

COVENANT UNIVERSITY

TUTORIAL KIT

PROGRAMME: BANKING AND
FINANCE

ALPHA SEMESTER

400 LEVEL



Raising A New Generation Of Leaders

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COVENANT UNIVERSITY

CANAANLAND, KM 10, IDIROKO ROAD
P.M.B 1023, OTA, OGUN STATE, NIGERIA.

TITLE OF EXAMINATION: B.Sc EXAMINATION

COLLEGE: BUSINESS AND SOCIAL SCIENCES

SCHOOL: BUSINESS

DEPARTMENT: BANKING AND FINANCE

SESSION: 2014/2015

COURSE CODE: BFN 411

COURSE TITLE: FINANCIAL MANAGEMENT

INSTRUCTION: Answer FOUR Questions only

SEMESTER: ALPHA

CREDIT UNIT: 3

TIME: 2½ HOURS

1. (a). Define Simulation and give a reason why it is preferred to a decision tree.

(b). Discuss in details any five Limitations of Sensitivity Analysis

(c). A property owner is faced with a choice of:

(i) A large-scale investment (A) to improve her flats. This could produce a substantial pay-off in terms of increased revenue net of costs but will require an investment of N1,400,000. After extensive market research it is considered that there is a 40% chance that a pay-off of N2,500,000 will be obtained, but there is a 60% chance that it will be only N800,000.

(ii) A smaller scale project (B) to re-decorate her premises. At N500,000 this is less costly but will produce a lower pay-off. Research data suggests a 30% chance of a gain of N1,000,000 but a 70% chance of it being only N500,000.

(iii) Continuing the present operation without change (C). It will cost nothing, but neither will it produce any pay-off. Clients will be unhappy and it will become harder and harder to rent the flats out when they become free.

Required: Based on the above data, draw a decision tree and choose the best alternative using EV.

2(a) Mention and explain the basic Asset Replacement Decision Methods.

(b) Covenant University Power Ltd is trying to put up a policy for the replacement of its transformers. The team of engineers and financial experts has come up with the life cycle present values as stated below:

Replacement period in years	PV of cost for a full life cycle
	N
1	2,200,000
2	2,560,000
3	2,910,000
4	3,000,000
5	3,400,000

Using a COC of 12%, determine the optional replacement period for the consideration of management. Advise the management which year to replace its transformers. Discount factor should be rounded off to 4 decimal places.

3(a) Explain any five (5) of the following sources of equity funds available to companies:

- (i) Private Placement.
- (ii) Offer For Sale
- (iii) Offer For Subscription
- (iv) Stock Exchange Introduction
- (v) Offer For Sale by Tender
- (vi) Rights Issues.

(b) Hebron Plc had N10m ordinary share in issue and each share is currently quoted at N3. The company is considering making right issue of one for every 4 held at N2:

You are required to calculate:

- (i) The theoretical Ex - right price - 2 marks

- (ii) Value per right (Nil paid price) - 2 marks
- (iii) Value of a right - 2 marks
- (iv) Define Theoretical Ex-Right Price. - 1¹/₂

4a. Hebron Limited is considering a project requiring an outlay of N1.5 and the following expected cash inflows:

Yr	Real Cashflows
1	650,000
2	700,000
3	750,000
4	800,000

The money cost of capital is 20% and inflation rate is currently running at 17% per annum.

Required: Determine the project viability using (a) RCF (b) MCF (7¹/₂ marks)

4b. Fetob Nig. Ltd is considering a project costing N50,000. The project is expected to have a life of 4 years with a residual value of N4,000. Annual cash revenue from the project is expected to be N35,000 in year 1 rising afterwards by 6% per annum for inflation. Running cost are expected to be N15,000 in the first year of the project but would increase by 11% per annum because of inflating labour costs. The general rate of inflation is expected to be 10% and the company's money cost of capital is 18%. Advise the company on whether or not to accept the project.

4c. Explain the basic types of inflation. What are the implications? (2 marks)

Total (17¹/₂ marks)

5. XYZ company is considering investing in plant and machinery costing N100,000. The machine has a life of 5 years after which it can be sold for N5,000. The machine would generate annual

cost of saving of N35,000. Investment incentive on the machinery will be available as follows: Investment allowance 20%, initial allowance 20%, annual allowance 10% on a straight line basis. Tax rate 35% payable one year in arrears and after tax cost of capital is 15%. Should the machine be purchased? Total (17½ marks)

6. a. With the aid of diagrams explain and discuss the difference between SML and CML
- b. What are the assumptions and implications of CAPM?
- c. Briefly Discuss with relevant examples the concept of systematic, unsystematic and total risk.

**COVENANT UNIVERSITY, OTA
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**TITLE OF EXAMINATION: B.Sc BANKING AND FINANCE
SCHOOL OF BUSINESS, COLLEGE OF BUSINESS AND SOCIAL SCIENCES,
DEPARTMENT: BANKING AND FINANCE**

**SESSION: 2014/15 ALPHA SEMESTER EXAMINATION.
COURSE CODE: BFN 412 NOVEMBER, 2014
COURSE TITLE: PRACTICE OF BANKING**

INSTRUCTIONS:

- (i) ATTEMPT FOUR QUESTIONS (ii) ANSWER TWO FROM EACH SECTION
(iii) TIME ALLOWED: 2 HOURS 15MINS (iv) ALL QUESTIONS CARRY
EQUAL MARKS**

QUESTION ONE

- (a) Jimoh and Taiwo are trading partners and you hold their joint account. The mandate held by you allows either party to sign all cheques. Yesterday, you had a telephone call telling you to exercise care as Jimoh and Taiwo are no longer in good terms. This morning, Jimoh drew a cheque on the joint account leaving a balance of N500. Payment is to be made in cash. As the manager of the branch, how will you handle the situation?
(8 ½ marks)
- (b) Mr John Chichi has an account with your branch for some years and has been enjoying a credit facility of N50,000 on a revolving basis. Of recent, the overdraft has developed hardcore. You wrote to him to bring the account to life. Last Friday, after getting your letter, he paid in a cheque of N3,000 and asked you to prepare a bank cheque of N2,500 to pay PHCN for his electricity bill.
How will you handle the situation? **(9 marks)**

QUESTION TWO

Miss Jolly Okon, twenty years of age, an undergraduate, calls to open an account with you and tells you that her father has been banking with you for over 20 years. The father of Miss Okon, Chief Mowanbe, is known to be a satisfactory current account holder in one of the branches of the bank. Miss Okon tells you that she has an urgent commitment which needs urgent attention and asks you for a cheque book immediately after the bank has received a reference from her friend who has an account at the branch. She paid in a clearing cheque for N250,000 and needs N25,000 to meet the urgent commitment. She uses the cheque book to withdraw the N25,000 on the understanding that Chief Mowanbe would write a satisfactory reference on his daughter, Miss Okon. When the reference letter was sent on Miss Okon the same day, the father phoned to tell you that you should not open an account for her. How will you deal with this situation?
(17 ½ marks)

QUESTION THREE

- (a) Yori Ade and Sunny Adams are in practice as Chartered Accountants. A joint account was opened by them in your branch four years with the mandate, "Either to sign". It has always been conducted in credit. A receiving order was made against Sunny Adams three days ago and was advertised accordingly. The account had a credit balance of N75,000 when the order was made.

