



UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF MANAGEMENT AND FINANCE

Postgraduate & Mid-career Development Unit

Master of Business Administration (Weekday Program) Semester II- Second-half
Examination – July, 2017 (Repeat)

MBA 535 – Financial Management

Three (03) Hours

Instructions:

1. Answer all Questions.
 2. Calculators are permitted.
 3. Time Value of Money Tables will be provided.
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1. i. "Financial Management is related not only to fund raising but encompasses the wider perspective of managing the finances for the company efficiently" Do you agree? Explain.

(06 Marks)

ii. Explain why some bonds sell at a premium over par value while other bonds sell at a discount. What do you know about the relationship between the coupon rate and the YTM for premium bonds? What about for discount bonds?

(04 Marks)

iii. Prepare an amortization schedule for a five year loan of Rs. 420,000. The interest rate is 10 percent per year, and the loan calls for equal annual payments. How much interest is paid in the third year? How much total interest is paid over the life of the loan?

(05 Marks)

iv. The risk free rate of return is 8 percent. The expected rate of return on the market portfolio is 15 percent. The expected rate of dividend growth for the firm Alpha is 7 percent. The current dividend paid on the stock of firm Alpha is Rs. 2.00. The beta of firm Alpha 's stock is 1.5. What maximum price should you pay for the stock of firm Alpha?

(05 Marks)

(Total 20 marks)

2. i. Of the two components of total risk, which one can investors eliminate? What is the remaining risk, and how it is measured? Explain your answer by providing real world examples?

(06 Marks)

ii. What do you mean by capital market efficiency? Explain briefly the three forms of market efficiency?

(06 Marks)

iii. The Market and Stock A have the following probability distributions:

<u>State</u>	<u>Probability</u>	<u>Returns</u>	
		<u>Market</u>	<u>Stock A</u>
1	0.3	15%	20%
2	0.4	9	5
3	0.3	18	12

- Calculate the expected rates of return for the Market and Stock A.
- Calculate the standard deviations for the Market and Stock A.
- Calculate the coefficients of variation for the Market and Stock A.

(08 Marks)

(Total 20 marks)

3. i. Discuss the similarities and differences between financial leverage and operating leverage.

(06 Marks)

ii. XYZ Corporation currently has 1.1 million shares of common stock outstanding and Rs. 8 million in debt bearing an interest rate of 10 percent on average. It is considering a Rs. 5 million expansion program financed with common stock at Rs.20 per share being realized (option 1), or debt at an interest rate of 11 percent (option 2), or preferred stock with a 10 percent dividend rate (option 3). Earnings before interest and taxes (EBIT) after the new funds are expected to be Rs. 6 million, and the company's tax rate is 30 percent.

- a. Determine likely earnings per share after financing for each of the three alternatives.
- b. Compute the degree of financial leverage for each alternative at the expected EBIT level of Rs. 6 million.
- c. As a financial manager, which alternative do you prefer? Explain.

(09 Marks)

iii. A Fabric Corporation, has Rs.1 million in earnings before interest and taxes. Currently it is all-equity-financed. It may issue Rs.3 million in perpetual debt at 15 percent interest in order to repurchase stock, thereby recapitalizing the corporation. There are no personal taxes.

- a. Assuming the corporate tax rate is 30 percent, what is the income available to all security holders if the company remains all-equity-financed? If it is recapitalized?
- b. What is the present value of the debt tax-shield benefits?

- c. The equity capitalization rate for the company's common stock is 20 percent while it remains all-equity-financed. What is the value of the firm if it remains all-equity-financed? What is the firm's value if it is recapitalized?

(07 Marks)

(Total 22 marks)

4. i. Explain why net present value is a more preferable technique for capital budgeting than other methods.

(05 Marks)

- ii. A project costs Rs.100, 000 and has an operating cash flow of Rs 10,000 in the first two years and Rs 40,000 in the following three years. The project stops at the end of year 5. The expected return on the market index is 12% and the risk free rate is 6%. Beta of the similar type project is 1.5. Using the payback rule, is this project worthwhile with a payback of 3 years? What about with a discounted payback rule? Discuss the advantages and disadvantages of the payback rule.

(07 Marks)

- iii. A company is considering to introduce a new lotion which is useful both in winters and summers. The manufacturing equipment will cost Rs. 810,000. The expected life of the equipment is 9 years. The company is thinking of selling the lotion in a single standard pack of 60 grams at Rs. 20 each pack. It is estimated that variable cost per pack would be Rs. 12 and annual fixed cost, Rs. 540,000. Fixed cost includes (straight line) depreciation of Rs. 90,000 and allocated overheads of Rs. 40,000. The company expects to sell 100,000 packs of the lotion each year. Assume that the tax rate is 30% and straight line depreciation is allowed for tax purposes. If the opportunity cost of capital is 12%, should the company manufacture the lotion?

