

DP09

Investment

7 OCTOBER 2004

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) How are Malaysian Government Securities with maturity up to 10 years issued? [1]
- (b) Briefly explain the following terms:
- (i) Initial public offers [1]
 - (ii) Private placements [1]
 - (iii) Restricted issues [1]
- (c) (i) Define “futures contract”. [2]
- (ii) What does the term “closing out a position” mean? [2]
- (d) Explain the difference between the following:
- (i) Ordinary shares and preference shares [2]
 - (ii) Convertible bonds and straight bonds [2]
- (e) List **four** factors a bond investor should consider when evaluating bonds for investment. [4]
- (f) (i) What are municipal bonds? [1]
- (ii) Briefly explain **two** basic types of municipal bonds. [2]
- (g) State the Act of Parliament that regulates all matters relating to unit trust schemes. [1]
(Total:20 marks)

PART B

ANSWER ALL QUESTIONS

2. (a) Assuming all other things being equal, indicate whether the following will result in a “**HIGHER**” or “**LOWER**” price/earnings (PE) ratio:
- (i) Higher dividend payout ratio [1]
 - (ii) Lower expected growth rate [1]
 - (iii) Higher required rate of return [1]
 - (iv) Rising interest rates [1]
- (b) You are given the following information on ASD Berhad:

Total number of issued shares	600million
Par value	RM0.50
Reserves	RM965million

Compute the net tangible asset per share of ASD Berhad. [3]

(c) You are given the following data:

Stock	Beta
A	1.5
B	1.0
C	0.6

(i) Explain what the beta means for:

(aa) Stock A [1]

(bb) Stock B [1]

(cc) Stock C [1]

(ii) Which stock would be considered an “aggressive” stock? Why? [1]

(iii) Which stock would be considered a “defensive” stock? Why? [1]

(d) The following data are extracted from the accounts of PAM Berhad:

PROFIT AND LOSS ACCOUNT

Item	2003 (RM'million)	2002 (RM'million)
Sales	924	699
Operating profit	273	208
Interest expense	5	8
Pre-tax profit	268	200
Income tax	48	37
Net profit after tax	220	163

BALANCE SHEET

Item	2003 (RM'million)	2002 (RM'million)
Fixed assets	257	243
Other long-term assets	94	80
Total assets	964	862
Current liabilities	240	272
Long-term liabilities	5	4
Total shareholders' equity	719	586

Compute the following financial ratios for years 2002 and 2003:

(i) Current ratio [2]

(ii) Debt-to-equity ratio [2]

(iii) Interest coverage ratio [2]

(iv) Operating profit margin [2]

(Total:20 marks)

3. (a) You are given the following data for Bond A and Bond B (both bonds have a face value of RM100 each):

Item	Bond A	Bond B
Price	RM90.70	RM68.37
Coupon	5%	0%
Yield to maturity	7.25%	7.75%
Tenor	5 years	5 years
Rating	AA	A

- (i) Why is the price of Bond B lower than that of Bond A? [2]
- (ii) (aa) After one year, interest rates remained stable but the price of Bond A increased. Why? [2]
- (bb) Similarly, after one year, the price of Bond B also increased. However, the price increase for Bond B was more rapid than that of Bond A. Why? [2]
- (iii) (aa) What does “yield to maturity (YTM)” mean? [2]
- (bb) Briefly explain why the YTM of Bond B is higher than that of Bond A. [2]
- (b) Using diagrams, briefly explain **four** patterns of yield curves. [4]
- (c) Define “yield spread”. [1]
- (d) Describe **three** ways in which an option may be disposed once it is purchased. [3]
- (e) Briefly explain **two** basic spreads used to reduce risk in an option position. [2]
- (Total:20 marks)
4. (a) State **five** requirements for Individual Membership of Bursa Malaysia Berhad (formerly known as the Kuala Lumpur Stock Exchange). [5]
- (b) State **two** requirements for Corporate Membership of Bursa Malaysia Berhad for local and foreign stockbroking houses. [3]
- (c) State **five** areas governed by the rules of Bursa Malaysia Derivatives Berhad (formerly known as the Kuala Lumpur Options and Financial Futures Exchange). [5]
- (d) State the regulatory body that is responsible for supervising and managing the following areas:
- (i) Administers the Companies Act 1965 and the relevant provisions of the Securities Industry Act 1983. [1]
- (ii) Provides the regulations and advice to the Minister of Finance on all matters relating to the securities and futures contracts industries. [1]
- (iii) Governs the conduct of its members in securities dealings and responsible for the surveillance of the marketplace and for the enforcement of its Listing Requirements.[1]
- (e) (i) What will Bursa Malaysia Berhad do if a selling-client fails to deliver the shares to a stockbroking firm by the due date? [2]
- (ii) What is the cost that the selling-client has to incur in order to complete the action in (e)(i)? [2]
- (Total:20 marks)

5. (a) You are given the following information on DC Bhd:

Issued capital	RM50million
Share premium	RM15million
Reserves	RM35million

Can DC Bhd pay a 2:1 bonus issue? Why?

