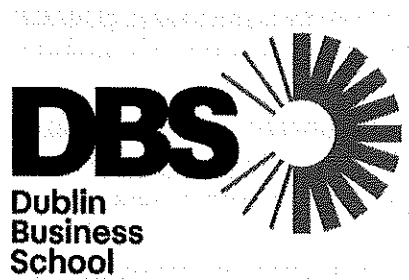


B7AF100



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BA (HONS) ACCOUNTING & FINANCE
BA (HONS) FINANCIAL SERVICES

SUMMER 2024 EXAMINATIONS

Module Code: **B7AF100**

Module Description: **Financial Management**

Examiner: **Paul Walsh**

Internal Moderator: **Aida Salina Jailani**

External Examiner: **Shane Moran**

INSTRUCTIONS TO CANDIDATES

Time allowed is 3 hours
Answer any 5 questions
All questions carry equal marks
Calculators are allowed

Question 1

Bounce plc manufactures rubber safety surfacing for playgrounds in Ireland. They currently purchase rubber balls from an outside supplier for €3.50 per tonne. This price is contractually guaranteed for the next four years, however, if Bounce plc terminates the contract within the next two years, they will be charged an immediate termination penalty of €100,000. The termination penalty will not be allowed as a tax-deductible expense.

Bounce plc directors are considering an investment of €400,000 for a machine that would allow them to manufacture these rubber balls in-house by using recycled tyres. It is estimated that at the end of the four-year project, this machine will have a second-hand value of €60,000.

The annual demand for the rubber balls (based on the sales forecasts of the company) is:

Year	Year 1	Year 2	Year 3	Year 4
Demand (tonnes)	105,000	109,000	136,000	159,000

The following additional information has been provided for your consideration:

- Variable costs (per tonne produced) €0.82 (current terms)
- Maintenance costs €43,000 (current terms)
- Fixed costs (per annum) €72,000 (current terms)

Inflation increases are expected per annum for the next four years are as follows:

- Variable costs: 3% per annum
- Maintenance costs: 5% per annum
- Fixed costs: 2% per annum

A corporation tax of 30% per year will be payable one year in arrears.

Tax-allowable depreciation of 25%, a year, can be claimed on the cost of the equipment per annum on a straight-line basis (less the resale value).

Bounce plc uses 13% post-tax cost of capital to appraise investment decisions.

Requirement:

- a) Calculate the Net Present Value (NPV) and advise Bounce plc if they should proceed with the investment in the machine.

(16 marks)

- b) Calculate the Internal Rate of Return (IRR) for this project.

(4 marks)

(Total 20 marks)

Question 2

Part A

- a) In the context of the stock market and equity investments explain the following terms:
- i. Systematic risk
(2 marks)
 - ii. Unsystematic risk.
(2 marks)
- b) Briefly explain how an investor might use Portfolio theory to eliminate unsystematic risk.
(1 mark)

Part B

Portfolio theory considers three elements of the cost of capital as:

1. Risk free rate of return.
2. Premium for business risk.
3. Premium for financial risk.

Requirement:

Explain, and give examples how each of the three elements above contributes to the cost of capital for the organisation.

(9 marks)

Part C

Total plc and Fina plc are two companies that operate in the same market. The average market return being paid on risky investments is 11%, compared with 4% on Government Bonds.

Total plc has a beta of 1.1, whereas Fina plc has a beta of 0.64.

Requirement:

Using the **Capital Asset Pricing Model (CAPM)** calculate the cost of equity for both companies and briefly explain any differences.

(6 marks)

(Total 20 marks)

Question 3

Comfy Leggings plc runs a chain of sporting clothing stores throughout the EU and Asia. The following information is available from Comfy Leggings plc's balance sheet as of 30th April 2024. Corporation tax rates of 25% apply to Comfy Leggings plc.

Statement of Financial Position (Extract)**Equity & Liabilities**

Ordinary Share Capital (€1.15)	€ 4,600,000
Share Premium	€ 492,000
Retained Earnings	€ 848,000

Non-Current Liabilities

6% Bonds	€ 2,950,000
7.5% Preference Shares	€ 2,850,000

Additional information

- Comfy Leggings plc has €1.15 ordinary shares which are currently being traded at €8.35 and shareholders expect an 11% return.
- Comfy Leggings plc uses market value for **both** debt and equity.
- The 6% bond (€100 par) is redeemable in 1 year and is currently trading at a premium of 12%.
- Preference shares originally had a €1.50 nominal share and are currently trading at €1.81.

Requirement:

- a) Calculate the Weighted Average Cost of Capital (WACC) for Comfy Leggings plc.
(14 marks)
- b) If Comfy Leggings plc wishes to raise new term-long finance, recommend specific options available, giving reasons for your answer.
(4 marks)
- c) Give **TWO** reasons when it is **NOT** appropriate for an organisation to use WACC as the discount factor for investment appraisal.
(2 marks)

(Total 20 marks)

Question 4

Bark Ltd has total sales for 2023 of €1,200,000 and at the moment is offering customers credit terms in line with industry average of 30 days. You have just been appointed Accounts Receivable Manager and are considering the option of offering customers a 2% discount for early payment.

