



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91 Cadastral Zone Nnamdi Azikiwe Express Way, Jabi-Abuja
FACULTY OF MANAGEMENT SCIENCES
DEPARTMENT OF FINANCIAL STUDIES
2019_2 EXAMINATION

Course Code: BFN721

Credit Unit: 2

Course Title: INVESTMENT ANALYSIS & PORTFOLIO MANAGEMENT

Time Allowed: 2HOURS

Instructions:

- 1. Attempt Question 1 and any other three (2) Questions.**
 - 2. Question 1 is compulsory and carries 30 marks while the other Questions carry 20 marks each.**
 - 3. Present all your points in a coherent and orderly manner.**
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1. Laraba Plc. is considering an investment which it intends to finance by the issue of new ordinary shares and debentures in a mix which will hold its gearing ratio approximately constant. The company has an issued share capital of 1 million ordinary shares of ₦1 each and also issued ₦700, 000 8% debentures. The market price of the ordinary shares is ₦3.76 per share and the debentures are priced at ₦75. Dividends and interest are payable annually. An ordinary dividend has just been paid while the next installment of interest is payable in the near future. Debentures are redeemable at par in twenty years time. A summary of the company's balance sheet as at 31 December 2018 is as follows:

	₦'000	₦'000
Fixed Assets		1,276
Current Assets	4,066	
Less: Current liabilities	<u>1,925</u>	
		<u>2,141</u>
		<u>3,417</u>
Financed by:		
Ordinary share capital	1,000	
Reserves	1,553	
Deferred taxation	164	
Debentures	<u>700</u>	
	<u>3,417</u>	

Dividends and Earnings have been as follows:

	Dividends	Earnings (before tax)	Earnings (after tax)
	₦'000	₦'000	₦'000
2014	200	575	350

2015	230	723	452
2016	230	682	410
2017	260	853	536
2018	300	906	606

The new investment which has the same risk characteristics as the existing projects, would require an immediate outlay of ₦1,500,000 and would generate an annual net cash inflow of ₦500,000 indefinitely.

You are required to:

- (a) Calculate Laraba Plc's Weighted Average Cost of Capital (WACC). **(10 Marks)**
- (b) Discuss briefly four (4) difficulties and uncertainties in your estimation. **(5Marks)**
- (c) Prepare calculations showing whether or not acceptance of the new project is worthwhile. **(5 Marks)**
- (d) Appraise the dividend policy of the company. **(10 Marks)**

2.

Goody-Goody Plc is a fast growing profitable company situated in a commercial city in the southern part of the country. It specializes in the manufacture and distribution of water reservoirs. The management of Goody-Goody Plc has just identified a niche market in certain northern cities requiring a particular size of reservoir not currently manufactured by the company. The company's current facilities cannot be used to manufacture the new – size reservoir, and it is imperative to buy a new machinery. Acquisition and installation will cost ₦18million over the next 2 years, ₦9million in each year. Expected cash inflows associated with the project from year 3 to 8 are ₦2.8million, ₦3.8million, ₦6.5million, ₦6.2million, ₦5million and ₦1.5million respectively. If the project is successful the company has an option to invest additional ₦15 million to secure a wider market at the end of year 5. The probability of success is 60 percent with an expected incremental cash flow from year 6 to 10 as follows:

Incremental Cash flow (₦'m)	Probability
8.0	0.5
5.4	0.5

However, if not successful the company will not invest the ₦15million and there will be no expected incremental cashflows. The required rate of return of Goody-Goody plc is 10 per cent. You are required to determine:

- (a) The net present value of the initial project and comment on its acceptability. **(10 Marks)**
- (b) The worth of the project if the option to expand is considered. Comment on its acceptability. **(10 Marks)**

3. (a) List the THREE forms of capital market efficiency **(5 Marks)**

(b) A valued client of your stock broking firm has asked for your advice on his investment portfolio. Details of his securities in the stock market (which is regarded as efficient) with the associated risk characteristics are given below:

SECURITIES	X	Y	Z
Standard deviation (%)	5	15	14
Correlation coefficient (%)	80	40	60
Proportion of amount invested (%)	30	30	40

The expected return on shares in general and on the basis of past return and inflationary expectation was estimated to be 20%. It is expected that the risk premium will be about 5%. The risk of the market as measured by its standard deviation is 8%. All the three securities lie on the Securities Market Line (SML).

You are required to prepare the following computations for a discussion with your client, as a prelude to your advice:

- (i) The expected portfolio return **(8 Marks)**
- (ii) The risk of the portfolio **(7Marks)**

4.

Bamisoro Nigeria Limited is a fast growing profitable company. The company is based in Lagos and has just won a contract to supply gas to the State's Electricity Board. In this regard, the company planned to commission a 35-kilometre pipeline at a cost of ₦260m to enable it execute the contract. The pipeline, when installed, will carry the gas to an agreed location under the control of the State Electricity Board.

With all these arrangements in place, it is expected that the sales of the company will increase from the present ₦360m to about ₦1,100m.

The anticipated revenue from sales to the State's Electricity Board is expected to be ₦120m per annum.

Apart from this contract, the pipeline could also be used to transport Liquefied Natural Gas (LNG) to other willing customers in the suburb. The sales from this source are put at ₦80m per annum.

The management of Bamisoro Nigeria Limited considers the useful life of the pipeline to be 20 years. The financial manager estimates a profit to sales ratio of 20% per annum for the first 12 years and 17% per annum for the remaining life of the project.

The project is not likely to have any salvage value.

Bamisoro Nigeria Limited is located in a remote area hence would enjoy exemption from tax.

The company's cost of capital is 15%.

- (a) Distinguish between mutually exclusive investment and independent investment. **(2Marks)**
- (b) Why is investment decision important to organizations and what techniques can be used to ensure that optimal investments are undertaken by firms? **(5 Marks)**
- (c) What is the project's payback period? **(2 Marks)**

(d) Advise Bamisoro Nigeria Limited giving reasons as to the acceptability of the project based on the payback criterion. **(3Marks)**

(e) Compute the project's NPV and IRR. **(8 Marks)**

5. Chief Alagbala has the following portfolio of shares in five listed companies in Nigeria:

Companies	Black	Blue	Yellow	Purple	White
Shares held (units)	15,000	18,000	10,000	12,000	20,000
Price per unit	₦0.50	₦0.60	₦0.40	₦0.25	₦0.35

The following data are given in relation to the shares:

Companies	Black	Blue	Yellow	Purple	White
Market value per share	₦2.50	₦2.20	₦1.90	₦1.50	₦0.60
Current dividend yield	2.2%	4.0%	5.2%	2.6%	1.8%
Beta Factor	1.32	1.20	0.80	1.05	0.80

At present the risk-free rate of return is 8% while the market return is 14%.

You are required to

(a) Calculate:

(i) the Beta Factor **(5Marks)**

(ii) the required return on the portfolio. **(10 Marks)**

(b) Explain the relevance of Portfolio Theory to Chief Alagbala. **(5 Marks)**