[4]

- (b) You are given the following information on AB Berhad:

Item	Before bonus issue
Total issued ordinary shares RM0.50 per share	40million
Reserves	RM8million

AB Berhad declares a 1:5 bonus issue.

Calculate the following:

- (i) Total number of issued ordinary shares after the bonus issue [2]
- (ii) Value of issued capital before the bonus issue [1]
- (iii) Value of issued capital after the bonus issue [1]
- (iv) Reserves after the bonus issue [2]
- (v) Shareholders' fund before the bonus issue [1]
- (vi) Shareholders' fund after the bonus issue [1]
- (c) (i) What is the Central Depository System (CDS)? [1]
- (ii) State **four** benefits of the CDS to investors. [4]
- (d) State **three** types of investment income that are exempted from tax. [3]

(Total:20 marks)

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 could not answer most of the questions which are on the basic definition of terms related to investment.
- Instead of just memorising the facts, candidates should try to understand the concepts of the terms and products in the financial market.

1. (a) MGS with maturity up to 10 years are issued by way of auction through principal dealers.
- (b) (i) Initial public offers: The offer of sales by a company to institutional and public investors through the Bursa Malaysia.
- (ii) Private placements: New securities issues or debt securities of a company sold directly to a predetermined group of institutional investors, thus bypassing the open market.
- (iii) Restricted issues: Issues of new shares to shareholders and/or directors within a group of companies.
- (c) (i) A futures contract is a binding agreement between a seller and the buyer to respectively deliver and take delivery of a specific quantity of financial instruments or physical commodities at a specific price at a specific future date.
- (ii) Closing out a position means that a trader with an existing position enters into an opposite trade to the original one.
- (d) (i) Ordinary shares give their holders the right of ownership of the company, such as the right to a share of the company's profits by way of dividends, the right to vote in general meetings and to elect and dismiss directors.

Preference shares are another class of share capital that has a preferential position over ordinary shares, in regard to the payment of dividends and the division of the company's assets.
- (ii) A convertible bond pays the holder a regular fixed interest and also gives the holder the option to exchange the bond for shares in the company at a pre-determined price over a future period.

A straight bond has no convertible feature. It is often issued with warrants that are detachable and are traded separately in the market.
- (e) Factors a bond investor should consider when evaluating bonds for investment (any **four**):
 - maturity period
 - creditworthiness of the issuer
 - coupon rate
 - market price of the bond
 - yield to maturity
 - any special features such as call options, coupon payment frequencies, trading liquidity, etc.
- (f) (i) Municipal bonds are bonds issued by states, countries, cities and other political entities.

- (ii) *General obligation bonds*: bonds that are backed by the full faith and credit of the issuer who can tax residents to pay for the bond interest.

Revenue bonds: bonds issued to finance a project and repaid using the revenues generated by the project.

- (g) The Securities Commission Act 1993

Question 2

- Candidates could not get the right current asset figure from the information given.
- Candidates did not know what net tangible asset per share is or how to compute it.
- Candidates did not know what the given beta meant for a particular stock.

2. (a) (i) Higher
- (ii) Lower
- (iii) Lower
- (iv) Lower
- (b) Share capital = 600,000,000 x RM0.50
= RM300million
- NTA = Share capital + Reserves
= RM(3,000,000,000 + 965,000,000)
= RM1,265million
- NTA/share = RM1,265,000,000/600,000,000
= RM2.11
- (c) (i) (aa) Stock A: For every 1% change in the market return, on average, stock A's return changes by 1.5%.
- (bb) Stock B: For every 1% change in the market return, on average, stock B's return changes by 1%.
- (cc) Stock C: For every 1% change in the market return, on average, stock C's return changes by 0.6 %.
- (ii) The average beta of all stocks is 1.0 because the beta of the overall market is 1.0. Therefore, Stock A is considered an aggressive stock as a beta of 1.5 means that it is more volatile than the overall market.
- (iii) The average beta of all stocks is 1.0 because the beta of the overall market is 1.0. Therefore, Stock C is considered a defensive stock as a beta of 0.6 means that it is less volatile than the overall market.
- (d) (i) Current ratio
- | | |
|--------------------------------------|----------------------|
| Current ratio (2002) | Current ratio (2003) |
| = Current assets/Current liabilities | = 613/240 |
| = 539/272 | = <u>2.55</u> |
| = <u>1.98</u> | |

