

Professional Level – Options Module

# Advanced Performance Management

Friday 10 December 2010

**Time allowed**

Reading and planning: 15 minutes

Writing: 3 hours

This paper is divided into two sections:

Section A – BOTH questions are compulsory and MUST be attempted

Section B – TWO questions ONLY to be attempted

**Present Value and Annuity Tables are on pages 10 and 11.**

**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

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Paper

**ACCA**

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The question paper begins on page 3.**

**Section A – BOTH questions are compulsory and MUST be attempted**

1 Film Productions Co (FP) is a small international company producing films for cinema release and also for sale on DVD or to television companies. FP deals with all areas of the production from casting, directing and managing the artists to negotiating distribution deals with cinema chains and TV channels. The industry is driven by the tastes of its films' audience, which when accurately predicted can lead to high levels of profitability on a successful film.

The company's stated mission is to 'produce fantastic films that have mass appeal'. The company makes around \$200 million of sales each year equally split between a share of cinema takings, DVD sales and TV rights. FP has released 32 films in the past five years. Each film costs an average of \$18 million and takes 12 months to produce from initial commissioning through to the final version. Production control is important in order to hit certain key holiday periods for releasing films at the cinema or on DVD.

The company's films have been moderately successful in winning industry awards although FP has never won any major award. Its aims have been primarily commercial with artistic considerations secondary.

The company uses a top-down approach to strategy development with objectives leading to critical success factors (CSFs) which must then be measured using performance indicators. Currently, the company has identified a number of critical success factors. The two most important of these are viewed as:

- (i) improve audience satisfaction
- (ii) strengthen profitability in operations

At the request of the board, the chief executive officer (CEO) has been reviewing this system in particular the role of CSFs. Generally, the CEO is worried that the ones chosen so far fail to capture all the factors affecting the business and wants to understand all possible sources for CSFs and what it means to categorise them into monitoring and building factors.

These CSFs will need to be measured and there must be systems in place to perform that role. The existing information system of the company is based on a fairly basic accounting package. However, the CEO has been considering greater investment in these systems and making more use of the company's website in both driving forward the business' links to its audience and in collecting data on them.

The CEO is planning a report to the board of Film Productions and has asked you to help by drafting certain sections of this report.

**Required:**

**You are required to draft the sections of the CEO's report answering the following questions:**

- (a) Explain the difference between the following two types of CSF: monitoring and building, using examples appropriate to FP. (4 marks)**
- (b) Identify information that FP could use to set its CSFs and explain how it could be used giving two examples that would be appropriate to FP. (6 marks)**
- (c) For each of the two critical success factors given in the question, identify two performance indicators (PIs) that could support measurement of their achievement and explain why each PI is relevant to the CSF. (10 marks)**
- (d) Discuss the implications of your chosen PIs for the design and use of the company's website, its management information system and its executive information system. (9 marks)**

Professional marks will be awarded in Question 1 for appropriateness of style and structure of the answer. (2 marks)

**(31 marks)**

**2** Robust Laptops Co (RL) make laptop computers for use in dangerous environments. The company's main customers are organisations like oil companies and the military that require a laptop that can survive rough handling in transport to a site and can be made to their unique requirements.

The company started as a basic laptop manufacturer but its competitors grew much larger and RL had to find a niche market where its small size would not hinder its ability to compete. It is now considered one of the best quality producers in this sector.

RL had the same finance director for many years who preferred to develop its systems organically. However, due to fall in profitability, a new chief executive officer (CEO) has been appointed who wishes to review RL's financial control systems in order to get better information with which to tackle the profit issue.

The CEO wants to begin by thinking about the pricing of the laptops to ensure that selling expensive products at the wrong price is not compromising profit margins. The laptops are individually specified by customers for each order and pricing has been on a production cost plus basis with a mark-up of 45%. The company uses an absorption costing system based on labour hours in order to calculate the production cost per unit.

The main control system used within the company is the annual budget. It is set before the start of the financial year and variances are monitored and acted upon by line managers. The CEO has been reading about major companies that have stopped using budgets and wants to know how such a radical move works and why a company might take such a step. He has been worried by moves by competitors into RL's market with impressive new products. This has created unrest among the staff at RL with two experienced managers leaving the company.

