

Certified Accounting Technician Examination  
Advanced Level

# Managing Finances

Wednesday 11 June 2008

**Time allowed**

Reading and planning: 15 minutes

Writing: 3 hours

ALL FOUR questions are compulsory and MUST be attempted.

Extract from discount factor tables and annuity factor tables 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

The ACCA logo consists of the letters 'ACCA' in a bold, white, sans-serif font, centered within a solid black square.

Paper T110

**Extract from discount factor tables at a discount rate of 10%**

<b>Time</b>	<b>Factor</b>
1	0.909
2	0.826
3	0.751
4	0.683
5	0.621
6	0.564
7	0.513
8	0.467
9	0.424
10	0.386

**Extracts from annuity factor tables at a discount rate of 10%**

<b>Time</b>	<b>Factor</b>
1	0.909
2	1.736
3	2.487
4	3.170
5	3.791
6	4.355
7	4.868
8	5.335
9	5.759
10	6.145

**ALL FOUR questions are compulsory and MUST be attempted**

- 1 Alan Web is a famous musician and composer. He has recently teamed up with a successful producer of musicals, David Daniels. Together, they are going to fund a new musical 'The Fiesta'. The musical will run in Jamin (the capital of Bundai) for five months. If it is successful, it will then tour the rest of Bundai for a further period.

Alan and David are each investing \$100,000 in the production. They have opened a business bank account to be used solely for the musical's income and expenses. The investment cash will be paid into this account on 30 June 2008. Rehearsals will take place throughout the month of July, with the musical's official opening night taking place on 1 August.

Alan and David appreciate the need for cash forecasting and have made the following estimates for income and expenses for the six months from 1 July to 31 December 2008:

- 1 Tickets for the musical will go on sale on 1 July. Tickets will be sold through an agent who is to be paid commission by Alan and David. The price of tickets will vary according to the seat location. Prices are as follows:

Location of seat	Price
Stalls	\$30
Front	\$20
Rear	\$15

Ticket sales each month will include not only tickets for that month's performances but also advance bookings for later months. Sales per month are expected to be as follows:

	Jul	Aug	Sep	Oct	Nov	Dec
Stalls	10,000	20,000	No further stalls seats available			
Front	30,000	50,000	20,000	No further front seats available		
Rear	10,000	30,000	40,000	50,000	45,000	35,000

The agent will pay the proceeds of ticket sales into Alan and David's business account in the same month as the tickets are sold to the public. The agent will then invoice Alan and David for the commission it charges of 6%. This will be payable in the month following the ticket sales.

- 2 Sales from programmes, CDs and beverages are expected to be \$150,000 in August and \$175,000 for each month thereafter. All costs relating to the production of these goods will be incurred in July. Costs represent 10% of sales value.
- 3 All of the staff in notes 4 and 5 below will only receive 50% of their usual monthly salary for the month of rehearsals.
- 4 The leading lady, who plays the key role in the musical, will be paid a salary of \$16,000 per month. The remaining 20 cast members (actors/singers) will be paid a monthly salary of \$8,000 each. The leading lady and the cast members will be paid at the end of each month for that month's work.
- 5 A live orchestra will also be playing every night. The orchestra also starts rehearsing at the beginning of July. There are 25 musicians in the orchestra, each of whom will be paid a salary of \$4,000 per month. Musicians will be paid at the beginning of each month for the previous month's work.
- 6 Other production staff members are provided by an independent production company and are expected to cost \$80,000 per month in total. They will not be required until the musical opens in August. They will be paid at the beginning of each month for that month's work. However, in addition to this monthly cost, there will also be a production company administration fee of 5%, payable monthly in arrears.
- 7 The production company charges a separate amount for the production equipment, also required at the beginning of August. This is expected to be \$33,000 per month, payable on the first day of each month.
- 8 The costumes for the cast will be made in July. A deposit of \$50,000 needs to be paid at the beginning of July, with the remaining balance of \$25,000 to be paid at the end of that month.
- 9 The background for the stage is currently being painted by local artists. Its cost of \$180,000 will be payable upon its completion at the beginning of July.

- 10 The musical will be held at the National theatre, which must be hired for \$600,000 per month, payable at the beginning of each month. The theatre will be used for rehearsals in July as well.
- 11 Certain equipment, not supplied by the production company, costing \$155,000 will be bought in July for the production. Depreciation for the six-month period will total \$31,000.
- 12 All workings should be in \$'000 to the nearest \$'000.

**Required:**

- (a) **Prepare a monthly cash budget for the musical for each of the six months to 31 December 2008, showing the cash balance at the end of each month.** (18 marks)
- (b) Alan and David are very aware that their actual cash flow in the six months ending 31 December 2008 could differ greatly if the above estimates prove to be inaccurate. They have heard of 'sensitivity analysis' and want to know more about it.

**Required:**

**Briefly explain sensitivity analysis and discuss how it might best be used to make the cash budget for the musical more useful.**

**Note: no further calculations are required.** (6 marks)

- (c) Alan and David are considering whether they should set up their own company for future theatrical productions. They want to know whether, over a ten-year period, it would save money.

If they set up the company, they would avoid the following *annual* costs:

- (i) Estimated external production staff costs of \$900,000.
- (ii) Estimated administration fees of \$45,000.
- (iii) Estimated production equipment costs of \$400,000.

However, they would incur the following set-up costs immediately:

- (i) Legal costs of \$4,000.
- (ii) Company registration costs of \$1,000.
- (iii) Equipment costs of \$1,800,000.

A further amount of \$1.5 million would be payable for the equipment in one year's time.

