Diploma in Financial Management

Paper DB1 – Incorporating subject areas:
– Financial Strategy
– Risk Management

Tuesday 3 June 2008

Time allowed
Reading and planning: 15 minutes
Writing: 3 hours

This paper is divided into three sections:

Section A	ALL 20 questions are compulsory and MUST be attempted
Section B and Section C	THREE questions in total to be attempted Candidates MUST attempt ONE question from Section B, ONE question from Section C and ONE further question from either Section B or Section C

Present Value Rates are on page 2.

Do NOT open this paper until instructed by the supervisor.

During reading and planning time only the question paper may be annotated. You must NOT write in your answer booklet until instructed by the supervisor.

This question paper must not be removed from the examination hall.

Paper DB1

ACCA

The Association of Chartered Certified Accountants

Present value of $1 receivable in n years at 12%

n	12%
0	1·00
1	0·89
2	0·80
3	0·71
4	0·64
5	0·57

Section A – ALL 20 questions are compulsory and MUST be attempted

Please use the Candidate Registration Sheet provided to indicate your chosen answer to each multiple choice question. Each question within this section is worth 2 marks.

1 Consider the following statements:

1. The amount of systematic risk varies between different forms of investment
2. Systematic risk can be diversified away by holding a suitably wide portfolio of investments

Which one of the following combinations (true/false) relating to the above statements is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

2 Amur Co has 10 million $1 ordinary shares in issue that have a current market value of $2·40 per share. The cost of the equity shares is estimated at 12% per year. The company also has irredeemable, 9% loan notes in issue with a nominal value of $40 million, which are quoted at $120 per $100 nominal value. The rate of taxation is 20%.

What is the weighted average cost of capital for the company?

A 7·2%
B 8·0%
C 8·2%
D 9·6%

3 Consider the following statements concerning warrants:

1. Warrants must be exercised by their holders at a specified future date.
2. Warrant holders receive a dividend on their investment.

Which one of the following combinations (true/false) relating to the above statement is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

4 Ishim Co has issued $50 million of 6% convertible bonds at $105 per $100 nominal value. The bonds are convertible in three years' time into ordinary shares of the company. The conversion rate will be 20 shares for every $100 of convertible bonds. The ordinary shares are currently trading at $4·50 per share.

What is the conversion premium (to the nearest cent)?

A 6%
B 10%
C 15%
D 17%

5 Consider the following statements concerning stock market efficiency:

When a stock market displays weak-form efficiency, it is impossible to:

1. make regular profits from any trends or patterns detected in share prices.
2. make abnormal gains by identifying undervalued or over-valued shares.

Which one of the following combinations (true/false) relating to the above statements is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

6 A product has an annual demand of 9,600 units, which is even throughout the year. The product costs $50 per unit and the cost of holding one unit is $60 per year. The order costs are $5 per order. The supplier offers a 4% discount for orders of at least 80 units.

What is the minimum annual total cost that can be incurred in trading in this product?

A $460,800
B $463,800
C $466,200
D $482,400

7 Consider the following statements concerning sources of finance:

1. Retained earnings represent a free source of finance for a business.
2. Convertible loan notes are normally issued at a lower rate of interest than non-convertible loan notes.
3. Under an operating lease, the lessor is responsible for the upkeep of the asset.
4. Under an invoice discounting arrangement, the invoice discounter will collect the receivables on behalf of the client.

Which of the above statements are correct?

A 1 and 2
B 1 and 3
C 2 and 3
D 3 and4

8 Aldan Co has 2 million $0·50 ordinary shares in issue and the market capitalisation of the company is $28·0m. The company is about to make a 1-for-4 scrip issue, immediately followed by a 2-for-1 share split.

What will be the theoretical value of a share following the above transactions and the number of shares held by an investor that held 1,000 shares prior to these transactions?

	Share value following transactions	No of shares held following transactions
A	$14·00	2,500
B	$5·60	2,500
C	$8·75	625
D	$1·87	7,500

9 The following methods of issuing shares may be used by a quoted company:

1. An intermediaries' offer
2. An offer for subscription
3. A rights issue
4. A placing

Which of the above methods allow the investing public to participate in the share issue?

A 1 and 2
B 2 only
C 3 and 4
D 4 only

10 Tarim Co has ordinary shares in issue with a par value of $0·25. For the financial year just ended, the company had earnings per share of $0·20 and a dividend cover of 2·0 times. At the year end the dividend yield was 4·0%.