**Financial and other information for Robust Laptops**

**Robust Laptops**

**Data for the year ended 30 September 2010**

Volume (units)	23,800	<b>Total</b>
		<b>\$'000</b>
Direct variable costs		
	Material	40,650
	Labour	3,879
	Packaging and transport	2,118
	Subtotal	<u>46,647</u>
Overhead costs		
	Customer service	7,735
	Purchasing and receiving	2,451
	Inventory management	1,467
	Administration of production	2,537
	Subtotal	<u>14,190</u>
	Total	<u>60,837</u>
Labour time per unit	3 hours	
Data collected for the year:		
No of minutes on calls to customer	899,600	
No of purchase orders raised	21,400	
No of components used in production	618,800	

**Order 11784**

Units ordered	16	
Direct costs for this order:		\$
Material		27,328
Labour		2,608
Packaging and transport		1,424
Other activities relating to this order:		
No of minutes on calls to customer	1,104	
No of purchase orders raised	64	
No of components used in production	512	
Administration of production (absorbed as general overhead) 3 Labour hrs per unit		

**Required:****Write a report to the CEO to include:**

**(a) An evaluation of the current method of costing against an Activity Based Costing (ABC) system. You should provide illustrative calculations using the information provided on costs for 2010 and Order 11784. Briefly state what action management might take in the light of your results with respect to this order.**

(15 marks)

**(b) An explanation of the operation of a beyond budgeting approach and an evaluation of the potential of such a change at RL.**

(10 marks)

Professional marks will be awarded in Question 2 for appropriateness of format, style and structure of the report.

(4 marks)

**(29 marks)**

**Section B – TWO questions ONLY to be attempted**

**3** LOL Co is a chain of shops selling cards and gifts throughout its country. It has been listed on the stock exchange for 10 years and enjoys a fairly high profile in the retail sector of the national economy. You have been asked by the chief executive officer (CEO) to advise the company on value-based management (VBM), as a different approach to performance management. The CEO has read about this method as a way of focusing on shareholder interests and in the current tough economic climate, she thinks that it may be a useful development for LOL.

The company has traditionally used earnings per share (EPS) growth and share price in order to assess performance. The changes being proposed are considered significant and the CEO wants to be briefed on the implications of the new analysis and also how to convince both the board and the major investors of the benefits.

**Financial data for LOL**

	<b>2009</b>	<b>2010</b>
	<b>\$m</b>	<b>\$m</b>
Profit before interest and tax	50.7	43.5
Interest paid	4.0	7.8
Profit after interest and tax	35.0	26.8
Average number of shares in issue (millions)	160	160
Capital employed at the end of the year was	<b>(in \$m)</b>	
2008	99.2	
2009	104.1	
2010	97.8	

LOL aims for a capital structure of 50:50 debt to equity.

Costs of capital were

	<b>2009</b>	<b>2010</b>
Equity	12.70%	15.30%
Debt (post-tax cost)	4.20%	3.90%

Corporation tax is at the rate of 25%.

Stock market information

	<b>2009</b>	<b>2010</b>
Stock market all-share index	2,225.4	1,448.9
Retailing sector index	1,225.6	907.1
LOL (average share price) (\$)	12.20	10.70

**Required:**

- (a) Explain to the CEO what value-based management involves and how it can be used to focus the company on shareholder interests.** (4 marks)
- (b) Perform an assessment of the financial performance of LOL using Economic Value Added (EVA™) and evaluate your results compared with those of earnings per share (EPS) growth and share price performance. You should state any assumptions made.** (12 marks)
- (c) Evaluate VBM measures against traditional profit based measures of performance.** (4 marks)

**(20 marks)**

4 FGH Telecom (FGH) is one of the largest providers of mobile and fixed line telecommunications in Ostland. The company has recently been reviewing its corporate objectives in the light of its changed business environment. The major new addition to the strategic objectives is under the heading: 'Building a more environmentally friendly business for the future'. It has been recognised that the company needs to make a contribution to ensuring sustainable development in Ostland and reducing its environmental footprint. Consequently, it adopted a goal that, by 2017, it would have reduced its environmental impact by 60% (compared to year 2001).