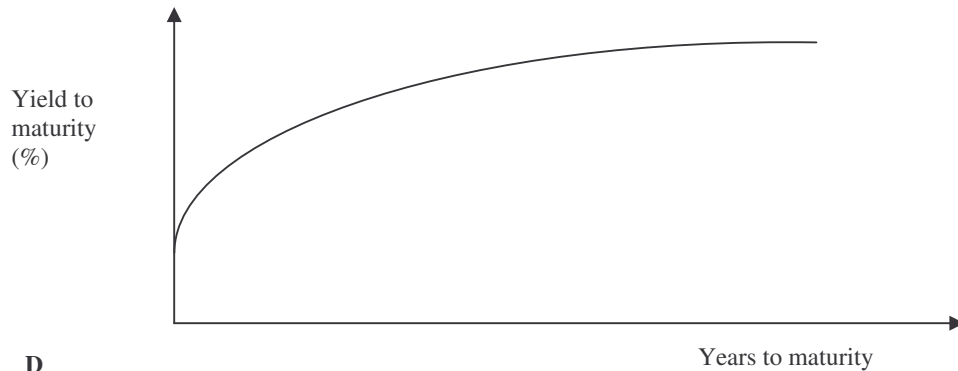
- (ii) Debt-to-equity ratio
- | | |
|---|-----------------------------|
| Debt-to-equity ratio (2002) | Debt-to-equity ratio (2003) |
| = $\frac{(\text{Current liabilities} + \text{Long-term liabilities})}{\text{Shareholders' equity}}$ | = $\frac{(240 + 5)}{719}$ |
| = $\frac{(272 + 4)}{586}$ | = <u>0.34</u> |
| = <u>0.47</u> | |
- (iii) Interest coverage ratio
- | | |
|--|--------------------------------|
| Interest coverage ratio (2002) | Interest coverage ratio (2003) |
| = $\frac{\text{Earnings before interest and tax}}{\text{Debt interest charges}}$ | = $\frac{(323 - 5)}{5}$ |
| = $\frac{(208 - 8)}{8}$ | = <u>63.6x</u> |
| = <u>25x</u> | |
- (iv) Operating profit margin
- | | |
|--|--------------------------------|
| Operating profit margin (2002) | Operating profit margin (2003) |
| = $\frac{\text{Operating profit}}{\text{Sales}}$ | = $\frac{273}{924}$ |
| = $\frac{208}{699}$ | = <u>29.55%</u> |
| = <u>29.76%</u> | |

Question 3

- Candidates have difficulty with the mechanism and nature of zero coupon and a coupon-paying bond.
- Candidates confused options with rights and described the wrong ways of how to dispose an option.
- Candidates did not understand the concept of fixed income and yield to maturity. Answers reflected guesswork rather than proper understanding of the terms.

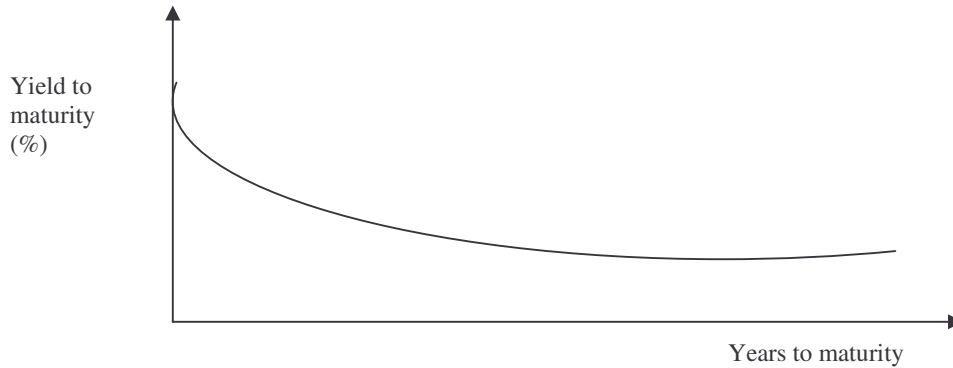
3. (a) (i) Bond B is a zero coupon bond and thus, trades at a deep discount at its face value. Bond A is a coupon-paying bond and therefore, it trades at a higher price relative to Bond B.
- (ii) (aa) Without any change in interest rate levels, the price of bond always trends towards its face value.
- (bb) Given that Bond B is a zero coupon bond, a large portion of its yield-to-maturity is in the form of capital gains. Hence, the price increases at a higher percentage than Bond A, which is a coupon-paying bond.
- (iii) (aa) YTM is the interest rate that equates the present value of the cash flows to be received on the bond to the initial investment in the bond.
- (bb) There is a higher risk premium attached to Bond B given its rating of single "A" versus Bond A's rating of "AA".

