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

Module B

Diploma in Financial Management

Tuesday 4 December 2007

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.

The Association of Chartered Certified Accountants

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

x =	6%	9%	10%
n			
0	1·00	1·00	1·00
1	0·94	0·92	0·91
2	0·89	0·84	0·83
3	0·84	0·77	0·75
4	0·79	0·71	0·68

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 Virunga Co uses the net present value (NPV) method, the internal rate of return (IRR) method and discounted payback period (DPP) to appraise its new investment opportunities. An investment opportunity was recently appraised using each of these methods and was estimated to provide a positive NPV of $10·5 million, an IRR of 15% and a DPP of three years. Following this appraisal, it was discovered that the cost of capital of the company was lower than had been previously estimated.

What would be the effect (increase/decrease/no effect) on the figures provided by each investment appraisal method of taking account of the lower cost of capital?

	NPV	IRR	DPP
A	Increase	Increase	Decrease
B	Increase	No effect	Decrease
C	Decrease	No effect	Increase
D	No effect	Decrease	No effect

2 Shares in Alborz Co have an expected rate of return of 9% and a beta of 0·8. Shares in Ural Co have a beta of 1·2. The expected market rate of return is 10%.

Using the Capital Asset Pricing Model (CAPM), what is the expected rate of return for shareholders in Ural Co?

A 8·7%
B 11·0%
C 13·0%
D 13·5%

3 Consider the following statements concerning loan finance:

1. Providers of mezzanine finance have a preferential right, ahead of other lenders, to the repayment of capital if the business is liquidated.
2. Holders of junk bonds expect to receive a higher yield from their investment than holders of investment-grade bonds.

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

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

4 Lechtal Co sells a particular product for which it pays $6 per unit. Annual sales are 60,000 units and demand accrues evenly throughout the year. The cost of ordering the product is $15 per order and the inventory cost of holding one unit of the product for one year is $3. It is Lechtal Co's policy to have an order quantity of 1,200.

What is the total annual cost to the business of trading in this product?

A $360,750
B $361,800
C $362,550
D $364,550

5 A colleague states that when a stock market displays only weak-form efficiency, it has the following features:

1. Share price changes are random.
2. Share prices change in anticipation of new information being announced.

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

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

6 Sayan Co is listed on a stock market and is about to announce a one-for-three rights issue at an issue price of \$12·00. The current share price of the company is \$16·00.

What will be the theoretical value of the rights attached to each original share?

A \$0·75
B \$1·00
C \$1·33
D \$3·00

7 Glarus Co is considering four separate investment opportunities but only has limited funds to invest during the current year. This means that the company will not be able to invest fully in all four opportunities. Each investment opportunity is divisible (i.e. it is possible to undertake part of an investment and to receive a pro rata return). Details of each investment opportunity are as follows:

Investment opportunity	Initial outlay \$m	Present value of net cash inflows \$m
Kurai	186	211
Barisan	65	84
Carnic	100	120
Flinders	50	71

How should the investment opportunities be ranked if Glarus Co wishes to maximise the wealth of its shareholders?

	Project ranking 1st	2nd	3rd	4th
A	Flinders	Barisan	Carnic	Kurai
B	Kurai	Carnic	Barisan	Flinders
C	Flinders	Carnic	Barisan	Kurai
D	Kurai	Flinders	Carnic	Barisan

8 To aid financial planning, Elburz Co has adopted the following target financial ratios for the forthcoming financial year:

Return on equity 10% (using year-end equity figure)
Non-current liabilities: Equity 2:1
Total assets less current liabilities: Current assets 3:1
Current ratio 1:1
Acid test ratio 0·8:1

The net profit after tax for the forthcoming year is forecast to be $500,000.

What will be the forecast level of inventory at the end of the year?

A $0·5m
B $1·0m
C $4·0m
D $9·0m

9 Consider the following statements concerning a stock split:

A stock split will

1. convert reserves into share capital
2. reduce the market price of a listed company's shares.

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

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

10 Consider the following:

1. Altay Co has a current ratio of 1·5:1 and an operating cash cycle of 35 days and the company has decided to increase the operating cash cycle by five days.
2. Rhodope Co has a debt/equity ratio of 45%. The company has decided to make a one-for-two scrip issue of equity shares.

What will happen (increase/decrease) to the current ratio of Altay Co and to the debt/equity ratio of Rhodope Co if these changes are made?

