

Fundamentals Level – Skills Module

# Financial Management

March/June 2016 – Sample Questions



**Time allowed**

Reading and planning: 15 minutes

Writing: 3 hours

This question paper is divided into two sections:

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

Section B – ALL FIVE questions are compulsory and MUST be attempted

**Formulae Sheet, Present Value and Annuity Tables are on pages 6, 7 and 8.**

**Do NOT open this question 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.**

**Do NOT record any of your answers on the question paper.**

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

# 9 F P a p e r

Think Ahead

**ACCA**

The Association of  
Chartered Certified  
Accountants

**Section B – ALL FIVE questions are compulsory and MUST be attempted**

Please write your answers to all parts of these questions on the lined pages within the Candidate Answer Booklet.

**1** Crago Co is concerned that it may be overtrading. Financial information relating to the company is as follows.

	20X5		20X4	
	\$000	\$000	\$000	\$000
Credit sales income		17,100		12,000
Cost of sales		8,550		7,500
Current assets				
Inventory	2,500		2,100	
Trade receivables	2,000		1,000	
		<u>4,500</u>		<u>3,100</u>
Current liabilities				
Trade payables	1,900		1,250	
Overdraft	2,400		850	
		<u>4,300</u>		<u>2,100</u>
Net working capital		<u>200</u>		<u>1,000</u>
Long-term debt		3,000		3,000

Companies which are similar to Crago Co have the following average values for 20X5:

Inventory days	65 days
Trade receivables days	30 days
Trade payables days	50 days
Current ratio	1.7 times
Quick ratio	0.8 times

Assume there are 360 days in each year.

**Required:**

**Evaluate whether Crago can be considered to be overtrading and discuss how overtrading can be overcome.**

Note: Up to 4 marks are available for calculations.

**(10 marks)**

- 2 The directors of Plam Co expect that interest rates will fall over the next year and they are looking forward to paying less interest on the company's debt finance. The dollar is the domestic currency of Plam Co. The company has a number of different kinds of debt finance, as follows:

	Loan notes	Loan notes	Bank loan	Overdraft
Denomination	Dollar	Peso	Dollar	Dollar
Nominal value	\$20m	300m pesos	\$4m	\$3m
Interest rate	7% per year	10% per year	8% per year	10% per year
Interest type	Fixed rate	Fixed rate	Variable rate	Variable rate
Interest due	6 months' time	6 months' time	6 months' time	monthly
Redemption	8 years' time at nominal value	8 years' time at nominal value	Instalments over 8 years	Continuing at current level

The 7% loan notes were issued domestically while the 10% loan notes were issued in a foreign country.

The interest rate on the long-term bank loan is reset to bank base rate plus a fixed percentage at the end of each year. The annual payment on the bank loan consists of interest on the year-end balance plus a capital repayment.

Relevant exchange rates are as follows:

	Offer	Bid
Spot rate (pesos/\$)	58.335	58.345
Six-month forward rate (pesos/\$)	56.585	56.597

Plam Co can place pesos on deposit at 3% per year and borrow dollars at 10% per year. The company has no cash available for hedging purposes.

**Required:**

- (a) Evaluate the risk faced by Plam Co on its peso-denominated interest payment in six months' time and advise how this risk might be hedged. (5 marks)
- (b) Identify and discuss the different kinds of interest rate risk faced by Plam Co. (5 marks)

**(10 marks)**

- 3 Darlga Co is partly financed by 7% loan notes which are redeemable at their nominal value of \$1,000 per loan note in eight years' time. Alternatively, the loan notes are convertible after seven years into 110 ordinary shares of Darlga Co per loan note. The ordinary shares of Darlga Co are currently trading at \$6.50 per share on an ex dividend basis. The current cost of debt of the convertible loan notes is 8%.

**Required:**

- (a) Justifying any assumptions which you make, calculate the current market value of the loan notes of Darlga Co, using future share price increases of:
- (i) 4% per year;
- (ii) 6% per year. (6 marks)

- (b) Discuss the limitations of the dividend growth model as a way of valuing the ordinary shares of a company. (4 marks)

**(10 marks)**

4 Dinla Co has the following capital structure.

	\$000	\$000
Equity and reserves		
Ordinary shares	23,000	
Reserves	<u>247,000</u>	270,000
Non-current liabilities		
5% Preference shares	5,000	
6% Loan notes	11,000	
Bank loan	<u>3,000</u>	
		<u>19,000</u>
		<u>289,000</u>

The ordinary shares of Dinla Co are currently trading at \$4.26 per share on an ex dividend basis and have a nominal value of \$0.25 per share. Ordinary dividends are expected to grow in the future by 4% per year and a dividend of \$0.25 per share has just been paid.