What is the price/earnings ratio of the company at the year end?

A 2·0 times
B 8·0 times
C 12·5 times
D 25·0 times

11 The shares of Vitim Co have a beta of 0·6 and the shares of Tigris Co a beta of 1·5. Investors in Vitim Co have an expected rate of return of 8% and the expected returns to the market are 10%.

Using the Capital Asset Price Model, what will be the expected rate of return for investors in Tigris Co?

A 7·5%
B 12·0%
C 12·5%
D 20·0%

12 According to a colleague, the Combined Code states that:

1. the nominations committee, and
2. the audit committee

should be made up of a majority of independent, non-executive directors.

Which one of the the following combinations (true/false) concerning each of the above committees is correct?

	Nominations committee	Audit committee
A	True	True
B	True	False
C	False	True
D	False	False

13 Pechora Co is a German business that has purchased goods from a supplier, Kama Co, which is based in the USA. Pechora Co has been invoiced in euros and payment is to be made 30 days after the purchase. During this 30-day period, the euro strengthened against the US$.

Assuming neither Pechora Co nor Kama Co hedge against currency risk, what would be the currency gain or loss for each party as a result of this transaction?

	Pechora Co	Kama Co
A	No gain or loss	Gain
B	Gain	No gain or loss
C	No gain or loss	Loss
D	Loss	No gain or loss

14 Consider the following statements concerning financial options:

1. An American-style option gives the holder the right to exercise the option at any time up to and including its expiry date.
2. An out-of-the-money call option has an intrinsic value of zero.

Which one of the following combinations (true/false) concerning the above statements is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

15 Volga Co is financed entirely by equity shares and its cost of capital is 12%. Purus Co is identical to Volga Co except that it is financed by 400,000 $1 equity shares with a current market value of $4·20 per share, and $800,000 of 5% loan notes, which are currently trading at $78 per $100 nominal value.

Using Modigliani and Miller (without taxes), what is the cost of equity shares in Purus Co?

A 13·5%
B 14·1%
C 14·6%
D 16·7%

16 According to a colleague, the Combined Code states that independent non-executive directors should comprise:

1. at least one third of the board of smaller companies, excluding the chairman.
2. at least half the board of larger companies, excluding the chairman.

Which one of the following combinations (true/false) concerning the above statements is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

17 The current premium for a put option on £ sterling, at a strike rate of US$1·95, is US$0·10 per £ sterling. A put option for £45,000 can be exercised in three months' time and the current exchange rate is £1 sterling = $1·92.

What is the total intrinsic value and total time value of the option?

	Intrinsic value	Time value
A	$1,350	$3,150
B	$3,150	$1,350
C	£1,350	£3,150
D	$1,350	$15,000

18 Consider the following statements concerning capital structure:

According to Modigliani and Miller (without taxes)

1. The cost of equity in a geared company is equal to the cost of equity in a similar ungeared company.
2. The cost of debt will remain the same, irrespective of the level of gearing.

Which one of the following combinations (true/false) relating to the above statements is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

19 A company plans to take out a $50 million loan in six months' time and wishes to fix the interest rate for a 12-month period. The company wants to use a forward rate agreement to hedge the interest rate risk and the following rates have been quoted by a bank:

	Bid %	Offer %
6 v 12	5·65	5·60
6 v 18	5·70	5·64

LIBOR is 5·5% at the fixing date and the company can borrow at 45 basis points above this figure.

What rate of interest will the company pay to, or receive from, the bank as a result of the forward rate agreement?

A 0·15% paid to bank
B 0·20% paid to bank
C 0·25% received from bank
D 0·31% received from bank

20 Consider the following statements concerning dividend policy:

1. The traditional view states that dividends should be paid only when investment opportunities are exhausted.
2. The Modigliani and Miller view (without taxes) states that dividend policy is irrelevant to shareholder wealth.

Which one of the following combinations (true/false) concerning the above statements is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

(40 marks)

Section B – Candidates MUST attempt ONE question from Section B, ONE question from Section C and ONE further question from either Section B or Section C.

1 Salween Co is a major supermarket chain which is committed to significant growth over the next five years. To help achieve this, the board of directors of Salween Co is considering the acquisition of Jurua Co. The board believes that the acquisition of this company would lead to significant operating and financial synergies. Jurua Co is a smaller supermarket chain that is listed on the same stock exchange as Salween Co and which has enjoyed steady, but unspectacular, growth.