Early payment has been set at 15 days. It is estimated that 50% of customers will take the discount. Your current source of short-term finance costs 12% per annum.

Total future sales will remain at €1,200,000 as you do not believe that this will act as an incentive for more sales with cash sales remaining at 20% of total sales.

Requirement:

- a) Advise the finance manager if Bark Ltd should proceed with offering the discount providing calculations to support your recommendations.

(12 marks)

- b) Explain the two main objectives of working capital management, and give examples explaining how there is conflict between the two.

(4 marks)

- c) Explain **Factoring** as a source of short-term finance and briefly identify **TWO** implications of using this as a Working Capital Management strategy.

(4 marks)

(Total 20 marks)

Question 5**Part A**

A stock exchange listing comes with many advantages however there are also some disadvantages.

Requirement:

- a) Explain any **FOUR** advantages to any company of becoming listed on a recognised stock exchange.

(4 marks)

- b) Give **THREE** alternative sources of long-term financing that an organisation might consider ahead of a stock exchange listing, giving **ONE** reason for each method you have chosen as to why an organisation would select this method of finance.

(6 marks)

Part B

Selamat plc is looking to raise finance for an investment opportunity. They are considering a rights issue of 3 new shares for every 11 shares currently in issue. Selamat plc shares are currently trading at €32.20.

They are considering an issue price of 15% discount to current market price per share. Below is an extract from Selamat plc most recent financial statements.

Equity & Liabilities

	€
Ordinary Share Capital (€1.20)	1,800,000
Share Premium	775,000

Requirement:

- a) Calculate
- Theoretical Ex-Rights Price (TERP).

(2 marks)

ii. Value of the right.

(2 marks)

iii. Total number of shares in issue after the right.

(1 mark)

- b) Joanna holds 1,760 shares of Selamat plc and has just received notification from her broker informing her of the rights issue.

Unsure of how to proceed Mary has asked for your help to demonstrate the impact of the below options on the value of her holdings.

i. Take up the right.

(2 marks)

ii. Sell the right.

(2 marks)

iii. Do nothing.

(1 mark)

(Total 20 marks)

Question 6

Part A

Timid plc is considering an investment in a new machine at a cost of €500,000, for a project that is estimated to run for four years.

Additional information

- Sales of 25,000 units per annum have been accurately forecasted, with a selling price of €34.00.
- There is no inflation on the selling price over the four years.
- Variable estimated at €24.51 per unit, with no inflation.
- Fixed costs are expected to be €56,000 annually for four years with no inflation.
- Timid plc uses post-tax cost of capital of 12% to appraise all investments

Requirement:

Calculate the below sensitivities, if the NPV has been correctly calculated at €50,638

- | | |
|-------------------------------|-----------|
| a) Initial investment. | (2 marks) |
| b) Fixed Cost sensitivity. | (2 marks) |
| c) Selling price per unit. | (3 marks) |
| d) Variable cost sensitivity. | (3 marks) |

Part B

You are the Finance Director at Advisors plc and have received emails asking you to assist with the below **SEPARATE** financial issues being considered by Advisors plc.

Issue 1

Advisors plc provided you with the following information:

An item of plant cost €270,000 new and has an annual maintenance cost of €20,000 per annum.

It can be traded after 3 years for €40,000.

It can be traded after 4 years for €24,000.

Advisors plc uses a cost of capital of 11%.

Requirement:

Advise Advisors plc using Equivalent Annual Cost on a three-year OR four-year replacement cycle for this item of plant?

(6 marks)

Issue 2

Advisors plc owns ordinary shares in EKN plc which are currently trading at €8.95 per share. These were bought on 4th January 2024 for €40,500. Advisors plc has just received a dividend payment of €1,575 from an original investment of €4.50 per share.

Requirement:

Calculate for Advisors plc;

a) Total euro return from investment in EKN plc.

(3 marks)

b) Total percentage return from investment in EKN plc.

(1 marks)

(Total 20 marks)

Question 7

Decisions Ltd. has decided to acquire a new machine and you have been presented with the following information:

Option 1

Purchase the machine at a cost of €300,000 and it will have a useful economic life of five years and zero scrap value.

Capital allowances are allowed at 20% per annum straight-line.

Decisions Ltd. intends to finance the new machine by using a five-year fixed loan at a post-tax cost of 8% pa, principal to be repaid in five years' time.

Option 2

A leasing company has proposed a five-year finance lease with payments of €85,000 per annum payable in advance.

For both options

The scrap value will be zero.

Taxation is payable on operating cash flows at 30% one year in arrears.

Decisions Ltd uses post tax cost of debt of 11% for the purposes of investment appraisal.

Requirement:

- a) Evaluate the two options being considered and advise Decisions plc on the best alternative.

(14 marks)

- b) Explain the terms ***hard capital rationing*** and ***soft capital rationing*** and explain **TWO** reasons for each type.

(6 marks)

(Total 20 marks)

END OF EXAMINATION

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

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

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Present Value Tables

Period s	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
	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	0.209	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	0.093
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

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Annuity Tables										
Periods	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	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606
	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	3.498	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	4.486	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