



QUESTIONS

Examination Paper 2.1

**Financial Accounting and Financial
Statement Analysis**

Economics and Financial Markets

Quantitative Analysis and Statistics

Professional Examination

March 2021

Level 2

Question 2 - Financial Accounting and Financial Statement Analysis

Briefly explain the impact of gearing on a company's return on equity (ROE). (3 marks)

Solution to Question 2

- a. Increased debt increases the leverage factor in a company.
- b. During normal or boom times, leverage results in exponential profit returns.
- c. During recessions, leverage can result in exponential losses.
- d. A large debt burden carries risk because of the reaction of leverage to the prevailing economic conditions.
- e. Increased debt favours ROE during boom times but hurts ROE during recessions. (1 for any 3 marks)

Question 5 - Financial Accounting and Financial Statement Analysis (20 marks)

The net assets (non-current assets plus current assets less current liabilities) of a company at the start of a period are ₦6,000,000. During the period the following transactions occur:

Cash received from debtors of ₦550,000.
Sale of stock for ₦900,000 on credit (stock cost ₦750,000).
A 5 year bank loan of ₦500,000 is arranged and the cash received. An unexpected bad debt of ₦50,000 is written off.

- 5a) Work out the new figure for net assets. (2 marks)
- 5b) A company has a falling current ratio.
 - 5b1) Explain why this might be a concern for an investor. (2 marks)
 - 5b2) Explain why this might be seen as good management. (2 marks)
- 5c) The following information is extracted from the accounts of a quoted company: ₦

Profit before interest and tax	75,000
Interest payable	30,000
Profit before tax	45,000
Tax payable	15,000
Profit for the year	30,000
Total dividend for the year:	10,000

- 5c1) Calculate the interest cover and dividend cover ratios for the company. (2 marks)
- 5c2) You later discovered that the company had capitalized interest of ₦25,000 in the year (therefore, excluded from the extracts above).

Required:
Revise your analysis given this extra information. (2 marks)
- 5c3) Briefly comment on your results in (8c1) and (8c2) above. (2 marks)

- 5d) For each item below, mark "X" to show whether it has an impact on cash flows and, if yes, on which category of cash flows:

Item	No impact on cash flows	Impact on cash flows from operating activities	Impact on cash flows from investing activities	Impact on cash flows from financing activities
Payment of dividends to shareholders				
Increase of the allowance for bad debts				
Payments received from customers				
Acquisition of a subsidiary				
Impairment of goodwill				
Increase of share capital by issuing bonus shares				
Sale of a fixed asset				
Payments to suppliers				

(4 marks)

5e) Parent Limited bought 60% of the shares of Child Limited for ₦100,000 when Child Limited's retained earnings were ₦40,000. As at December 31, 2011 the respective net assets positions were as follows:

	Parent Ltd	Child Ltd
	<u>₦</u>	<u>₦</u>
Share capital	70,000	80,000
Share premium	50,000	70,000
Retained earnings	90,000	110,000

Calculate the amount of *retained earnings* that would be shown in the Consolidated Statement of Financial Position of Parent Limited's Group as at December 31, 2011.

(4 marks)

Solution to Question 5

5a)

Opening net assets	6,000,000	¼ mark
<u>Adjustments</u>		
Cash from debtors	0	½ mark
Sale of stock	+ 900,000	¼ mark
	-750,000	¼ mark
5-year loan	+500,000	¼ mark
Bad debt	<u>- 50,000</u>	¼ mark
Closing net assets	<u>6,600,000</u>	¼ mark

5b)**5b1)**

A falling current ratio might show reduced liquidity and increased risk of default and inability to pay creditors. (2 marks)

5b2)

It might show better working capital management as excess working capital can always be paid back to shareholders. (1 mark)

Again, there is generally an inverse relationship between liquidity and profitability. (1 mark)

5c1)

Interest cover = PBIT/ Interest payable = N 75,000/ N30000 = 2.5 (1 mark)

Dividend cover =PAT/Dividend for the year = N 30,000/ N10,000 = 3 (1 mark)

5c2)

If interest of N25,000 was not capitalized then: Interest payable = 30,000 + 25,000 = N50, 000.

Profit for the year = 30,000 - 25,000 = N5, 000 (assuming no change in tax payable).

Interest cover = PBIT/ Interest payable = N 75,000/ N50, 000 = 1.5 (1 mark)

Dividend cover =PAT/Dividend for the year = N 5,000/ N10,000 = 0.5 (1 mark)

5c3)

Capitalization of interest of N25,000 has resulted in an improvement in the interest cover and dividend cover of the company. This had made the performance of the company to appear better than it really was. (1 mark)

Without capitalization of interest, it is clear that the company's capacity to pay interest expenses and declared dividend was quite weak. (1 mark)

5d)

Item	No impact on cash flows	Impact on cash flows from operating activities	Impact on cash flows from investing activities	Impact on cash flows from financing activities
Payment of dividends to shareholders				*
Increase of the allowance for bad debts	*			
Payments received from customers		*		
Acquisition of a subsidiary			*	
Impairment of goodwill	*			
Increase of share capital by issuing bonus shares	*			
Sale of a fixed asset			*	
Payments to suppliers		*		