Required:

- (i) What action will you take as their banker? **(6 marks)**
- (ii) How will you ensure that there is no damage to Yori Ade's reputation? **(5 marks)**
- (iii) How will you handle a cheque for N40,000 signed by Yori Ade and another for N10,000 signed by Sunny Adams and presented for payment today? **(6 ½ marks)**

SECTION B

QUESTION FOUR

- a. Mr Olu Jacobs, a Chartered Accountant has banked with your branch for the past ten years and has conducted his account satisfactorily. He wrote a cheque for ₦50,000 in favour of his wife Mrs Ranti Jacob on his current Account with a credit balance of ₦75,000. Mrs Ranti Jacobs presented the cheque on the second day to the paying Cashier along with her identity card, current driving license and a valid international passport. However, the cashier refused to pay the cheque.

Required:

- a. Advance ten reasons which might be responsible for the cashier's action. **(10 marks)**
- b. Mrs Ranti Jacob was surprised that her Husband's cheque was not paid as she is aware that Mr Olu Jacobs always has credit balance on his current account and so she asked her Cousin Mr Ola who was a clerk in the branch to help her ascertain the balance on her husband's account. The Cousin obliged and wrote on a sheet of paper the Credit balance of ₦75,000 and gave to Mrs. Jacobs. What is the effect of Mr. Ola's Action on the bank? **(7 ½ marks)**

QUESTION FIVE

- a. Mrs Olayiwola came to the branch today with a safe custody item receipt indicating that she had kept some valuable items with your bank since 2010. The items included Certificate of Landed Property (C of O) and Marriage Certificate and others. The bank has searched for the items and has not been able to locate them.

Required:

- a. Indicate your bank's position if a claim is submitted by Mrs. Olayiwola via her lawyers. **(7 ½ marks)**
- b. List the four specific liabilities of the bank as a bailee and discuss them briefly **(10 marks)**

QUESTION SIX

Describe the process of Cheque Clearing in the bank's clearing system showing a typical clearing format. **(17 ½ marks)**

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COLLEGE: Business and Social Sciences

SCHOOL: Business

DEPARTMENT: Banking and Finance

SESSION: 2014/2015

SEMESTER: ALPHA

COURSE CODE: BFN 413

CREDIT UNIT: 3

COURSE TITLE: International Monetary Finance and Relations

INSTRUCTION: Attempt Four Questions only. Two Questions from each section. **TIME:** 2 ½ Hrs

Section A

- (a) Briefly analyse the various trends in global finance from the time of Bretton Woods Agreement till the present. Identify the main features that have shaped capital flows and exchange rate liberalisations over the periods? (10 marks)

(b) Evaluate trends that have been most and least impactful on the Nigerian economic and financial environment (7 ½ marks)
- (a) Paying attention to their distinguishing features, describe the instruments of Euro-commercial papers, Euronotes and Eurobonds (3 marks)

(b) Discuss the concepts of Eurobanks, Eurocurrency and the euro financing system. (4½ marks)

(c) Critically assess the reasons for the mechanisms which allowed for the competitive nature of the system and its sustenance given the current financial globalisation experience (10 marks).
- (a) What are the major causes of capital flight? What are the main issues to be addressed in the capital flight episodes facing Nigeria? (7 ½ marks)

(b) What are the main issues to consider for a country to make aid useful in its hope for development? Outline your answers using Nigeria as a case study. (10 marks)

Section B

- (a) Attempt a critical analysis of the rationale for fostering monetary/ financial integration in developing countries, with special reference to ECOWAS (11marks)

(b)Examine the main problems militating against the various attempts to achieve integration in ECOWAS and show how the experience of the European Union successful integration could help (6 marks)

5. (a) Critically examine the two main Exchange rate determination model (6 marks)
- (b) With appropriate illustration show the inter-relationship among balance of payments, foreign exchange market and exchange rate determination (11 ½ marks)
6. Write briefly to bring out the salient issues in any of three of the following:
- i. Macroeconomic implications of exchange rate change
 - ii. Analysis of the main tools and techniques for management of forex risk/exposure
 - iii. Main factors in the determination of exchange generally and naira exchange rate in particular
 - iv. Definitions of optimum currency area criteria. (Total 17 ½ marks)

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TITLE OF EXAMINATION: B.Sc. EXAMINATIONS

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COLLEGE: Business and Social Sciences

SCHOOL: Business

DEPARTMENT: Banking and Finance

SESSION: 2014/2015

SEMESTER: ALPHA

COURSE CODE: BFN 415

CREDIT UNIT: 3

COURSE TITLE: Project Finance and Evaluation

INSTRUCTION: Attempt Four Questions only. Two Questions from each section. TIME: 2 ½ Hrs

Section A

Instructions: Attempt FOUR questions in all. Question 1 compulsory. Time 2 ½ Hours

1. Consider the following projects

Projects	Cash flows (Year 0) ₦	Year1	Year 2	Year 3	Year 4	Year 5
A	120000	25000	35000	48000	50000	45000
B	150000	33000	45000	58000	45000	35000
C	60000	15000	20000	25000	18000	15000

With a weighted average cost of capital to the firm at 12%

Required:

- a. Evaluate each of the projects under two commonly used DCF techniques. (12 marks)
 - b. Using profitability index to rank your options which of these techniques would consider most appropriate in your choice of the most viable option for the firm where total investible capital is ₦200,000.00.(7 marks)
 - c. Why would the non-DCF techniques be less useful in the analyses of these projects (2 marks)?
2. How would the objectives of market analysis impact the estimation of the demand for different types of (both public and private) goods and services?(17 marks)
3. (a) Define and distinguish between projects and programmes (5 marks)
(b) What are the main obstacles to good project development in Nigeria? (5 marks)
(c)What the the main objectives of project monitoring (3 marks)
(d) Differentiate between project follow up and cycle. (4 marks)

Section B

4. (a) What are the main issues to address in order to set up a cost benefit analysis framework (7 marks)
 (b) Briefly show two main similarities and two critical differences between the processes of social cost benefit analyses as performed by Not-for-profit and Profit seeking firms.
 (c) What are the limitations of Cost benefit analysis?

5. To illustrate the distribution of benefits over time consider the following two projects A and b in the table below. Note that project A receives the most of its benefits later in the project (in year 4 and 5) while B receives most of its returns earlier in the project years (years 1 and 2).