The 5% preference shares have an ex dividend market value of \$0.56 per share and a nominal value of \$1.00 per share. These shares are irredeemable.

The 6% loan notes of Dinla Co are currently trading at \$95.45 per loan note on an ex interest basis and will be redeemed at their nominal value of \$100 per loan note in five years' time.

The bank loan has a fixed interest rate of 7% per year.

Dinla Co pays corporation tax at a rate of 25%.

**Required:**

(a) Calculate the after-tax weighted average cost of capital of Dinla Co on a market value basis. (8 marks)

(b) Discuss the connection between the relative costs of sources of finance and the creditor hierarchy. (3 marks)

(c) Explain the differences between Islamic finance and other conventional finance. (4 marks)

**(15 marks)**

- 5 Degniss Co is a company which installs kitchens and bathrooms to customer specifications. It is planning to invest \$4,000,000 in a new facility to convert vans and trucks into motorhomes. Each motorhome will be designed and built according to customer requirements. Degniss Co expects motorhome production and sales in the first four years of operation to be as follows.

Year	1	2	3	4
Motorhomes produced and sold	250	300	450	450

The selling price for a motorhome depends on the van or truck which is converted, the quality of the units installed and the extent of conversion work required. Degniss Co has undertaken research into likely sales and costs of different kinds of motorhomes which could be selected by customers, as follows:

Motorhome type	Basic	Standard	Deluxe
Probability of selection	20%	45%	35%
Selling price (\$/unit)	30,000	42,000	72,000
Conversion cost (\$/unit)	23,000	29,000	40,000

Fixed costs of the production facility are expected to depend on the volume of motorhome production as follows:

Production volume (units/year)	200–299	300–399	400–499
Fixed costs (\$000/year)	4,000	5,000	5,500

Degniss Co pays corporation tax of 28% per year, with the tax liability being settled in the year in which it arises. The company can claim tax allowable depreciation on the cost of the investment on a straight-line basis over ten years. Degniss Co evaluates investment projects using an after-tax discount rate of 11%.

**Required:**

- (a) Calculate the expected net present value of the planned investment for the first four years of operation. (7 marks)
- (b) After the fourth year of operation, Degniss Co expects to continue to produce and sell 450 motorhomes per year for the foreseeable future.

**Required:**

Calculate the effect on the expected net present value of the planned investment of continuing to produce and sell motorhomes beyond the first four years and comment on the financial acceptability of the planned investment. (3 marks)

- (c) Critically discuss the use of probability analysis in incorporating risk into investment appraisal. (5 marks)

**(15 marks)**

## Formulae Sheet

### Economic order quantity

$$= \sqrt{\frac{2C_0D}{C_h}}$$

### Miller–Orr Model

$$\text{Return point} = \text{Lower limit} + \left(\frac{1}{3} \times \text{spread}\right)$$

$$\text{Spread} = 3 \left[ \frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}} \right]^{\frac{1}{3}}$$

### The Capital Asset Pricing Model

$$E(r_i) = R_f + \beta_i (E(r_m) - R_f)$$

### The asset beta formula

$$\beta_a = \left[ \frac{V_e}{(V_e + V_d(1 - T))} \beta_e \right] + \left[ \frac{V_d(1 - T)}{(V_e + V_d(1 - T))} \beta_d \right]$$

### The Growth Model

$$P_0 = \frac{D_0(1 + g)}{(r_e - g)}$$

### Gordon's growth approximation

$$g = br_e$$

### The weighted average cost of capital

$$\text{WACC} = \left[ \frac{V_e}{V_e + V_d} \right] k_e + \left[ \frac{V_d}{V_e + V_d} \right] k_d (1 - T)$$

### The Fisher formula

$$(1 + i) = (1 + r)(1 + h)$$

### Purchasing power parity and interest rate parity

$$S_1 = S_0 \times \frac{(1 + h_c)}{(1 + h_b)} \quad F_0 = S_0 \times \frac{(1 + i_c)}{(1 + i_b)}$$

### 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>											
(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	0.914	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	0.350	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	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	11
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	12
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103	13
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	14
15	13.865	12.849	11.938	11.118	10.380	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**