
CERTIFIED PUBLIC ACCOUNTANT INTERMEDIATE LEVEL EXAMINATIONS

11.1: MANAGERIAL FINANCE

MONDAY: 1 DECEMBER 2014

INSTRUCTIONS:

- 1. Time Allowed: 3 hours 15 minutes** (15 minutes reading and 3 hours writing).
- This examination has two sections; A & B.
- Section A has three Compulsory Questions while B has three questions two to be attempted.
- In summary attempt five questions.
- Marks allocated to each question are shown at the end of the question.
- Show all your workings

SECTION A

Attempt All questions in this section

QUESTION ONE

WIDGET is a listed group which operates a number of manufacturing facilities within its home country, Country F. The currency of Country F is the Frw. WIDGET has Frw 700 million funds available for capital investment in new product lines in the current year.

Most products have a very limited life cycle. Four possible projects have been identified, each of which can be started without delay.

Initial calculations for these projects are shown below:

Project	Initial investment	Net annual cash inflows after initial investment	Project terms (Years)	Present value of cash flows	Net Present value
	Frw	Frw		Frw	Frw
	“Millions”	“Millions”		“Millions”	“Millions”
A	100	151.2	1	135	35
B	150	82.3	4	250	100
C	300	242.6	2	410	110
D	350	124.0	6	510	160

Notes:

1. The projects are non-divisible and each project can only be undertaken once.
2. Apart from the initial investment, annual cash flows are assumed to arise at the end of the year.
3. A discount rate of 12% has been used throughout.
4. Ignore taxation.

Required:

(a) (i) Prioritize the projects according to each of the following measures:

- Net present value (NPV)
- Profitability index (PI)
- Payback (undiscounted) **(5 Marks)**

(ii) Explain the strengths and weaknesses of each of the prioritization methods used in (a)(i) above as the basis for making investment decisions in the context of capital rationing for non-divisible projects.

(9 Marks)

b) (i) Advise what combination of projects maximizes shareholder wealth within a maximum total initial investment of Frw 700 million.

(3 Marks)

(ii) Explain how the optimal combination of projects would need to be reassessed under EACH of the following circumstances:

- ‘Soft’ rather than ‘hard’ single period capital rationing applies.
- The same level of capital rationing and range of projects is expected in the following year. **(8 Marks)**

(Total 25 Marks)

QUESTION TWO

A wholesaler's credit sales are currently Frw 14,400,000. The firm offers a net 30 days credit terms to its retailers. Of its receivables 3% becomes uncollectible. Variable costs are 70% of sales and the firm requires 20% rate of return of its assets. The wholesaler is considering the following 3 alternatives credit policy:

1. Keep credit terms of net 30 days
2. Change credit terms to net 60 days.
3. Change credit terms to net 90 days.

Data for each alternative is shown below:

	Net 30 days	Net 60 days	Net 90 days
Receivable turnover	12 times	6 times	4 times
Annual credit sales	14,400,000	15,600,000	16,400,000
Average accounts receivables	1,200,000	2,600,000	4,100,000
Bad debts percentage	3%	4%	6%

Required:

Which policy is preferable?

(Total 20 Marks)

QUESTION THREE

- a) Distinguish between systematic risk and unsystematic risk. **(2 Marks)**
- b) An investor has invested capital of Frw 100 million in two securities X and Y in the following proportions: Frw 20 million in security X and Frw 80 million in security Y.

The returns of the two securities depend on the state of the economy as follows:

State of Economy	Probability	Return of X	Return of Y
Boom	0.4	9%	12%
Normal	0.50	7%	11%
Recession	0.10	6%	10.5%

Required:

Determine the portfolio risk for this investment

(6 Marks)

Namaku Limited has its financial year ending on 30 June. The earnings per share (EPS) of the company from 2005 to 2014 were as follows:

Year ended 30 June	EPS (Frw)
2005	200
2006	216
2007	233
2008	252
2009	272
2010	294
2011	318
2012	343
2013	370
2014	400

Additional information

- 1) Namaku Limited has issued 140,000 ordinary shares whose current market price is Frw 5,000 per share.
- 2) The company's past dividend payout ratio which is expected to be maintained in the future, is 50%
- 3) The capital structure of the company which is considered to be optimal is 70% equity and 30% debt.
- 4) The interest rate on debt capital is 8%
- 5) The corporate tax rate is 30%

Required:

- (i) The weighted average cost of capital (WACC) of the company **(4 Marks)**
- (ii) The maximum amount that the company could spend on capital projects without need to obtain additional equity or debt capital. **(3 Marks)**

(Total 15 Marks)

SECTION B

Attempt two questions from this section

QUESTION FOUR

- a) Define the term venture capital highlighting the various reasons why the venture capital market is not well developed in developing countries using your country as an example. **(4 Marks)**
- b) State and explain any three types of dividend policies that could be adopted by a firm. **(3 Marks)**
- c) You are provided with the following information for Nil Limited for the year ended 30 June 2014.

