

TECHNICAL UNIVERSITY OF MOMBASA

School of business

DEPARTMENT OF ACCOUNTING AND FINANCE

UNIVERSITY EXAMINATIONS FOR DEGREE IN BACHELOR OF /
COMMERCE/ BUSINESS ADMINISTRATION.

BAC 4301; FINANCIAL MANAGEMENT

END OF SEMESTER EXAMINATIONS

SERIES; DECEMBER 2016

TIME; 2 HOURS

Instructions;

Answer question one and any other two questions.

Question One.

- (a) Briefly explain the main functions of a financial manager. (10 marks)
 (b) Briefly explain the Factors which may determine the cost of capital. (10 marks)
 (c) Degniss Co is a company which installs kitchens and bathrooms to customer specifications.

It is planning to invest sh. 4,000,000 in a new facility to convert vans and trucks into motorhomes. Each motorhome will be designed and built according to customer requirements. Degniss Co expects motorhome production and sales in the first four years of operation to be as follows.

Year	1	2	3	4
Motorhomes produced and sold	250	300	450	450.

The selling price for a motorhome depends on the van or truck which is converted, the quality of the units installed and the extent of conversion work required. Degniss Co has undertaken research into likely sales and costs of different kinds of motorhomes which could be selected by customers, as follows:

Motorhome type	Basic	Standard	Deluxe
Probability of selection	20%	45%	35%
Selling price (per unit)	30,000	42,000	72,000
Conversion cost (per unit)	23,000	29,000	40,000

Fixed costs of the production facility are expected to depend on the volume of motorhome production as follows:

Production volume (units/year)	200–299	300–399	400–499
Fixed costs including dep. (sh.000/year)	4,000	5,000	5,500

Degniss Co pays corporation tax of 28% per year, with the tax liability being settled in the year in which it arises. The company can claim tax allowable depreciation on the cost of the investment on a straight-line basis over ten years. Degniss Co evaluates investment projects using an after-tax discount rate of 11%.

Required:

Calculate the expected net present value of the planned investment for the first four years of operation. (10 marks)

Question Two.

- (a) The following figures relate to two companies: (sh.)

	P Ltd.	Q Ltd.
Sales	500	1,000
Variable costs	200	300
Contribution	300	700
Fixed costs	150	400
Interest	50	100
Profit before Tax	100	200

Assume that the cost structure of each company retained the same and that the sales increased by 40%

Required:

- (i) Calculate the operating, financial and combined leverages for the two companies; and (6 Marks)
 (ii) Comment on the relative risk position of them. (4 marks)

- (b) Flaherty Electric has a capital structure that consists of 70 percent equity and 30 percent debt. The company's long-term bonds have a before-tax yield to maturity of 8.4 percent. The company uses the DCF approach to determine the cost of equity. Flaherty's common stock currently trades at sh. 40.5 per share. The year-end dividend (D_1) is expected to be sh. 2.50 per share, and the dividend is expected to grow forever at a constant rate of 7 percent a year. The company estimates that it will have to issue new common stock to help fund this year's projects. The company's tax rate is 40 percent. What is the company's weighted average cost of capital, WACC? (10 marks)

Question Three.

The Board of Directors of BesTaste, a medium size company, wants to expand its catering business that has been growing over the past six years. The local authority has granted the business planning permission to extend its current premises. The company will invest \$1,000,000 in buildings and non-current assets. It will also require financial support for working capital.

The Board of Directors has asked you, the Chief Finance Officer (CFO), to evaluate the following sources of finance and report back before the next meeting.

Required:

- (a) Compare and contrast a rights issue of shares and loan notes. (10 marks)
 (b) Explain which source of finance in (a) above would be more beneficial for the buildings and non-current assets. (6 marks)
 (c) Advise the Board of Directors on a source of finance for working capital. (4 marks)

Question Four.

XYZ Ltd., expects an Income before interest and tax of sh. 150,000 from its 1,000,000 Investment. The company has 10% of sh.500,000 Debentures. The equity capitalization rate of the company is 10%. The tax rate is 35%

- (a) Calculate the value of the firm, the overall capitalization rate according to the net income approach and the return on equity. (10 marks)
 (b) If the debenture debt is increased to sh. 750,000 and interest of debt is change to 9%. What is the value of the firm and overall cost of capital? (10 marks)

Question Five.

