AFRICAN ECONOMIC RESEARCH CONSORTIUM

Collaborative MA Programme in Economics for Anglophone Africa (Except Nigeria)

JOINT FACILITY FOR ELECTIVES (JFE)

JUNE – SEPTEMBER 2007

CORPORATE FINANCE AND INVESTMENT II

Second Semester: Final Examination

Duration: 3 Hours **Date: Monday, September 24, 2007**

INSTRUCTIONS:

1. There are **FIVE QUESTIONS** divided into **TWO SECTIONS**. Attempt **BOTH QUESTIONS** in **SECTION I** and **ANY TWO QUESTIONS** in **SECTION II.**
2. Points for each question are indicated to help you budget your time within the allowed **THREE** hours of the examination.
3. Be neat, clear and to the point. Importance will be attached to these in grading your work.

SECTION I:

Attempt BOTH QUESTIONS in this Section

Question 1 (25 marks)

(a) The expression $E(R_j) = R_f + \beta_j \lfloor E(R_M) - R_f \rfloor$, where $\beta_j = \frac{Cov(R_M, R_j)}{\sigma_M^2}$, is often viewed as a graphical representation of the expected return–beta relationship of the Capital Asset Pricing Model (CAPM). In real life it can be argued that the most appropriate way to present the relationship is $E(R_i) = R_f + \beta_j \lfloor E(R_M) - R_f \rfloor + \varepsilon$. Explain in simple language and comprehensively the essence of the expression and the point in the latter view.

(10 marks)

(b) Suppose you observe the following for two equity securities.

Stock	BETA	Return
Aceland Inc	1.8	22%
Brainchild Ltd	1.6	20.5%

(i) If the riskfree rate is 7 percent, are these securities correctly priced? If there is mispricing between the two securities, explain how the market forces will react to the mispricing. **(6 marks)**

(ii) What would the riskfree rate and market return have to be if the securities were correctly priced? **(5 points)**

(c) Briefly explain any two limitations of using the CAPM in real life. **(4 marks)**

Question 2 (25 marks)

(a) "If ALL market participants believe and adhere to the efficient market hypothesis it will not hold" Comment on this statement. **(5 marks)**

(b) Explain the meaning of the term 'market anomaly' in relation to the efficient market concept. Citing specific example, discuss any two market anomalies that have been observed in some financial markets. **(8 marks)**

(c) For each of the following scenarios, discuss whether profit opportunities exist from trading in the shares of the firm under each of the following four conditions: (1) the market is not weak form efficient, (2) the market is weak form but not semi-strong form efficient, (3) the market is semi-strong form but not strong form efficient, and (4) the market is strong form efficient. **(Total 12 marks)**

(i) The share price has risen steadily each day for the past 30 days.

(ii) The Financial statements for the firm were released three days ago, and you believe you have uncovered some anomalies in the firm's inventory and cost control reporting techniques that are causing the firm's true liquidity strength to be understated.

(iii) You observe that the senior management of the firm has been buying a lot of the company's shares on the open market over the past week.

SECTION II:

Attempt ANY TWO QUESTIONS from this Section

Question 3 (25 marks)

(a) What is the essence of a passive investment strategy? How does a passive investment strategy differ from an active investment strategy? **(10 marks)**

(b) Explain the key activities that are involved in the portfolio creation and management process for an investor pursuing a passive investment strategy **(15 points)**

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Question 4 (25 marks)

(a) Compare and contrast a call option and a put option. **(6 marks)**

(b) The put-call parity relationship is given as $C_0 - P_0 = S_0 - X(1+r)^{-T}$ where C_0, P_0, S_0, X, r and T are the call premium, put premium, the stock price, the exercise price, interest rate and time to expiration respectively. Explain the rationale of this relationship. **(8 marks)**

(c) Consider an option on TBX share with an exercise price (X) of shs. 500 and maturing in 60 days. A call option is selling at a premium of shs. 28 while a put option is selling at a premium of shs. 10. The current market interest rate is 12% per annum while a TBX share is selling at shs. 505.

(i) Estimate, with supporting explanations, the intrinsic and time values of the call and put options. **(4 marks)**

(ii) Using the put-call parity relationship, explain if the options are appropriately priced. **(3 marks)**

(iii) If the options are not appropriately priced explain how you are going to take advantage of the mispricing. Show any profit position arising from your strategy. **(4 marks)**

Question 5 (25 marks)

(a) The ultimate objective of **technical** and **fundamental** analysis is to help an investor make a decision on a security – including when and whether to buy, sell or hold onto a security. Explain how the two approaches are different and how each is relevant regarding what decision to make and when to make such decision. **(10 marks)**

(b) Express Garments Inc (EGI) was started four years ago focusing mainly on producing garments for major design labels. Most of the shares are owned by the top management and designers. EGI has been growing very fast and has just listed its stock on the Alternative Investment section of the local stock exchange. In its submission EGI has indicated that it currently pays no dividend and is not expected to for the next three (3) years. EGI's latest earning per share (EPS) was Shs. 50 all of which was reinvested in the company. The firm's expected return on equity (ROE) for the next 3 years is 20 percent per annum. Thereafter, the firm's ROE is expected to fall to 15 percent. EGI is expected to start paying out 40 percent of its earnings in cash dividend from 4th year's EPS. This will continue forever after. EGI's market capitalization rate is 15 percent per annum.

(i) What is your estimate of EGI's intrinsic value per share now? **(8 marks)**

(ii) Assuming its current market price is equal to its intrinsic value, what do you expect to happen to its price over the next year? **(3 marks)**

(iii) What effect would it have on your estimate of EGI's intrinsic value if it is expected to pay out only 20 percent of earnings starting from the 4th year's earnings? **(4 marks)**