

DP09

Investment

6 SEPTEMBER 2007

1. Time allowed : Three (3) hours
2. Total number of questions : Five (5) questions
3. Number of questions to be answered : All five (5) questions
Part A : One (1) question [20 marks]
Part B : Four (4) questions [20 marks each]
4. Show details of workings, where appropriate. Silent, non-programmable calculators may be used.
5. Begin each answer to a new question on a fresh page.
6. Answer **all** questions in **English**.
7. A blank page is provided at the end of the question paper for rough work.

PART A

1. **Only brief answers are required in this section (a few words or a few sentences). Answer ALL parts of the question.**

- (a) Define a "prospectus". [2]
- (b) State the formula for the following:
 - (i) Net Tangible Asset/share [2]
 - (ii) Price-earnings ratio [2]
 - (iii) Debt-to-equity ratio [2]
 - (iv) Warrant intrinsic value [2]
 - (v) Warrant premium [2]
- (c) Pursuant to paragraph 9.23(b) of the Listing Requirements of Bursa Malaysia Securities Berhad, what is the time frame given to a public-listed company to submit its annual audited report? [1]
- (d) Briefly explain the following terminologies:
 - (i) Market order [1]
 - (ii) Good till cancel order [1]
 - (iii) Basis order [1]
 - (iv) Limit order [1]
 - (v) Stop order [1]
- (e) State **one** type of bond which does not have reinvestment risk. [2]

(Total:20 marks)

PART B

ANSWER ALL QUESTIONS

2. (a) State **two** components of total return on an investment. [4]
- (b) What does beta measure? [2]
- (c) You are given the following information:

Item	Stock X	Stock Y	Stock Z
MGS 3-year yield	4%	4%	4%
Risk premium	3%	3%	3%
Dividend (RM)	0.30	0.15	0.10
Assumed selling price of stock after one year (RM)	4.50	3.00	5.00
Current market price (RM)	4.30	2.50	5.20

- (i) Based on the above data, calculate the required rate of return for Stocks X, Y and Z. [2]
- (ii) Using the Dividend Discount Model, compute the value of Stocks X, Y and Z, assuming that you will buy and hold the stocks for one year and sell them thereafter. Show your workings. [6]
- (iii) If you are an investor, which of the stocks above, Stocks X, Y or Z, would you avoid investing in? Explain your answer. [2]
- (d) (i) What does the slope of the Security Market Line (SML) indicate? [2]
- (ii) Will the SML experience a change in slope or a parallel shift in the event of an increase in the expected rate of inflation? [2]
- (Total:20 marks)
3. (a) State **two** major functions of Cagamas Berhad. [2]
- (b) State the theory that **best** explains each of the following:
- (i) Upward-sloping curves should predominate because of the uncertainty of premiums on longer term securities. The yield curve will shift as expectations on future rates change. [1]
- (ii) The yield curve will change as the demand for or supply of securities in various parts of the maturity range changes. Such changes may have little or no effect on other parts of the yield curve. [1]
- (iii) The shape of the yield curve at any point in time has implications of the expectations of market participants. [1]
- (c) What is a yield spread? [2]
- (d) State **five** factors that affect the risk premium of a bond. [5]

- (e) Denway Bhd has just issued 200,000, 5%, RM100 par value convertible bonds. The bonds are convertible to common shares at RM5 per share. The current market price of Denway Bhd is RM7 per share.
- (i) Calculate the conversion ratio of the convertible bonds. [2]
 - (ii) Calculate the conversion value of the convertible bonds. [2]
 - (iii) Calculate the conversion parity price if the market price of the convertible bonds is RM110. [2]
 - (iv) What will happen if the current stock price is above the conversion parity price calculated in (e)(iii) above? [2]
- (Total:20 marks)

4. (a) Company XY is planning for a rights issue and the details are as follows:

- A rights issue of 1:5 at RM1.20
- Market price at RM2 per share

- (i) Calculate the theoretical ex-rights price per share. [4]
- (ii) Compute the value of rights. [2]

(b) Based on the information given in the table below, answer the questions that follow:

Item	A Long Call Option of Stock Y (RM)	A Long Put Option of Stock Z (RM)
Stock price	7.00	4.50
Exercise price	5.50	4.20
Option's premium	0.50	0.50

- (i) Calculate the intrinsic value of call option of Stock Y. [2]
 - (ii) Calculate the intrinsic value of put option of Stock Z. [2]
 - (iii) If you are an investor, how can you earn a "riskless profit"? [2]
- (c)
- (i) State the formula for "adjustment factor" relating to the rights and bonus issues. [2]
 - (ii) Briefly explain the purpose of computing the "adjustment factor". [2]
- (d) For each of the following, state "True" or "False":
- (i) Prior to expiration, an American option may have a higher value than an equivalent European option. [1]
 - (ii) For put options, the higher the strike price relative to the stock's underlying price, the more the put is worth. [1]
 - (iii) There will always be some price differences between American and European options because of exchange-rate risk. [1]
 - (iv) European options allow for exercise on or before the expiration date. [1]
- (Total:20 marks)