	Beginning		Ending
	Frw "000"	Frw "000"	Frw "000"
Stock	17,340		15,960
Debtors	42,240		37,250
Creditors	35,510		27,370
Net sales		120,000	
Cost of goods sold		92,000	

Required:

The operating and cash conversion cycle assuming a year has 360 days. **(6 Marks)**

- d) Phobis Co is considering a bid for Danoca Co. Both companies are stock-market listed and are in the same business sector. Financial information on Danoca Co, which is shortly to pay its annual dividend, is as follows:

Number of ordinary shares	5 million
Ordinary share price (ex div basis)	Frw 3,300
Earnings per share	Frw 400
Proposed payout ratio	60%
Dividend per share one year ago	Frw 233
Dividend per share two years ago	Frw 220
Equity beta	1.4
Other relevant financial information	
Average sector price/earnings ratio	10
Risk-free rate of return	4.6%
Return on the market	10.6%

Required:

Calculate the value of Danoca Company using the following methods:

- (i) price/earnings ratio method; **(3 Marks)**
 - (ii) dividend growth model; **(4 Marks)**
- (Total 20 Marks)**

QUESTION FIVE

(a) The SIAM Corporation has announced a rights offer to raise Frw 50 million for a new journal, the Journal of Financial Excess. This journal will review potential articles after the author pays a non refundable reviewing fee of Frw 3,000 per page. The stock currently sells for Frw 25 per share and there are 22 million shares outstanding.

- (i) What is the maximum possible subscription price? What is the minimum? **(1 Marks)**
- (ii) If the subscription price is set at Frw 15 per share, how many shares must be sold? How many rights will it take to buy one share? **(2 Marks)**
- (iii) What is the ex rights price? What is the value of a right? **(2 Marks)**
- (iv) Show how a shareholder with 100 shares and no desire (or money) to buy additional shares is not harmed by the rights offer? **(3 Marks)**

(b) The Modern Company has issued 100,000 Frw 1 per equity shares which are at present selling for Frw 3 per share. The company has plans to issue rights to purchase one new equity share at a price of Frw 2 per share for every four shares.

Required:

- (i) Calculate the theoretical Ex-rights price of Modern's equity shares. **(2 Marks)**
- (ii) Calculate the theoretical value of a Modern right before the shares sell ex-rights. **(2 Marks)**
- (iii) The chairman of the company receives a telephone call from an angry shareholder who owns 1,000 shares. The shareholder argues that he will suffer a loss in his personal wealth due to this right issue, because the new shares are being offered at a price lower than the current market value.

The chairman assures him that his wealth will not be reduced because of the rights issue, as long as the shareholder takes appropriate action. Is the chairman correct? What should the shareholder do?

b) Prepare a statement showing the effect of the rights issue on this particular shareholder's wealth, assuming:

(i) He sells all the rights (2 Marks)

(ii) He exercises half the rights and sells the other half (2 Marks)

(iii) He does nothing at all (2 Marks)

(iv) Are there any real circumstances which might lend support to the shareholder's claim? Explain. (2 Marks)

(Total 20 Marks)

QUESTION SIX

TNG Company expects annual demand for product X to be 255,380 units. Product X has a selling price of Frw 19 per unit and is purchased for Frw 11 per unit from a supplier; MKR Co. TNG places an order for 50,000 units of product X at regular intervals throughout the year. Because the demand for product X is to some degree uncertain, TNG maintains a safety (buffer) stock of product X which is sufficient to meet demand for 28 working days. The cost of placing an order is Frw 25 and the storage cost for Product X is Frw 0.10 per unit per year.

TNG normally pays trade suppliers after 60 days but MKR has offered a discount of 1% for cash settlement within 20 days. TNG Co has a short-term cost of debt of 8% and uses a working year consisting of 365 days.

Required:

a) Calculate the annual cost of the current ordering policy. Ignore financing costs in this part of the question. (2 Marks)

b) Calculate the annual saving if the economic order quantity model is used to determine an optimal ordering policy. Ignore financing costs in this part of the question. (3 Marks)

c) Determine whether the discount offered by the supplier is financially acceptable to TNG Co. (4 Marks)

d) Critically discuss the limitations of the economic order quantity model as a way of managing stock. (7 Marks)

e) Differentiate between factoring and invoice discounting as used in debtors management (4 Marks)

(Total 20 Marks)

End of question paper

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