

THE PUBLIC ACCOUNTANTS EXAMINATIONS BOARD

A Committee of the Council of ICPAU

CPA(U) EXAMINATIONS

LEVEL TWO

CORPORATE FINANCIAL MANAGEMENT - PAPER 12

TUESDAY, 8 DECEMBER 2009

INSTRUCTIONS TO CANDIDATES

1. Time allowed: **3 hours 15 minutes**.
The first 15 minutes of this examination have been designated for reading time. You may not start to write your answer during this time.
2. Section **A** has **one** compulsory question carrying 40 marks.
3. Section **B** has **four** questions and only **three** questions are to be attempted. Each question carries 20 marks.
4. Relevant formulae and tables are provided on pages 7 - 9.
5. Please read further instructions on the answer book.

SECTION A

Question 1

Chemtech Oil Masters Ltd (COM) specializes in the manufacture of specialized chemicals used by pharmaceutical industries in the East African region. Due to high transportation costs of their chemicals, they wish to construct a plant in Kenya. They estimate to use the plant for four years after which it will have depreciated fully.

COM will have to invest 800 million Kenya shillings (KShs) in plant, and Kshs 300 million in initial working capital before they can commence production and sales. Working capital needs will increase by 20% in the first year of operation and there after remain constant. They have forecast to sell 20,000 tonnes of chemicals in the first year, and this volume is expected to grow by 10% per annum in the second year, and thereafter by 20% per annum as they fully utilize the capacity of the plant.

The Kenyan government will allow COM to repatriate profits to Uganda, their home country. The selling price per tonne of chemicals is expected to be KShs 50,000 per tonne and operating expenses are expected to be 50% of the revenues.

Chemical companies do not qualify for any capital allowances. The tax rate in Kenya is 30% and tax is payable one year in arrears. Due to the agreements within the East African Community, no extra taxes will be charged by the Ugandan Government once cash flows/profits are repatriated.

The financing of this project will be in a debt: equity ratio of 50%: 50%. The debt will be raised from Uganda Development Bank in Uganda shillings, at a pre-tax interest rate of 10% per annum. The market risk premium is 8% and companies in the chemical industry have an average debt: equity ratio of 40%:60% with an equity beta of 1.2. The current spot exchange rate is 0.0382Ksh/US\$hs. The risk free rate of interest is 7%.

For purposes of forecasting future exchange rates, the research department in Bank of Uganda has forecast lending rates as follows over the next five years:

Year	Lending rate in KShs	Lending rate in US\$hs
1	8%	8%
2	8%	10%
3	6%	7%
4	7%	7%
5	7%	6%

Required:

- (a) Calculate the project's cash flows in Uganda shillings and, using the adjusted present value (APV), advise COM on the wealth maximization potential of the project.
(10 marks)
- (b) What challenges is COM likely to face as they undertake this investment?
(5 marks)
- (c) COM has purchased some materials for its existing operations from Europe at a price of 54,000 Euros. Three months credit is allowed before payment is due. COM has no spare cash now but can borrow at 2% above the treasury bill rate or invest short term at 2% below the treasury bill rate in either Uganda or Europe.

Current exchange rates are as follows:

Spot 2,900 – 3,000 UShs/Euro

3 months forward 2% - 1.5% premium

The treasury bill rate is 7% per annum in Uganda and 4% per annum in Europe.

Required:

- Illustrate how COM may use the money market or a forward contract to hedge the transaction exposure on this purchase, showing the total cost of each alternative.
(5 marks)
- (d) Explain to the finance manager of COM any **three** different ways in which foreign direct investment could be done giving one challenge associated with each.
(6 marks)
- (e) (i) Explain the concept of financial distress.
(2 marks)
- (ii) Briefly describe the causes of financial distress.
(3 marks)
- (iii) Explain briefly how COM can address the financial distress problem.
(3 marks)
- (f) Explain the advantages of using warrants in the process of raising finance and the factors that limit their use in less developed countries like Uganda.
(6 marks)
- (Total 40 marks)**

Question 2

The following information was obtained from the financial statements of Brandon Publishers Ltd (BP).