The reasons for the board's concern are that the telecommunications sector is competitive and the economic environment is increasingly harsh with the markets for debt and equities being particularly poor. On environmental issues, the government and public are calling for change from the business community. It appears that increased regulation and legislation will appear to encourage business towards better performance. The board have recognised that there are threats and opportunities from these trends. It wants to ensure that it is monitoring these factors and so it has asked for an analysis of the business environment with suggestions for performance measurement.

Additionally, the company has a large number of employees working across its network. Therefore, there are large demands for business travel. FGH runs a large fleet of commercial vehicles in order to service its network along with a company car scheme for its managers. The manager in charge of the company's travel budget is reviewing data on carbon dioxide emissions to assess FGH's recent performance.

Recent initiatives within the company to reduce emissions have included

- (a) the introduction in 2010 of a homeworking scheme for employees in order to reduce the amount of commuting to and from their offices and
- (b) a drive to increase the use of teleconferencing facilities by employees.

**Data on FGH Telecom:**

**Carbon Dioxide emissions**

Measured in millions of kgs	2001 Base year	2009	2010
Commercial Fleet Diesel	105.4	77.7	70.1
Commercial Fleet Petrol	11.6	0.4	0.0
Company Car Diesel	15.1	14.5	12.0
Company Car Petrol	10.3	3.8	2.2
Other road travel (Diesel)	0.5	1.6	1.1
Other road travel (Petrol)	3.1	0.5	0.3
Rail travel	9.2	9.6	3.4
Air Travel (short haul)	5.0	4.4	3.1
Air Travel (long haul)	5.1	7.1	5.4
Hire Cars (Diesel)	0.6	1.8	2.9
Hire Cars (Petrol)	6.7	6.1	6.1
Total	<u>172.6</u>	<u>127.5</u>	<u>106.6</u>

**Required:**

- (a) **Perform an analysis of FGH's business environment to identify factors which will affect its environmental strategy. For each of these factors, suggest performance indicators which will allow FGH to monitor its progress.** (8 marks)
- (b) **Evaluate the data given on carbon dioxide emissions using suitable indicators. Identify trends from within the data and comment on whether the company's behaviour is consistent with meeting its targets.** (9 marks)
- (c) **Suggest further data that the company could collect in order to improve its analysis and explain how this data could be used to measure the effectiveness of the reduction initiatives mentioned.** (3 marks)

**(20 marks)**

5 RM Batteries Co (RMB) is a manufacturer of battery packs. It has expanded rapidly in the last few years under the leadership of its autocratic chairman and chief executive officer, John Smith. Smith is relentlessly optimistic. He likes to get his own way and demands absolute loyalty from all his colleagues.

The company has developed a major new product over the last three years which has necessitated a large investment in new equipment. Smith has stated that this more efficient battery is critical to the future of the business as the company operates in a sector where customers expect constant innovation from their suppliers.

However, the recent share price performance has caused concern at board level and there has been comment in the financial press about the increased gearing and the strain that this expansion is putting on the company. The average share price has been \$1.56 (2008), \$1.67 (2009) and \$1.34 (2010). There are 450 million shares in issue.

A relevant Z-score model for the industry sector is:

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + X_5$$

Where

X1 is working capital/total assets (WC/TA);

X2 is retained earnings reserve/total assets (RE/TA);

X3 is Profit before interest and tax/total assets (PBIT/TA);

X4 is market value of equity/total long-term debt (Mve/total long-term debt); and

X5 is Revenue/total assets (Revenue/TA).

A score of more than 3 is considered safe and at below 1.8, the company is at risk of failure in the next two years.