Both projects yield the same ₦ costs. Costs are paid when the project is initiated.

Table: Two projects with different benefit schedules

Year	Project (A)	Project (B)
0	(₦3,500.00)	(₦3,500)
1	200	1970
2	500	1300
3	800	800
4	1300	500
5	1970	200
NPV @ 10%	192.77	432.03
NPV @ 5%	448.12	814.46
B/C ratio at 10%	?	?
B/C ratio at 5%	?	?

You are required to:

- a. Insert the correct B/C ratio in the blank spaces for each of the projects marked “?”
 - b. Which of these two projects will be chosen?
 - c. If the discount rate chosen is 5% will the benefit cost ratio for each be positive or negative and
 - d. Which of the two projects will be preferred?
6. (a) Analyse
 - i. Five major characteristics of what could make a project qualify as viable for project financing
 - ii. Five of the main causes for project failures
 - (b) Explain with appropriate illustration, the employment of Limited partnership drilling funds for exploration and development of oil and gas highlighting:
 - i. The distinguishing financing roles, liability and benefits accruing to the general partner *vis a vis* the limited partner.

ii. Advantages to the general partner.

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COLLEGE: Business and Social Sciences

SCHOOL: Business

DEPARTMENT: Banking and Finance

SESSION: 2014/2015

SEMESTER: ALPHA

COURSE CODE: BFN 416

CREDIT UNIT: 3

COURSE TITLE: Capital Market and Portfolio Theory

INSTRUCTION: Attempt Four Questions only. Two Questions from each section. **TIME:** 2 ½ Hrs

Section A

1. Kevin Isaacs and Co. Plc is a company run by well-known financial professionals who have distinguished themselves in the financial service industry. The company is planning to float a 12% -14% ₦500 million mortgage bond that it intends to utilize on the product line it has just established. The company's projections are feasible. The capital structure of the company is as follows:

	₦ million
10% Debenture Stock 2010/2012	400
9.5% Preference share of ₦1.00	500
Ordinary share of ₦1.00	1325

The profit after debenture stock interest and company tax for the year ended 30th June 2009 is ₦310 million. A dividend of 08k per ordinary share has been paid.

Required

- a. Calculate the income priority percentage showing the cost of interest or dividends (Assume corporation tax at 35%). (6 marks)
- b. Calculate the capital priority percentages and the overall cover for each of these classes of stock or shares. Would you advise investors to buy the mortgage bond being introduced by Kevin Isaacs? (6 marks)
- c. Assume that the investors buy the mortgage bond being introduced, would this change the ratings of the company. (2 ½ marks)
- d. Explain the significance of 12% - 14% and 2010/2012 as used in the company's financing structure. (2 marks)
- e. What rating would you assign to the company, given the following credit ratings and classifications? (1 marks)

	AAA	A	BBB+
Post tax interest coverage (times)	16.67	4.63	1.53
Post tax fixed charge coverage (times)	6.34	2.93	1.33

2. (a) Chisom plc 12% unsecured convertible loan stock 2013/2015 is convertible into 50k ordinary shares on from 1st February to 30th April 2013 inclusive at the rate of 30 shares for every ₦1000 of stock. The market price of the ordinary stock is ₦28.00 while the current price of the convertible is ₦1050. Net dividend for shares in respect of the year end Dec 2012 is ₦0.98

(b) Loko plc 5% unsecured convertible loan stock 2013 is convertible into 50k ordinary shares on 25th March each year for every stock of ₦1000 from 2012 inclusive, at the rate of 38 shares for every ₦1000 of debenture. The market price for the shares is ₦37.00. The market price of the convertible is ₦1420.00. Net dividends per ordinary share in respect of the year ended 30th June 2012 totalled ₦0.77.

Assume a basic tax rate of 30% for the investor.

Required

- a. Calculate the conversion premium (or discount) in each case (4 marks).
 - b. What action would you advise your client to take? Give reasons for your answers and show all relevant calculations (8 marks)
 - c. Explain the significance of the alternate 2013/2015 dates (1 ½ marks)
 - d. Why do firms generally issue convertible debentures? (4 marks)
3. (a) What is a bullish market?
(b) Define the major barometers of measuring market performance.
(c) What indicators would you adduce to a capital market crash?
(d) What role do you think that financial market integration is playing in this process?

Section B

QUESTION 4

4a. Consider a price - weighted market index composed of two securities, A and B with prices N16 and N30, respectively. The index denominator is currently 2.0.

Required

Calculate the value of the denominator when;

- i. Stock B undergoes a 3 for 1 stock split
 - ii. Stock A undergoes a 4 for 1 stock split (7 ½ marks)
- 4b. Assume a 100 index level on day 0, and the market comprising three securities, securities A, B and C each selling for N12, N10 and N15 respectively and each having 1100, 1500 and 2000 shares respectively outstanding on day 0. On day 1, the prices of securities A and B rises to N13.50 and N11 while security C falls to N6 per share after a stock split of 3 for 1.

Required

Calculate the new index value using index value weighting method (5 marks).

- 4c. Assume a market consisting of four securities, securities A, B, C, and D with price value of N8, N12, N9.50 and N13 respectively on day 0. On day 1, the price changes to N10, N11.50, N6 and N5 with stock C have a split of 3 for 1 and stock D having a split of 4 for 1.

Required

Calculate the level of the market using equal weighting method, assuming 100 index level on day 0 (5 marks).

Question 5

- a. Briefly discuss the role of the Security and Exchange Commission in effective pricing and issuing of security in the Nigerian Security Market (6 marks)
- a. You are given the following historical performance information on the capital market and a mutual fund

Year	Mutual Fund Beta	Mutual Fund Return (%)	Return on Market index (%)	Return on Govt. Securities (%)
1	0.75	-8.00	-7.5	6.50
2	0.60	5.75	2.5	4.50
3	0.95	10.00	11.50	4.50
4	0.89	15.00	15.50	6.50
5	1.05	13.00	9.50	4.50
6	1.22	9.00	6.55	6.50
7	0.85	18.00	12.00	5.55
8	0.75	20.00	5.00	6.00
9	0.85	24.00	7.5	4.50
10	0.90	08.00	8.00	6.50
11	0.65	-4.00	9.5	5.55

Calculate the following risk adjusted measures for the mutual funds:

- a. Reward to variability ratio
b. Reward to volatility ratio

Comment on the mutual fund's performance compared to the market when the market beta coefficient is 1.2 (11 ½ marks)

Question 6

- a. With graphical illustration explain the security market line (5 marks).
b. The return on stock A and market portfolio for a period of 6 years are as follows:

Year	Return on Stock A (%)	Return on Market portfolio (%)
1	20	17
2	17	13

3	9	15
4	15	-7
5	11	13.5
6	-15	-12

You are required to determine the:

- i. Characteristic line for Stock A
- ii. The systematic and Unsystematic risk of stock A (12 ½ marks).

