



UNIVERSITY EXAMINATION 2014/ 2015

FACULTY: COMMERCE & CO-OPERATIVE & COMMUNITY DEVELOPMENT

TYPE: REGULAR

UNIT CODE: HCOB 2305 \ CMFI 2101

UNIT TITLE: FINANCIAL MANAGEMENT 1 \ FINANCIAL MANAGEMENT

DATE: April 2015

TIME: 2 HRS

Instructions

- ♦ Answer question one and any other two questions
- ♦ All workings **MUST** be shown clearly

QUESTION ONE

- a) Outline four functions of a financial manager in a contemporary corporate set-up. (4 marks)
- b) An investor intends to invest in two stocks trading at NSE in order to reduce risk. A broker has extracted the following statistics for 3 stocks.

	Stock A	Stock B	Stock C
Expected Return	0.20	0.14	0.10
Standard deviation	0.232	0.136	0.195

The correlation coefficients between the three stocks are:-

	Stock A	Stock B	Stock C
Stock A	1.000		
Stock B	0.286	1.000	
Stock C	0.132	-0.605	1.000

The investor seeks a portfolio of 12%.

Required

Advise the investor on the possible stock combinations that would achieve his objective with the least amount of risk. (10 marks)

- c) Makindu PLC is contemplating to invest in a project to boost their income. The following information relates to the two mutually exclusive projects that the firm can invest in:

	Project A	Project B
Initial Investment	Sh 10 Million	Sh 12 Million
Cash inflows	Sh 3.6 Million per year for 6 years	Sh 4.0 Million per year for 3 years

The two project are subject to straight line of depreciation and the corporation tax is 30%. The return for each project is 15%.

Required

Advise the Management of Makindu PLC on the following regarding the projects:-

- Payback period (3 Marks)
 - Net Present Value (3 Marks)
 - Internal Rate of Return (4 Marks)
 - Advise on which of the project to choose under each method, giving reasons for your decision. (3 marks)
- d) Discuss three recent innovations in the financial market in Kenya (3 marks)

(Total: 30 marks)

QUESTION TWO

- a) In making investment decisions, cash flows are considered to be more important than accounting profits. Briefly explain why this is the case. (4 marks)
- b) Maridadi Ltd. wishes to make a choice between two mutually exclusive projects. Each of these projects requires Sh.400,000,000 in initial cash outlay. The details of the two projects are as follows:

Project A

This project is made up of two sub-projects. The first sub-project will require an initial outlay of Sh.100,000,000 and will generate Sh.25,600,000 per annum in perpetuity. The second sub-project will require an initial outlay of Sh.300,000,000 and will generate Sh.85,200,000 per annum for the 8 years of its useful life. This sub-project does not have a residual value at the end of the 8 years. Both sub-projects are to commence immediately.

Project B

This project will generate Sh.87,000,000 per annum in perpetuity.

The company has a cost of capital of 16%.

Required:

- i. Determine the net present value (NPV) of each project. (6 marks)
- ii. Compute the internal rate of return (IRR) for each project. (6 marks)
- iii. Advise Maridadi Ltd. on which project to invest in, and justify your choice. (4 marks)

(Total: 20 marks)

QUESTION THREE

- a) Outline four limitations of the use of ratios as a basis of financial analysis. (8 marks)
- b) The following information represents the financial position and financial results of Shirika Limited for the year ended 31 December 2014.

Shirika Limited

Statement of Comprehensive Income for the year ended 31 December 2014

	Sh."000"	Sh."000"
Sales – Cash		300,000
- Credit		<u>600,000</u>
		900,000
Less: cost of sales		
Opening stock	210,000	
Purchases	<u>660,000</u>	
	870,000	
Less: closing stock	(150,000)	<u>720,000</u>
Gross profit		180,000
Less expenses:		
Depreciation	13,100	
Directors' emoluments	15,000	
General expenses	20,900	
Interest on loan	<u>4,000</u>	
		(53,000)
Net profit before tax		127,000
Corporation tax at 30%		(38,100)
Net profit after tax		88,900
Preference dividend	4,800	
Ordinary dividend	<u>10,000</u>	<u>14,800</u>
Retained profit for the year		<u>74,100</u>

Shirika Limited

Statement of Financial position as at 31 December 2014

	Sh."000"	Sh."000"	Sh."000"
Fixed Assets			213,900
Current Assets:			
Stocks	150,000		
Debtors	35,900		
Cash	<u>20,000</u>	205,900	
Current Liabilities:			
Trade creditors	60,000		
Corporation tax payable	63,500		
Proposed dividend	<u>14,800</u>	<u>138,300</u>	<u>67,600</u>
			<u>281,500</u>

Financed by:

Ordinary share capital (Sh.10 par value)	100,000	
8% preference share capital	60,000	
Revenue reserves	81,500	
10% bank loan	<u>40,000</u>	
		<u>281,500</u>

Additional information:

1. The company's ordinary shares are selling at Sh.20 in the stock market.
2. The company has a constant dividend pay out of 10%.

