School of Business and Economics

Bachelor of Science in Finance

Financial management December 2016 end year semester examinations

CMFI 2204: Financial management II

Question One

Answer three questions .Question one is compulsory .Time 2 hours.

a) Distinguish between ordinary and preference share capital (8 marks)
b) Explain any five determinants of cost of capital (5 marks)
c) Explain any five factors that may restrict payment of dividends (5marks)
d) The following were extracts from the last years financial statements of Kisima Ltd :
Sales sh 2,000,000 , variable costs sh 800,000, Fixed costs(excluding interest) sh 400,000 ,20% Debentures sh1,000,000 . Corporation tax rate is 40% ; number of common shares outstanding 100,000 shares (par value sh 10 each).

***Required**:* *i*) Degree of operating leverage **(4 marks)**
ii) Degree of financial leverage **(4marks)**
iii) Degree of combined leverage **(2 marks)**
iv) Earnings per share (EPS**)** **(2 marks)**

Question Two

a) Explain the factors which influence capital structure decision (6 marks)

b) The cost of a company's ordinary share (par value sh 10) is 15% and dividends grow at a rate of 12% p.a.The ordinary shareholders expect a dividend of 9% p.a .Determine the current market price of the share. (5 marks)

c) Hardy Ltd has an annual net operating income of sh 200,000 , an average cost of capital of 10% and an initial debt of sh 750,000 at 8% rate of interest.

Required: Using NOI approach, determine:
i) Market value of equity (5 marks)
ii) Cost of equity (4 marks)

Question Three

a) What are the limitations of "trading on equity"? (5 marks)

b) A company is considering to raise sh 200,000 to buy a milk processing machine. The following three financing alternatives are available:

i) Issue 20,000 ordinary shares at sh 10 each
ii) Issue 10,000 ordinary shares at sh 10 each and 1,000 10% Debenture s at sh 100 each
iii) Issue 5,000 ordinary shares at sh 10 each and 1,500 10% Debentures at sh 100 each.
EBIT is sh 25,000 and Corporation tax is 40%.

Required: Recommend the best financing alternative (show workings) (15 marks)

Question four

a)Explain the determinants of working capital needs of a firm (8 marks)

b) The following information was extracted from the books of Serian Ltd in 2015:

i) Raw material stockholding period : 52 days
ii) Production(WIP) period : 11 days
iii) Finished goods stockholding period: 10 days
iv) Creditors' payment period:25 days
v) Debtors' collection period : 32 days
vi) Annual sales (all on credit): sh 3,600,000
vii) Cost of sales :sh 2,880,000
viii)Annual purchases (all on credit) : sh 1,440,000
Assume 1 year=365 days and production is carried on evenly throughout the year.

Required: Statement of working capital requirements (12 marks)

Question five

a) Explain the importance of cost of capital (4 marks)

b)The following capital structure of a company is considered optimal:

	Sh
Ordinary shares (600,000 shares at sh 10 each)	10,000,000
10% Preference shares (200,000 shares at sh 20 each)	4,000,000
12% Debentures (90,000 Bonds at sh 100 each)	9,000,000
Term loan	2,000,000
Total capital	25,000,000

Additional information

i) Ordinary shares are currently quoted at sh 15 each with a floatation cost of sh 5 per share; a dividend of sh 0.30 per share is expected by shareholders. The expected growth rate is 3% p.a

ii) Preference shares currently sell at sh 30 each

iii) The current issue price of debentures is sh 96 each

iv) Interest on term loan is 15%

v) Corporation tax is 40%

Required:

Determine the specific costs of capital and WACC (show workings) (16 marks)

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Marking scheme

Question one

a) Difference between ordinary and preference share capital:

- Ordinary shares carry voting rights whereas preference shares do not except convertible preference shares
- Ordinary shares carry variable dividend rate, preference shares have fixed dividend rate except participating preference shares
- Ordinary share capital is a permanent source of finance ; preference shares are usually redeemable except irredeemable preference shares.
- Ordinary share capital receive dividends after preference share capital
- Ordinary share prices are usually higher than preference share prices if the company is performing well.
- Preference share capital increases the company's gearing level whereas ordinary share capital reduces it.
- Cumulative preference shares may receive dividends in arrears whereas ordinary shares do not.
- It is easier to raise capital through issue of ordinary shares than preference shares.
- Ordinary shares qualify for bonus issues but not preference shares.
- Preference share capital is usually secured by company's financial strength but not ordinary shares.

