

**DP09**

# **Investment**

**6 APRIL 2006**

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) Differentiate between an initial public offering and an offer for sale.
- (b) Identify the types of share issues for each of the following scenarios:
- (i) ACH Bhd, a listed company on Bursa Malaysia, needs to raise fund for the acquisition of BCA Bhd. ACH Bhd decides to bypass the open market by issuing new securities to a pre-determined group of large institutional investors, such as life insurance companies, pension funds and investment companies.
  - (ii) LLB Bhd, a listed company on Bursa Malaysia, is issuing new shares to its existing shareholders to raise fund for its plant expansion. The issue is made to existing shareholders in proportion to their shareholdings in the company. The shareholders may either take up the offer or dispose their entitlements to other people.
  - (iii) KKB Bhd is issuing new shares to shareholders and/or directors within its group of companies.
- (c) Malaysian Government Securities are offered for sale in the primary and secondary markets. What is the difference between these two markets? [3]
- (d) Briefly explain the following types of corporate bonds:
- (i) Income bonds [2]
  - (ii) Junk bonds [2]
  - (iii) Mortgage bonds [2]
- (e) Briefly explain the following unit trust funds:
- (i) Balanced funds [2]
  - (ii) Growth funds [2]
- (Total:20 marks)

## PART B

### ANSWER ALL QUESTIONS

2. (a) You are a fund manager and you were given the following data:

Stock	Expected P/E	Beta	Standard Deviation
Ai Bhd	11.1x	1.0	40%
Mas Bhd	11.2x	-0.6	35%
Tas Bhd	11.4x	1.5	55%
Market	13.0x	1.0	38%

- (i) After careful analysis of various indicators and their trends, you are bearish about the market over the next few months.

If you had to choose only one stock from the table above to add to your portfolio, which stock would you choose? Briefly explain your answer using only the data given in the above table. [3]

- (ii) If you expect the stock market to fall by 10%, how much do you expect your chosen stock in (a)(i) above to fall/rise? Show all calculations. [3]
- (b) Explain the difference between the risk measured by standard deviation and beta. [2]
- (c) The covariance of return of Stock Z to market return is 3 and the beta of Stock Z is 2.  
What is the variance of market return? [2]
- (d) Consider the following balance sheets for AA Bhd and BB Bhd:

**BALANCE SHEET AS AT 31 DECEMBER 2005**

Item	AA Bhd RM'000	BB Bhd RM'000
Fixed assets	4,770.4	2,464.6
Intangible assets	447.5	60.4
Other long-term assets	1,544.5	823.7
<b>Total non-current assets</b>	<b>6,762.4</b>	<b>3,348.7</b>
Cash and equivalents	1,968.8	644.8
Stocks	719.4	614.2
Trade debtors	697.0	573.2
Other current assets	357.6	25.9
<b>Total current assets</b>	<b>3,742.8</b>	<b>1,858.1</b>
Trade creditors	489.1	335.6
Short-term borrowings	118.0	183.4
Other current liabilities	206.7	23.0
<b>Total current liabilities</b>	<b>813.8</b>	<b>542.0</b>
Long-term borrowings	3,092.9	69.6
Other long-term liabilities	560.8	222.8
<b>Total long-term liabilities</b>	<b>3,653.7</b>	<b>292.4</b>
Shareholders' funds	4,862.3	4,226.5
Minority interests	1,175.4	145.9

You are also given that the total sales for AA Bhd and BB Bhd for the year ended 31 December 2005 are RM6,072,500 and RM3,789,900 respectively.