- (b) **Rising yield curve** – formed when the yields on short-term issues are low and rise consistently with longer maturities and flatten out at the extremes. It is the most common pattern and tends to prevail when interest rates are at low or modest level.

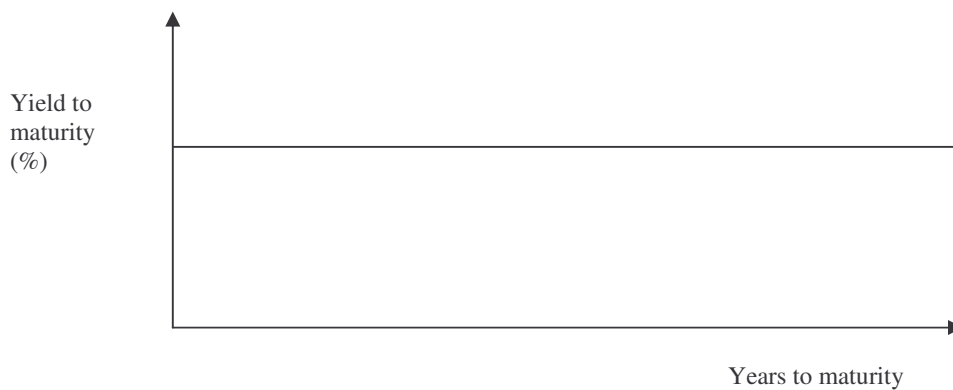


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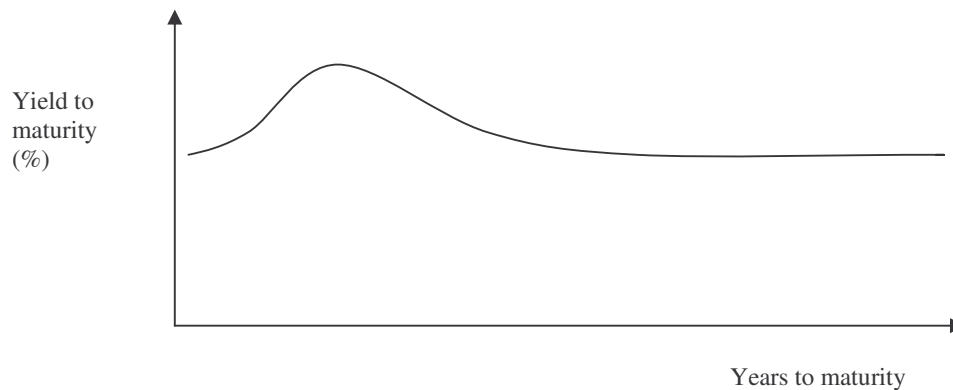
- Declining yield curve** – formed when the yields on short-term issues are high and yields on subsequently longer maturities decline consistently. It tends to occur when rates are relatively high.



- Flat yield curve** – has approximately equal yield on short-term and long-term issues. It rarely exists for any period of time.



Humped yield curve – formed when yields on intermediate-term issues are above those on short-term issues and the rates on long-term issues decline to levels below those for the short-term and then level out.



- (c) Yield spread refers to the relationship between bond yields and the particular issuer and issue characteristics.
- (d) Ways in which an option may be disposed once it has been purchased:
- The buyer may exercise the option;
 - The buyer may allow the option to expire unexercised;
 - The option may be offset, i.e. the buyer may subsequently sell the option or the seller may subsequently buy the option back.
- (e) Basic spreads used to reduce risk in an option position:
- **Money spread** – a money spread involves the purchase of a call option at one exercise price and the sale of the same maturity option, but with a different exercise price.
 - **Time spread** – A time spread involves the purchase and sale of options that are identical except for expiration date.