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COLLEGE: COLLEGE OF BUSINESS AND SOCIAL SCIENCES
SCHOOL: SCHOOL OF BUSINESS
DEPARTMENT: BANKING AND FINANCE

SESSION: 2014/15

SEMESTER: ALPHA

COURSE CODE: BFN 417

CREDIT UNIT: 3

NOVEMBER, 2014

COURSE TITLE: BANK AUDIT, EXAMINATION AND INSPECTION

INSTRUCTIONS:

- (ii) ATTEMPT FOUR QUESTIONS (ii) ANSWER TWO FROM EACH SECTION
- (iii) TIME ALLOWED: 2 HOURS 15MINS (iv) ALL QUESTIONS CARRY EQUAL MARKS

SECTION A

QUESTION ONE

- (a) What is internal control system and internal audit? (3 ½ marks)
- (b) List and briefly explain the main types of control. (4 ½ marks)
- (c) Who are those involved in the maintenance of internal control. (3 marks)
- (d) Discuss the benefits and hindrances to internal control. (6 ½ marks)

QUESTION TWO

- (a) Who is a team leader? (4 marks)
- (b) Outline and discuss the responsibilities of a team leader in the inspection assignment. (13 ½ marks)

QUESTION THREE

- (a) To perform the role of an examiner a person should possess certain qualities. Mention six qualities of a bank examiner. (3 marks)
- (b) Formal communication is vital in the audit process. Discuss this illustrating with the types of formal communication normally used by the auditor and state the purpose of each. (9 ½ marks)
- (c) Outline the circumstances that may threaten auditor's/inspector's independence. (5 marks)

SECTION B

QUESTION FOUR

- a. What is audit programme (Definition Required) **(3 marks)**
- b. Illustrate audit programme with a typical audit programme for petty cash. **(6 marks)**
- c. Using the account of a Social Club, what does audit programme contain? **(3 ½ marks)**
- d. For what uses/advantages are audit programmes designed? **(5 marks)**

QUESTION FIVE

- a. The objective of bank audit/inspection is to safeguard the assets of the bank against fraud, manipulation and waste. List five of such audit/inspections you are familiar with and discuss them in full. **(10 marks)**
- b. After an audit/inspection assignment has been carried out, an Audit/Inspection Report is written by the Auditors/inspectors, addressed to the Bank Management/Board of the bank. What purpose is the Audit/Inspection Report meant to serve? **(7 ½ marks)**

QUESTION SIX

- a. Why was it necessary for the Central Bank of Nigeria to introduce the prudential Guidelines for cost and non-performing/doubtful accounts? **(4 marks)**
- b. Discuss the various classes of non-performing accounts **(7 marks)**
- c. What are the specific provisions which banks are mandated to make for each class? **(6 ½ marks)**

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TITLE OF EXAMINATION: B Sc. DEGREE EXAMINATIONS

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COLLEGE: Business and Social Sciences

SCHOOL: Business

DEPARTMENT: Banking and Finance

SESSION: 2014/2015

SEMESTER: ALPHA

COURSE CODE: BFN 418

CREDIT UNIT: 2

COURSE TITLE: Treasury Management

INSTRUCTION: Attempt Four Questions only. Two Questions from each section. **TIME:**2 Hrs
Section A

1. Consider the following assets of the Balance Sheet of Diamond Bank Plc for the year 2011 and 2012 and answer the questions that follow.

	2012	2011
	₦'m	₦'m
Cash and balances with Banks	132196061	55784079
Deposit /loans to banks	139803281	90648011
Loans and advances to customers	582200158	388136486
Financial assets held for trading:	90111236	8041618
Investment securities:		
Available for sale investments	10601609	85990731
Held to maturity investments	65762681	61712761
Assets pledges as collateral	79302531	34940000
Other assets	13793105	10663445
Investments in associates	3182250	3184549
Investments in Property	4070340	3833335
Property Plant and equipment	44980333	39664459
Intangible assets	834815	819076
Deferred Tax	8265354	12363242
Totals	1178103754	739997713

Required

- a. Define and concisely explain the terms liquidity and profitability showing the relationship between the two (4 marks).
- b. Explain and describe the three different groupings of the assets of Diamond Bank as displayed above and show the relative importance of each group of assets in terms of liquidity (6 marks)
- c. Analyse the differences in the figures and explain the implications of the significant differences (7 marks)

- d. From the calculation above, what is your opinion of the use of assets by this bank to balance the concept of liquidity and profitability in treasury management? (2 marks)
2. (a) What is operational risks management in treasury?
(b) What are the typical operational risks?
(c) How is treasury management different from cash management?
3. List out the required competencies expected of a bank treasury manager. What are his major and essential functions in the process of bank treasury management? (17 marks)

Section B

4. (a) In Treasury Management, Cashiering is a major issue. What are the principles involved in effective Cashiering?
(b) Describe in full details, the process of
(i) Cash movement in and out
(ii) Vault Operations
5. In the process of Treasury Management bank run certain risks. You are to list the types of risks and discuss five in details with particular emphasis on how the risks can be avoided or managed if they occur.
6. (a) At times a bank has excess cash over its immediate needs per time; explain how such excess cash can be invested into profitable short term instruments/securities.
(b) Differential between the Nigerian Stock Exchange and the Security Commission by the mode of their functions.

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MARKING GUIDE

SOLUTION

1. (A) **Simulation** is referred to as a modelling process of experimentation on a mathematical structure of a real life system in order to describe and evaluate the system behaviour through real time under various assumptions.

A simulation technique is recommended and preferred to a decision tree analysis, where the number of uncertain variables becomes very large and complicated.

(B) Limitations of Sensitivity Analysis

- 1, A common problem with sensitivity analysis is that it does not adequately specify the interrelationship between variables. As a result, there might be no underlying economic rationale to the numbers.
- 2, Only one variable is changed/alterd at a time. This may not always apply – for example:
 - i) If the cost of production increases, sales price per unit may also increase
 - ii) Where general level of prices is changed, both costs of materials and labour – as well as the selling prices will tend to increase at the same rate.
 - iii) Various items of costs may be related (for example) the amount of labour used may vary with the amount of materials. The mentioned interrelationships are easier to manage where sensitivity analysis is “applied intelligently” and “appropriate relationships recognised”.

