UNIVERSITY EXAMINATIONS: 2013/2014

EXAMINATION FOR THE MASTERS OF SCIENCE (MSC) IN COMMERCE (FINANCE AND ACCOUNTING)

MEI 601 INTERNATIONAL FINANCIAL ASSET MANAGEMENT (KITENGELA)

DATE: APRIL, 2014   **TIME: 3 HOURS**

INSTRUCTIONS: Answer Question One and Any Other Three Questions

QUESTION ONE

Suppose you are a financial adviser and your client is currently investing only in the US stock market. Your client is adamant that he doesn't see the need to invest in the UK stock market. As an investment adviser you want to convince him to consider diversifying into the UK stock market. At the moment there are neither particular barriers nor restrictions on investing in the UK stock market. Your client would like to know what kind of benefits can be expected from doing so. The following information is available.

US STOCK MARKET	RETURN (MEAN)	RISK (SD)
United states	1.26% per month	4.43%
United Kingdom	1.23% per month	5.55%

The correlation coefficient between the two markets is 0.58.

Based on the above mini case, attempt the following questions.

a)   Explain why the investor is reluctant to invest in the UK clearly indicating what kind of puzzle is making him behave in such a manner.   (7 Marks)

b)   Explain how the investor can benefit from equity premium puzzle if he embraces international

diversification.   Clearly indicate the extra return the US investor can expect at the US equivalent risk level. (8 Marks)

c)   Suppose he invests in a portfolio of investments both locally and internationally explain four ways in which he can evaluate the portfolio performance. (8 Marks)

d)   Suppose that the investor invests equally in the two markets determine the expected return and standard deviation resulting from the international portfolio. (8 Marks)

QUESTION TWO

a)   If the price is a vehicle of information, the equilibrium price is such that once agents have observed it they do not wish to trade again or in other words they no longer wish to alter their investment decisions. This definition of equilibrium leads to conclusions that may differ from the Walrasian paradigm. Explain the three possible reasons that can lead to this conclusion.

(6 Marks)

b)   Explain three principle determinants of the bid ask spread. (6 Marks)

c)   Differentiate between the no arbitrage approach and the risk neutral approach of option pricing.

(6 Marks)

d)   Differentiate between the old school approach and the interior decorator approach to financial consulting. (5 Marks)

QUESTION THREE

a)   During the last 10 year period the average annual rate of return on the NSE (market portfolio) was 15% and the average annual rate of return on a risk free asset (T.B) was 9%. As an administrator of a large pension fund that is divided among three money managers you must decide whether to renewal your investment contract with each of these money managers. You have gathered the following information:

Investment manager	Average annual rate of return	Beta of portfolio	Std deviation of portfolio
W	13%	0.90	1.9%
X	17%	1.05	2.3%
Y	19%	1.25	2.34%

The standard deviation of the market $(\delta_m) = 2.2\%$.

Required:

Evaluate the performance of the managers using Treynor's portfolio performance measure, Sharpe's portfolio performance measure and Jensen's portfolio performance measure and rank them.   (16 Marks)

b)   Using a graph of security market line indicate a portfolio that is undervalued, overvalued and one that is efficiently priced.   (7 Marks)

QUESTION FOUR

A share price is currently sh100. It is known that the price will be either sh 90 or sh 120 after six months. The risk-free interest rate is 10% per annum.

Required;

Using a one step binomial tree:

a)   Calculate the value of a call option using the no arbitrage approach   (6 Marks)

b)   Calculate the value of a put option using the no arbitrage approach   (6 Marks)

c)   Calculate the value of a call option using the risk neutral pricing approach   (6 Marks)

d)   Calculate the value of a put option using the risk neutral pricing approach   (5 Marks)

QUESTION FIVE

Consider the following prices for the last five orders; sh 20, sh 24, sh 16, sh 18 and sh 22. Assume that the proportion of uninformed investors selling in large quantities is 10% and 15% of the total population of traders is informed.

The probability that the price will be lowest at sh 8 is 10% while the probability that the large quantity signals bad information of the stock is 80%.

Required:

Using the Easley and O'hara model calculate:

a)   The bid price   (9 Marks)

b)   The ask price   (9 Marks)

c)   The spread   (5 Marks)

QUESTION SIX

a)   State and explain the main assumptions of the Glostein and Milgrom model.   (8 Marks)

b)   Suppose the market maker believes that an assets value is either high value sh 100 or low value sh 60. The market maker has assigned a prior probability of 0.6 to the higher value and hence a probability of 0.4 to the low value. Suppose further that half of liquidity traders are informed and the other half are not informed. Assume that the uninformed trader is equally likely to buy or sell. Let the event of sale be S and of buy be S^I. Suppose at time 1 the trade is a sale S.

Required;

Determine the bid and ask price at time 1.   (15 Marks)