½ mark for each correct box (Total 4 marks)

5e)

Retained earnings in consolidated accounts

100% of parent's retained earnings plus a proportion of the post acquisition reserves of the subsidiary based on percentage of ownership (in this case 60%). (2 marks)

$$= 100\% \times 90,000 + 60\% (110,000 - 40,000) = \mathbf{N132.000} \quad (2 \text{ marks})$$

Question 3 – Economics and Financial Markets

Is there any difference between “Naira devaluation” and “Naira depreciation”?
Explain. (3 marks)

Solution to Question 3

Naira devaluation and depreciation are only similar, strictly not the same. (1 mark)

Devaluation is generally used for a discrete change in the exchange rate brought about as a matter of policy, whereas depreciation occurs gradually through the working of the foreign markets. (1 mark)

Both Naira devaluation and depreciation represent a fall in the price of a currency in terms of other currencies, but under different exchange rate regimes; fixed exchange rate and flexible exchange rate system, respectively. (1 mark)

Question 6 - Economics and Financial Markets

Below is an extract from a recent newspaper publication on IMF projections on the Nigerian economy in 2021.

“The International Monetary Fund, IMF, has predicted a 3.3% economic growth for Nigeria in 2021, up from 1.5% in 2020, with inflation to continue on downward trend.

IMF said the accelerated economic growth, which reflects a more optimistic outlook than the 2.5% growth projected by Minister of Finance, Budget and Planning, Mrs. Zainab Ahmed, would be driven by sectors outside its dominant energy industry. The forecast puts inflation ending the year at 10%, down from 13% percent at the end of 2020, continuing a two-year downward trend supported by tight monetary policy.”

It is good news that, while the Nigerian economy is projected to be in a phase of growth in 2021, some other economies are experiencing economic recession and/or economic depression.

6a1) Distinguish clearly between economic recession and economic depression. (4 marks)

6a2) Are inflation and economic recession necessarily mutually exclusive? (5 marks)

6a3) Using the IS-LM model, illustrate with appropriate diagram(s) how the higher growth projection of 3.3% in 2021 compared with 1.5% in 2020 will be achieved? (6 marks)

6b)

6b1) Explain what automatic stabilizers are and give two examples (1 mark)

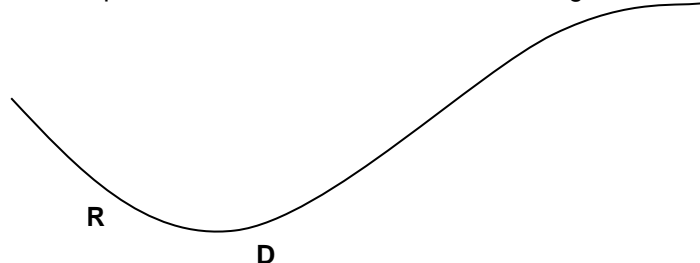
6b2) List two advantages of automatic stabilizers. (2 marks)

(Total: 18 marks)

Solution 6

6a1) Economic Recession and Depression

- Economic recession is a period of decline in total output, income, employment, and trade, lasting six (6) months or longer.
- It is a period of downturn marked by widespread contraction of business in many sectors of the economy.
- However, because many prices are downwardly inflexible, the price level is likely to fall only if the recession is severe and prolonged – i.e., if a depression occurs.
- Hence, economic depression could be described as the trough of recession.



D = Depression and R = Recession

- It is the phase in which output and employment "bottom out" at their lowest levels. (1 mark each for any 4 points)

6a2) Inflation and Economic Recession

- Inflation is a period of rising general prices on a sustained basis (1 mark)
- Ordinarily inflation and recession could be considered to be mutually exclusive meaning you could not have one when the other was occurring. This was the popular notion in the decades following World War II – having support in the Keynesian macroeconomic theory. (1 mark)
- However, history has proven this to be incorrect. This has led to the introduction of the term "stagflation". Stagflation is said to be occurring when the inflation rate is high with a slowing economy and high unemployment. (1½ marks)
- Thus, inflation with a stagnant economy or deep recession/depression could be a reality, arising for instance from a disruption in the supply chain resulting in higher prices and lower production. (1½ marks)

6a3)