Extract from the statement of comprehensive income for the year ended 31 December 2008:

	Shs '000'
Profit before interest and tax	240,000
Interest	<u>(60,000)</u>
Profit before tax	180,000
Income tax paid	<u>(60,000)</u>
Profit for the period	120,000
Ordinary dividends	<u>(40,000)</u>
Retained profit for the year.	<u>80,000</u>

Extract from the statement of financial position as at 31 December 2008:

	Shs '000'
Ordinary share capital (shares of Shs 500 nominal)	100,000
Retained profits	300,000
8% debenture redeemable in 2011	600,000

Average data for the publishing sector:

Times interest earned ratio: 9 times
Debt: equity ratio 75%

At a recent board meeting, board members had several proposals regarding improving the attractiveness of their company to potential investors. Three of the proposals are summarized below:

- (i) To issue loan stock of Shs 30 million on the Uganda Securities Exchange. The board believes that this money can then be invested short-term, as they look out for a good long-term investment opportunity. There are no investment opportunities currently available. This 10% interest loan stock would be redeemable in six years time at par. The level of profitability is not expected to change in the short run.
- (ii) To make a 1 for 4 rights issue of shares at a 25% discount at the current market price of Shs 700 in order to control the gearing and financial risk of the company. Profit before interest and tax is expected to increase in proportion to the increase in the number of shares.

- (iii) To increase the current dividend per share so as to make the company very attractive to potential investors thus increasing the firm's value.

Required:

- (a) Analyse and discuss the implications of proposal (i) to BP. **(6 marks)**
- (b) Calculate the theoretical ex-rights price and the amount of funds that would be raised in the second proposal, and evaluate the use of this proposal to reduce risk and gearing. **(7 marks)**
- (c) (i) Evaluate proposal (iii) above using financial management theory.
(ii) Outline the practical considerations in designing a dividend policy. **(7 marks)**
- (Total 20 marks)**

Question 3

- (a) Discuss the relevance of arbitrage pricing theory (APT) in modern portfolio management. **(4 marks)**
- (b) Explain the concept of an efficient portfolio and the relevance of the efficient frontier to finance managers. **(4 marks)**
- (c) The financial advisor to Mr. Kamapesa has indicated to him that he could earn high returns if he invested in one of the bonds listed on the Uganda Securities Exchange. Reel Telecom's 10 year bond has a coupon interest of 12%. The company pays interest semi annually and the bond has just been issued. The nominal value of each bond stock is Shs 100.
- (i) Given that Mr. Kamapesa's required rate of return is 15%, determine the price he would be willing to pay for every Shs 100 of nominal value. **(3 marks)**
- (ii) Assuming the market value of this bond is Shs 82 for every Shs 100 nominal, advise Mr. Kamapesa on whether he should invest in this bond, given his required rate of return of 15%. **(5 marks)**
- (iii) Explain the difference between the coupon rate and yield to maturity as used in bond stocks. **(4 marks)**
- (Total 20 marks)**

Question 4

- (a) As a corporate financial management specialist, evaluate the assertion that 'Profit maximization is not an operationally feasible criterion'.
(10 marks)
- (b) Discuss the assertion that 'The basic rationale for the objective of shareholder's wealth maximization is that it reflects the most use of society's economic resources and thus leads to maximization of economic wealth'.
(10 marks)

(Total 20 marks)

Question 5

The shares of Goodness Moringa Ltd (GM) and KAY Ltd (KAY) are currently depressed. GM has decided to merge with KAY in order to benefit from scale economies since they are in the same industry. After the merger, the post-merger P/E ratio of the combined company will be the weighted average of the individual firm's pre-merger P/E ratios (weights based on profits after tax). The following financial data relates to the two companies:

	GM Shs million	KAY Shs million
Net sales	350	45
Profit after tax	28.13	3.75
Current total market capitalization	420	45
Share capital (shares of Shs 1,000 per share)	750	150

The dividend per share for GM is Shs 130 and Shs 60 for KAY.

Required:

- (a) Calculate the pre-merger market value per share and earnings per share (EPS) for both companies.
(6 marks)
- (b) Determine the post-merger EPS, market value per share and P/E ratio, if for purposes of the merger, the two companies' shares are valued at Shs 560 for GM and Shs 300 for KAY.
(8 marks)
- (c) Discuss the limitations of the dividend valuation model when used to value a company.
(6 marks)

(Total 20 marks)

You may use the following list of financial formulae:

The Capital Asset Pricing Model

$$E_i = R_f + \beta_i (E_m - R_f)$$

The asset beta formula

$$\beta_a = \left(\frac{V_e \beta_e}{(V_e + V_d(1-T))} \right) + \left(\frac{V_d(1-T) \beta_d}{(V_e + V_d(1-T))} \right)$$