The draft financial statements of Jurua Co for the most recent financial year are set out below.

Statement of financial position as at 31 May 2008

	$m
Non-current assets	
Property, plant and equipment	
Land and buildings	72·5
Motor vehicles	8·2
Fixtures and fittings	7·6
	88·3
Current assets	
Inventories	10·3
Trade receivables	0·9
Cash and cash equivalents	13·6
	24·8
Total assets	113·1
Equity	
Ordinary share capital ($0·50 nominal)	20·0
Retained earnings	44·5
	64·5
Non-current liabilities	
Borrowings – 10% Loan note	11·0
Current liabilities	
Trade payables	35·5
Taxation	2·1
	37·6
Total equity and liabilities	113·1

Income statement for the year ended 31 May 2008

	$m
Revenue	145·2
Cost of sales	(105·4)
Gross profit	39·8
Selling and distribution expenses	(14·5)
Administration expenses	(10·0)
Finance expenses	(1·1)
Profit before taxation	14·2
Taxation	4·2
Profit for the year	10·0

An independent valuer has provided the following estimates of the current realisable values of the assets of Jurua Co:

	$m
Land and buildings	95·6
Motor vehicles	6·5
Fixtures and fittings	5·2
Inventories	14·2

The current realisable value of trade receivables was considered to be in line with their values in the statement of financial position.

The required return from ordinary shareholders in similar quoted companies is 8%. The average price/earnings ratio for similar listed businesses is 11·5 times.

The profit for Jurua Co for the forthcoming year is expected to be the same as for the year that has just ended. The current dividend payout ratio of the company is 20% but this will change as dividends are expected to grow at the rate of 4% per year for the foreseeable future.

Required:

(a) Identify two operating synergies and two financial synergies that may be achieved by Salween Co through the acquisition of Jurua Co. (4 marks)

(b) Calculate the value of an ordinary share in Jurua Co using the following valuation methods:

(i) net assets (net book value) basis;
(ii) net assets (liquidation) basis;
(iii) dividend growth basis; and
(iv) price earnings ratio basis. (8 marks)

(c) Briefly evaluate each of the share valuation methods in (b) above and state, with reasons, which one is likely to provide the most realistic assessment of the market value of an ordinary share in Jurua Co. (8 marks)

(20 marks)

2 The most recent financial statements of Kolyma Co are set out below:

Income statement for the year ended 31 May 2008

	$000
Revenue	1,520
Cost of sales	(790)
Gross profit	730
Selling and distribution expenses	(240)
Administration expenses	(315)
Other operating costs	(10)
Interest payable	(25)
Profit before taxation	140
Taxation at 30%	(42)
Profit for the year	98

Statement of financial position as at 31 May 2008

	$000
Non-current assets	
Property, plant and equipment	
Cost	1,620
Depreciation	(680)
	940
Current assets	
Inventories	210
Trade receivables	365
	575
Total assets	1,515
Equity	
Share capital	100
Share premium account	200
Retained earnings	433
	733
Non-current liabilities	
Borrowings – (10% loan repayable 2009)	250
Current liabilities	
Trade payables	75
Taxation	42
Borrowings – Bank overdraft	415
	532
Total equity and liabilities	1,515

The following information relating to the company is also available:

(i) All purchases and sales are made on credit.

(ii) Current assets held at the beginning of the financial year included:

	$000
Inventories	180
Trade receivables	330
Trade payables	120

(iii) The bank overdraft limit had been agreed at $400,000 but was recently exceeded immediately before the year end.

The directors of Kolyma Co recently met to discuss the overdraft problem and agreed that the operating cash cycle of the company should be reduced in order to keep within the overdraft limit. The operations director argued that if the average settlement period for trade payables had been maintained at 55 days throughout the year, which was the industry average settlement period for the preceding year, the bank overdraft would have been kept within the agreed limit and the closing payables would be increased. The finance director pointed out, however, that the company receives a 2% discount on payments to suppliers, which would not have been available if the settlement period had been maintained at 55 days.

Assume the purchases for the year would be unaffected by any change in the average settlement period for payables.

Required:

(a) Calculate the operating cash cycle of Kolyma Co for the most recent financial year, using average figures and working to the nearest number of days. (7 marks)

(b) Calculate the revised bank overdraft and trade payables as at 31 May 2008, assuming the settlement period for payables had been maintained at 55 days throughout the year as suggested by the operations director.