	Current ratio of Altay Co	Debt/equity ratio of Rhodope Co
A	Increase	Decrease
B	Increase	No effect
C	No effect	No effect
D	Decrease	Increase

11 **Which one of the following principles concerning directors' remuneration policy and service contracts correctly reflects the recommendations set out in the Combined Code?**

A Remuneration of non-executive directors should not normally include share options.
B Notice periods should be set for periods of one year or more.
C Performance-related elements of remuneration should form a significant part of the remuneration package of ALL directors.
D The remuneration committee should have delegated responsibility for setting the remuneration of ALL directors.

12 Plessur Co pays a constant dividend of $0·10 per equity share and these shares have a beta of 1·4. The current market rate of return is 9% and the risk-free rate of return is 3%.

What is the predicted market value of each equity share?

A $0·64
B $0·88
C $1·14
D $1·19

13 Kamnik Co holds the following European-style options at their expiry date:

1. A put option on 20,000 shares in Ligurian Co at an exercise price of $3·60. The share price is $3·40 at the expiry date of the option.
2. An option on a notional loan of $10 million for one year to borrow at a strike rate of 5·2%. LIBOR is 5·6% at the expiry date of the option.
3. A call option on £850,000 in exchange for Singapore $ at an exchange rate of £1 = Singapore $2·7540. The exchange rate is £1 = Singapore $2·7520 at the expiry date of the option.

Which of the above options should be exercised and which should be allowed to lapse at their expiry date?

		Option	
	1	2	3
A	Lapse	Exercise	Exercise
B	Lapse	Lapse	Exercise
C	Exercise	Exercise	Lapse
D	Exercise	Lapse	Lapse

14 Consider the following statements concerning capital structure:

According to the Modigliani and Miller (ignoring taxes) view of capital structure

1. the market value of a geared business is equal to the market value of a similar, ungeared (all-equity financed) business.
2. the cost of equity in a geared company is equal to the cost of equity in a similar, ungeared (all equity financed) business.

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 Bernina Co has recently paid a dividend of $0·30 per equity share. The company has a constant dividend payout ratio of 25% and achieves a 12% return on all new investments.

What is the predicted market value of an equity share?

A $1·30
B $2·73
C $3·43
D $10·90

16 Hafner Co wishes to borrow $20 million for ten years at a variable rate of interest and Ennstal Co wishes to borrow $20 million for ten years at a fixed rate of interest. The amounts required can be borrowed at the following interest rates:

Company	Variable rate	Fixed rate
Hafner Co	LIBOR + 0·8%	6·2%
Ennstal Co	LIBOR + 1·0%	6·8%

The two companies agree to an interest rate swap with benefits being shared equally.

What would be the net annual interest cost for Hafner Co when LIBOR is 5·8%?

A 6·5%
B 6·4%
C 6·3%
D 6·2%

17 Consider the following statements concerning the assessment of risk.

1. Stress testing assesses the vulnerability of an enterprise to exceptional but plausible shocks.
2. Value at risk (VaR) is an estimate of the potential loss arising from the price volatility of a financial asset.

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

18 Gydan plc, a UK business, is due to receive €500,000 in four months' time for goods supplied to a French customer. The company has decided to use a money market hedge to manage currency risk. The following information concerning borrowing rates is available:

Country	Borrowing rate per annum
France	9%
UK	6%

The spot rate is £1 = €1·4490–1·4520

Using the money market approach, what is the £ sterling value of the amount that Gydan Co will have to borrow now in order to match the receipt?

A £315,920
B £335,015
C £334,323
D £337,601

19 A colleague states that, according to the Combined Code:

1. The performance of the chairman should be evaluated on an annual basis by the full board of directors.
2. The performance of board committees should be evaluated every three years by the board of directors.

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

20 Wetterstein Inc, a US-based company, expects to receive €800,000 in two months' time for consultancy services provided to the Spanish government. It wishes to be certain of the amount to be received and will use the derivatives market to achieve this.

Which one of the following actions should the company take NOW to hedge the risk?

A Buy euro futures
B Buy US dollar options
C Sell euro futures
D Sell US dollar futures

(40 marks)

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Section B begins on page 10.

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 Bernese Co develops and manufactures drills for businesses operating in the oil and gas industry. Although it is committed to maximising the wealth of its shareholders, the company has incurred heavy losses over recent years. A new chief executive has now been appointed to revive the flagging fortunes of the company. As part of the revival process, a review has been ordered of all projects involving new drills that were either still being developed or were already developed and about to be launched.

Project XK150 began in 2006 and has incurred costs of $4 million, to date, in developing and testing a new drill for use in offshore oil rigs. The project had experienced numerous problems and the drill has taken longer than expected to develop but it will be ready to market from December 2007. The new drill is expected to generate sales over a four-year period, after which it will be replaced with an improved version.

