



QQI
BA (Hons) Accounting and Finance
Level 3

SUMMER 2016 EXAMINATIONS

Module Code: **B8AF106 / B8AC020**

Module Description: **Finance II/ Advanced Financial Management**

Examiner: **Mr. John Munnelly**

Internal Moderator: **Mr. Derek Reynolds**

External Examiner: **Dr Ciaran Mac an Bhaird**

Date: 9th May 2016
Time: 1530 - 1830

INSTRUCTIONS TO CANDIDATES

Time allowed is THREE hours
Answer FOUR out of SIX questions
Please show all workings clearly
All questions carry equal marks
Formulae and Mathematical Tables attached

Question 1

The Jolly Roger Trading Company, a U.S. based export company expects to receive a payment of €612,500 in 9 months' time.

It also must pay a separate supplier €300,000 in 9 months' time.

It is now 31st March 2015.

A new Finance director has contacted the bank and the following rates are available to her.

The current spot rate is US\$1.15/Euro.

December Futures are quoted at US\$1.25/Euro.

The Jolly Roger Trading Company has successfully used futures in the past to hedge against currency risk and the normal contract size is €62,500

In December 2015 the spot rate has moved to US\$1.30/Euro and the December Futures rate has also moved to US\$1.30/Euro.

The Finance Director has asked for your help.

Required:

(a) Show the outcome of the futures hedge and comment on it.
(15 Marks)

(b) What is Interest Rate Risk and what approach should be adopted in identifying it.
(10 Marks)

(Total 25 Marks)

Question 2

ABC Ltd is looking to acquire a similar sized competitor XYZ Ltd
 You have been supplied with the following financial Information for XYZ Ltd.

Extract from Income statement for current year	€
Profits	250,000
Statement of Financial Position	
Non-Current Assets	2,000,000
Current assets	1,400,000
Total Assets	<u>3,400,000</u>
Represented by	
Ordinary shares	800,000
Reserves	1,250,000
Long term bond 4%	1,000,000
Current Liabilities	350,000
	<u>3,400,000</u>
The following information has come to light	
The Fixed assets which are machinery have a replacement value of	€ 2,300,000
Inventory which makes up Current assets is	1,000,000
This Inventory can only be realised for a value of	250,000
The current share price of XYZ is	5.00(Cum Div)
XYZ currently has a P/E ratio of	20

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Question 2 continued

XYZ is going to pay a dividend per share of	0.80
Share price 1 year ago	0.77
Share price 2 years ago	0.75
Share price 3 years ago	0.70
4 years ago it paid a dividend per share of	0.68
 The Beta Factor of XYZ is	 0.80
 Risk free rate is R_f	 5%
 Average return on the market R_m	 16%

Required:

(a) Advise ABC on a value that they should offer XYZ for the Purchase of XYZ Ltd using:

- i. Asset Valuation method.
- ii. Market Capitalisation.
- iii. P/E method.
- iv. Dividend Valuation model.

(13 Marks)

(b) Advise how XYZ might launch a defence against such a takeover bid.

(6 Marks)

(c) Advise ABC how they might finance a successful bid.

(6 Marks)**(Total 25 Marks)**

Question 3

Company A has deliberately paid no dividends for the last five years

Company B always pays a dividend of 50% of earnings after taxation

Company C maintains a low but constant dividend per share and offers regular scrip issues.

Each managing director is convinced that their company's policy is maximizing shareholders wealth.

Requirement

- a) Briefly discuss the factors what might influence a company's choice of dividend policy.

(5 marks)

- b) Critically evaluate each of the policies outlined above and explain the circumstances under which each managing director might be correct in her belief that her company's dividend policy is maximizing shareholders wealth.

State clearly any assumptions made.

(12 marks)

- c) Critically analyze Modigliani and Miller's theory of dividend policy.

(8 marks)

(Total 25 Marks)

Question 4

The Useful Gadget Co is about to invest in new machinery costing €850,000.

The company intends to make Gadget X, a new accessory for its popular Gadget phone. Details of sales quantities, prices, costs and inflation are below.

The expected sales quantities are as follows:

Year 1	Year 2	Year 3	Year 4
40,000	65% more than year 1	90,000	80,000

Other Information as follows:

Exp. Selling Price Per Unit	€12
Sales inflation each year	3%
Product cost per unit	€8.25
Product Inflation each year	4%
Fixed Costs each year	€52,000
General Inflation	5%

The investment in machinery €850,000, qualifies for tax allowances and can be written down at 25% per year reducing balance basis.

