



STRATHMORE INSTITUTE OF MATHEMATICAL SCIENCES
BBS ACTUARIAL SCIENCE
END OF SEMESTER EXAMINATION
BSA 2103: FINANCIAL STATEMENT ANALYSIS AND VALUATION IN ACTUARIAL
SCIENCE

DATE: 4 August 2020

Time: 2 Hours 30 mins

Instructions

1. This examination consists of **FIVE** questions.
2. Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

Question One

- a) What is meant by ratio analysis? State two consideration the financial analysts should consider before carrying out the ratio analysis. Explain two limitations of ratios. **(8 marks)**
- b) Common size and trend statements provide a convenient way to organize the financial statement information. Briefly explain the benefits of using the common size and trend statements in financial analysis. **(6 marks)**
- c) Duke Limited, is a public company quoted on the Nairobi Securities Exchange (NSE) that would like to acquire (100% of) a suitable private company. It has obtained the following draft financial statements for one of the companies, Salama Limited.

Salama Limited

Statement of comprehensive income for the years ended 31st December

	2019	2020
	KShs'000	KShs'000
Turnover	1,824,410	2,272,986
Costs of sales	(1,123,796)	(1,049,322)
Gross profit	700,614	1,223,664
Expenses		
Administration and establishment	(222,660)	(274,097)
Selling and distribution expenses	(11,584)	(10,782)
Other charges and expenses	(88,043)	(122,827)
Profit / (loss) from operations	378,327	815,958
Finance costs (interest)	(7,483)	(60,481)
Profit / (loss) before tax	370,844	755,477
Taxation (charge) / credit	29,971	(381,202)

Profit / (loss) after tax	400,815	374,275
---------------------------	---------	---------

Salama Limited

Statement of financial position as at 31st December

Assets	2019	2020
Non-current assets	KShs'000	KShs'000
Property, plant and equipment	1,176,980	2,429,918
Current assets		
Inventories	96,575	173,171
Trade and other receivables	173,163	184,480
Taxation recoverable	12,309	15,136
Cash and bank balances	30,263	283,086
	312,310	655,873
Total assets	1,489,290	3,085,791
Shareholders' funds and liabilities		
Capital and reserves		
Share capital	228,055	250,548
Reserves	789,339	1,577,216
Non-current liabilities	1,017,394	1,827,764
Deferred tax	130,583	296,429
Bank loan	7,784	4,550
Post-employment benefits	23,281	11,206
Notes in issue	-	600,000
Current liabilities	161,648	912,185
Short term portion of post-employment	2,100	1,500
Trade and other payables	308,148	344,342
	310,248	345,842
Total shareholders' funds and liabilities	1,489,290	3,085,791

Additional information:

Salama Limited has 400,000 ordinary shares outstanding and it operates on a 365 calendar-year. Assume all sales are made on credit.

Required:

a) From the information provided, compute the following ratios for Salama Limited for the years ended 31st December 2019 and 2020.

- i) Return on capital employed (2 marks)**
- ii) Asset turnover (2 marks)**
- iii) Inventory conversion period (2 marks)**
- iv) Accounts receivable collection period (2 marks)**
- v) Current ratio (2 marks)**

b) Based on the ratios you have computed in (a) above, assess the relative performance and financial position of Salama Limited for the two years ended 31st December 2019 and 2020 to inform the directors of Duke Limited in their acquisition decision. (6 marks)

(Total: 30 marks)

Question Two

- a) One metric of particular importance to an equity investor is earnings per share (EPS). EPS is an input into ratios such as the price/earnings ratio. Better still presentation of EPS enables each shareholder to compute his or her share of the company's earnings.

Required:

Discuss the importance of EPS to both the current and potential investors citing relevant examples. (6 marks)

- b) Natto Limited is a company which deals with the manufacture of polythene papers. As a result of a new legislation banning the use of polythene papers in country K in 2019, Natto Limited has been experiencing cash flow problems since then. The information provided below shows the performance of various subsidiaries of the company for the year ended 30 June 2020:

Natto Limited

Company	Working Capital	Retained Earnings	EBIT	Market value of equity	Liabilities	Sales	Total Assets
	Shs'000'	Shs'000'	Shs'000'	Shs'000'	Shs'000'	Shs'000'	Shs'000'
A Ltd	8,000	72,000	90,000	40,000	100,000	240,000	250,000
B Ltd	6,000	36,000	20,000	6,000	12,000	140,000	120,000
C Ltd	12,000	34,000	18,000	62,000	680,000	1,000,000	1,200,000
D Ltd	50,000	240,000	380,000	180,000	800,000	1,800,000	2,400,000

Required:

- i) ***The Altman's Z Score for each subsidiary company and a comment on each of the results obtained (8 marks)***
- ii) ***It has been suggested that other ratios ought to be incorporated into the Altman's bankruptcy prediction model. What is your opinion on this? (6 marks)***
- (Total: 20 marks)**

Question Three

- a) Financial ratios can help a firm identify its strategic and competitive capabilities and adjust accordingly. Giving a *relevant example*, analyze the relevance of this proposition. **(8 marks)**

- b) An analyst has gathered data from two companies in the same industry, Alpha and Beta Limited.