The manager of Project XK150 has produced the following calculations to aid the review process:

	Year to 30 November			
	2008	2009	2010	2011
	$m	$m	$m	$m
Revenue	18·3	22·5	12·6	7·2
Less				
Salary and wages	(12·7)	(14·4)	(6·6)	(2·5)
Materials and components	(2·3)	(3·5)	(1·5)	(0·6)
Overheads	(4·8)	(4·8)	(4·8)	(4·8)
Depreciation	(2·0)	(2·0)	(2·0)	(2·0)
Development costs	(1·0)	(1·0)	(1·0)	(1·0)
Interest charges on loan	(1·5)	(1·5)	(1·5)	(1·5)
Profit/(loss)	(6·0)	(4·7)	(4·8)	(5·2)

The manager of Project XK150 is dismayed by the above results and believes that the new chief executive will call an immediate halt to the proposed launch when the results are presented to him. Before making the presentation, however, the project manager has asked you to check the figures that he has produced.

When going through the figures, you find the following:

(i) The materials and components are already in stock and were purchased specifically for producing the new drills. The materials and components are highly specialised and cannot be used for any other project. They have no ready market value and, if the new drills are not manufactured, the materials and components will have to be disposed of immediately at a cost to the company of $0·2 million.

(ii) The overheads reflect a 'fair share' of the total overheads incurred by the company. However, the overheads that relate specifically to the project account for only 25% of the amount shown in each period.

(iii) The depreciation charge relates to existing plant and equipment which will be required for the manufacture of the new drills. This plant and equipment has a current net book value of $8·0 million and a current resale value of $6·0 million. If the project goes ahead, the plant and equipment will be sold for $2·0 million at the end of the project's life.

(iv) Working capital of $2·5 million will be required immediately and will be released at the end of the four-year period of the life of the new drills.

(v) The development costs relate to the costs incurred during the period up to 30 November 2007. It is the policy of the company to write off development costs in equal annual instalments over the period in which revenues are generated.

(vi) Interest charges arise from a loan that was taken out specifically to finance the development and manufacture of the new drills.

You can assume the calculations provided by the manager of Project XK150 contain no arithmetic errors.

The company has a cost of capital of 10%.

Ignore taxation

Required:

(a) Calculate the net present value of the new drill and briefly comment on the viability of the project. (11 marks)

(b) Briefly explain the reasons for any adjustments that you have made to the figures provided by the manager of Project XK150 in order to calculate the net present value of the new drill. (6 marks)

(c) Briefly explain why the net present value method is an appropriate method to use when assessing the financial viability of the new drill. (3 marks)

(20 marks)

2 Cottian Co operates an office furniture business that generated sales revenues of $80 million during the year ended 30 November 2007. The office furniture market is expected to be stagnant for the foreseeable future and so sales revenues for the company for the forthcoming year are forecast to remain the same as in the previous year, assuming that no changes are made to the terms of trade.

All sales are on credit and the terms of trade include the requirement that payment for goods is due one month after sale. A recent analysis of trade receivables, however, shows that, on average, customers take two months to pay. Although the company does not currently offer its customers a discount for prompt payment, the board of directors is considering a change in policy in an effort to improve the average collection period for receivables.

The marketing department believes that, by offering a $2^1/_2$% discount for customers who pay within one month, 75% of existing customers will pay at the end of one month in order to receive the discount. The remaining 25%, however, are likely to pay at the end of two months. A change in discount policy is likely to prove popular with customers and will bring the company's terms of trade into line with those of its competitors. This change is also forecast to generate new customers, all of which are likely to take advantage of the new discount policy. The marketing director, who is a long-time advocate of offering discounts for prompt payment, has suggested that these new customers are likely to generate an additional $10 million of sales revenue during the forthcoming year.

The following forecasts for the forthcoming year have been made and are not affected by the proposed change in the terms of trade:

(i) a gross profit margin on sales revenues of 45%.
(ii) variable overheads will be 20% of sales.
(iii) fixed overheads will be $4·8 million.
(iv) variable and fixed overheads will be paid in the month in which incurred.
(v) sales and cost of sales will accrue evenly over the year.
(vi) three months' credit (based on the cost of sales) will be taken from trade payables.

The company intends to hold four months' inventory at all times and to have a cash balance at the year end of $0·3 million.

Ignore taxation.