The following annual costs would arise:

- (i) Staff salaries of \$500,000.
- (ii) Professional fees of \$10,000.
- (iii) Equipment maintenance costs of \$75,000.
- (iv) Depreciation costs of \$200,000.

Alan and David will need to spend a considerable amount of time setting up the company. They estimate that, as a result of this, their revenue may be \$75,000 lower in the first year than it would otherwise have been (ignore agent's commission). Their cost of capital is 10% per annum.

**Required:**

**Using the discount tables provided, calculate the net present value (NPV) of the proposal to set up the production company, at the company's cost of capital. Advise Alan and David whether they should set up the company.**

**Note: show all workings in \$'000.** (10 marks)

- (d) Alan and David have been advised that the 'pay-back period method' may also be a useful way of assessing whether to set up the production company. They know nothing about this method of project appraisal.

**Required:**

- (i) **Explain the simple payback period method;**

Note: calculations are not required. (2 marks)

- (ii) **State two differences between the calculation of the simple payback period of a project as compared to the calculation of the net present value of a project;** (2 marks)

- (iii) **State two advantages of using the simple payback period method as compared to other methods of project appraisal.** (2 marks)

**(40 marks)**

- 2 Light Co is a privately owned company specialising in the manufacture of lighting equipment. It supplies lighting to customers, who take an average of 30 days to pay. It has an overdraft on its current account of \$2m. The compound annual interest rate charged on this account is 12%, with interest being charged to the account daily.

In order to reduce its overdraft, Light Co is now considering introducing discounts to customers who pay within seven days.

**Required:**

- (a) **Calculate the maximum discount that Light Co should offer for payment within seven days if it wants to avoid any increase in its overall finance costs and explain the basis of your calculation.** (4 marks)

- (b) **Briefly explain the difference between simple and compound interest rates, using Light Co's overdraft interest as an example.** (4 marks)

- (c) One year later, despite introducing a tempting discount to customers, Light Co has found that very few customers have paid early and taken the discount. In fact, receivables days have increased significantly, as has the company's overdraft. Light Co is therefore considering factoring its debts in the coming year.

Credit sales for the last year totalled \$12 million, with average receivables of \$2 million. Next year, sales are expected to increase by 10%. Receivables days are expected to increase to 70 days if the factoring arrangement is NOT entered into. A factoring company has put forward the following proposal to Light Co:

- (i) Receivables days will be reduced to 28 days as a result of stricter credit control procedures.
- (ii) The factor will charge interest of 13% per annum on the advances.
- (iii) The factor will charge an administration fee of 1.5% of turnover for the service.
- (iv) The factor will advance 80% of the value of sales invoices.

Should Light Co enter into the agreement, it will make its credit controller redundant. She earns a salary of \$18,000 per annum. Current bank overdraft rates have remained the same at 12% per annum.

**Required:**

- Evaluate whether it is financially viable for Light Co to factor its debts in the coming year.** (12 marks)

**(20 marks)**

**3** The Kitchen Co is an innovation company set up two years ago by its key shareholder and director, Brian Geek. It currently has a range of about two thousand kitchen products on the market, the most successful of which is a gadget called the 'Fish Eye'. This is a revolutionary utensil, the size of a kitchen knife, which plugs into the power supply and is used on cooked fish to identify any fish bones that need to be removed prior to serving. The 'Fish Eye' exploded onto the market two years ago, as the company's introductory product, and sales have continued to grow rapidly ever since.

One of Brian Geek's friends has warned him about the high incidence of overtrading for new businesses selling high demand, innovative products. Brian Geek is therefore concerned that The Kitchen Co's financial position be carefully monitored. Its turnover has increased by 100% over the last year, and its trade receivables and inventories have doubled. The company's current ratio has fallen over the last year from a ratio of 3:1 to a ratio of 2.5:1. The industry norm is 2:1.

The company has a \$1 million overdraft facility on its current account from its bank. Whilst the company has never used even half of its limit, it often relies on the overdraft facility to finance its working capital.

**Required:**

- (a) Explain the term 'overtrading'. (2 marks)**
- (b) Describe the symptoms that MAY be present in a company that is overtrading. (5 marks)**
- (c) Briefly discuss whether The Kitchen Co is overtrading. (5 marks)**
- (d) One of the key components used to make the 'Fish Eye' is component X, which is imported from overseas. Brian Geek wants to manage his inventory levels of component X more efficiently. He wants to make sure that he can meet demand for production and sales whilst at the same time avoiding excessive inventory levels. The following information relates to component X:**

Cost of component X	\$24 per unit
Usage per day	1,000 units
Maximum lead time	20 days
Minimum lead time	10 days
Average lead time	15 days
Cost of ordering	\$650 per order
Holding costs	\$2 per unit per annum

Usage per day is always constant. The re-order level is set at the maximum expected requirement in lead time plus 25%.

**Required:**

- (i) Calculate the re-order level; (3 marks)**
- (ii) Calculate the Economic Order Quantity (EOQ) using the following formula:**

$$EOQ = \sqrt{\frac{2C_o D}{C_H}}$$

**Where  $C_o$  = the cost of placing one order**  
**D = the annual demand in units**  
 **$C_H$  = the cost of holding one unit per annum**

Note: you should assume that there are 48 working weeks in the year and five working days in each of the weeks. (2 marks)

- (iii) Calculate the maximum inventory level for component X using the information provided. (3 marks)**

**(20 marks)**

4 Banks and the money markets play an important role in a country's economy.

**Required:**

(a) Explain the difference between retail banks and wholesale banks. (4 marks)

(b) Describe four functions of a central bank. (8 marks)

(c) Name the different money markets and briefly explain their role within the economy. (4 marks)

(d) Briefly describe four money market instruments. (4 marks)

**(20 marks)**

**End of Question Paper**