(08 Marks)

(Total 20 marks)

5. i. What is meant by cost of capital for a firm and what relevance does it have in decision-making? Discuss briefly the different approaches to the computation of the cost of the equity capital.

(08 Marks)

ii. The following is the capital structure of ABC Ltd. as on 31 March 2017:

	Rs.
Equity shares (Rs.100 per share)	1,000,000
10% preference shares (Rs. 100 per share)	400,000
12% Debentures	<u>600,000</u>
	<u>2,000,000</u>

The market price of the company's share is Rs.110 and it is expected that a dividend of Rs.10 per share would be declared for the year 2016/2017. The dividend growth rate is 6%.

- If the company is in the 30% tax bracket, compute the weighted average cost of capital.
- Assuming that in order to finance an expansion plan, the company intends to borrow a fund of Rs. 1,000,000 bearing 14% rate of interest, what will be the company's revised weighted average cost of capital? This financing decision is expected to increase dividend from Rs.10 to Rs. 12 per share. However, the market price of equity share is expected to decline from Rs.110 to Rs.105 per share.

(10 Marks)

(Total 18 marks)

Important Formulas

$$1. E(R) = \sum_{i=1}^n P_i R_i$$

$$2. \sigma = \sqrt{\sum_{i=1}^n (R_i - E(R))^2 P_i}$$

3.

$$C.V = \frac{\sigma}{\bar{x}} \times 100$$

4.

$$P_0 = \frac{D_0(1+g)}{R-g} = \frac{D_1}{R-g}$$

$$5. \bar{R}_i = R_F + \beta_i \times (\bar{R}_M - R_F)$$

8.

$$PMT = \frac{PVAN_0}{PVIFA_{i,n}}$$

$$9. DOL = [(EBIT + FC)/EBIT]$$

10. DFL =

$$\frac{EBIT}{EBIT - I - [PD/(1-t)]}$$

$$12. k_s = (D_1/P_0) + g$$

$$13. V_L = V_U + T_C B$$

$$14. WACC = w_d k_d (1-T) + w_p k_p + w_e k_e$$

Present value interest factor of Rs.1 per period at i% for n periods, PVIF(i,n).

nd	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797	0.783	0.769	0.756	0.743
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712	0.693	0.675	0.658	0.641
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636	0.613	0.592	0.572	0.552
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567	0.543	0.519	0.497	0.476
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507	0.480	0.456	0.432	0.410
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452	0.425	0.400	0.376	0.354
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404	0.376	0.351	0.327	0.305
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361	0.333	0.308	0.284	0.263
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322	0.295	0.270	0.247	0.227
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287	0.261	0.237	0.215	0.195
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	0.286	0.257	0.231	0.208	0.187	0.168
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	0.258	0.229	0.204	0.182	0.163	0.145
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	0.232	0.205	0.181	0.160	0.141	0.125
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	0.209	0.183	0.160	0.140	0.123	0.108
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218	0.188	0.163	0.141	0.123	0.107	0.093
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198	0.170	0.146	0.125	0.108	0.093	0.080
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180	0.153	0.130	0.111	0.095	0.081	0.069
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164	0.138	0.116	0.098	0.083	0.070	0.060
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149	0.124	0.104	0.087	0.073	0.061	0.051

Present value interest factor of an (ordinary) annuity of Rs.1 per period at i% for n periods, PVIF

nd	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	1.713	1.690	1.668	1.647	1.626	1.605
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	2.444	2.402	2.361	2.322	2.283	2.246
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	3.102	3.037	2.974	2.914	2.855	2.798
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	3.696	3.605	3.517	3.433	3.352	3.274
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	4.231	4.111	3.998	3.889	3.784	3.685
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	4.712	4.564	4.423	4.288	4.160	4.039
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	5.146	4.968	4.799	4.639	4.487	4.344
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	5.537	5.328	5.132	4.946	4.772	4.607
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	5.889	5.650	5.426	5.216	5.019	4.833
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	6.207	5.938	5.687	5.453	5.234	5.029
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	6.492	6.194	5.918	5.660	5.421	5.197
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103	6.750	6.424	6.122	5.842	5.583	5.342
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	6.982	6.628	6.302	6.002	5.724	5.468
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606	7.191	6.811	6.462	6.142	5.847	5.575
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824	7.379	6.974	6.604	6.265	5.954	5.668
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022	7.549	7.120	6.729	6.373	6.047	5.749
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201	7.702	7.250	6.840	6.467	6.128	5.816
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365	7.839	7.366	6.938	6.550	6.198	5.877
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.129	8.514	7.963	7.469	7.025	6.623	6.259	5.929