- (i) Compute the current ratios for both AA Bhd and BB Bhd. Which company has a better ability to pay debts when they are due? Show your workings. [4]
- (ii) Compute the receivables' turnover for both AA Bhd and BB Bhd. Which company's trade debtors are of a higher quality? Show your workings. [4]
- (iii) State **two** possible reasons why a company's average collection period is longer than its average credit terms of sales. [2]

(Total:20 marks)

3. (a) Consider the table below:

Item	Bond A	Bond B	Bond C	Bond D	Bond E	Bond F
Rating	AA	AAA	BBB	BBB	A	A
Coupon rates	3.50%	2.50%	4.00%	4.00%	3.80%	3.80%
Call features	No	No	No	No	Yes	No
Marketability	High	High	Moderate	Moderate	Low	High
Term to maturity	3-year	3-year	3-year	5-year	3-year	3-year
Yield-to-maturity	4.20%	3.20%	5.80%	7.10%	3.50%	3.20%

Explain why:

- (i) Bond B's yield-to-maturity is lower than that of Bond A. [2]
- (ii) Bond C's yield-to-maturity is lower than that of Bond D. [2]
- (iii) Bond E's yield-to-maturity is higher than that of Bond F. [2]
- (b) Explain the following features that may affect a bond's maturity:
- (i) Non-callable provision [2]
- (ii) Non-refunding provision [2]
- (iii) Sinking fund [2]
- (c) Identify the option strategies adopted by the following investors:
- (i) Anthony believes that the share price of PYI Bhd will rise. In order to capitalise on his conviction, he purchases a combination of two puts and a call on PYI Bhd. The puts and the call have the same expiration date and exercise price. [1]
- (ii) Julie believes that there is a higher probability that the share price of ITE Bhd will increase as compared to a price decrease. She has thus bought two calls and a put of ITE Bhd. The calls and put options have the same expiration date and exercise price. [1]
- (iii) Kathy notices that the market price of CAO Bhd is trading near its option's strike price. She expects the price of CAO Bhd will start moving but she is unsure which way the market price will go. [1]
- (d) State **five** variables used in the Black-Scholes' Model to value the call option of a non-dividend-paying stock. [5]
- (Total:20 marks)

4. (a) PCK Bhd has just obtained the approval to issue a 2:4 bonus issue and 1:4 rights issue at RM1.00 a share. The last traded cum price was RM5.00 a share:

- (i) Calculate the theoretical ex-price of PCK Bhd. [2]
- (ii) Calculate the value of rights. [2]
- (iii) Calculate the adjustment factor arising from the bonus and rights issues. [1]
- (iv) If the book value of PCK Bhd is RM6 per share before the bonus and rights issues, calculate the book value per share after the bonus and rights issues. [2]
- (v) What will be the price-to-book value of PCK Bhd after the bonus and rights issues? [2]

- (b) You are a fund manager and you have been given the following information on two stocks, Stock L and Stock M:

Item	Stock L	Stock M
Expected earnings per share (RM)	0.2	0.05
Expected dividend per share (RM)	0.06	0.01
Dividend growth rate	3.50%	5.50%
Risk-free rate	4.20%	4.20%
Risk premium	2.70%	3.00%
Market price (RM)	1.80	1.10

- (i) Compute the required rate of return for both Stock L and Stock M. [2]
- (ii) You are asked to pick a stock that would meet the following criteria:

Price-earnings ratio	Lower than 10x
Dividend yield	At least 2.5%

Using the Earnings Multiplier Model, which of the two stocks (Stock L or Stock M) fulfills the two investment criteria? Show your workings. [7]

- (iii) Which of the two stocks (Stock L or Stock M) has a higher dividend payout? [2]  
(Total:20 marks)

5. (a) Who are the people who have the privilege of possessing sensitive and confidential information of a listed company? [4]
- (b) Under the Securities Industry Act 1983, what are the liabilities of persons who have improperly used specific confidential information for personal gains? [2]
- (c) State **three** reasons for the difference between the theoretical ex-rights price and the actual market price. [6]
- (d) List **three** reasons why companies issue bonus issues. [3]
- (e) What is the role of the Research Institute of Investment Analysis Malaysia? [1]
- (f) State **four** main characteristics of preference shares. [4]  
(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 distinguish between primary and secondary markets for MGS.
- Candidates had poor understanding of the theory and concepts of bonds.
- Candidates should give equal emphasis to both equities and bonds when learning about investment theories and principles.

### **PART A**

1. (a) An initial public offer is the offer of new shares by a company to the public through Bursa Malaysia. The new shares are issued to the public at a pre-determined price which is approved by the Securities Commission.