5. (a) State **four** regulatory bodies that supervise and manage the securities industry in Malaysia. [4]
- (b) State **three** main areas that the Securities Industry Act 1983 regulates. [3]
- (c) Briefly explain the functions of the following:
- (i) Bursa Malaysia Berhad [2]
 - (ii) Kuala Lumpur Options and Financial Futures Exchange (KLOFFE) [2]
 - (iii) Malaysian Central Depository System [2]
- (d) State **two** regulatory bodies of KLOFFE. [2]
- (e) List **three** reasons why companies issue bonus issues. [3]
- (f) Briefly describe when “false trading” or a misleading appearance of active trading takes place. [2]
- (Total:20 marks)

- END OF QUESTION PAPER -

OUTLINE ANSWERS

The comments given in the boxes below indicate the areas of weaknesses the examiners have identified and their advice to future candidates.

Question 1

- Candidates were unable to provide the formulae and terminologies.
- Candidates need to learn their formulae and terminologies well.

PART A

1. *Only brief answers are required in this section (a few words or a few sentences). Answer ALL parts of the question.*

- (a) A “prospectus” is an official document issued by a company which invites the public to subscribe to its new shares to be listed on KLSE. It usually provides detailed information about the company.
- (b) (i)
$$\text{NTA/share} = \frac{\text{Shareholders' funds}}{\text{Total number of issued shares}}$$
- (ii)
$$\text{PE ratio} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$
- (iii)
$$\text{Debt-to-equity ratio} = \frac{\text{Current and long term liabilities}}{\text{Shareholders' equity}}$$
- (iv)
$$\text{Warrant intrinsic value} = \frac{\text{Share price} - \text{Exercise price}}{\text{Warrant conversion ratio}}$$
- (v)
$$\text{Warrant premium} = \frac{(\text{Warrant price} \times \text{Number of warrants}) + \text{Exercise price} - \text{Share price}}{\text{Share price}} \times 100$$
- (c) Four months after the end of each accounting year.
- (d) (i) **Market order**
A market order is an order placed for immediate execution at the best available ask or bid price in the market.
- (ii) **Good till cancel order**
Orders that remain valid until either filled or cancelled.
- (iii) **Basis order**
Taking a spread position, i.e., simultaneously purchasing and selling contracts with different expiration dates.
- (iv) **Limit order**
A limit order stipulates a price limit for the execution of the transaction.

- (v) Stop order
A stop order specifies that the order is not to be executed until the market reaches a designated price.

OR

A buy stop order specifies that the order is not to be executed until the market rises or falls to a designated price. A sell stop order specifies that the order is not to be executed until the market price falls below or rises to a designated price.

- (e) A Zero-coupon bond given that the coupon rate is nil.

PART B

Question 2

- Candidates displayed some understanding of the concepts tested.
- Answers given by candidates lacked depth.
- Candidates need to understand the basic concepts as well as their applications.

2. (a) Two components of Total Return on Investment:
- (i) Periodic cash receipts generated by the investment which come in the form of either dividends or interest income.
- (ii) Capital gain (or loss) which arises from an appreciation (or depreciation) in the investment's value, i.e. the difference between the purchase price and the price at which the investment is sold.
- (b) Beta measures the systematic risk, i.e., the risk of an individual stock in relation to the overall market.
- (c) (i) Required rate of return = Risk-free rate + risk premium
= 4% + 3%
= 7%
- (ii) Value of Stock X
- $$V_X = \frac{\text{Dividend per share}}{(1 + \text{Required rate of return})} + \frac{\text{Selling price per share after 1-year}}{(1 + \text{Required rate of return})}$$
- $$= \frac{\text{RM0.30}}{(1+0.07)} + \frac{\text{RM4.50}}{(1+0.07)}$$
- $$= \text{RM0.28} + \text{RM4.20}$$
- $$= \underline{\text{RM4.48}}$$

Value of Stock Y

$$\begin{aligned}V_Y &= \frac{\text{Dividend per share}}{(1+\text{Required rate of return})} + \frac{\text{Selling price per share after 1-year}}{(1+\text{Required rate of return})} \\ &= \frac{\text{RM0.15}}{(1+0.07)} + \frac{\text{RM3.00}}{(1+0.07)} \\ &= \text{RM0.14} + \text{RM2.80} \\ &= \underline{\text{RM2.94}}\end{aligned}$$

Value of Stock Z

$$\begin{aligned}V_Z &= \frac{\text{Dividend per share}}{(1+\text{Required rate of return})} + \frac{\text{Selling price per share after 1-year}}{(1+\text{Required rate of return})} \\ &= \frac{\text{RM0.10}}{(1+0.07)} + \frac{\text{RM5.00}}{(1+0.07)} \\ &= \text{RM0.10} + \text{RM4.67} \\ &= \underline{\text{RM4.77}}\end{aligned}$$

(iii) Stock Z, as it trades at 9% above its fair value.