b)Factors which determine the cost of capital

- The term or duration of finance
- Economic conditions prevailing
- Nature and size of business
- Availability of credit
- Government policy through CBK
- Effect of taxation
- Nature of security offered
- Growth stage of the company

c) Constraints on paying dividends:

- Legal restrictions
- liquidity
- access to the capital market
- restrictions in loan agreements
- control
- investment opportunities
- inflation

d) Kisima Ltd

	sh
Sales	2,000,000
Less: Variable cost	800,000
Contribution	1,200,000
Less : Fixed cost	400,000
EBIT	800,000
Less: Interest	200,000
PBT	600,000
Less: Corporation tax@40%	240,000
PAT	360,000

Degree of operating leverage(DOL)=Contribution/EBIT= 1,200,000/800,000=1.50
Degree of financial leverage(DFL)=EBIT/PBT= 800,000/600,000=1.333
Degree of combined leverage(DCL)=DOLxDFL=1.5x 1.333=2.00
Earnings per share(EPS)=PAT/N=sh360,000/100,000=sh 3.60
N=number of ordinary shares outstanding=100,000
EBIT + Fixed cost=Contribution.

Question two

a) Determinants of capital structure

- leverage (or trading on equity) effect on EPS
- growth and stability of sales
- cost of capital
- cash flow ability of the company
- control
- flexibility
- size of the company
- marketability
- flotation costs

b) Cost of equity =k_e= D_1/p_0 +g where D_1=expected dividend
P_0=market price
g=growth rate in dividends

K_e=9%x sh 10 x 100/P_0 +12 , solve for P_0 in the equation.

P_0=30

Therefore market price is sh 30.

c) Value of firm (NOI approach)

	sh
Net operating income ,X	200,000
Market value of firm, V=S+D=X/k_0=200,000/0.10	2,000,000
Market value of debt=D	750,000
Market value of equity=V-D	1,250,000

Cost of equity=K_e=(NOI-INT)/V-D=NI/S=(200,000-60,000)/1,250,000=140,000/1,250,000=0.112 or 11.2 %

Or K_e= K_o+ (K_o-K_d) D/S=0.10 +(0.10-0.08)x 750,000/1,250,000=0.10+0.012=0.112 or 11.2%

V=Value of firm, D=Market value of debt, S=Market value of equity

INT=Interest on debt.

K_d=cost of debt

NOI=Net operating income, NI=net income=NOI-INT

K_0=overall cost of capital.

Question three

a) Limitations of trading on equity

Trading on equity or gearing or financial leverage refers to the use of fixed charges sources of funds such as debt and preference share capital along with the owner's equity in the capital structure

Limitations of trading on equity

- Risk of failure due over-borrowed funds
- High debt ratio increases investment risk to increased interest charges
- There may be restrictions on further borrowing in loan agreements or debt contracts
- Management may not be confortable in issuing debt finance due to company's conservative policy.

b) Financing plans

	1	**2**	**3**
	Sh	**sh**	**sh**
EBIT	25,000	25,000	25,000
Less:Interest	--	10,000	14,000
	25,000	15,000	11,000
Less:Corporation tax@40%	10,000	6,000	4,400
Profit after tax (PAT)	15,000	9,000	6,600
Number of ordinary shares Outstanding (N)	20,000	10,000	5,000
Earnings per share(EPS)= PAT/N	sh 0.75	sh0.90	sh 1.32

Workings:

Plan 1:20,000 ordinary shares @ sh 10= sh 200,000

Plan 2:10,000 ordinary shares @sh 10 =	sh 100,000
1,000 debentures @sh 100=	sh 100,000
Total amount	sh 200,000
Interest on debt=10%x sh 100,000=	sh 10,000
Plan 3: 5,000 ordinary shares@sh 10 =	sh 50,000
1,5000 debentures @sh 100 =	sh 150,000
Total amount	sh 200,000

Recommendation:
Plan 3 has the highest EPS of sh 1.32 per share and maximizes shareholders wealth. It therefore the best financing alternative plan.

