

UNIVERSITY OF BOLTON
BUSINESS & CREATIVE TECHNOLOGIES
ACCOUNTANCY PATHWAY BY DISTANCE
LEARNING
SEMESTER ONE EXAMINATION 2009/2010
HONG KONG – CED (INTAKES 33 & 35)
FINANCIAL MANAGEMENT
MODULE NO: ACC3015

Date: Saturday 19th December 2009

Time: 3 Hours - Morning

INSTRUCTIONS TO CANDIDATES:

There are **FOUR** questions.

Answer **ALL** questions

All questions carry equal marks.

Present value and Annuity tables are included at the back of this examination paper.

Candidates are advised that the examiners attach importance to legibility of writing and clarity of expression.

This examination carries 70% of the marks for this module.

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Question 1.

Bush & Co wishes to calculate its weighted average cost of capital and the following information relates to the company at the current time:

Number of ordinary shares	20 million
Book value of 7% convertible debt	\$29 million
Book value of 8% bank loan	\$2 million
Market price of ordinary shares	\$5.50 per share
Market value of convertible debt	\$107.11 per \$100 bond
Equity beta of Burse Co	1.2
Risk-free rate of return	4.7%
Average market return	11.2%
Rate of taxation	30%

Bush & Co expects share prices to rise in the future at an average rate of 6% per year. The convertible debt can be redeemed at par in eight years' time, or converted in six years' time into 15 shares of Bush & Co per \$100 bond.

Required:

- (a) Calculate the market value weighted average cost of capital of Bush & Co. State clearly any assumptions that you make. **(12 marks)**
- (b) Discuss the circumstances under which the weighted average cost of capital can be used in investment appraisal. **(6 marks)**
- (c) Discuss whether the dividend growth model or the capital asset pricing model offers the better estimate of the cost of equity of a company. **(7 marks)**

Total 25 marks

Question 2.

TAP Co is planning to buy CAX Co, a company in the same business sector, and is considering paying cash for the shares of the company. The cash would be raised by TAP Co through a 1 for 3 rights issue at a 20% discount to its current share price. The purchase price of the 1 million issued shares of CAX Co would be equal to the rights issue funds raised, less issue costs of \$320,000. Earnings per share of CAX Co at the time of acquisition would be 44.8c per share. As a result of acquiring CAX Co, TAP Co expects to gain annual after-tax savings of \$96,000. TAP Co maintains a payout ratio of 50% and earnings per share are currently 64c per share. Dividend growth of 5% per year is expected for the foreseeable future and the company has a cost of equity of 12% per year.

**Question 2 continued over...
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Question 2 cont'd...

Information from TAP Co statement of financial position:

Equity and liabilities	\$000
Shares (\$1 par value)	3,000
Reserves	4,300
	7,300
Non-current liabilities	
8% loan notes	5,000
Current liabilities	2,200
	14,500
Total equity and liabilities	14,500

Required:

(a) Calculate the current ex dividend share price of TAP Co and the current market capitalisation of TAP Co using the dividend growth model. **(4 marks)**

(b) Assuming the rights issue takes place and ignoring the proposed use of the funds raised, calculate:

- (i) the rights issue price per share;
- (ii) the cash raised;
- (iii) the theoretical ex rights price per share; and
- (iv) the market capitalisation of TAP Co. **(5 marks)**

(c) Using the price/earnings ratio of TAP Co, calculate the share price and market capitalisation of CAX Co before acquisition. **(3 marks)**

(d) Assuming a semi-strong form efficient capital market, calculate the post acquisition market capitalisation and share price of TAP Co once the after-tax savings have been made public. **(5 marks)**

(e) Discuss the factors that TAP Co should consider, in its circumstances, in choosing between equity finance and debt finance as a source of finance from which to make a cash offer for CAX Co. **(8 marks)**

Total 25 marks

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Question 3.

SCOT Co is evaluating the purchase of a new machine to produce product P, which has a short product life-cycle due to rapidly changing technology. The machine is expected to cost \$1 million. Production and sales of product P are forecast to be as follows:

Year	1	2	3	4
Production and sales (units/year)	35,000	53,000	75,000	36,000

The selling price of product P (in current price terms) will be \$20 per unit, while the variable cost of the product (in current price terms) will be \$12 per unit. Selling price inflation is expected to be 4% per year and variable cost inflation is expected to be 5% per year. No increase in existing fixed costs is expected since SCOT Co has spare capacity in both space and labour terms.

Producing and selling product P will call for increased investment in working capital. Analysis of historical levels of working capital within SCOT Co indicates that at the start of each year, investment in working capital for product P will need to be 7% of sales revenue for that year.

SCOT Co pays tax of 30% on taxable profits. Liability to tax is reduced by capital allowances on machinery (tax-allowable depreciation), which SCOT Co can claim on a straight-line basis over the four-year life of the proposed investment. The new machine is expected to have no scrap value at the end of the four-year period.

SCOT Co uses a nominal (money terms) after-tax cost of capital of 12% for investment appraisal purposes.

Required:

(a) Calculate the net present value of the proposed investment in product P. **(12 marks)**

(b) Calculate the internal rate of return of the proposed investment in product P. **(3 marks)**

(c) Advise on the acceptability of the proposed investment in product P and discuss the limitations of the evaluations you have carried out. **(5 marks)**

(d) Discuss how the net present value method of investment appraisal contributes towards the objective of maximising the wealth of shareholders. **(5 marks)**

Total 25 marks

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Question 4.

Fabric plc is an importer/exporter of textiles and textile machinery. It is based in the UK but trades with other countries throughout Europe. It has a small subsidiary based in Switzerland. The company is about to invoice a customer in Switzerland for 750,000 Swiss Francs (SF), receivable in 3 months' time. Fabric plc's treasurer is considering 2 methods of hedging the exchange risk. These are:

Method 1: A money market hedge

Method 2: A 3-month forward exchange contract with the company's bank to sell SF 750,000.

The spot rate of exchange is SF 2.3834 to £1. The 3-month forward rate of exchange is SF 2.3688 to £1. The annual interest for borrowing in Switzerland is 3% and for investing in the UK is 5%.

Required:

(a) Advise the treasurer on which of the 2 methods is the most financially advantageous for fabric plc. Include relevant calculations in your advice. **(9 marks)**

(b) Explain the causes of exchange rate fluctuations **(6 marks)**

© Evaluate other methods available to hedge exchange rate risk **(10 marks)**

Total 25 marks

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Present Value Table

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

Where r = discount rate

n = number of periods until payment

Periods (n)	Discount rate (r)									
	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	0.594	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 Table

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

Where r = discount rate
 n = number of periods

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	3.460	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	10.370	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.260	10.580	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.130	11.350	10.630	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.000	12.110	11.300	10.560	9.899	9.295	8.745	8.244	7.786	7.367
15	13.870	12.850	11.940	11.120	10.381	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	3.498	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

END OF QUESTIONS