An offer for sale refers to the offer of a block of shares belonging to existing shareholders for sale to the public. The price of the issue will be predetermined and will be underwritten and intending investors will subscribe for the issue via application forms.

- (b) (i) Private placements.
- (ii) Rights issue.
- (iii) Restricted issue.
- (c) In the primary market, only new issues of MGS are offered for sale directly to investors. Secondary transactions in MGS are conducted mainly through the money market.
- (d) (i) Income bonds  
Income bonds stipulate payment schedules, but the interest is due and payable only if the issuer earns an income to make the payment by the stipulated dates. In the event that the company does not earn sufficient income, it does not have to make the interest payment and it cannot be declared bankrupt. However, the interest payment must be paid subsequently. Income bonds usually offer higher returns to compensate investors for the added risk of uncertainty in interest payments of the issuer.
- (ii) Junk bonds  
Junk bonds are high-risk, high-yield bonds. They are issued in connection with mergers, leveraged buyouts, companies with heavy debts to repay and stock buybacks by corporations.
- (iii) Mortgage bonds  
Mortgage bonds are issued with a first-mortgage lien on some or all of the issuer's properties. Such lien provides greater security to the bondholders and a lower interest rate for the issuer.
- (e) (i) Balanced Funds  
Balanced funds generally have a three-part investment objective, namely to conserve the investors' initial principal, to pay current income and to promote long-term growth of both principal and income.

- (ii) Growth funds  
Growth funds invest in the common stocks of well-established companies. Their primary aim is to increase the value of their investments rather than a flow of dividend payments.

## PART B

### Question 2

Candidates were confused with the term "bearish".

2. (a) (i) In anticipation of a bear market, choose the negative beta stock, i.e. Mas Bhd. If the stock market declines, then the negative beta stock will rise against the market trend.
- (ii) Based on a beta of -0.6 for Mas Bhd, if the stock market falls by 10%, then Mas Bhd should rise by the following amount:
- $$-10\% \times -0.6 = +6\%$$
- (b) Standard deviation measures the total risk of one security or a portfolio of securities. It is the deviation of each observation from the mean of the observations.
- Beta is a relative measure of systematic risk, i.e. the risk of an individual stock in relation to the overall market.
- (c) Variance of market return  
= Covariance of stock returns to market returns/Beta of Stock Z  
=  $\frac{3}{2}$   
= 1.5
- (d) (i) Current ratio = Current assets/Current liabilities  
Current ratio for AA Bhd  
=  $3,742.8/813.8$   
= 4.6
- Current ratio for BB Bhd  
=  $1,858.1/542.0$   
= 3.4
- Since the current ratio of AA Bhd is higher, it has better ability to pay debts.
- (ii) Receivables turnover of AA Bhd  
= Sales/Account receivables  
=  $6,072.5/697.0$   
= 8.7x
- Receivables turnover of BB Bhd  
=  $3,789.9/573.2$   
= 6.6x
- The receivables of AA Bhd are of higher quality.
- (iii) Any two:
- Difficulty in collection period
  - Poor credit management
  - Existence of uncollectables

### Question 3

- Candidates were unable to explain the features of bonds that may affect their maturity.
- Candidates could not list the variables used in the Black-Scholes Model correctly.

3. (a) (i) As an AAA-rated bond, Bond B has a lesser risk of default as compared to Bond A. Therefore, it offers a lower yield.
- (ii) Bond D has a longer tenor. Therefore, investors would demand a premium because uncertainty increases with time and long-term bonds are more sensitive to interest rate fluctuations compared to short-term bonds.
- (iii) Bond E is callable and less liquid as compared to Bond F.
- (b) (i) Non-callable provision: Under this provision, the issuer cannot retire the bond prior to its maturity.
- (ii) Non-refunding provision: This provision prohibits a call and premature retirement of an issue from the proceeds of a lower-coupon refunding bond.
- (iii) Sinking fund: A sinking fund provision specifies that a bond must be paid off systematically over its life rather than only at maturity. It is an obligation and must be carried out regardless of market conditions.
- (c) (i) Strip
- (ii) Strap
- (iii) Straddle
- (d) • The price of the underlying stock.
- The exercise price of the option.
- The time remaining to the expiration of the option.
- The interest rate.
- The variability of the underlying stock price.