Other limitations are as follows:

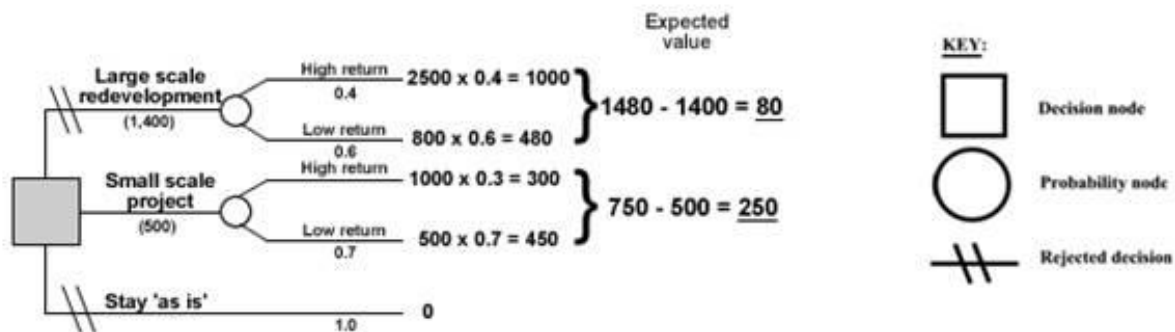
- 3, Where the decision is between mutually exclusive projects, additional sensitivity calculations would be necessary to show how the ranking of the projects – in order of desirability, would be affected by changes in the various estimates.
- 4, The actual sensitivity calculations which are carried out, are very much a matter for the

skill and judgment of the decision maker. Such calculations are likely to vary from decision to decision.

- 5, It does not provide for a means or basis for determining the discount rate
- 6, Even where sensitivity calculations have been carried out, the final decision is extremely dependent on the subjectivity and judgment of the decision maker.
- 7, Even though sensitivity analysis explicitly recognises the problems of uncertainty, it does not really directly attempt to measure the level of uncertainty.

C.DECISION TREE

The small scale project (i.e. B) which has EV of 250 should be chosen



2. Asset Replacement Policy:

(a) The Basic Asset Replacement Decision Methods are:

(i) **Identical/Traditional Replacement Decision Method:** - 2marks

This involves the replacement of an existing asset with a new, but identical asset.

Assets are considered to be identical if they generate the same cash flows (that is, both the existing asset and the replacing asset have the same technological and financial characteristic).

(ii) **Non Identical Replacement Decision Method:** - 2 marks

The non-identical method involves the replacement of an existing asset with an asset which generates cash flows which differ from that of the asset being replaced. This implies that the characteristics of assets involved have no financial and technical resemblance.

(b)

CU Power Limited
Calculation of the Annual Equivalent Cost (AEC)

AEC = Present Value of Cost/Cumulative Discount Factor

Year	PV of cost	Discount Factor	Cum. Disc. Factor	AEC	Ranking
	₦			₦	
1	2,200,000	0.8929	0.8929	2,200,000/0.8929 = N2,463,881.73	5 th
2	2,560,000	0.7972	1.6901	2,560,000/1.6901 = N1,514,703.27	4 th
3	2,910,000	0.7118	2.4019	2,910,000/2.4019 = N1,211,540.86	3 rd
4	3,000,000	0.6355	3.0374	3,000,000/3.0374 = N987,686.84	2 nd
5.	3,400,000	0.5674	3.6048	3,400,000/3.6048 = N943,186.86	1 st

10 marks - 2 marks for each step correctly calculated.

(c) Comment/Decision: - 3¹/₂ marks

The reason for the calculation of AEC instead of the Annual Equivalent Revenue is because we are dealing with cost. From the above calculation, the Management of CU Power Limited should replace its transformers in the 5th year because it offers the least cost of **N943,186.86** when compared to other years.

3. (a) **Investment in Securities: - 2 Marks each**
(i) **Private Placement:**

Is a situation whereby shares are offered to a specific group of investors usually Insurance companies, Pension Funds and other Institutional Investors and Individuals.

(ii) Offer For Sale:

This is not a fresh issue but the sale of existing shares by current shareholders. Shares are offered to the public for sale through the issuing house. At the end of the sales, proceeds from the offer remains with the existing shareholders while the nominal share capital remains unaltered. It is simply a change of ownership of the sold shares.

(iii) Offer For Subscription:

In this situation, the company offers fresh issues through the issuing house to the public. The proceeds from the offer goes to the company for capital investment and the nominal share outstanding increases as a result of the fresh issue.

(iv) Stock Exchange Introduction:

It is not a method of raising new capital, but of obtaining permission to “Deal”, that is introducing the shares of the company to the capital market. The motive is to ensure the success of the offer after listing by making the share look attractive to potential investors. The company after quotation will have access to the capital market in the future.

(v) Offer For Sale By Tenders:

The company offers the shares for sale at a minimum price per unit. Applications are then invited for sale of the shares at prices determined by the various investors. The final price which clears all available shares is called the **Striking Price**. This is the price that all shares will be taken up.

(vi) Rights Issues:

This is a method of obtaining additional finance from existing shareholders. The attractiveness of this source of finance is that it avoids floatation or issuing cost that is prevalent with offer for subscription/sale. The price at which the shareholders buy the rights is usually below the market price.

(b)

(i) Theoretical Ex-right price - 2 marks

Ordinary share @ N3 x 4	= N12
1 Right issue at N2	= <u>N2</u>
Total	<u>14</u>
Theoretical ex right price 14/5	= 2.80

(ii) **Value per right (Nil paid)** - **2 marks**

$$\begin{aligned} \text{Theoretical Ex-price} &= \text{N}2.80 \\ \text{Less right issue} &= \underline{\text{N}2.00} \\ &= \underline{0.80\text{k}} \end{aligned}$$

(iii) **Value of a right** - **2 marks**

$$= \frac{\text{Theoretical ex right Px} - \text{Right Issue Px}}{\text{Right Holding}}$$

What entitle the shareholder to one right

$$\frac{\text{N}2.80 - \text{N}2}{4} = 80\text{k}/4 = 20\text{k}$$

OR

$$\begin{aligned} \text{Market Price Value} &= 3.00 \\ \text{Less theoretical Ex right px} &= \underline{2.80} \\ &= \underline{0.20\text{k}} \end{aligned}$$

(iv) **Theoretical Ex-right Price:** - **1^{1/2}**

Is the market price of shares after the right issue. It is the price at which the existing shareholders buy the rights which is usually below the market price in order to make it attractive to them.