Required:

Determine the following financial ratios explaining their relevance:

- i. Acid test ratio. (2 marks)
- ii. Operating ratio (2 marks)
- iii. Return on total capital employed (2 marks)
- iv. Price earnings ratio. (2 marks)
- v. Interest coverage ratio (2 marks)
- vi. Total assets turnover (2 marks)

(Total: 20 marks)

QUESTION FOUR

- a) The CMA (Capital Markets Authority) has put in place several tax incentives to encourage investments in capital markets. Highlight some of the tax incentives by the Capital Markets Authority. (6 marks)
- b) Explain the benefits that are enjoyed by investors because of the existence of organized security exchanges. (8 marks)
- c) Briefly describe the benefits of the Central Depository System (CDS) to the following stakeholders.
 - i. Government; (2 marks)
 - ii. Capital Markets Authority and Nairobi Stock Exchange; (2 marks)
 - iii. Investors. (2 marks)

(Total: 20 marks)

QUESTION FIVE

- a) Explain fully the effect of the use of debt capital on the weighted average cost of capital of a company. (6 marks)
- b) Maxi Investments Ltd. wishes to raise funds amounting to Sh.10 million to finance a project in the following manner:

Sh.6 million from debt; and

Sh.4 million from floating new ordinary shares.

The present capital structure of the company is made up as follows:

1. 600,000 fully paid ordinary shares of Sh.10 each
2. Retained earnings of Sh.4 million
3. 200,000, 10% preference shares of Sh.20 each.
4. 40,000 6% long term debentures of Sh.150 each.

The current market value of the company's ordinary shares is Sh.60 per share. The expected ordinary share dividend in a year's time is Sh.2.40 per share. The average growth rate in both dividends and earnings has been 10% over the past ten years and this growth rate is expected to be maintained in the foreseeable future.

The company's long term debentures currently change hands for Sh.100 each. The debentures will mature in 100 years. The preference shares were issued four years ago and still change hands at face value.

Required:

- i) Compute the component cost of:-
 - Ordinary share capital (2 marks)
 - Debt capital (2 marks)
 - Preference share capital (2 marks)
- ii) Compute the company's current weighted average cost of capital. (5 marks)
- iii) Compute the company's marginal cost of capital if it raised the additional Sh.10 million as envisaged. (Assume a tax rate of 30%). (5 marks)

(Total: 20 marks)

UNIVERSITY EXAMINATION 2014/ 2015**FACULTY: COMMERCE & CO-OPERATIVE & COMMUNITY DEVELOPMENT****TYPE: REGULAR CAMPUS: KAREN****UNIT CODE: HCOB 2305 \ CMFI 2101 UNIT TITLE: FINANCIAL MANAGEMENT 1 \ FINANCIAL MANAGEMENT****DATE: April 2015 TIME: 2 HRS****QUESTION ONE****a) Four important managerial finance functions****1) Investment of Long-term asset-mix decisions**

These decisions (also referred to as capital budgeting decisions) relates to the allocation of funds among investment projects. They refer to the firm's decision to commit current funds to the purchase of fixed assets in expectation of future cash inflows from these projects. Investment proposals are evaluated in terms of both risk and expected return.

Investment decisions also relates to recommitting funds when an old asset becomes less productive. This is referred to as replacement decision.

2) Financing decisions

Financing decision refers to the decision on the sources of funds to finance investment projects. The finance manager must decide the proportion of equity and debt. The mix of debt and equity affects the firm's cost of financing as well as the financial risk. This will further be discussed under the risk return trade-off.

3) Division of earnings decision

The finance manager must decide whether the firm should distribute all profits to the shareholders, retain them, or distribute a portion and retain a portion. The earnings must also be distributed to other providers of funds such as preference shareholder, and debt providers of funds such as preference shareholders and debt providers. The firm's dividend policy may influence the determination of the value of the firm and therefore the finance manager must decide the optimum dividend – payout ratio so as to maximize the value of the firm.

4) Liquidity decision

The firm's liquidity refers to its ability to meet its current obligations as and when they fall due. It can also be referred to as current assets management. Investment in current assets affects the firm's liquidity, profitability and risk. The more current assets a firm has, the more liquid it is. This implies that the firm has a lower risk of becoming insolvent but since current assets are non-earning assets the profitability of the firm will be low. The converse will hold true.