### Question 4

- Candidates did not know how to calculate P/Book ration despite the fact that this area has been tested many times in past exams.
- Candidates were unable to derive P/E ratio using the Earnings Multiplier Model and dividend yield.

4. (a) (i) 4 existing shares at RM5 per share RM20  
2 bonus issue RM0  
1 rights issue at RM1.00 per share RM1  
7 shares worth RM21

Theoretical ex-right and ex-bonus price =  $RM21/7 = RM3$  per share.

- (ii) Ex-rights per share RM3  
Less: subscription price RM1  
Value of rights RM2

- (iii) Adjustment factor  
= Theoretical ex-price  
Last traded cum price  
=  $3 / 5 = 0.6$

- (iv) Adjusted shareholders' fund per share  
 = RM 6 x 0.6  
 = RM 3.60
- (v) (page 85)  
 Price to book value  
 = Market price/Book value per ordinary shares  
 = RM3/3.60  
 = 0.833x
- (b) (i) Required rate of return of Stock L  
 = Risk-free rate + Risk Premium  
 = 4.2% + 2.7%  
 = 6.9%
- Required rate of return of Stock M  
 = 4.2% + 3.0%  
 = 7.2%
- (ii) P/E of Stock L  
 =  $(D_1/E_1) / (k_L - g_L)$   
 $k_L$  = Required rate of return of Stock L  
 =  $(0.06/0.2) / (0.069 - 0.035) = \underline{8.8x}$
- P/E of Stock M  
 =  $(D_1/E_1) / (k_M - g_M)$   
 $k_M$  = Required rate of return of Stock M  
 =  $(0.01/0.05) / (0.072 - 0.055) = \underline{11.8x}$
- Dividend yield of Stock L = Dividend per share/Market price  
 = RM0.06 / RM1.80  
 = 3.3%
- Dividend yield of Stock M = Dividend per share/Market price  
 = RM0.01 / RM1.10  
 = 0.9%
- Therefore, Stock L meets the two investment criteria.
- (iii) (pg 69)  
 Dividend payout of Stock L =  $D_1/E_1$   
 = 0.06/0.2  
 = 30%
- Dividend payout of Stock M  
 = 0.01/0.05  
 = 20%
- Stock L has higher expected dividend payout.

**Question 5**

Candidates were unsure about the liability of a person who used specific confidential information for personal gain.

5. (a)
- An officer (includes any persons who at any time within the preceding 12 months was an officer of the company);
  - An employee of the company;
  - An agent of the company which includes a banker, advocate and solicitor, auditor, accountant or stock broker of the company, and any person who is or at any time in the preceding six months has been knowingly connected to the company;
  - Officer of a stock exchange.
- (b) On conviction, the person is liable to a fine of not less than RM1million and to imprisonment for a term of not exceeding 10 years.
- (c)
- The daily supply/demand forces cause the share prices to fluctuate;
  - The company may be fundamentally weak and is not an attractive investment;
  - The rights prices were unattractive relative to the market price of the shares.
- (d)
- To increase the amount of issued and paid up capital in line with the company's assets and earnings.
  - To increase the float of shares in the market.
  - To capitalise on the Share Premium account.
- (e) Textbook answer:  
The Research Institute of Investment Analysis Malaysia helps to upgrade the investment technology standard in Malaysia.
- From [www.asaf.prg.au/members/riiam/riiam.htm](http://www.asaf.prg.au/members/riiam/riiam.htm):  
The RIIAM's objectives are to enhance the level of competency in investment analysis and research, conduct training and development to enhance human capital and professionalism in the Malaysian securities industry.
- (f)
- Limited ownership rights
  - Fixed dividend
  - Dividend priority over ordinary shares
  - Priority in asset claims.