No. 4a: Hebron Limited Project

(i). **Using RCF**

$$\text{Real Cost of Capital (RCC)} = (1+m/1+i) - 1$$

$$\text{RCC} = (1.2/1.17) - 1$$

$$\text{RCC} = 0.026$$

$$\text{RCC} = 2.6\% \quad \text{(1 mark)}$$

<u>Yr</u>	<u>RCF</u>	<u>RCC@2.6%</u>	<u>PVs</u>
0	1,500,000	1	(1,500,000)
1	650,000	0.9747	633,555

2	700,000	0.9499	664,930
3	750,000	0.9259	694,425
4	800,000	0.9024	<u>721,920</u>

NPV= 1,214,830 (2 marks)

The project can be accepted based on the RCF (1 mark)

ii. Using MCF

<u>Yr</u>	<u>RCF</u>	<u>MCF</u>	<u>MCC@20%</u>	<u>PVs</u>
0	1,500,000/(1.17) ⁰	1,500,000	1	(1,500,000)
1	650,000/(1.17) ⁻¹	760,000	0.8333	633,555
2	700,000(1.17) ⁻²	958,230	0.6944	664,930
3	750,000(1.17) ⁻³	1,201,210	0.5787	694,425
4	800,000(1.17) ⁻⁴	1,499,110	0.4823	<u>721,920</u>

NPV= 1,214,830 (3 mks)

The project can also be accepted based on the MCF (1 mark)

No 4b: Fetob Nig Ltd

Year	1	2	3	4	
Cash Revenue	35000	35000(1.06) ¹	35000(1.06) ²	35000(1.06) ³	
Running Cost	<u>15000</u>	<u>15000(1.11)¹</u>	<u>15000(1.11)²</u>	<u>15000(1.11)³</u>	
Cash Profits	<u>20000</u>	<u>20450</u>	<u>20845</u>	<u>21171</u>	(2½ marks)

Yr	Cashflow	DCF@18%	PVs
0	(50000)	1	(50000)
1	20000	0.8474	16948.00

2	20450	0.7182	14687.19
3	20845	0.6086	12686.27
4	21171	0.5158	10920.00
4	4000	0.5158	<u>2063.20</u>

NPV= 7304.60 (4 marks)

Akira Nig Ltd should accept the project. (1 mark) (7½ marks)

No 4c: Basic Type of Inflation and Implications

General Inflation: This is an increase in the average price of all goods and services in an economy. General inflation affects both the discount rate and the cashflow hence it should be properly estimated.

Specific Inflation: This refers to a change in prices of the various components such as sale prices, labour costs etc. Specific inflation affects only the cashflows of the project under consideration.

(2 marks) Total: (17½ marks)

5. WORKINGS:

1. Investment allowance = 20% x 100,000 = N20,000

) Capital allowance computation.

Year	Claims	Capital allowance N	Tax written down value N
1	Initial allowance (20% x 100,000)20,000 Annual allowance(10% x 100,000) - 20,000) <u>8,000</u>	28,000	72,000
2		8,000	64,000
3		8,000	56,000
4		8,000	48,000
5	48,000 - 5000		

) Computation of tax liability

Year	1	2	3	4	5
Cost of savings	35,000	35,000	35,000	35,000	35,000

Investment allowance	(20,000)	-	-	-	-
Capital allowance	<u>(28,000)</u>	<u>(8,000)</u>	<u>(8,000)</u>	<u>(8,000)</u>	<u>(43,000)</u>
Taxable profits	<u>13,000</u>	<u>27,000</u>	<u>27,000</u>	<u>27,000</u>	<u>8,000</u>
Tax at 35%	4,550	(9,450)	(9,450)	(9,450)	2,800

) Computation of NPV

Year	Machinery	Savings	Tax	Net cash	DCF @15%	PV
0	(N100, 000)	-	-	(N100,000)	1	(N100,000)
1		35,000	-	35,000	0.8696	30,436
2		35,000	4,550	39,550	0.7561	29,903.76
3		35,000	(9,450)	25,550	0.6575	16,799.13
4		35,000	(9,450)	25,550	0.5718	14,609.49
5	5000	35,000	(9,450)	30,550	0.4972	15,189.46
6			2,800	2,800	0.4323	<u>1,210.44</u>
						<u>8,148.28</u>

The project has a positive NPV of N8, 148.28, thus, the machinery should be purchased.

6a. Security Market Line

When the capital market is in equilibrium, $E(R_x) = (R_M - R_f)$ is called the security market line (SML) and at this point, the required rate of return equals the expected rate of return. It is a line joining the risk free return equals the expected rate of return. It is a line joining the risk free return from the risk free investments and the risky return from the market securities.