The finance manager should develop sound techniques of managing current assets to ensure that neither insufficient nor unnecessary funds are invested in current assets.

b) Combination possibility

i. 50% in B, 50% in C: $(0.5 \times 14\%) + (0.5 \times 10\%) = 12\%$

ii. 20% in A, 80% in C: $(0.2 \times 20\%) + (0.8 \times 10\%) = 12\%$

Variance of 1 (B & C)

$$=(0.5^2)(0.0185) + (0.5)^2(0.380)$$

$$= 0.0061$$

Variance of 1 (A & C)

$$=(0.2^2)(0.538) + (0.8)^2(0.380)$$

$$= 0.0284$$

Investing 50% in stock B and 50% in Stock C achieves the expected return of 12% with lower portfolio variance. Thus this would be the best combinations.

c) Payback period

Project A = $10M / 3.6M = 2.78$ Years

Project B = $10M / 4.0M = 2.50$ Years

NPV

Project A: Yr 0 (10,000,000)

Yr 1 -6 3.6M x 3.784 13,622,400

NPV 3,622,400

Project B: Yr 0 (12,000,000)

Yr 1 -6 4.0M x 2.283 9,132,000

NPV 2,868,000

$$IRR = L((N_L / (N_L - N_H)) \times (H - L))$$

$$L = 15\%$$

$$H = 30\%$$

$$N_L = 3,624,138$$

$$N_H = (486,115)$$

$$\text{Project A} = 23.226\%$$

$$\text{Project B} = 9.510\%$$

iv) Under PBP – Choose Project B - less payback period

Under NPV – Choose Project A - +ve NPV

Under IRR – Choose Project A - Highest IRR

d) Innovations by Financial markets

- Online trading
- ATM
- Mobile banking
- Internet banking
- Online share trading

QUESTION TWO

a) Cashflow are considered to be more important than accounting profits because:

- Accounting profits are affected by the accounting policies adopted
- There are non cash transactions involved in the determination profits and thereafter they may not be realized for investment purposes.
- The success of an investment depends mainly on cash movements than profits as reported.
- Whereas cashflows can be realized to levels of risk, accounting profits are not directly related to risk.

(b) (i) The Net Present Value (NPV)

Project A:	Sh.000
Subject-project 1 (25,600/0.16)	160,000
Subject-project 2 85,200 x	370,075
PVFA _(8.16%) (4.3436)	<u>530,075</u>
Less initial cost	<u>400,000</u>
Net present value	<u><u>130,075</u></u>

Project B:	Sh.000
P.V. of inflows(87,000/0.16)	543,750
Initial cash outflow	<u>400,000</u>
Net Present Value	<u><u>143,750</u></u>

For each project the IRR should be greater since NPV is positive at 16%.

(ii) For project A, we use 2 rates, 20% and 28% to approximate IRR.

	20%		28%
	Sh.000		Sh.000
Sub-project 1: 25,600/0.2	128,000	25,600/0.28	91,429
Sub-project 2: 85,200 x PVFA _(8.20%)		85200 x PVF _(8.20%)	
OR 3.8372	<u>326,929</u>	OR 3.0758	<u>262,058</u>
	454,929		353,487
Less I.C.O	<u>400,000</u>		<u>400,000</u>
NPV	<u><u>54,929</u></u>		<u><u>(46,513)</u></u>

$$\text{Thus IRR} = 20\% \left(+ \frac{54,929}{54,929 + 46,513} \right) (28-20)$$

$$= 20\% + 4.3\%$$

$$= 24.3\% \text{ OR } \underline{\underline{24\%}}$$

$$\text{For Project B: IRR} = \frac{87,000}{400,000} \times 100\%$$

$$= \underline{\underline{21.75\%}}$$

- (iii) According to NPV, project B is preferred (NPV of 143,750 > 130,075). However, based on IRR Project A is preferred (IRR of 20% > 21.75%)

Project B should be selected since NPV and shareholders wealth increase more under this project. IRR gives proportionate returns and presumes that cash flows are re-invested at the IRR which is not realistic.

QUESTION THREE

(a) Limitations of ratios

- They are based on historical data
- They are easy to manipulate due to different accounting policies adapted by the firms
- They are only quantitative measures but ignore qualitative issues such as quality of service, technological innovations etc
- They constantly change hence are computed at one point in time e.g. liquidity ratios change now and then
- They don't incorporate the effect of inflation
- They don't have standard computational purposes, firms are of different sizes

(b)	Ratio	Formulae	Computation
(i)	Acid test ratio	$\frac{\text{Current Asset-stock}}{\text{Current Liabilities}}$	$= \frac{205.9 - 150}{138.3}$
(ii)	Operating profit ratio	$\frac{\text{EBIT/Operating profit}}{\text{Sales}} \times 100$	$= \frac{53 + 4}{900} \times 100 =$
(iii)	Return on total capital Employed	$\frac{\text{Net Profit after Tax}}{\text{Sales}} \times 100$	$= \frac{88.9}{900} \times 100 =$
(iv)	Price Earning ratio	$\frac{\text{M.P.S}}{\text{EPS}}$ $= \frac{20}{8.41} = 2.38 \text{ times}$	$= \frac{20}{(88.9 - 4.8)/10\text{m shares}}$ $= \frac{20}{(53 + 4)/4}$ $= 14.25 \text{ times}$
(v)	Interest coverage ratio	$\frac{\text{EBIT}}{\text{Interest charges}}$	
(vi)	Total Asset Turnover	$\frac{\text{Sales}}{\text{Total Assets}}$	$= \frac{900}{213.9 + 205.9}$ $= 2.14 \text{ times}$