	Alpha Limited (Shs `millions)	Beta Limited (Shs `millions)
Revenues	500	900

Operating income	35	100
Interest expense	5	0
Income before taxes	30	100
Taxes	10	40
Net income	20	60
Total assets	250	300
Total debt	100	50
Owner's equity (book	150	250

Required:

Calculate the return on equity, (ROE) for both companies and explain the critical factors that can lead to a higher ROE.

(12 marks)

(Total: 20 marks)

Question Four

Mary is a financial analyst who is preparing to forecast cash flow for Parma limited as an input into her valuation model. She asked you to evaluate the historical cash flow statement of Parma limited which is presented here below. Parma limited presents its financial statement in conformity with IFRSs.

PARMA GROUP

STATEMENT OF CASHFLOWS

FOR THE YEAR ENDED 31ST DECEMBER

	2020		2019	
	Shs 'm'	Shs 'm'	Shs 'm'	Shs 'm'
Cash flows from operating activities				
Profit before tax		178		142
Adjustment:				
Profit from associates	(4)		(6)	
Finance cost	6		7	
Depreciation	64		53	
Impairment on goodwill	4		3	
Amortization of patents	3		3	
Amortization of trade licenses	23		18	
Loss on disposal of PPE	10		9	
	106	106	87	87
		284		230
Changes in working capital				
Increase/decrease in inventory	(96)		123	
Increase in receivables	(62)		(65)	
Decrease/Increase in payables	45		(158)	
	(113)	(113)	(100)	(100)
		171		130
Interest paid		(4)		(6)
Taxation paid		(26)		(42)

Cash flows from operating activities		141		82
Cash flows from investing activities				
Acquisition of PPE	(50)		(95)	
Acquisition of available for sale financial assets	(5)		(14)	
Acquisition of trade licenses	(100)		-	
Disposal of PPE	4		15	
Disposal of FV through p/l a/c	5		-	
Dividends from associates	1		4	
Cash flows used in investing activities	(145)	(145)	(90)	(90)
Cash flows from financing activities				
Issue of shares	90		45	
Issue of debentures	40		20	
Redemption of bank loan	(8)		25	
Dividends paid: H ltd	(80)		(60)	
: N.C.I.	(1)		(5)	
Cash flows from financing activities	41	41	25	25
Cash and Cash equivalent during the year		37		17
Cash and Cash equivalent bal b/f		(23)		(40)
Cash and Cash equivalent bal c/f		14		(23)

Required:

- What are the major sources of cash for Parma limited? (4 marks)***
 - What is the relationship between the net profit before tax and cash flow from operating activities? (6 marks)***
 - Is the cash flow from operating activities sufficient to cover capital expenditures? (2 marks)***
 - Evaluate the liquidity position of Parma limited and in particular the going concern of the entity. (8 marks)***
- (Total: 20 marks)**

Question Five

- Explain what is meant by the term 'Earnings management' **(2 marks)**
- Recording the substance of transactions, rather than their legal form, is an important principle in financial accounting. Abuse of this principle can lead to profit manipulation; non-recognition of assets and substantial debt not being recorded on the balance sheet.

Required:

- Describe how the use of off-balance sheet financing can mislead users of financial statements (your answer should lay emphasis on earnings management). (6 marks)***
- According to IASs 33 (*Earnings Per Share*), explain why the diluted earnings per share is more suitable for valuation purposes than the basic EPS. **(4 marks)**

d) Malcolm Ltd reported Sh. 100,000 in net income for 2004 on weighted average common shares outstanding of 12,500. Malcolm Ltd has Sh. 400,000 face value of convertible bonds outstanding with an annual coupon rate of 6%. The bonds were issued on April,1, 2004 and can be converted into common shares at a conversion ratio of 20 shares per 1,000 of face value. Malcolm Ltd has also had 5,000 outstanding warrants with an exercise price of Sh. 40 that were issued on December 31, 2003. The average share price during the year was Sh. 45, and the marginal tax rate is 35%.

Required: Compute the basic and the diluted earnings per share. **(8 marks)**

(Total: 20 marks)