Working Capital is required for this project. It is determined that 10% of the next year's sales Value is required and must be in place in the year before the sales take place.

Working capital is released at the end of the project.

The Machinery involved in the project can be sold for scrap at the end of the project for €175,000.

Question 4 continued next page

Question 4 continued

The Corporation Tax rate is 30%

The company's real rate of return is currently 1.9%

Required:

(a) Assess – on an NPV basis - whether this project should be undertaken.

(14 Marks)

(b) Calculate the I.R.R. of this project.

(5 Marks)

(c) The Managing director wishes for you to calculate the present value of an annuity beginning in 4 years' time.

The Annuity will run for 6 years and the payment will be €5,000 per annum. The interest rate is 8%

(6 Marks)

(Total 25 Marks)

Question 5

Echofield is a listed company specialising in near field communication.

The company has an equity/debt ratio of 40% Equity and 60% debt.

Echofield has a beta factor of 0.35

Echofield also has a pre-tax K_d of 4%

The average return on the market is 6% and the Risk free rate is 2%

The Corporation tax rate is 30%

The company is considering a project in a different industry as a means of expansion. Not having done a project similar to this previously means the board are anxious to correctly identify the risks involved in assessing the project.

They have found a company similar to Echofield who are competing in that industry.

Data for the similar company - Space Junketeers - is as follows.

Equity Beta for Space Junketeers is 1.6

Equity/Debt Ratio = 20% Equity and 80% Debt.

Echofield intends to maintain its existing capital structure after this project.

Required:

(a) What would be a suitable Cost of Capital to apply to this project?
(20 Marks)

(b) What advice would you offer Echofield regarding other potential risks involved the project they are appraising.

(5 Marks)

(Total 25 Marks)

Question 6

A Start-up company has just appointed you as the Finance director. One of your first duties is to advise the C.E.O. on a suitable growth strategy for the business.

Required:

Write a note to your C.E.O. advising him on possible growth methods.

Your discussion should centre on growing organically or growth through acquisition.

(Total 25 Marks)

FORMULAE**PRESENT VALUE OF A SHARE (Dividend Valuation Model)**

$$P_0 = \frac{\text{Div}_0(1+g)}{(K_e - g)}$$

COST OF EQUITY CAPITAL

$$K_e = \frac{[\text{Div}_0(1+g)]}{P_0} + g$$

CAPITAL ASSET PRICING MODEL

$$K_e = r_f + \beta [E(r_m) - r_f]$$

WEIGHTED AVERAGE COST OF CAPITAL AFTER TAX (WACC)

$$\text{WACC} = K_e \times \frac{E}{E + D} + K_d \times (1-T) \times \frac{D}{E + D}$$

ASSET BETA

$$\beta_{\text{asset}} = \beta_{\text{equity}} \times \frac{E}{E + D(1-T)}$$

EQUITY BETA

$$\beta_{\text{equity}} = \beta_{\text{asset}} \times \frac{E + D(1-T)}{E}$$

NOMINAL AND REAL RETURNS

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

INTERNAL RATE OF RETURN

$$\text{IRR} = L + \{(NL/(NL - NH)) \times (H-L)\}$$

GROWTH ESTIMATION FORMULA

$$g = \sqrt[n]{\left(\frac{D_0}{\text{Dividend } n \text{ yrs ago}}\right)} - 1 = \left(\frac{D_0}{\text{Dividend } n \text{ yrs ago}}\right)^{1/n} - 1$$

PURCHASING POWER PARITY AND INTEREST RATE PARITY

$$S_1 = S_0 \times (1+h_c)/(1+h_b)$$

$$F_0 = S_0 \times (1+i_c)/(1+i_b)$$

GORDONS GROWTH APPROXIMATION

$$b = r_e$$

PRESENT VALUE TABLE

Periods										
(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
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239
(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
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.206	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.933
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065

ANNUITY TABLE

Periods										
(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
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.893	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.37	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.26	10.58	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.13	11.35	10.63	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.00	12.11	11.30	10.56	9.899	9.295	8.745	8.244	7.786	7.367
15	13.87	12.85	11.94	11.12	10.38	9.712	9.108	8.559	8.061	7.606
(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
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.496	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.586	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675