KASNEB

CIFA PART II SECTION 3

CORPORATE FINANCE

WEDNESDAY: 24 May 2017. **Time Allowed: 3 hours.**

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

QUESTION ONE

(a) Examine five sources of conflict of interest that could arise between shareholders and bondholders of a corporate firm. (5 marks)

(b) In relation to short-term financing, discuss three causes of overtrading. (3 marks)

(c) Tambaki Ltd., a listed company, intends to expand its business operations by investing in two projects; A and B. project A will be financed through a floating rate note while project B will be financed through equity finance.

The following is the company's financial data before it undertook the expansion programme for the year ended 31 March 2017:

	Sh. "Million"
Ordinary shares (par value Sh.0.50)	225
Retained earnings	801
	1026
14% loan notes	75
9% bank loan	250
	325

Additional information:

1. The 14% loan notes are redeemable at par in five years time. These loan notes have a current ex-interest market price of Sh.110 per Sh.100 loan note.
2. The corporate tax rate is 30%.
3. The current market price per share of the company's ordinary shares is Sh.3.76.
4. The company's equity beta is estimated to be 1.2.
5. The systematic risk of debt may be assumed to be zero. The risk free rate is 7% and market return is 13.5%.
6. The estimated equity beta of Tambaki Ltd's main competitor in the same industry is 1.8 while its capital gearing is 60% equity and 40% debt by market values.

Required:

(i) The current weighted average cost of capital (WACC) of Tambaki Ltd. (6 marks)

(ii) Determine the risk adjusted cost of capital that Tambaki Ltd. should use as the discount rate for its proposed investment in the new venture. (5 marks)

(iii) Highlight one assumption that should be made in (c)(ii) above. (1 mark)

(Total: 20 marks)

QUESTION TWO

(a) Evaluate three advantages and three disadvantages of using comparable transaction analysis when valuing a target company. (6 marks)

(b) Kemgen Ltd. has provided you with the following information:

	Sh.
Profit before interest and taxes	300,000
Less interest on debentures at 12%	60,000
Earnings before taxes	240,000
Less taxes at 30%	72,000
Net income	168,000

Earnings per share (EPS)	Sh. 4.2
Market price per share (MPS)	Sh. 30
Number of equity shares (Sh.10 each)	40,000
Price to earnings (P/E) ratio	7.14

Additional information:
1. The company has undistributed reserves of Sh.600,000.
2. The company requires Sh.200,000 for expansion. This amount will earn interest at the same rate as funds already employed.
3. You are informed that a debt to equity ratio of higher than 35% will push the price to earnings (P/E) ratio down to 5.71 and raise the interest rate on additional amount borrowed to 14%.

Required:

(i) The probable price of the share assuming the additional funds are raised as debt. (4 marks)

(ii) The probable price of the share assuming the additional funds are raised by issuing equity shares. (4 marks)

(c) Kinoru Ltd. is considering a capital project requiring a cash outlay of Sh.15 million. The project is expected to generate a net cash inflow of Sh.3.75 million for the next 6 years. The opportunity cost of capital is 18%. Kinoru Ltd. can raise a term loan of Sh.10 million for the project. The term loan will carry an interest rate of 16% and would be repayable in 5 equal annual installments with the first installment falling due at the end of the second year. The balance of the amount required for the project could be raised by issuing equity. The issue cost of equity is expected to be 8%. The corporate tax rate for Kinoru Ltd. is 30%.

Required:

Advise the management of Kinoru Ltd. on the validity of the project using the adjusted present value (APV) method. (6 marks)

(Total: 20 marks)

QUESTION THREE

(a) Outline three guidelines that could be adopted by companies to effectively manage their accounts payable. (3 marks)

(b) Describe three components of net agency costs of equity. (3 marks)

(c) Wagai Ltd., a firm in the alcohol manufacturing industry intends to acquire Karemo Ltd., a beer distributing firm. In a press release, Wagai Ltd. outlines the terms of the merger, which specify that Karemo Ltd.'s shareholders will each receive 0.90 shares of Wagai Ltd. owned. Karemo Ltd. has 1 million shares outstanding. On the day of merger announcement, Wagai Ltd.'s share closed at Sh.20.00 and Karemo Ltd.'s share closed at Sh.15.00. Samuel Omondi is an individual investor who owns 500 shares of Karemo Ltd.