Question four

a) **Factors which determine the working capital needs of a firm:**
- Nature and size of the business
- Manufacturing cycle
- Business fluctuation
- Production policy
- Firm's credit policy
- Availability of credit
- Growth and expansion activities
- Profit margin and profit appropriation
- Price level changes
- Operating efficiency

b) **Calculation of working capital needs:**
Net Working capital=current assets-current liabilities
Statement of working capital needs

	Sh
Raw material stock: stock-holding period/Days in a year x annual purchases	
(52/365xsh 1,440,000)	205,000
Work in progress (WIP): production period/Days in a year x cost of sales	
(11/365 x sh 2,880,000)	87,000
Finished goods stock: Finished goods stockholding period/Days in year x	
Cost of sales (10/365x sh 2,880,000)	79,000
Debtors : Debtors' collection period/Days in a year x annual sales	
(32/365 x 3,600,000)	316,000
Investment in current assets	687,000
Less: Investment in current liabilities	
Trade creditors: creditor's payment period/Days in a year x Annual purchases	
(25/365 x sh 1,440,000)	(99,000)
Net working capital	**588,000**

Question five

a) **Importance of cost of capital**
- Yardstick against which viability of an investment is measured(investment decisions)
- Used to assess the ability of management to use resources efficiently (performance evaluation)
- Influence share prices and dividends(dividend policy)
- Used to gauge availability of finance(sourcing of finance)
- Used to assess the company's capital structure and whether its is optimum or not (capital structure determination)

b) Calculation of weighted average cost of capital (WACC)

Source	Amount (sh)	Proportion	After-tax cost	Weighted cost
Ordinary share capital	10,000,000	0.40	5.5%	2.20%
Preference share capital	5,000,000	0.16	6.67%	1.067%
Debentures	4,000,000	0.36	7.50%	2.70%
Term loan	2,000,000	0.08	9.00%	0.72%
	25,000,000		WACC	6.7

Workings:

i) **Cost of new equity**=k_e=div_1/p_0-f + g=0.30/15-5 + 2.50=5.50%

Where div_1=expected dividend

p_0=issue price or market price per share

f =floatation cost per share

g=growth rate in dividend as percentage

ii) **Cost of preference shares**=k_p= r$x$$divp_1/ps_0$= 10%x20/30=6.67%

Where r=rate of preference share dividend (%)

$divp_1$= expected preference share dividend

ps_0=issue or market price per preference share

iii(**Cost of debentures** =k_d=I(1-t)x par/D_o=12%(1-0.40)x100/96=7.50%

where I=nominal rate of interest on debentures

t=corporation tax rate

par=par value of debenture

D_0=issue price or market price per debenture

iv)**Cost of term loan** =k_t=R(1-t)=15%(1-0.40)=9%

(8 marks)

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Cmfi 2204 financial management II

Supplementary examination **December 2016**

Question one

a)Distinguish between equity and debt financing (8 marks)
b) Explain five considerations in designing a firm's dividend policy (5 marks)
c)Explain five features of an optimal capital structure (5 marks)
d) The following information is provided by Fatima Ltd in 2014:

	sh
Sales	5,460,000
EBIT	2,240,000
PBT	640,000
Fixed cost (including depreciation sh 200,000)	1,400,000

Required:
i)Degree of operating leverage (3 marks)
ii) Degree of financial leverage (3 marks)
iii)Degree of combined leverage (3 marks)
iv)Cash break- even point (3 marks)

Question Two

a) Explain four limitations of debt financing (4 marks)

b) ABC Ltd needs sh 1,000,000 for expansion. The expansion is expected to yield and annual EBIT of sh160,000 .In choosing a financial plan, the company has an objective of maximizing earnings per share (EPS).It is considering the possibility of issuing equity shares and raising debt of sh 100,000 or sh 400,000 or sh 600,000.The current market price per share is sh 25 and is expected to drop to sh 20 if the funds are borrowed in excess of sh 500,000 .Funds can be borrowed at the rates indicated below:

i) Upto sh 100,000 at 8%
ii) Over sh 100,000 and upto sh 500,000 at 12%
iii)Over sh 500,000 at 18%

Assume a tax rate of 50%.

Required: Determine the best financing alternative. (16marks)

Question three

a) Explain five advantages and five disadvantages of issuing ordinary shares to issuer company (10 marks)

b) Amani Ltd has an annual net operating income of sh100,000 , an average cost of capital of 10% and an initial debt of sh 1,000,000 at 6% rate of interest.

