



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

## A. M. E. C. E. A

### MAIN EXAMINATION

#### JANUARY – APRIL 2012 TRIMESTER

#### FACULTY OF COMMERCE

#### DEPARTMENT OF ACCOUNTING AND FINANCE

#### EVENING/REGULAR PROGRAMME

#### CFI 311: CORPORATE FINANCE

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10  
15  
30-15  
15/30

Date: April 2012 Duration: 2 Hours  
**INSTRUCTIONS: Answer Question ONE and any other TWO Questions**

Q1. a) FCF Ltd is a follower of the residual dividend model. It expects next year's net profit will amount to Sh. 30m. It has a capital budget of Sh. 25m to be spent on long term investment projects. The company's capital structure is made up of 40% debt and 60% equity. The company's objective is to maintain its current capital structure.

- i) What will the company's payout ratio be next year? (6 marks)
- ii) How much will it add to its retained earnings for financing its projects? (1 mark)
- iii) How much will it borrow? (1 marks)

b) i) A company is evaluating an new project whose initial investment outlay is Sh. 250,000. The project will generate cash inflows of Sh. 50,000, Sh. 60,000, Sh. 80,000, Sh. 100,000 and Sh. 150,000 in years 1 to 5. These cash flows are uncertain. The associated risk adjustment factors are 1, 0.9, 0.75, 0.5, 0.3 and ~~0.2~~ and 0.2 form year 0 to 5 respectively. The company uses the certainty equivalent approach to incorporate risk in its capital budgeting process. The risk adjusted discount rate is 18% while the risk free rate of return is 16%. Should this project be accepted? Why?

Use  
- Uncertain means it is risky cashflows  
- Adjust to risk-free  
- Use risk free rate of return to discount

ii) How much is the risk premium associated with this project?

$RADR = \text{Risk free} + \text{prem}$   
 $0.18 = 0.16 + x \quad x = 2\%$  (2 marks)

MC + KC - Ka



- c) Company P is financed by 100% equity at a cost of equity of 20%. Firm R, is similar to P, but financed by Sh 200m of debt at annual interest rate of 12% and 5 million ordinary shares trading at Sh. 80 each. Using MMII without taxes calculate the cost of Equity of firm R. (6 marks)
- d) Define shareholders wealth and explain how it is measured. (2 marks)
- e) With an example distinguish between private placement and public offering of corporate bonds. (3 marks)

- Q2. Company T is a main producer of milk in the local market. It wants to acquire firm R which is in the same sector. The shareholders of company T have approached those of firm R for a possible acquisition and subsequently merge the two firms. Further analysis shows that firm T has 20 million shares outstanding, currently selling at Sh. 10 each. The cost of capital of firm T is 16%

Company R has 5 million shares outstanding currently selling at Sh. 6. Its cost of capital is 15%. The shareholders of firm R have indicated a price of Sh. 7.50 per share. This price can be paid either through cash or shares of firm T.

The estimated synergies from the deal are currently value at Sh. 18m.

- a) If payment is through cash calculate:
  - i) The acquisition premium per share (2 marks)
  - ii) The NPV to shareholders of firm T. (6 marks)
- b) If payment is by shares
  - i) How many shares will T need to issue? (2 marks)
  - ii) Calculate the NPV to shareholders of firm T. (6 marks)
- c) With an example distinguish between a horizontal and a vertical merger. (4 marks)

Handwritten notes: Price paid for entire 60m. - 18m. = 42m. Market value of T = 200m. = 20m x 10. (600000) 30 = 1200000

- Q3. TLC Ltd wants to expand its production activities. The project being considered will involve acquisition of a new machine at a price of Sh. 850,000. Shipping and installation charges for the machine are expected to total to Sh. 50,000. The machine will be depreciated over its 4 year life using straight line method. It is expected to have a salvage value of Sh. 100,000 at the end of its economic life.

Additional information is as follows:

- 1) Incremental revenues will be Sh. 500,000, Sh. 600,000, Sh. 750,000 and Sh. 600,000 in years 1 to 4 respectively.
- 2) Incremental operating costs will be Sh. 250,000, Sh. 260,000, Sh. 280,000 and Sh. 260,000 in years 1 to 4 respectively.

- 3) Fixed costs (excluding depreciation) will amount to Sh. 100,000 per year.
- 4) Initial networking capital amount to Sh. 50,000 and subsequently NWC needs will be 20% of revenues.
- 5) To assess the feasibility of this project TLC Ltd paid external consultants a fee of Sh. 70,000.
- 6) The company's minimum return on all new projects is 12% p.a.
- 7) The company is in 30% corporate tax bracket. However any capital losses or gains are charged at 15%.

**Required:**

- a) Calculate the initial investment outlay (4 marks)
- b) Calculate the relevant operating cash flows per year. (7 marks)
- c) Calculate the total cash flows per year. (5 marks)
- d) Should TLC undertake the project? Why? (4 marks)

MCM Ltd has shares trading at the local exchange at Sh. 25 each. The company needs to raise additional capital of Sh. 200m. The company can raise the capital either through issue of bonds or ordinary shares.

- a) If it sells shares, a total of 10m shares will be sold. Due to the decline in the demand for the company's shares the new shares will be sold to the public at a price of Sh. 23 each while MCM Ltd will receive a net of Sh. 20 per share. FAC Ltd will underwrite the issue on a firm commitment basis.
  - i) Calculate the percentage underwriting spread. (3 marks)
  - ii) Calculate the percentage return to FAC Ltd. (3 marks)
  - iii) If FAC Ltd is able to sell only 7m shares, calculate the total underwriting fee they will earn? How much does MCM Ltd receive? (3 marks)
- b) If it sells bonds 201,005 bonds will be sold at a price of Sh 1,010 to the investing public. FAC Ltd will have to pay Sh. 995 per bond to MCM Ltd.
  - i) Calculate the percentage underwriting spread. (3 marks)
  - ii) Calculate the percentage return to FAC Ltd. (3 marks)

Which alternative is better for MCM Ltd and why? Is the difference in the spread between the two types of issues normal? (5 marks)

Value

Present value interest factors:

$$\begin{aligned} \text{For a Single Amount} &= (1+r)^{-n} \\ \text{For an Annuity} &= \frac{1-(1+r)^{-n}}{r} \end{aligned}$$

\*END\*