Nano Media is a young, growing social media company that has just reported net income of sh.10 million for the most recent year, on revenues of sh.100 million. The company reported capital expenditures (including acquisitions) of sh.40 million for the most recent year, significantly higher than the depreciation of sh.12 million for the year. Finally, non-cash working capital was sh.36 million at the end of the most recent year. Looking forward, the company expects the following for each of these items for the next 3 years:

Revenues will grow 40% a year, capital expenditures at 15% a year and depreciation at 25% a year, each year for the next 3 years. The table below lists the expectations that the company has for net profit margins (net income as a percent of sales) and non-cash working capital as a percent of sales for the next 3 years:

	1	2	3
Net Margin	12%	14%	16%
Total non-cash WC as % of revenues	30%	25%	15%

- a. The company currently has a cash balance of sh.45 million. How much cash will be left after year 3, if it pays no dividends and does not borrow money? (10 marks)

b. Assume that the company decides to institute a dividend payout ratio of 20% and also to borrow sh.4 million every year for the next three years. How much stock can the company buy back over the three years, if it wants to have a cash balance of sh.10 million at the end of year 3? (10 marks points)

MARKING SCHEME

Question One.

(a) The above questions relate to four broad decision areas, these are:

1. Investment decision: Decisions relating to investment in both capital and current assets. The finance manager has to evaluate different capital investment proposals and select the best keeping in view the overall objective of the enterprise. Capital Budgeting is the typical name given to this decision.

2. Financing Decision: Provision of funds required at the proper time is one of the primary tasks of the finance manager. Identification of the sources, deciding which types of funds to raise (debt or equity), and raising them is one of the crucial tasks.

3. Dividend Decision: Determination of funds requirements and how much of it will be generated from internal accruals and how much to be sourced from outside is a crucial decision. Equity holders are the owners and require returns, and how much money to be paid to them is a crucial decision.

4. Working Capital Decision: The investment in current assets is a major activity that a finance manager is engaged in a day to day basis. How much inventory to keep, how much receivables can be managed, and what is the optimum cash levels, are three of the key questions that are dealt with regularly.

(b)

There are several factors that impact the cost of capital of any company. This would mean that the cost of capital of any two companies would not be equal. Rightly so as these two companies would not carry the same risk.

- General economic conditions: These include the demand for and supply of capital within the economy, and the level of expected inflation. These are reflected in the riskless rate of return and is common to most of the companies.
- Market conditions: The security may not be readily marketable when the investor wants to sell; or even if a continuous demand for the security does exist, the price may vary significantly. This is company specific.
- A firm's operating and financing decisions: Risk also results from the decisions made within the company. This risk is generally divided into two classes:
 - (i) Business risk is the variability in returns on assets and is affected by the company's investment decisions.
 - (ii) Financial risk is the increased variability in returns to the common stockholders as a result of using debt and preferred stock.
- Amount of financing required: The last factor determining the company's cost of funds is the amount of financing required, where the cost of capital increases as the financing requirements become larger. This increase may be attributable to one of the two factors:
 - (i) As increasingly larger public issues are increasingly floated in the market, additional flotation costs (costs of issuing the security) and underpricing will affect the percentage cost of the funds to the firm.
 - (ii) As management approaches the market for large amounts of capital relative to the firm's size, the investors' required rate of return may rise. Suppliers of capital become hesitant to grant relatively large amounts of funds without evidence of management's capability to absorb this capital into the business.

(c)

Annual Cash Inflows;

		Types			
Year	One. Units	Basic	Standard	Deluxe	Total
		50	112.5	87.5	250
		sh. 000	sh.000	sh.000	sh.000
Sales revenue		1,500	4,725	6,300	12,525
Less Variable costs		1,150	3,262.5	3,500	7,912.5
Contribution.		350	1,462.5	2,800	4,612.5
Less fixed cost					4,000
Net profit before dep.					612.5
Less Tax 28%					171.5
Net profit after tax					441
Add back provision for dep.					400
					Total cash inflow
					841.
Year two. Units	60	135	105	300	
	sh. 000	sh.000	sh.000	sh.000	
Sales revenue	1,800	5,670	7,560	15,030	
Less Variable costs	1,380	3,915	4,410	9,705	
Contribution.	420	1,755	3,150	5,325	
Less fixed cost				5,000	
Net profit before dep.				325	
Less Tax 28%				91	
Net profit after tax				236	
Add back provision for dep.				400	
				Total cash inflow	
				636	
Year Three. Units	90	202.5	157.5	450	
	sh. 000	sh.000	sh.000	sh.000	
Sales revenue	2,700	8,505	11,340	22,545	
Less Variable costs	2,070	5,872.5	6,615	14,447.5	
Contribution.	630	2,632.5	4,725	7,987.5	
Less fixed cost				5,500	
Net profit before dep.				2,487.5	
Less Tax 28%				696.5	
Net profit after tax				1,791	
Add back provision for dep.				400	
				Total cash inflow	
				2,191	
Year Four. Units	90	202.5	157.5	450	
	sh. 000	sh.000	sh.000	sh.000	
Sales revenue	2,700	8,505	11,340	22,545	
Less Variable costs	2,070	5,872.5	6,615	14,447.5	
Contribution.	630	2,632.5	4,725	7,987.5	
Less fixed cost				5,500	

Net profit before dep.	2,487.5
Less Tax 28%	696.5
Net profit after tax	1,791
Add back provision for dep.	400
Total cash inflow	2,191

Net present value for the first four years.