Question 4

Candidates did not know the areas governed by rules of Bursa Malaysia Derivatives Berhad or actions taken by Bursa Malaysia Berhad against selling-clients who fail to deliver shares by due date.

4. (a) **Five** requirements for Individual Membership of the Bursa Malaysia Bhd:
- Holder of Dealer’s Representative licence
 - Be at least 21 years of age as at the date of application
 - Be a person of good character and high business integrity
 - Be a Malaysian citizen
 - Commitment to pay a prescribed membership fee and contribution to the Bursa Malaysia Fidelity Fund
- (b) **Two** requirements for Corporate Membership of local and foreign stockbroking houses:
- A local corporation, in applying for membership, is required to acquire at least 51% of the equity of the stockbroking company and also have shareholders’ funds of not less than RM100million as the minimum amount approved by the Minister of Finance. If the corporation is a financial institution, it must have the approval of Bank Negara Malaysia to be eligible to apply for membership.
 - A foreign stockbroking firm must be a reputable stockbroking house, whose eligibility to apply for membership has been approved by the Minister of Finance.

- (c) **Five** areas governed by the rules of Bursa Malaysia Derivatives Berhad (BMDB):
- Membership to the BMDB
 - The administration of the BMDB
 - Member-customer relationship
 - Trading practices
 - Definition of the products that will be traded and the contract specifications of these products.
- (d) (i) Companies Commission of Malaysia (Registrar of Companies)
- (ii) Securities Commission
- (iii) Bursa Malaysia Berhad
- (e) (i) If a selling-client fails to deliver the shares to stockbroking firm by the due date, Bursa Malaysia Berhad will institute automatic buying-in against the stockbroking firm concerned on the market day following the due date to the Securities Clearing Automated Network Services Sdn Bhd (SCAN).
- (ii) The buying-in price is fixed by adding 10 bids to the last recorded sale or last buying-in offer at the close of business on the previous day.

Question 5

Candidates were unsure of what the CDS is. They did not know the types of investment income that are exempted from tax.

5. (a) DC Bhd **cannot** pay a 2:1 bonus as the company has insufficient distributable reserves to do so. Its distributable reserves, comprising its share premium and reserves only amount to RM50m. The amount is only enough to pay for a 1:1 bonus issue.
- (b) (i) Total number of issued ordinary shares after the bonus issue
 $= (40,000,000 + [40,000,000/5])$
 $= 48,000,000$ shares
- (ii) Value of issued capital before the bonus issue
 $= (40,000,000 \times \text{RM}0.50)$
 $= \text{RM}20,000,000$
- (iii) Value of issued capital after the bonus issue
 $= (48,000,000 \times \text{RM}0.50)$
 $= \text{RM}24,000,000$
- (iv) Reserves after the bonus issue
 $= \text{RM}8,000,000 - (8,000,000 \times \text{RM}0.50)$
 $= \text{RM}4,000,000$
- (v) Shareholders' fund before the bonus issue
 $= \text{Issued capital} + \text{Reserves}$
 $= \text{RM}20,000,000 + \text{RM}8,000,000$
 $= \text{RM}28,000,000$
- (vi) Shareholders' fund after the bonus issue
 $= \text{Issued capital} + \text{Reserves}$
 $= \text{RM}24,000,000 + \text{RM}4,000,000$
 $= \text{RM}28,000,000$

- (c) (i) The Central Depository System (CDS) is a computerised clearing and settlement system for the Malaysian stock market, and it replaces the physical holding and moving of scripts (share certificates). It is a computerised bulk entry system.
- (ii) Four benefits of the CDS to investors:
- No risk of loss, misplacement and forgery of scripts.
 - No hassle of delivery and collecting scripts, to and from brokers.
 - No need to send certificates for registration as it is automatic.
 - Savings on time, stamp duty and registration fee.
- (d) **Three** types of investment income earned by individuals that are exempted from tax:
- Interest earned from investment in Malaysian Government Securities or bonds;
 - Interest earned from investment in bonds issued by public companies listed on the KLSE, provided these bonds are not convertible into equity shares;
 - Interest earned from investment in bonds issued by companies not listed on the KLSE but rated by Rating Agency Malaysia Berhad, provided these bonds are not convertible into equity shares.