The Gordon model

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

Purchasing power parity and interest rate parity

$$S_1 = S_0 \frac{(1+i_c)}{(1+i_b)} \quad S_1 = S_0 \frac{(1+r_c)}{(1+r_b)}$$

Present value interest factor of \$1 per period at i% for n periods, PVIFA (i,n).												
Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
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
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.856	0.840	0.823	0.807	0.791
3	0.971	0.942	0.915	0.888	0.862	0.840	0.819	0.799	0.779	0.759	0.739	0.719
4	0.962	0.923	0.888	0.855	0.824	0.795	0.767	0.739	0.712	0.685	0.659	0.633
5	0.952	0.904	0.866	0.829	0.788	0.749	0.713	0.680	0.649	0.620	0.592	0.565
6	0.943	0.885	0.839	0.795	0.749	0.706	0.666	0.630	0.596	0.564	0.533	0.503
7	0.935	0.877	0.833	0.790	0.741	0.695	0.655	0.620	0.587	0.556	0.526	0.496
8	0.926	0.868	0.825	0.783	0.732	0.684	0.642	0.606	0.574	0.544	0.515	0.486
9	0.917	0.859	0.817	0.776	0.723	0.674	0.631	0.595	0.563	0.534	0.506	0.478
10	0.909	0.851	0.810	0.769	0.715	0.665	0.622	0.586	0.554	0.526	0.499	0.472
11	0.901	0.843	0.802	0.762	0.707	0.656	0.613	0.577	0.545	0.518	0.492	0.466
12	0.893	0.835	0.795	0.755	0.700	0.648	0.605	0.569	0.537	0.511	0.486	0.461
13	0.885	0.827	0.787	0.747	0.692	0.640	0.597	0.561	0.529	0.504	0.479	0.454
14	0.877	0.819	0.779	0.739	0.684	0.632	0.589	0.553	0.521	0.496	0.472	0.447
15	0.869	0.811	0.771	0.731	0.676	0.624	0.581	0.545	0.513	0.488	0.464	0.439

	13%	14%	15%	16%	17%	18%	19%	20%	21%	22%	23%	24%
1	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	0.826	0.820	0.813	0.806
2	0.783	0.766	0.750	0.734	0.719	0.703	0.688	0.673	0.658	0.644	0.630	0.615
3	0.693	0.677	0.662	0.647	0.632	0.617	0.599	0.584	0.569	0.555	0.541	0.527
4	0.613	0.598	0.583	0.568	0.553	0.538	0.522	0.507	0.492	0.478	0.464	0.450
5	0.543	0.529	0.514	0.499	0.484	0.469	0.454	0.439	0.425	0.411	0.397	0.383

6	0.48 0	0.45 6	0.43 2	0.41 0	0.39 0	0.37 0	0.35 2	0.33 5	0.31 9	0.30 3	0.28 9	0.27 5
7	0.42 5	0.40 0	0.37 6	0.35 4	0.33 3	0.31 4	0.29 6	0.27 9	0.26 3	0.24 9	0.23 5	0.22 2
8	0.37 6	0.35 1	0.32 7	0.30 5	0.28 5	0.26 6	0.24 9	0.23 3	0.21 8	0.20 4	0.19 1	0.17 9
9	0.33 3	0.30 8	0.28 4	0.26 3	0.24 3	0.22 5	0.20 9	0.19 4	0.18 0	0.16 7	0.15 5	0.14 4
10	0.29 5	0.27 0	0.24 7	0.22 7	0.20 8	0.19 1	0.17 6	0.16 2	0.14 9	0.13 7	0.12 6	0.11 6
11	0.26 1	0.23 7	0.21 5	0.19 5	0.17 8	0.16 2	0.14 8	0.13 5	0.12 3	0.11 2	0.10 3	0.09 4
12	0.23 1	0.20 8	0.18 7	0.16 8	0.15 2	0.13 7	0.12 4	0.11 2	0.10 2	0.09 2	0.08 3	0.07 6
13	0.20 4	0.18 2	0.16 3	0.14 5	0.13 0	0.11 6	0.10 4	0.09 3	0.08 4	0.07 5	0.06 8	0.06 1
14	0.18 1	0.16 0	0.14 1	0.12 5	0.11 1	0.09 9	0.08 8	0.07 8	0.06 9	0.06 2	0.05 5	0.04 9
15	0.16 0	0.14 0	0.12 3	0.10 8	0.09 5	0.08 4	0.07 4	0.06 5	0.05 7	0.05 1	0.04 5	0.04 0

Present value interest factor of an (ordinary) annuity of \$1 per period at i% for n periods, PVIFA (in).

Period	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
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.129	8.514

Period	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
16	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870