Required:

(i) The cost of the acquisition for Karemo Ltd. based on the current share price. (2 marks)

(ii) The number and value of shares of Karemo Ltd. that Samuel Omondi would receive based on the current share price. (2 marks)

(d) Kinyaga Ltd. is considering to acquire Kianjogu Ltd. Kinyaga Ltd. expects to receive net cash flow of Sh. 9 million from Kianjogu Ltd. in the first year. Kianjogu Ltd. is expected to have earnings before interest and tax (EBIT) of Sh.25 million and interest expense of Sh.5 million in the second year. Kianjogu Ltd. will require reinvestment of an additional 40 percent of its net income to finance its future growth. The applicable marginal tax rate for Kianjogu Ltd. is 30%. After the second year, the net cash flow from Kianjogu Ltd. to Kinyaga Ltd. will grow at a constant rate of 4 percent per annum. The firm has established that 18 percent is the appropriate equity discount rate to apply to this merger. All cash flows occur at the end of the year. The acquisition of Kianjogu Ltd. will cost Kinyaga Ltd. Sh.45 million.

Required:

The value of the acquisition. (6 marks)

(e) Kalokol Ltd. is considering the following five independent projects:

Project	Cost "Sh."	Internal rate of return (IRR)(%)
A	200,000	20
B	600,000	15
C	400,000	12
D	400,000	11
E	400,000	10

Additional information:
1. The company has a target capital structure consisting of 40% debt and 60% equity.
2. The company can issue bonds with a yield-to-maturity (YTM) of 11%.
3. The company has retained earnings and the ordinary shares has a market price of Sh.42 per share.
4. The floatation costs associated with issuing new equity are Sh.2 per share.
5. Kalokol Ltd.'s earnings are expected to continue to grow at a rate of 6% per annum.
6. Next year's dividend is forecasted to be Sh.4.
7. The corporate tax rate is 30%.

Required:
The optimal capital budget for Kalokol Ltd. (4 marks)
(Total: 20 marks)

QUESTION FOUR

(a) Outline four features of Islamic Insurance (takaful). (4 marks)

(b) In relation to capital structure of a firm, analyse the following types of risk:

(i) Business risk. (1 mark)

(ii) Sales risk. (1 mark)

(iii) Operating risk. (1 mark)

(iv) Financial risk. (1 mark)

(c) Engineers at Bidii Ltd., a motor vehicle manufacturing company have invented a driverless car. The company is ready for pilot production and test marketing. This is expected to cost Sh.20 million and will take six months. The company's management believes that there is 70% chance that the pilot production and test marketing will be successful. In case of success, Bidii Ltd. could build a plant costing Sh.150 million. The plant will generate an annual cash flow of Sh.30 million for 20 years if the demand is high, or an annual cash flow of Sh.20 million if the demand is low. High demand has a probability of 0.6 and low demand has a probability of 0.4. The interest rate is 12%.

Required:
Using decision tree analysis, evaluate the optimal course of action. (7 marks)

(d) Mwaluganje Ltd. is concerned on whether antitrust regulators would consider its acquisition of Koromojo Ltd. due to antitrust violation. The market in which the two companies operate consists of eight competitors. The largest company has a 25% market share. Mwaluganje Ltd. has the second largest market share of 20%. Each of the five competitors including Koromojo Ltd. has a market share of 10%. The smallest company has a market share of 5%.