Note: workings should be in $000s and to one decimal point. (5 marks)

(c) Calculate the approximate annual percentage cost of foregoing the discount from suppliers by extending the settlement period for payables to 55 days, from the current average settlement period, and comment on your findings. (5 marks)

(d) Discuss an alternative approach, other than extending the settlement period for payables, that the company might have used to keep within the overdraft limit set by the bank. (3 marks)

(20 marks)

3 'Capital investment projects are often of such crucial importance to a business that the whole investment process must be carefully managed.'

Required:

(a) Explain why capital investment projects are often of crucial importance to a business. (4 marks)

(b) Discuss the key issues to consider when identifying, authorising, monitoring and controlling capital investment projects. (16 marks)

(20 marks)

Section C – Candidates MUST attempt ONE question from Section B, ONE question from Section C and ONE further question from either Section B or Section C.

4 The directors of Tocantins Co are considering building a new factory in Qingdao, China to produce clothing for the Western European market. To date, the company has invested $500,000 in researching the proposal and in obtaining the licences necessary to build the factory. The factory will cost $16m to build and will take one year to complete. Payments for building the factory will be made in 12 monthly instalments during the first year of the investment project.

The factory will be operational in the second year and estimates of the likely cash flows from the factory and their probability of occurrence are as follows:

	Estimated net cash flows $m	Probability of occurrence
Year 2	4·5	0·2
	5·0	0·4
	6·0	0·4
Year 3	5·0	0·3
	6·5	0·4
	8·0	0·3
Year 4	5·0	0·2
	7·0	0·6
	9·0	0·2
Year 5	2·0	0·5
	2·5	0·4
	3·0	0·1

Estimates for each year are independent of each other. The company has a cost capital of 12%.

Required:

(a) Calculate the expected net present value (ENPV) of the investment proposal. (8 marks)

(b) Calculate the net present value of the worst possible outcome and the probability of its occurrence. (5 marks)

(c) State, with reasons, whether or not the company should invest in the new factory. (2 marks)

(d) Evaluate the strengths and weaknesses of using expected values when making investment decisions. (5 marks)

(20 marks)

5 Parana Finance Co is a large bank with a global reach. The directors of the bank have recently decided to adopt an Enterprise Risk Management (ERM) framework as a means of managing the various risks that the bank must confront. The directors are aware that other large banks, which have adopted an ERM approach, have also created a new role of chief risk officer within their organisational hierarchy. The directors are uncertain, however, whether creating such a role is either necessary or desirable.

Required:

(a) Explain why a bank may adopt an ERM framework. (3 marks)

(b) Discuss the role that a chief risk officer might perform within a bank and the qualities required of an individual that occupies such a role. (12 marks)

(c) Suggest how this role may fit within the organisational hierarchy of a bank and to whom the chief risk officer should report. (5 marks)

(20 marks)

6 Yukon Inc is a US-based shipping business that operates throughout the world. In recent years, heavy demand for commodities, particularly among developing nations, has created significant business opportunities for the company. To exploit these further, Yukon Inc has agreed to purchase a new oil tanker from a German shipyard for €20·2m. The oil tanker is near completion as it was due to be sold to another company. The order, however, was recently cancelled and Yukon Inc has agreed to buy the tanker, subject to certain changes in the tanker's specifications. The German shipyard will deliver the ship in four months' time and Yukon Inc must pay the full purchase price at this point.

To deal with the foreign exchange risk associated with the deal, Yukon Inc is considering the following possibilities:

1. The purchase of euro futures contracts that will be sold in four months' time to close the company's position. The relevant futures contract size is €125,000. The tick value is $12·50 and one tick is 0·01 cents per €. Euro futures contracts are currently priced at €1 = $1·3140.
2. The purchase of an over-the-counter option at an exercise price of €1 = $1·3345 with a premium cost of $2·50 per €100.

The current spot rate is €1 = $1·3250.

Assume that in four months' time the spot rate moves to €1 = $1·3425 and the futures price moves to $1·3290.

Required:

(a) Identify the main features of each method of hedging currency risk being considered and outline the advantages and disadvantages of each. (8 marks)

(b) Calculate the total cost of using futures contracts and the hedge efficiency ratio. (6 marks)

(c) Calculate the total cost of using the over-the-counter option for hedging. (3 marks)

(d) Compare your findings in (b) and (c) above and comment on the suitability of each hedging method for Yukon Inc. (3 marks)

(20 marks)

End of Question Paper