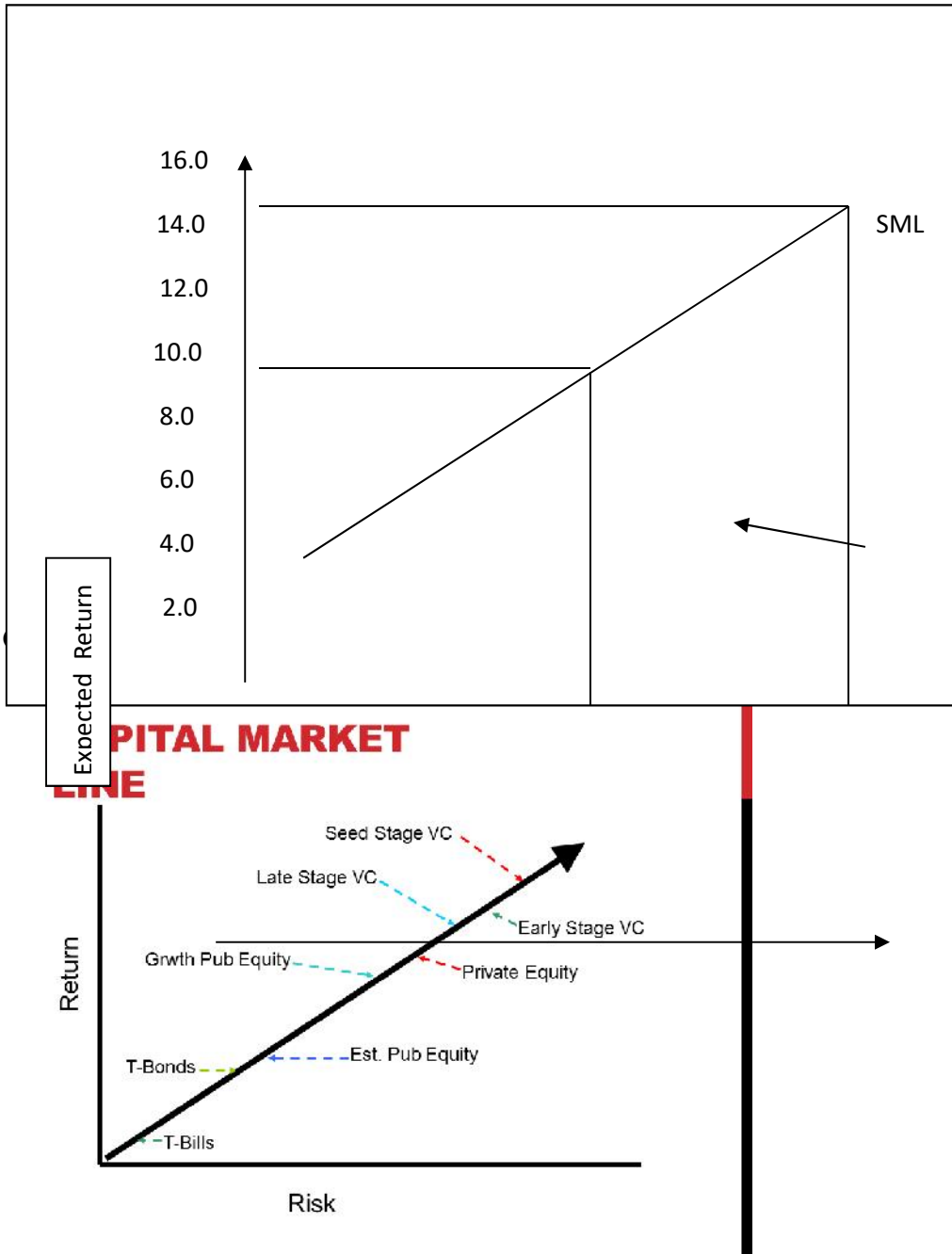
Capital Market Line

Capital Market Line (CML) is the tangent line drawn from the point of risk free assets to the region for risky assets. It is used in capital asset pricing model to illustrate the rates of return for efficient portfolios depending on the risk-free rate of return and the level of risk involved.

Difference between SML and CML

SML show the relationship between the expected return and market beta. While the CML states the relationship between the expected return on security; and total risk or

SECURITY MARKET LINE DIAGRAM



6B. ASSUMPTIONS OF CAPM

- B Market Efficiency : The capital market efficiency implies that share prices reflect all available information. This means that there are large numbers of investors holding small amount of wealth.
- B Risk aversion and mean variance optimization: Investors are risk-aversed. They evaluate a security's return and risk in terms of the expected return and variance or standard deviation respectively. They prefer the highest expected returns for a given level of risk. This implies that investors are mean-variance optimises and they form efficient portfolios.
- B Homogenous expectations: All investors have the same expectations about the expected returns and risks of securities.
- B Single time period: All investors' decisions are based on a single time period.
- B Risk free rate: All investors can lend and borrow at a risk-free rate of interest. They form portfolios from publicly traded securities like shares and bonds.

IMPLICATIONS OF CAPM

CAPM has the following implication

-) Investors will always combine a risk free asset with a market portfolio of risky assets. They will invest in risky assets in proportion to their market value.
-) Investor will be compensated only for that risk which cannot be diversified. This is the market related (systematic) risk. Beta, which is a ratio of the covariance between the asset returns and the market returns divided by the market variance, is the most appropriate measure of an asset's risk.
-) Investors can expect returns from their investment accounting to the risk. This implies a linear relationship between the asset's expected return and its beta.

6C. SYSTEMATIC, UNSYSTEMATIC AND TOTAL RISK

Systematic Risk

Systematic risk arises on account of the economy-wide uncertainties and tendency of individual securities to move together with changes in the market. This part of risk cannot be reduced through

diversification. It is also known as the market risk. Investors are exposed to market risk even when they hold well-diversified portfolios of securities. The examples of systematic or market risk are given in Table 1.0

Examples of Systematic Risk

<ul style="list-style-type: none"> B The government changes the interest rate policy The corporate tax rate is increased. B The government resorts to massive deficit financing. B The inflation rate increases. B The RBI promulgates a restrictive credit policy. 	<ul style="list-style-type: none"> B The government relaxes the foreign exchange controls and announces full convertibility of the Indian rupee. B The government withdraws tax on dividend payment by companies. B The government eliminates reduces the capital gains rate.
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Unsystematic Risk

Unsystematic Risk arises from the unique uncertainties of individual securities. It is also called unique risk. These uncertainties are diversifiable if a large number of securities are combined to form well diversified portfolios. Uncertainties of individual. Securities in a portfolio cancel out each other. Thus, unsystematic risk can be totally reduced through diversification.

Example of Unsystematic Risk

<ul style="list-style-type: none"> B The company workers declare strike. B The R& D expert leaves the company B A formidable competitor enters the markets. B The company loses a big contract in a bid. 	<ul style="list-style-type: none"> B The company makes a Breakthrough in process innovation. B The government increases customer duty on the material used by the company. B The company is unable to obtain adequate quantity of raw material
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Total Risk

Total risk of an individual security is the variance (or standard deviation) of its return. It consists of two parts.

Total risk of a security= Systematic risk + unsystematic risk

Systematic risk is the covariance of the individual securities in the portfolio. An investor has to suffer the systematic risk, as it cannot be diversified away. The difference between variance and covariance is diversifiable or unsystematic risk.

Variance of security - covariance of portfolio = unsystematic risk

BFN 413 MARKING GUIDE FOR 2014 2015 SECTION

Suggested Marking Guide

1. The international Gold Standard 1879 - 1913
2. The spirit of Bretton Woods agreement 1945 and the fixed Dollar rate standard 1950 - 1971
3. The floating rate dollar standard 1973 - 1984
4. The Plaza - Louvre Intervention Accord 1985 - 1999
5. The Spirit of the European Monetary system and Euro Zone 1979+
6. The Emerging and frontier Economies 1995 +

Adequate explanations on the impact of the (a) Floating rate dollar and (b) the Emerging and frontier markets economies as most impactful trends for Nigeria and (c) Plaza Louvre Intervention accord as least impactful for Nigeria.

2.(a) Euro commercial paper is one of the leading instruments of the international financial system where the papers underwritten by the banks are allowed to be sold as IOU in the international financial system to raise money for well rated clients. It is of short term duration usually not exceeding 6 months most are issued for 3 months

Euronotes are short term debt instruments also used in the international financial market that have a maturity of not more than nine months but are mostly issued for 6 months

A Eurobond is an international bond that is denominated in a currency not native to the country where it is issued Also called external bond, external bonds which strictly, are neither Eurobonds nor foreign bonds would also include: foreign currency denominated domestic bonds

(b) Euro banks are offshore banks that are allowed to operate on an international scale receiving deposits in currencies apart from the country where it operates. A currency is termed euro when it is freely negotiable and can be borrowed or lent outside its domicile. The currency would be freely accepted for payment for goods and services outside its country of issue. Majority of Eurocurrency dealing is done in dollars

The euro-financial system is essentially international in scope and not necessarily limited to the country of Europe It extends to the Cayman Islands and other far flung countries where free tax jurisdiction exist.

- (1) Freedom from regulations that is a problem of most national markets
 - (2) It is international in scope
 - (3) A higher level of competition with very low margins between deposits and loan interest rates
 - (4) And by depth which makes the schedules of US and DD highly encouraging to the change
 - (5) Earn interest on their voluntary level of reserves
 - (6) Do not pay deposit insurance
 - (7) Deal primarily with high quality credits
 - (8) Use floating interest rate arrangements and maturity matching to minimise interest rate risks
 - (9) Often operate in tax havens or under special tax incentives
- Operate wholesale business with lower overheads than onshore operations

3.