Required: Using NOI approach, determine:
i) Market value of equity (4 marks)
ii) Cost of equity (4 marks)

Question four

a) Explain the repercussions of :
i) Excessive working capital (4 marks)
ii) Inadequate working capital (4 marks)

b) A pro-forma cost sheet of a company provides the following data:

	Cost per unit (sh)
Raw materials	62.40

Direct labor (wages)	39.00
Overheads	48.60
Total cost	150.00

Additional information:

- **i)** Raw material stock-holding period: 30 days
- **ii)** Production (WIP) period : 15 days
- **iii)** Finished goods stock-holding period: 30days
- **iv)** Debtors collection period: 36 days
- **v)** Creditors payment period : 30 days
- **vi)** Deferral in payment of overheads: 30 days
- **vii)** Wages are paid within the same month; annual sales and purchases are all on credit.
- **viii)** Expected level of output is 60,000 units.
- **ix)** Assume 1 year =360 days

Required:

Prepare a Statement of working capital needed by the firm (12 marks)

Question five

a) What are the factors that determine the value of share? (5 marks)

b)A highly geared company has financed its activities as follows:

- Ordinary shares : 100,000 shares at sh 10 par value
- 4,000 8% Debentures at sh 100 par value
- 50,000 12% Preference shares at sh 10 par value

Additional information:

i) Ordinary shareholders expect a dividend of sh 2 per share and the growth rate on dividends is 3% p.a

ii) Corporation tax is 40%

iii) The market prices of the securities are as follows: Ordinary shares sh 20 each, preference shares sh 15 each and Debentures sh 120 each.

Required : Compute the weighted average cost of capital (WACC) (15 marks)

Bachelor of science finance

CMFI 2204: FINANCIAL MANAGEMENT II
Prerequisite: CMFI 2108 Financial Management I

Course Purpose To study the financial management functions of financing, dividend policy and working capital management. This course builds upon and extends the topics in Financial Management I

Expected Learning Outcomes
1. Use the methods learnt in time value of money to value financial assets
2. Describe how capital structure decisions are made.
3. Describe cost of capital

4. Examine operating and financial leverage, Working capital management and Dividend policy

Course outline

Week	Topic	Sub-topic	Remarks
Wk1&2	**Sources of Funds**	• *Internal sources of funds* • *External sources of funds* • *Methods of issuing shares* • *Rights and bonus issues* • *Short-term and other sources of funds*	
Wk3&4	**Cost of Capital**	• *Importance and determinants of cost of capital* • *Specific costs(Equity, Preference and debt finance)* • *Weighted average cost of capital* • *Marginal cost of capital* • *Cost of equity and CAPM*	Assign 1
Wk 5&6	**Capital Structure Decisions**	• *Optimal capital structure* • *Capital structure: Assumptions and theories (NI and NOI, traditional approach, M-M Hypotheses)* • *Capital structure under imperfections* • *Term structure of interest rates*	CAT 1
Wk 7&8	**Financial Leverage**	• *The concept of gearing/trading on equity* • *Measures of financial leverage* • *EBIT-EPS Analysis* • *Degree of Operating, financial and combined leverage* • *Cash breakeven point*	Assign 2
Wk 9&10	**Dividend Policy**	• *Determinants of dividend policy* • *Dividend relevance and irrelevance theories(Walter's, Gordon's Model and M-M Hypothesis)* • *Practical aspects of dividend policy(stability and forms of dividends)*	
Wk 11,12 & 13	**Working Capital Management**	• *Concept of Working capital* • *Determinants of working capital* • *Estimating working capital needs* • *Financing current assets.* • *Management of cash, debtors and inventory*	
Wk 14			CAT 2

Wk15	Revision and examinations

Teaching methodology Lectures Group discussions and group work
Instructional materials: To include tablets, smart board, LCD projector &computers, Flipcharts

Course evaluation

CATs/Assignments/presentation	30%
Final examination	70%
Total	100%

Course textbooks

Pandey,I M (2005), Financial management, Vikas publication House PVT Ltd.
Ross,Westerfield, and Jordan (2003), Corporate Finance,8th Edition, Mc-Graw Hill,Irwin.
Horne, V. (2008). Financial Management and Policy, Prentice ISBN-10: 013266679

Reference text books

Weston and Brigham, Managerial Finance, Holt Rheinhardt Publishing
Neaale W, Pike.R, Corporate Finance and Investment, Prentice Hall publishing.
Copeland, Thompson & Weston (1985), Managerial finance
Lawrence J. Gitman (1996), Principles of Managerial Finance, Pearson International, 11th Edition