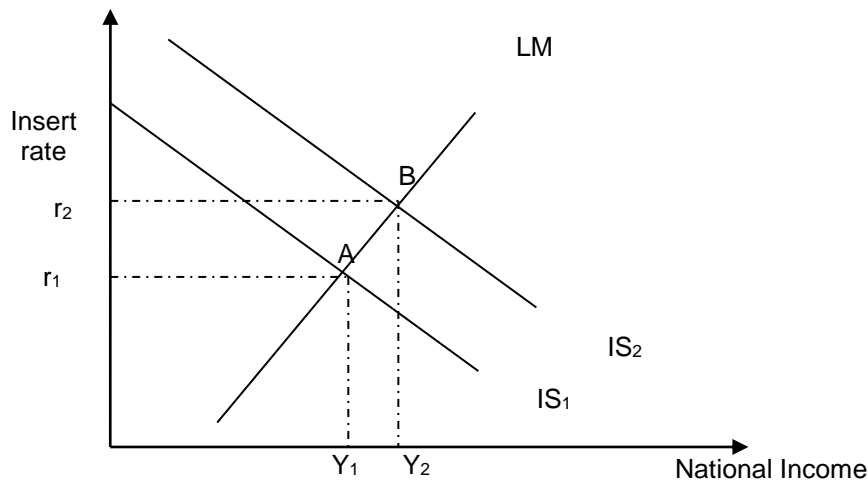


diagram is (2 marks)

Illustrated in the figure above is the impact of an expansionary fiscal policy in the form of government expenditure on the national income, starting from point A where national income is Y_1 and interest rate is r_1 . Assume government expenditure rises, there will be an outward shift of the IS curve from IS_1 to IS_2 , while the LM curve remains unchanged. (2 marks)

The rightward shift of the IS curve results in a rise in national income from Y_1 to Y_2 as well as interest rate from r_1 to r_2 . (1 mark)

Thus, IS-LM model shows that expansionary fiscal policy of increase in government expenditure raises both the level of national income and rate of interest. (1 mark)

6b)

6b1) Taxes and transfer payments that change with income are referred to as automatic stabilizers. (½ mark)

Progressive income tax and transfer payments. (½ mark)

6b2) They reduce fluctuations in income, output, and employment without deliberate actions on the part of policy makers. (1 mark)

They take effect automatically when income changes e.g. when workers lose their jobs, they may become immediately entitled to receive unemployment benefits. (1 mark)

Question 4 - Quantitative Analysis and Statistics

A random samples of size 90 from population of students in Nigeria who sat for Senior Secondary school certificate May/June 2016 Mathematics exam with probability of success 0.55.

- (i) compute the mean of the sample (1 mark)
- (ii) Variance (2 marks)
- (iii) Standard deviation correct to 2 decimal places (1 mark)

(Total: 4 marks)

Solution to Question 4

- (i) mean : $np = 90 \times 0.55 = 49.5$ (1 mark)
- (ii) $1-p=0.45$, variance = $np(1-p)$ (1 mark)

$90 \times 0.55 \times 0.45 = 22.275$ (1 mark)

(iii) $SD = \sqrt{Var} = \sqrt{22.275} = 4.72$ (1 mark)

Question 7 - Quantitative Analysis and Statistics

(12 marks)

7a

ABC Plc. manufactures plastic plates. Each plate is sold at ₦9.00 and the variable cost price of each plate is ₦5.50 with a fixed cost of ₦9,500.00.

Determine:

- 7a1) The cost function of production (2 marks)
 - 7a2) The output and the revenue at the Break-Even Point (BEP) (2 marks)
 - 7a3) The profit when 3000 plates are produced and sold. (2 marks)
 - 7a4) The sale volume that will generate a profit of ₦6,500 (2 marks)
- (8 marks)

7b

The Arithmetic mean of the distribution of 50K shares held by the 30,000 shareholders of TRANSCORP PLC is 850. The standard deviation is 2,000 while the median is 500.

Determine:

- 7b1) The total number of shares and hence the worth in Naira of the total shares of the company. (2 marks)
 - 7b2) The co-efficient of variation of the distribution. (2 marks)
- (Total: 12 marks)

Solution 7

7a

Let q units be produced.

7a1) Cost function, $C(q) = 5.5q + 9500$ (2marks)

7a2) At BEP, $C(q) = R(q)$ (½ mark)

i.e. $5.5q + 9500 = 9q$ (½ mark)

i.e. $3.5q = 9500 = q = \frac{9500}{3.5} = 2714.3$ (½ mark)

$q = 2714$ units (½ mark)

7a3) Profit, $P_r(q) = R(q) - C(q)$ (½ mark)

$= 9q - (5.5q + 9500)$ (½ mark)

$= 3.5q - 9500$ (½ mark)

$P_r(3000) = \frac{7}{2}(3000) - 9500 = \frac{21000}{2} - 9500 = 1000\text{units}$ (½ mark)

When

7a4) $P_r(q) = 6500$ (½ mark)

$3.5q - 9500 = 6500$ (½ mark)

$3.5q = 1600$ (½ mark)

$q = 4600\text{units}$ (½ mark)

7b

7b1)

Total no. of shares = $30,000 \times 850 = \mathbf{25,500,000}$ (1 mark)

Worth of Total share = $25,500,000 \times 0.50 = \mathbf{N12, 750,000}$ (1 mark)

7b2)

Coefficient of Variation = $\frac{\text{Standard Deviation}}{\text{Mean}} \times 100$ (1 mark)

$= \frac{2,000}{850} \times 100$ (½ mark)

$= \mathbf{235}$ (½ mark)