Year 0	(4,000 x 1)	=	-4,000
Year 1	841 x 0.909	=	764.469
Year 2	636 x 0.812	=	516.432
Year 3	2,191 x 0.731	=	1,601.621
Year 4	2,191 x 0.659	=	1,443.869
NPV	=		+326.391

Question Two.

(a) Calculation of leverage: Operating leverage = Contribution/Earnings before Interest & Tax

$$P Ltd = sh. 300/150 = 2$$

$$Q Ltd = sh.700/300 = 2.33$$

Financial leverage = Earnings before Interest & Tax/ Profit before Tax

$$P Ltd = 150 / 100 = 1.5$$

$$Q Ltd = sh. 300/200 = 1.5$$

Combined leverage = Contribution/ Earning before Tax (i.e., Operating leverage × Financial leverage)

$$P Ltd = sh. 300 /100 = 3$$

$$Q Ltd = sh. 700/200 = 3.5$$

Comment on the relative risk position of P Ltd. and Q Ltd.

(a) Operating Leverage: The operating leverage of Q Ltd. is higher than P Ltd.' and hence Q Ltd. is exposed to higher business risk than P Ltd. A firm will face business risk when the EBIT does not vary in direct proportion with the change in sales.

(b) Financial Leverage: The financial leverage of both the companies is same i.e., 1.5.

(c) Combined Leverage: When we study the overall risk of the companies, is carrying higher risk than P Ltd.

$$(b) WACC = [0.3 \times 0.084 \times (1 - 0.4)] + [0.7 \times (sh.2.5/(sh.40.5) + 0.07)] = 10.73\%$$

Question Three.

Advantages Loan notes

Disadvantages of loan notes.

From the view point of investors:

From the viewpoint of investors:

- Low risk – has priority in interest payments and on liquidation
- Income is fixed, so the holder receives the same interest whatever the earnings of the company.

- Has no voting rights – only if interest is not paid, holders will take control of the company

From the view point of company:

- Cheap – because it is less risky than equity for an investor
- Has predictable cash flows – limited to the stipulated interest payment
- Does not dilute control

From the view point of company:

- Inflexible – interest must be paid whatever the earnings of the company
- Increase risk at high levels of gearing
- Must be repaid the principles in general

The source that would be good for non-current assets is Rights issues because:

- It is a permanent source of capital
- It does not put a lot of pressure on the company to generate more profits.
- It lowers the gearing ratio.

working capital should finance by short term loans because:

- They take relatively a short time to convert into cash.
- They are always cheaper.

Question Four.

Value of the firm	Income statement
EBIT	150,000
LESS INTEREST	50,000
EBT	100,000
Less tax 35%	35,000
EAT	65,000

$$\text{Value of equity } EAT/K_e = 65,000/0.1 = 650,000$$

$$\text{Value of debt capital} = \text{Int.charged/int. rate} = 50,000/0.1 = 500,000$$

$$\text{Total Value} = 1,150,000$$

Overall cost of capital =

$$K_e = 0.1 \times 0.5 = 0.05$$

$$K_d = 0.065 \times 0.5 = 0.0325$$

$$0.0825 = 8.3\%$$

$$\text{Return on equity} = EAT/\text{Equity capital} = 65,000/500,000 = 0.13 \text{ or } 13\%$$

(a)

Value of the firm	Income statement
EBIT	150,0000
LESS INTEREST	75,000
EBT	26,500
Less tax 35%	35,000
EAT	48,500

$$\text{Value of equity EAT/Ke} = 48,500/0.1 = 485,000$$

$$\begin{aligned} \text{Value of debt capital} &= \text{Int. charged/int. rate} = 75,000/0.1 = 750,000 \\ \text{Total Value} &= 1,235,000 \end{aligned}$$

Overall cost of capital =

$$\begin{aligned} K_e &= 0.1 \times 0.25 = 0.025 \\ K_d &= 0.065 \times 0.75 = 0.04875 \\ &0.07375 = 7.373\% \end{aligned}$$

$$\text{Return on equity} = \text{EAT/Equity Capital} = 48,500/250,000 = 0.194 \text{ or } 19\%$$

Question Five.

(a)	Years	1	2	3
	Sh. 000	sh. 000	sh.000	sh. 000
Sales	100	140	196	274.4
Net profit margin	10	16.8	27.44	43.904
Add back Prov. Dep.	12	15	18.75	23.4375
Capital expenditure	40	46	52.9	60.835
Non- Cash W/C	36	42	49	41.16
Cash balance.	45	30.8	24.09	30.5965

(b)

Cash balance	45	30.8	24.09	30.596.5
Borrowings	4	4	4	4
Total	49	34.8	28.09	34.596.5
Less dividends	8	3.36	5.488	8.780.8
Bal. b/d	41	31.44	22.602	25.815.7
Less minimum balance				10,000
Amount spent on buy back				15,815.7