Required:
Assuming Mwaluganje Ltd. and Koromojo Ltd. attempt to merge:

(i) Determine the increase in the Herfindahl-Hirschman Index (HHI). (3 marks)

(ii) Determine the probable action by the antitrust regulators of the merger announcement. (2 marks)
(Total: 20 marks)

QUESTION FIVE

(a) Discuss four principles of capital budgeting. (4 marks)

(b) Describe four factors that might affect a company's dividend policy. (4 marks)

(c) (i) Explain four factors that could lead to financial distress for a company. (4 marks)

(ii) Uranga Ltd. wishes to determine an acceptable growth rate in sales. While the firm intends to expand, it does not wish to use any external funding to support such an expansion due to the high prevailing interest rates in the market. As a financial analyst, you gather the following data relating to the firm:

Profit margin	10%
Capital intensity ratio	1.2
Dividend payout ratio	50%
Current sales	Sh.100,000
Spontaneous liabilities	Sh.10,000

Required:
The maximum growth rate that Uranga Ltd. could sustain without requiring additional external funding. (5 marks)

(d) The finance department of Kimulot Ltd. has gathered the following information:

The carrying cost per unit of inventory is Sh.10.
The fixed cost per order is Sh.20.
The number of units required per year is 30,000.
The variable cost per unit ordered is Sh.2.
The purchase cost price per unit is Sh.30.
Assume that an year has 365 days:

Required:
Determine the time gap between the two orders. (3 marks)

(Total: 20 marks)

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Present Value of 1 Received at the End of n Periods:

$$PVIF_{r,n} = 1/(1+r)^n = (1+r)^{-n}$$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	9615	.9524	.9434	.9346	9259	.9174	.9091	.8929	8772	8696	.8621	.8475	.8333	.8065	.7813	7576	.7353
2	.9803	.9612	.9426	9246	.9070	.8900	8734	8573	8417	.8264	.7972	7695	7561	.7432	.7182	.6944	.6504	.6104	5739	.5407
3	.9706	.9423	.9151	8890	.8638	.8396	.8163	7938	7722	.7513	.7118	6750	6575	.6407	.6086	.5787	.5245	.4768	.4348	.3975
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	7084	.6830	.6355	5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.2923
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	6806	6499	.6209	.5674	5194	.4972	.4761	.4371	.4019	.3411	.2910	2495	.2149
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	1890	.1580
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	.1776	.1432	.1162
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.0854
9	.9143	.8368	7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.0628
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	0462
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	0340
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	1685	.1372	.1122	.0757	.0517	.0357	.0250
13	.8787	7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.0184
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.0135
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	3152	2745	.2394	.1827	.1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	0099
16	.8528	.7284	6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	1069	.0930	.0708	.0541	.0320	.0193	.0118	.0073
17	.8444	.7142	6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.0054
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0376	.0208	.0118	.0068	.0039
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.0029
20	8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	1486	1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.0021
25	.7798	6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	.0160	.0105	.0046	.0021	.0010	.0005
30	.7419	.5521	4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	.0001
40	.6717	.4529	3066	.2083	.1420	.0972	.0668	0460	.0318	.0221	.0107	.0053	.0037	.0026	.0013	.0007	.0002	.0001		*
50	.6080	.3715	2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	.0009	.0006	.0003	.0001	*	*	*	*
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004	.0002	.0001	*	*	*	*	*	*

* The factor is zero to four decimal places

Present Value of an Annuity of 1 Per Period for n Periods:

$$PVIF_{rt} = \sum_{t=1}^{n} \frac{1}{(1+r)^t} = \frac{1 - \frac{1}{(1+r)^n}}{r}$$

Number of payments	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.7845	3.6847	3.4976	3.3255	3.0205	2.7594	2 5342
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3436	4.0776	3.8372	3.4212	3.0758	2.7860
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2 9304
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	4.0013	3.4834	3 0764
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3.1039
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.1090
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	5.9288	5.3527	4.8696	4.1103	3.5458	3 1129
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3 1220
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	3.5693	3 1242
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
50	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995	4.1666	3.5714	3.1250
60	44.9550	34.7609	27.6756	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	8.3240	7.1401	6.6651	6.2402	5.5553	4.9999	4.1667	3.5714	3 1250