"Investing in Africa's future"

COLLEGE OF BUSINESS PEACE LEADERSHIP GOVERNANCE

NMAC 309: FINANCIAL MANAGEMENT

END OF SEMESTER FINAL EXAMINATIONS

NOVEMBER 2021

LECTURER: MR. GABRIEL MUZAH

DURATION: 5 HOURS

INSTRUCTIONS

- Answer one question
- We are extremely interested in your own thoughts and writing in response to the questions in the exam.
- Africa University will check all submitted final exams for plagiarism, excessive referencing and for exams which are identical or in which evidence of copying is apparent. Failing to acknowledge and cite other people's work or ideas, close paraphrasing, using passages verbatim without referencing, extreme referencing (without any original work done by the student), and copying other students' work is considered academic dishonesty by AU

Question 1

a) Discuss in detail the effect of behavioural biases from several categories: Investors, corporation and market. **[25 Marks]**

b) Suppose you have invested only in two stocks, A and B. You expect that returns on the stocks depend on the following three states of economy, which are equally likely to happen.

State of Economy	Return on Stock A (%)	Return on Stock B (%)
Bear	7.3%	-4.7%
Normal	11.5	5.4
Bull	16.6	24.3

    i.   Calculate the expected return of each stock. **[4 Marks]**
    ii.   Calculate the standard deviation of returns of each stock. **[4 Marks]**
    iii.   Calculate the covariance and correlation between the two stocks. **[4 Marks]**

c) Miss Maple is considering two securities, A and B, and the relevant information is given below:

State of Economy	Probability	Return on Security A (%)	Return on Security B (%)
Bear	0.6	3.0%	6.5%
Bull	0.4	15.0%	6.5

    i.   Calculate the expected returns and standard deviations of the two securities.

[2 Marks]

    ii.   Suppose Miss Maple invested $2,500 in Security A and $3,500 in security B. Calculate the expected return and standard deviation of her portfolio. **[2 Marks]**

3. Suppose Miss Maple borrowed from her friend 40 shares of security B, which is currently sold at $50, and sold all shares of the security. (She promised her friend she would pay her back in a year with the same number of shares of security B.). Then she bought security A with the proceeds obtained in the sales of security B shares and the cash of $6,000 she owned. Calculate the expected return and standard deviation of the portfolio. **[9 Marks]**

Question 2

a) Mergers and acquisitions (M&A) are defined as consolidation of companies. Differentiating the two terms, Mergers is the combination of two companies to form one, while Acquisitions is one company taken over by the other. M&A is one of the major aspects of corporate finance world. The reasoning behind M&A generally given is that two separate companies together create more value compared to being on an individual stand. With the objective of wealth

maximization, companies keep evaluating different opportunities through the route of merger or acquisition.

Analyse and discuss any recent (5 years) merger or acquisition of companies' outlining strategic (positioning + sustainability) and financial (investment + financing) considerations.

25 Marks

b)You are given the following information about Jordan plc:

Balance sheet at January 2010

$000 $000

	$000	$000
Fixed assets		1511
Current assets	672	
Current liabilities	323	349
Total assets less current liabilities		1860
7% preference shares ($1)	300	
9% debentures (redeemable January 2018)	650	
9% bank loans	560	1510
350		
Ordinary shares (50c)		200
Reserves		150
350		

You are also given the following information:

Yield on government Treasury bills	7%
Company equity beta	1.21
Market risk premium	9.1%
Current ex-div ordinary share price	$2.35
Current ex-div preference share price	66c
Current ex-interest debenture market value	$105
Corporation tax rate	30%

Required:

  i.   Calculate the company's WACC using market weightings.   **[20 Marks]**

  ii.   Discuss the application of Weighted Average Cost of Capital in investment appraisal

[5 Marks]

Question 3

a) Baker and Wurgler conclude that the market timing hypothesis is the dominating force overpowering all other theories in impact and importance. Discuss? **[15 Marks]**

b) The capital structure determination is not only related with the adjustment of debt and own investment but also the value the amount of ownership acquired by managers and also other stockholders. Discuss the three variables considered important for determining the optimal capital structure? **[10 Marks]**

b) The MH Company operates a low-cost airline and is a listed company. The shares are held mainly by large financial institutions and the following are extracts from MH Company's budgeted Statement of Financial Position at 31 May 2016.

	$m
Ordinary shares of $1	100
Reserves	50
9% loan notes	200
	350

Dividends have grown in the past at 3% a year, resulting in an expected dividend of $1 per share to be declared on 31 May 2016. (Assume for simplicity that the dividend will also be paid on this date.)

Due to expansion, dividends are expected to grow at 4% a year from 1 June 2015 for the foreseeable future. The price per share is currently $10.40 ex div, and this is not expected to change before 31 May 2016.

The market value of these loan notes at 1 June 2016 is expected to be $100.84 (ex-interest) per $100 nominal. Interest is payable annually in arrears on 31 May and is allowable for tax purposes. Tax is payable on profits at a rate for of 30%. Assume taxation is payable at the end of the year in which the taxable profits arise.

REQUIRED:

a) Calculate the cost of debt of MH Company.   **(4 Marks)**

b) Calculate the cost of equity of MH Company   **(6 Marks)**

c) Calculate the expected Weighted Average Cost of Capital (WACC) of MH Company as at 31 May 2013 using market Values as the weighting factors. **(15 Marks)**

End of Exam

List of Formulae

$$WACC = \left(\frac{V_e}{V_e + V_d + V_p}\right) k_{e} + \left(\frac{V_d}{V_e + V_d + V_p}\right) k_{d}(1 - T) + \left(\frac{V_p}{V_e + V_d + V_p}\right) k_{pref}$$

$$K_e = \frac{D_o(1+g)}{P_o} + g$$

$$K_e = CAPM = R_f + \beta(R_f - R_m)$$

$$K_{pref} = \frac{d}{P_0}$$

$$K_d = \frac{i(1-t)}{P_o}$$

$$\text{Approximate Yield to Maturity} = \frac{I + (F_d - V_d)/n}{[(F_d + 2V_d)]/3}$$

$$\sigma^2 = \sum P_n (R_n - E(R))^2$$

$$\text{Covariance} = \frac{\sum (\text{Return}_{ABC} - \text{Average}_{ABC}) * (\text{Return}_{XYZ} - \text{Average}_{XYZ})}{(\text{Sample Size}) - 1}$$

$$\text{Correlation Coefficient} = \frac{\text{Covariance}_{a,b}}{\sigma_a \sigma_b}$$

$$\sigma_{portfolio} = \sqrt{w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2w_1 w_2 Cov_{1,2}}$$

$$E(R) = p_1 R_1 + p_2 R_2 + \dots + p_n R_n$$