QUESTION FOUR

(a) The tax incentives to encourage investments in capital markets are:

- Capital gains are tax exempt
- New quoted firm with effect from 1st January 2003 will have a lower corporate tax rate of 25% p.a for the first 5 years of quotation.
- Venture capital firms enjoy a ten year tax holiday
- The withholding tax on dividends is only 5% which is final tax
- Floatation costs of newly quoted firms and tax allowable expenses

- The transfer of securities is exempted from stamp duty and VAT
 - Income of collective investment scheme is tax free.
- (b) The benefits that enjoyed by investors due to existence of organized security exchanges e.g. Nairobi Stock Market are:
- The firms are able to issue new shares and raise capital easily
 - The exchange is a vehicle of mobilizing savings in the economy
 - Since investors can buy new shares, this enable them to diversify their investments and reduce risk
 - It is a means through which foreign direct investment (FOI) can flow into the economy
 - Investors are able to know the price of their securities as determined by demand and supply forces in the stock exchange.
 - Since investors cannot buy or sell shares themselves, they interact with stockbrokers and get investment advice
- (c) The benefits of central depository system (CDS) to the:
- (i) Government:
- There will be greater mobilization of savings in the economy
 - It is a convenient way for FOI
 - It reduces the cost of capital since transaction costs are significantly reduced.
- (ii) Capital Market Authority and NSE
- Increased share turnover
 - Increased stock market liquidity
 - Improved transparency of stock market
 - Better service delivery
- (iii) Investors
- Reduced share transfer costs
 - Faster and more efficient settlement of deals
 - Investments become more liquid
 - Reduced share certificate is required (dematerialization)

QUESTION FIVE

(a) At initial stages of debt capital the WACC will be declining upto a point where the WACC will be minimal. This is because.

- (i) Debt capital provides tax shield to the firm and after tax cost of debt is low.
(ii) The cost of debt is naturally low because it is contractually fixed and certain.

Beyond the optimal gearing level, WACC will start increasing as cost of debt increases due to high financial risk.

(b) (i) Cost of equity

$$K_e = \frac{d_0(1+g)}{P_0} + g$$

$d_0(1+g) = \text{Sh}2.40$
 $P_0 = \text{Sh}60$
 $g = 10\%$
 $K_e = \frac{2.40}{60} + 0.10 = 0.14 = 14\%$

Cost of debt capital (Kd)

Since the debenture has 100years maturity period then Kd = yield to maturity = redemption.

$$K_d = \frac{\text{Int}(1-T) + (m - vd) \frac{1}{n}}{(m + vd) \frac{1}{2}}$$

$m = \text{Maturity/per value} = \text{sh } 150$
 $vd = \text{market value} = \text{Sh. } 100$
 $n = \text{number of years to maturity} = 100$
 $\text{Int} = \text{Interest} = 6\% \times \text{Sh. } 150 = \text{Sh.}9 \text{ p.a}$
 $T = \text{Tax rate} = 30\%$

$$K_d = \frac{9(1 - 0.3) + (150 - 100) \frac{1}{100}}{(150 + 100) \frac{1}{2}} = \frac{6.8}{125} \times 100 = 5.441\%$$

Cost of preference share capital K_p

$K_p =$ Coupon rate = 10% since MPS = par value

(ii)

WACC or overall cost of capital K_o

M.V of equity = 600,000 shares x sh 60 MPS 36

M.V of debt = 40,000 debentures x Sh 100 4

M.V of preference shares = 200,000 shares x Sh 20 4

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$K_e = 14\%$ $K_d = 5.44\%$ $K_p = 10\%$

$$K_o = \text{WACC} = 14\% \left[\frac{36}{44} \right] + 5.44\% \left[\frac{4}{44} \right] + 10\% \left[\frac{4}{44} \right] = \underline{\underline{12.86\%}}$$

The Sh 10M will be raised as follows:

Sh 6M from debt

Sh 4M from shares

Since there are no floatation costs involved then:

Marginal cost of debt = 5.4%

Marginal cost of ordinary share capital = 14%

$$\text{Therefore marginal cost of capital} = 14\% \left[\frac{4}{10} \right] + 5.4\% \left[\frac{6}{10} \right] = \underline{\underline{8.86\%}}$$