ZCAS University

Investment Planning

BBF 2202

Mid Semester Test

Wednesday 25th October 2023

12:30 to 15:30

TIME ALLOWED: THREE HOURS (plus 5 minutes to read through the paper)

INSTRUCTIONS:

1. Section A: this question is **compulsory** and must be attempted.
2. Sections B: Answer Three (3) questions from this section.
3. This question paper carries a total of **100 marks**.
4. Candidates must **not turn this** page until the invigilator tells them to do so.

SECTION A: Question 1 is compulsory and must be attempted

Question 1

As a portfolio manager, you are considering investing in the following *four* (4) stocks:

Stock	Expected return %	Beta
A	10	1.6
B .	7.5	1.3
C	30	1.7
D	10	0.8

Required:

i. Explain the terms "expected return", "required return" and "fairly priced". (6 marks)

ii. If the market risk premium is 4% p.a. and the risk-free rate is 3% p.a., which stock (s) should you choose and why? (16 marks)

iii. Illustrate your answers in (ii) graphically clearly showing the alphas for each investment. (9 marks)

iv. Analysts have revised their view of stock B and reduced the expected beta to 1.1. Does this change your answer? Explain. (5 marks)

v. If a stock has a high beta value, explain why for a going concern, you might expect this value to decrease over time. (4 marks)

(Total: 40 marks)

SECTION B: Attempt any THREE questions in this section

Question 2

Like mutual funds, the basic idea behind hedge funds is investment pooling. Investors buy shares in these funds, which then invest the pooled assets on their behalf.

Required:

i. Explain *four* (4) important differences between mutual funds and hedge funds.   (8 marks)

ii. Differentiate between directional and non-directional strategies.   (4 marks)

iii. Briefly explain how hedge funds create portable alphas.   (4 marks)

iv. Briefly discuss *three* (3) benefits and *three* (3) drawbacks of risk management.   (6 marks)

(Total: 20 marks)

Question 3

Imagine yourself as an investment analyst considering investing in the following two (2) investments BFI and BBF. The probability distribution of BFI and BBF's cash flows for the next year is shown on the following table:

Investment BFI		Investment BFI	
Probability %	Cashflow (K)	Probability	Cashflow (K)
0.3	2000	0.4	3000
0.6	4000	0.4	2000
0.1	6000	0.2	7000

Required:

i. Discuss *three* (3) factors that contribute to the reduction of risk in a portfolio.   (6 marks)

ii. Compute the expected cashflows and comment.   (4 marks)

iii. Compute the variance and standard deviation and comment.   (8 marks)

iv. Compute the coefficient of variation and comment.   (2 marks)

(Total: 20 marks)

Question 4

Sourcing money may be done for a variety of reasons. Traditional areas of need may be for capital asset acquirement such as new machinery, the construction of a new building or depot. In this day and age of tight liquidity, many organisations have to look for capital through equity finance and debt finance in order to fund capital assets.

<u>Required:</u>

a. Explain the following sources of finance available to firms. *Give examples.*

i.   Venture Capitalist Firms.   (5 marks)

ii. Business angels   (5 marks)

iii. Peer-to-Peer lending   (5 marks)

iv. Business Expansion Schemes (BES).   (5 marks)

(Total: 20 marks)

Question 5

A firm borrows K1000,000 and the loan is to be repaid in equal payments at the end of each of the next five (5) years. The lender charges a 25.5% interest rate on the loan balance that is outstanding at the beginning of each year.

<u>Required:</u>

i.   Calculate the equal payment to be made annually.   (6 marks)

ii. Prepare an amortization schedule.   (6 marks)

iii. Explain the terms "fixed" or "floating charge". Explain the circumstances under which a floating charge can become a fixed charge.   (4 marks)

iv. Explain the importance of covenants in a loan agreement.   (4 marks)

(Total: 20 marks)

End of mid-semester test!

FORMULAE SHEET

1. $E_R = P_i R_i + \ldots\ldots = \sum PiRi$

2. $\sigma^2 = \sum_{i=1}^{n}(R_i - \overline{R})^2(P_i)$

3. $\rho_{x,y} = \dfrac{Cov_{x,y}}{\sigma_x \sigma_y}$

4. $14. \; Cov(R_a R_b) = \sum(R_a - \overline{R_a})(R_b - \overline{R_b})P$

5. $15. \; \overline{r_p} = w_x * \overline{r_x} + w_y * \overline{r_y}$

6. $\sigma_p = \sqrt{w_x^2 \, \sigma_x^2 + w_y^2 \sigma_y^2 + 2 \, w_x w_y \sigma_x \sigma_y \rho_{x,y}}$

7. $\overline{r_i} = r_f + \beta_i * (\overline{r_m} - r_f)$

8. $\alpha_p = R_p - \{R_f + \beta_p \times [E(R_m) - R_f]\}$

9. $PV_{Ordinary\ Annuity} = C * \left[\dfrac{1 - (1+r)^{-n}}{r} \right]$