- (d) (i) Return per unit of risk required
(ii) Parallel shift

Question 3

- Candidates displayed good understanding of the factors affecting the risk premium of bonds.
- Candidates were weak in their application of the concept of convertible bonds.
- Candidates need to have a better understanding of concept application. Knowing just the definitions or factors is not enough.

3. (a) Two functions of Cagamas Berhad:
- It acts as an intermediary between investors looking for fixed income investments and the originators of housing loans.
 - It raises funds for its purchase of housing loans by issuing loans to the public.
- (b) (i) Liquidity Preference Theory/Liquidity Performance Theory
(ii) Market Segmentation Theory
(iii) Expectations Theory
- (c) A yield spread refers to the relationship between bond yields and the particular issuer and issue characteristics.

- (d) (i) Default/Quality Risk
- (ii) Call Features
- (iii) Coupon Rates
- (iv) Liquidity/Marketability
- (v) Tax treatment
- (e) (i) Conversion ratio = $\frac{\text{Par value of bond}}{\text{Conversion price}}$
= $\frac{\text{RM100}}{\text{RM5}}$
= 20
- (ii) Conversion value = Conversion ratio x Current price of common stock
= 20 x RM7
= RM140
- (iii) Conversion parity price = $\frac{\text{Market price of convertible bond}}{\text{conversion ratio}}$
= $\frac{\text{RM110}}{20}$
= RM5.50
- (iv) If the conversion parity price is below the current stock price, someone could buy the convertible, immediately convert it and sell the stock for a risk-free profit.

Question 4

- Candidates demonstrated a good understanding of the rights issue.
- Candidates displayed poor calculation of options.
- Candidates need to understand concept application instead of just knowing the principles.

4. (a) (i) Calculate the theoretical ex-rights price per share.
- | | | |
|------------------------------------|---|----------------------------|
| 5 existing shares at RM2 per share | → | RM10.00 |
| 1 right issue at RM1.20 per share | → | RM1.20 |
| 6 shares' worth | → | RM11.20 |
|
Theoretical ex-rights price | = | $\frac{\text{RM11.20}}{6}$ |
| | = | <u>RM1.87</u> |
- (ii) Compute the value of rights.
- | | | |
|--------------------------|---|---------------|
| Ex-rights per share | → | RM1.87 |
| Less: Subscription price | → | RM1.20 |
| Value of rights | → | <u>RM0.67</u> |
- (b) (i) Intrinsic value of call option of Stock Y
= Max (Stock Price – Exercise Price, 0)
= RM7.00 – RM5.50
= RM1.50
- (ii) Intrinsic value of put option of Stock Z
= Max (Exercise Price – Stock Price, 0)
= The Put Option is out-of-the money
- Therefore, the intrinsic value is 0.

- (iii) Long Stock Y's call option; exercise the option; sell stock Y and make a riskless profit of RM1.00.
- (c) (i) Adjustment Factor = $\frac{\text{Theoretical ex-rights price}}{\text{Last traded cum-rights price}}$
- (ii) The adjustment factor is computed to adjust past years' earnings to reflect the capital base expansion following a rights and bonus issue.
- (d) (i) True
- (ii) True
- (iii) False
- (iv) False

Question 5

- Candidates were able to state the regulatory bodies that supervise and manage the securities industry in Malaysia.
- Candidates displayed poor knowledge with regard to the functions of Bursa Malaysia Berhad, KLOFFE and MCDS.
- Candidates need to ensure they have a good understanding of the role and functions of the various regulatory bodies.

5. (a) Regulatory bodies that supervise and manage the securities industry in Malaysia:
- (i) Securities Commission
- (ii) Registrar of Companies
- (iii) Foreign Investment Committee
- (iv) Bursa Malaysia Berhad
- (b) Three main areas that the Securities Industry Act 1983 regulates:
- (i) False trading – transactions which create a misleading appearance of active trading.
- (ii) Stock manipulations – stock prices are raised, maintained or stabilised artificially and are not dictated by the prevailing market demand/supply forces.
- (iii) Dissemination of false and insider information.
- (c) The functions of:
- (i) Bursa Malaysia Berhad – institutes market surveillance, corporate disclosure, trading operations, etc., of all securities listed on the exchange. Also governs the conduct of its members in securities dealings.
- (ii) KLOFFE – provides a platform for trading of a range of futures and options products.
- (iii) The Central Depository System – the computerised clearing and settlement system for the Malaysian stock market. It replaces the physical holding and moving of scripts.

- (d) Two regulatory bodies of KLOFFE
- The Ministry of Finance
 - The Securities Commission
- (e) Reasons why companies issue bonus issues:
- To increase the amount of a company's issued and paid up capital in line with its assets and earnings.
 - To increase the float of shares in the market.
 - To capitalise the Share Premium account.
- (f) "False trading" or the misleading appearance of active trading takes place when:
- (i) a buy or sell transaction is effected which does not involve any change in beneficial ownership of the shares.
 - (ii) an offer to sell and purchase securities at a specified price substantially the same as the first-mentioned price.