Required:

(a) Calculate the forecast net profit of Cottian Co for the forthcoming year, based on the assumption that:

(i) the proposed discount policy is not adopted; and
(ii) the proposed discount policy is adopted. (8 marks)

(b) Calculate the investment in working capital at the end of the forthcoming year, based on the assumption that:

(i) the proposed discount policy is not adopted; and
(ii) the proposed discount policy is adopted. (8 marks)

(c) Discuss your calculations in answer to parts (a) and (b) above and state whether the proposed discount policy should be adopted. (4 marks)

(20 marks)

3 Bergamo plc owns a large chain of bookshops, which operates throughout the UK. Over the past three years the company has struggled to maintain its market share in the face of fierce competition from internet retailers and from large supermarket chains. The board of directors of Bergamo plc has therefore decided that, in order to reduce risk and to secure future growth, the company must diversify its operations. To this end, the board is now negotiating with the board of directors of Ortler plc, a food manufacturer, with a view to acquiring the company.

The two boards of directors have agreed a share price but have yet to agree the form of bid consideration. The board of Bergamo plc would prefer a share-for-share exchange whereas the board of Ortler plc would prefer a cash offer for the shares of the company.

Required:

(a) Outline the operating and financial synergies that may accrue as a result of a merger or acquisition.
(6 marks)

(b) Briefly discuss whether diversification through mergers and acquisitions is an effective means of reducing risk and securing future growth and use the information in the question to illustrate your answer.
(6 marks)

(c) Outline the advantages and disadvantages of:

(i) a share-for-share exchange; and
(ii) a cash payment

as forms of bid consideration. (8 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 Pirin Co operates a chain of vegetarian restaurants and has the following abbreviated balance sheet as at 30 November 2007.

Balance sheet as at 30 November 2007

	$m
Total assets less current liabilities	37·5
Equity shares	12·5
Retained earnings	15·0
	27·5
Non-current liabilities	
Loan capital	10·0
	37·5

Over the past four years, the company has generated the following after-tax profits.

After-tax profits

Year ended 30 November	**$m**
2004	3·97
2005	4·29
2006	4·63
2007	5·00

The board of directors of Pirin Co is currently considering whether to recalculate the company's cost of capital. When evaluating investment decisions, the board employs the net present value method and uses a cost of capital of 16%. This figure, however, was calculated four years ago and since then the company has undergone various changes.

The following information is also available:

1. The loan capital consists of 8% bonds that are redeemable in three years' time. The current market value of the bonds is $95 per $100 nominal value. The loan capital will be redeemed at its nominal value in three years' time.
2. The company has 25 million equity shares in issue and these shares are currently trading at a P/E ratio of 7·6 times.
3. The dividend policy of the company is to maintain a dividend cover of 2·0 times.
4. At a recent board meeting, the directors decided to maintain the current capital structure of the company for the foreseeable future.

Assume a tax rate of 25% and that tax relief on interest is received in the year that the interest is paid.

Required:

(a) Calculate, for Pirin Co, each of the following:

(i) the cost of loan capital;
(ii) the cost of equity capital; and,
(iii) the weighted average cost of capital

Note: each item should be calculated to the nearest %.

(13 marks)

(b) Briefly state the possible implications for the company of failing to re-calculate its cost of capital.

(2 marks)

(c) Identify and briefly discuss the key assumptions that underpin the use of the weighted average cost of capital as a discount rate in investment appraisal. (5 marks)

(20 marks)

5 Rila Co is a small construction company operating in Wales. In the past, the policy of the company has been to allow its senior managers to manage the risks that were relevant to their particular departments. Thus, IT risks were dealt with by the IT manager, health and safety risks were dealt with by the human resources manager and financial risks were dealt with by the financial controller. The recent acquisition of the company by a large international conglomerate, however, has led to a change of policy. The conglomerate announced that Rila Co must immediately adopt an enterprise risk management (ERM) approach. This announcement was greeted with dismay by the senior managers of Rila Co who supported the current policy and who were not convinced of the need for change.

Required:

(a) Outline the problems associated with the current arrangements for managing risk and explain how the enterprise risk management (ERM) approach differs from this approach. (7 marks)

(b) What are the potential benefits of employing an enterprise risk management approach? (6 marks)

(c) What problems might arise when implementing an enterprise risk management approach within the company and how might they be overcome? (7 marks)

(20 marks)

6 Audit committees are now a vital element of the system of corporate governance for companies listed on a number of the world's leading stock markets.

Required:

(a) Outline the role of an audit committee of a listed company and explain how this role might be carried out. (13 marks)

(b) Identify and discuss the potential problems for a listed company of having an audit committee. (7 marks)

(20 marks)

End of Question Paper