	30%	23m
Tetrad Merchant Bank	32%	15m
Metro Merchant Bank	27%	25m
Total		90m

(i) Calculate the rate used to float the treasury bills. **(2 marks)**

(ii) Calculate the price of the treasury bill at issuance. **(2 marks)**

(iii) What is the effective yield on this treasury bill? **(2 marks)**

(c) Extreme Sales Pvt Ltd is currently all-equity financed and has a value of $5m. The beta of the company share is 1.2. It is planning to add $2m of debt to its balance sheet. This goal can be achieved by issuing $2m worth of bonds at a cost of 9% (assume par value of $1000) and using the proceeds to repurchase its own shares. The risk free rate is 7% and the market risk premium is 6%. The company pays tax at a rate of 40%.

(i) What is Extreme Sales Pvt Ltd cost of equity after the change in capital structure using M-M propositions? **(3 marks)**

(ii) Find the value of the leveraged firm. **(3 marks)**

Question 2 (Total 25 marks)

(a) The following information is available about Shangrilla Pvt Ltd, a listed entity on the Taiwan Stock Exchange.

Recently paid dividend is $5 while retained earnings for investment in growth projects are maintained at a retention ratio of 30%. The return on equity over the years has averaged 20% while the beta of Shangrilla Pvt ltd share is 0.8. The return on government securities in Taiwan is 7% and the Taiwan Stock Exchange main index has been consistent in providing an average annual return of 13.5%. The current market price of Shangrilla Pvt Ltd is $109 per share.

You are considering buying this share for short term investment purposes.

With aid of relevant calculations, justify your decision of buying the share or rejecting it. **(10 marks)**

(b) ZESA Holdings issues a 5 year, 9% coupon bond which pays coupons annually. The par value of the bond is $1000. XYZ Ltd, with a weighted average cost of capital of 15% is considering investing in this ZESA bond.

(i) Calculate the price per bond paid by XYZ Ltd. **(3 marks)**
(ii) Comment on the price in (i) above. **(4 marks)**

(iii) Find the expected change in Bond price emanating from a 0.8% change in interest rates. **(8 marks)**

Question 3 (Total 25 marks)

(a) An investor purchases 3000 Old Mutual shares on margin. The initial margin requirement is 70% while the maintenance margin level is 55%. The price of the Old Mutual share on day of purchase is $9.

(i) Show the investors margin account as it would appear in the books of the broker on day of purchase. **(3 marks)**
(ii) If the share price increases to $13 on day 4, what is the maximum number of shares that can be sold by the investor without triggering a margin call. **(3 marks)**

(b) The current share price of ABC Ltd is $20. An investor is expecting a cash inflow of $2m in 3 weeks time which is to be invested in the ABC share. Premiums on put options and call options are 3% and 3.5% of the going market price respectively.

(i) Evaluate the strategy which the investor will use to be protected from adverse price movements. **(4 marks)**
(ii) Show pay off diagrams for strategy in (i) above. **(3 marks)**

(c) Amigos Pvt Ltd is a long term supplier of Power Sales Retail Stores. On 2 June 2010, Amigos Pvt Ltd supplies merchandise valued at $60,000 to Power Sales. The payment is in the form of a 90 day promissory note drawn on Barclays Bank. The average discount rate quoted by Merchant Banks is 23% p.a while borrowing rates are at 28%. Deposit rates on 7 day and 30 day deposits are 15% and 18% respectively.

On 10 June 2010 Amigos Pvt Ltd has an urgent working capital requirement of $40,000.

With the aid of relevant calculations determine whether the company should borrow or discount the promissory note. **(12 marks)**

Question 4 (Total 25 marks)

(a) The following information pertains to Big Nuz Pvt ltd.

Amount Borrowed	Ke	Kd(1-T)
0	12%	0.0%
250,000	12.51%	4.8%
500,000	13.20%	5.4%
750,000	14.61%	6.9%
1,000,000	15.60%	8.4%

Given that total capital required is $1,500,000.

(i) Calculate the weighted average cost of capital (WACC) at each level of borrowing and comment **(in not more than 15 sentences)** on your findings with particular reference to a relevant capital structure theory. **(6 marks)**

(ii) State and explain four risks associated with an investment in bonds. **(12 marks)**

(b) BMG Engineering needs to undertake a $100m expansion project to be financed through debt, equity and retained earnings. The policy at BMG is to maintain a debt to equity ratio of 45%.
The company already has a borrowing of $10m and the current debt to equity ratio is 35%. BMG can issue a 4 -year $1000 par bond with a coupon rate of 9%. The required rate of return by bondholders is 11%.
The current share price for BMG is $40, the previously paid dividend is $6 per share and these dividends are expected to grow at a constant rate of 7% p.a indefinitely.
Also given is that $10 million from reserves has been set aside for this project. Corporate taxes are at 35%.

Calculate the new Weighted average cost of capital for the firm assuming that the resultant capital structure is consistent with target capital structure . **(7 marks)**

Question 5 (Total 25 marks)

(a) You are given that Firm A is valued at $500m made up of 1,000,000 shares while Firm B is valued at $150m made up of 500,000 shares. If firm A takes over B, the combined operation will generate savings of $35m. B is bought through a share swap at ratio 1:2.

(i) Calculate the cost of the merger to A **(2 marks)**

(ii) Calculate merger gain. **(2 marks)**

(iii) If shareholders of B anticipated the merger such that the current value of B included a demand premium of 15% on its share price, calculate the 'true' cost of B. **(2 marks)**

(iv) State and briefly explain two methods of fighting a hostile takeover **(4 marks)**

(b) You are the Head of Treasury of a local Commercial Bank. Your forecasts about interest rates on deposits is that they are likely to decrease from the current levels of 30% to 25% in week 2, 15% in week 3 and 10% in week 4. Deposit rates are generally uniform for all time periods.

The margin put on cost of deposits to arrive at investment rates is 4%. Your corporate clients deposit an average of $1,500,000 at the beginning of every week.

Show how you would take advantage of interest rate movements to maximize net interest income. **(7 marks)**

(c) Discuss **(in not more than 10 sentences**) the following dividend theories;

(i) Tax differential theory **(4 marks)**

(ii) Signaling theory **(4 marks)**