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University Examinations 2013/2014

THIRD YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF COMMERCE

HBC 2223 : INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT

DATE: DECEMBER 2013

TIME: 2 HOURS

INSTRUCTIONS: Answer question *One* and any other *Two*.

QUESTION ONE (30 MARKS)

- a) Mbogori Plc is considering investments A through E, using Capital Asset Pricing Model (CAPM) and its graphical representation, the security market line (SML). The relevant information is represented in the figure below:

Asset	Rate of Return (%)	Beta
Risk free asset	9%	0
Market Portfolio	14%	1.00
Project A		1.50
Project B		0.75
Project C		2.00
Project D		0
Project E		-0.5

Required:

- i) The required rate of return and the risk premium for each project, given the non-diversifiable risk. (5 marks)
 - ii) Using the above information, draw the SML and plot the investments A to E. (5 marks)
 - iii) Assume that the recent economic events have caused the investors to become less risk-averse, causing the market returns to drop by 2% to 12%. Calculate the new required rate of required returns A through E and draw the new SML on the same set of axes that you used in Part (ii) above. (5 marks)
- b) Outline the main differences between technical analysis and fundamental analysis. (5 marks)

- c) The following portfolios are being considered for investment during the period under consideration, the risk free rate was 0.07.

Portfolio	Return	Beta	Standard - Deviation
A	0.15	1.0	0.05
B	0.20	1.5	0.10
C	0.10	0.6	0.03
D	0.17	1.1	0.06
MARKET	0.13	1.0	0.04

Required:

- i) Compute the Sharpe's and Treynor's measure for each portfolio and the market portfolio. (6 marks)
- ii) Rank the portfolio using the Sharpe and explain the difference you find in the ranking. (4 marks)

QUESTION TWO (20 MARKS)

- a) Define efficient Capital markets. (3 marks)
- b) Differentiate between information efficiency and allocative efficiency. (3 marks)
- c) Explain the following terms:
 - i) Random walk theory (2 marks)
 - ii) Fundamental analysis (2 marks)
 - iii) Technical analysis (2 marks)
- d) Citing relevant examples, differentiate between systematic and unsystematic risk. (8 marks)

QUESTION THREE (20 MARKS)

- a) Explain the logic of Arbitrage Pricing Theory (APT). How does it compare and contrast with CAPM? (6 marks)
- b) An investor is considering making an investment in Shares of KSS Co. Ltd. The security returns depend on only three factors, inflation, interest rate and industrial production. Details are given below:

Factor	Beta	Expected Value (%)	Actual Value (%)
GNP	1.95	6.0	6.5
Inflation	0.85	5.0	5.75
Interest rate	1.20	7.0	8.0
Industrial Production	2.20	9.0	10.0
Stock market index	2.50	9.5	11.50

Required:

- i) If the risk free (anticipated) rate of return is 9%, how much should the required returns be? (8 marks)
- c) Discuss different bond management strategies. (6 marks)

QUESTION FOUR (20 MARKS)

You have identified two quoted shares which you believe exhibit negative correlation which you believe exhibit negative correlation in their possible returns over the next year as follows:

State of nature	Probability of state	Expected Returns	
		A Shares	B Shares
X	0.30	25%	14%
Y	0.45	22%	18%
Z	0.25	12%	20%

Required:

- a) Calculate expected returns of each shares and of the portfolio (Assume 70% in A and 30% in B) (6 marks)
- b) Calculate the standard deviation and variance of each asset and of the portfolio. (8 marks)
- c) Calculate the covariance between the two securities. (4 marks)
- d) Calculate the correlation co-efficient. (2 marks)

QUESTION FIVE (20 MARKS)

- a) The traders of derivatives can be categorized into hedgers and speculators. Explain how each would use futures. (6 marks)
- b) XYZ Limited has the following dividends per share and market price per share for the period 2007 – 2012.

Year	Dividends (Shs.)	Market price/ Share (Shs.)
2007	1.53	31.25
2008	1.53	20.75
2009	1.53	30.88
2010	2.00	67.00
2011	2.00	100.00
2012	3.00	154.00

Required:

- i) Annual rate of return of XYZ Limited. (8 marks)
- ii) How risky are the returns of the share. (6 marks)