The company's recent financial performance is summarised below:

#### Summary Income Statements

	2008	2009	2010
	\$m	\$m	\$m
Revenue	1,460	1,560	1,915
Operating Costs	1,153	1,279	1,724
Operating profit	307	281	191
Interest	35	74	95
Profit before tax	272	207	96
Tax	87	66	31
Profit for the period	185	141	65

#### Statements of Financial Position

	2008	2009	2010
	\$m	\$m	\$m
Assets			
Non-current assets	1,120	1,778	2,115
Current Assets	235	285	341
Total Assets	1,355	2,063	2,456
Equity and Liabilities			
Share capital	230	230	230
Retained earnings reserve	204	344	410
Long-term borrowings	465	991	1,261
Current liabilities	456	498	555
Total equity and liabilities	1,355	2,063	2,456



A junior analyst in the company has correctly prepared a spreadsheet calculating the Z-score as follows:

	2008	2009	2010
Share price (\$)	1.56	1.67	1.34
No of shares (millions)	450	450	450
Market value of Equity (\$M)	702	752	603
x1 WC/TA	-0.163	-0.103	-0.087
x2 RE/TA	0.151	0.167	0.167
x3 PBIT/TA	0.227	0.136	0.078
x4 Mve/Total long-term debt	1.510	0.758	0.478
x5 Revenue/TA	1.077	0.756	0.780
Z	2.746	1.770	1.452
Gearing [debt/equity]	107%	173%	197%

**Required:**

- (a) **Discuss the strengths and weaknesses of quantitative and qualitative models for predicting corporate failure.** (6 marks)
- (b) **Comment on the results in the junior analyst's spreadsheet.** (5 marks)
- (c) **Identify the qualitative problems that are apparent in the company's structure and performance and explain why these are relevant to possible failure.** (5 marks)
- (d) **Critically assess the results of your analysis in parts (b) and (c) alongside details of RMB's recent financial performance and suggest additional data that should be acquired and how it could be used to assess RMB's financial health.** (4 marks)

**(20 marks)**

### Present Value Table

Present value of 1 i.e.  $(1 + r)^{-n}$

Where  $r$  = discount rate  
 $n$  = number of periods until payment

		<i>Discount rate (r)</i>										
<i>Periods</i>		1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
(n)		1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1		0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2		0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	2
3		0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	3
4		0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	4
5		0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	5
6		0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	6
7		0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	7
8		0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	8
9		0.941	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	9
10		0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	10
11		0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.305	11
12		0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	12
13		0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	13
14		0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	14
15		0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	15
(n)		11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1		0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2		0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694	2
3		0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579	3
4		0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482	4
5		0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402	5
6		0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335	6
7		0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279	7
8		0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233	8
9		0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194	9
10		0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162	10
11		0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135	11
12		0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112	12
13		0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093	13
14		0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078	14
15		0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065	15

### Annuity Table

Present value of an annuity of 1 i.e.  $\frac{1 - (1 + r)^{-n}}{r}$

Where  $r$  = discount rate  
 $n$  = number of periods

		<i>Discount rate (r)</i>									
<i>Periods</i>											
<b>(n)</b>	<b>1%</b>	<b>2%</b>	<b>3%</b>	<b>4%</b>	<b>5%</b>	<b>6%</b>	<b>7%</b>	<b>8%</b>	<b>9%</b>	<b>10%</b>	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	2
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	3
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	4
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	5
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	6
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	7
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	8
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	9
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	10
11	10.37	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	11
12	11.26	10.58	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	12
13	12.13	11.35	10.63	9.986	9.394	8.853	8.358	7.904	7.487	7.103	13
14	13.00	12.11	11.30	10.56	9.899	9.295	8.745	8.244	7.786	7.367	14
15	13.87	12.85	11.94	11.12	10.38	9.712	9.108	8.559	8.061	7.606	15
<b>(n)</b>	<b>11%</b>	<b>12%</b>	<b>13%</b>	<b>14%</b>	<b>15%</b>	<b>16%</b>	<b>17%</b>	<b>18%</b>	<b>19%</b>	<b>20%</b>	
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528	2
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106	3
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589	4
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991	5
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326	6
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605	7
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837	8
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031	9
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192	10
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327	11
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439	12
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533	13
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611	14
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675	15

**End of Question Paper**