- a. It refers to all capital outflows from developing countries, either short term or long term, portfolio or equity investments
- b. It is also defined as short term outflows for speculative purposes or outflows resulting from economic or political uncertainty in home countries.
- c. It is the capital outflows or investments for which there are no reports of returns

The causes are

- a. Overvaluation of the currency and constant high premium between the parallel and official rates
- b. Financial sector constraints or repression or the use of controls in the financial system
- c. Fiscal deficits exemplified by the fiduciary issue that do not consider productivity leading to inflationary pressures
- d. Risks, actual or perceived especially frequent political instability and policy somersaults causes investors both residents and non-residents to lose confidence
- e. External incentives to invest abroad encourage the flights of capital. These include the
 1. Availability of negotiable risk free bearer bonds in external financial markets
 2. Deposit insurance on non-resident capital to a large extent
 3. Tax havens that encourage inflows of capital where there are no taxes on income

Aid can be made useful for a country development under the following circumstances

- Direct investment in growth yielding sectors is important
- Aid has been more effective in countries with good and stronger civil liberties
- Aid works best in countries with good policies and institutions
- Multilateral aid is more effective than bilateral aid and untied aid has higher returns than tied aid
- Donor requirements (in terms of reporting and evaluation) may undermine returns. There is need for (1) country ownership (2) participation of recipient countries.

4. Critical analysis of the rationale for fostering Monetary/Financial Integration in developing countries generally

Students are required to analyze:

- J The beneficial effects of Monetary/Financial Integration
- J The costs or perceived disadvantages of /Financial Integration 5 marks
- J Also, to show that there would be net beneficial effects after making provision for resolving members' differences and debunking most of the costs and perceived disadvantages 3 marks
- J Then, to justify the integration, with special reference to ECOWAS 3 marks

b. Examination of the main problems militating against the various attempts to achieve successful integration in ECOWAS. 3 marks

) to show how the lessons from the European Union successful integration could help in ECOWAS case 3¹/₂ marks

Total 17¹/₂ marks

5a. Critical examination of two of the main Exchange Rate Determination Models:

-) Flexible Prices: The Monetary Model
-) Mundell - Fleming Model
-) Sticky Prices: The Dornbusch Model
-) The Portfolio Balance Model
-) Currency Substitution

Students are expected to highlight in each:

-) The assumptions made
-) The merits
-) The shortcomings 5 marks each 10 marks

b. to show the inter-relationship among the Balance of Payments, the Foreign Exchange Market and Exchange Rate Determination. 4 marks

Appropriate illustration utilized 3¹/₂ marks

Total 17¹/₂ marks

6. Students are required to write on any 3, bringing out the salient issues in each.

$5\frac{1}{2}$ marks each x 3	=	16 ¹ / ₂ marks
1 mark for good presentation	=	1
<u>Total marks</u>		<u>17¹/₂</u>

BFN 415 Suggested Marking Guide FOR 2014 2015 SESSION

The basic objectives of the market analysis are to determine the following:

- (a) the size of the market and possible growth rate
- (b) the reaction to the entry of the new firm and its product
- (c) the market area or segment to be served by the product and the marketing policy that serves this purpose.

The nature of the product concerns eventual output depending largely on the types of goods to be produced, namely: (a) consumer goods, (b) intermediate or investment or capital goods and (c) collective consumption goods.

The analysis of the demand of the various types of goods is approached in different ways. The level of demand for consumer goods is estimated differently and is directly related with to income and prices. The quantity of demand not estimated for intermediate goods and capital goods will depend on the extent of distribution of income and the stage of development of the economy. Finding out this involves estimating the price and income elasticity of demand elasticity of demand.

Coefficient of income elasticity for normal goods is positive for normal goods.

Future demand can be estimated by extrapolating a trend

Investment Goods this is also a derived DD which can be split into two (a) replacement demand, and

(b) New demand. This involves:

- a. The study of the sources and uses of capital good and the establishment of the corresponding technical relationship
- b. Knowledge of the durability of such goods and the rate of depreciation.
- c. Investigation of substitution possibility for other capital goods
- d. Possible substitutions with other factor inputs, especially labour
- e. Structural changes in the economy to demand the production of such goods.
- f. Public Goods
- g. These are goods that, once produced for an individual, become freely available for all. They are non-marketable, non-measurable and non-divisible goods and mainly are regarded as services. They are generally provided by the government. The pure forms of these types of goods are public health, defence, internal security, scientific research, street lighting etc. It is much better to estimate the need rather than demand for these types of goods. The volume of the services placed at the disposal of the users is determined as a function of decisions based on the government policy which is determined by budgetary constraints and competing requirements for public expenditures. Where public goods are of direct benefit to the consumers, it is possible to employ quantitative relations to estimate the probable level of demand. Usually population and its growth rate are used to measure the level of possible demand. It is also possible to use the rate of income and its increase to measure the possible level of demand to be expected.
- h. In all, expression of optimism should be with caution. In the process of analysis the source of information, analysis and methods adopted to measure expected estimates influence the results and

possible the siting and location of the projects. In addition there are estimates problems uncertainties. In estimating the future demand key variables might suddenly be affected by unexpected crises, sociological factors that are unpredictable Therefore in estimation of demand for goods that are not proven the optimism should be guarded.

3.(a) a project is defined as proposal for a capital investment to develop facilities to provide goods and services and is regarded as the smallest unit of investment activity to produce goods and services. A project is also defined as the compilation of data which enables an appraisal to be made of economic advantages of and disadvantages attendant to the allocation of a country resources to the production of specific goods and services.

A programme on the under hand is distinguished from a project in that it is a coordinate set of projects within the same geographical area. A set of projects may thus be undertaken to support a main project. Thus different projects are regarded as a programme if they are simultaneously implemented to ensure the success of the pivotal project

- a. Lack of pre investment studies where studies were done they may be stale or not detailed sufficiently. The use of financial analysis does not take into consideration the effectiveness of demand possible and current market situation
- b. Wrong location of project optimum location is an advantage in the siting facilities. This is a major problem I in government or public sector projects, because political considerations are stronger than economic dictates and this limit the success of such projects.
- c. Overambitious projects: some projects that are developed are rather too ambitious for the level of the country's development. The end result of the project is that is that the purpose is not achieved for reasons of lack of inadequate infrastructure executive capacity, raw materials or raw materials for the scale of the project.
- d. Executive capacity as mentioned above is major problems in citing projects in t many developing countries. Though this has been realises as a problem adequate steps a rot being made to deal with the issue. The lack of capacity of executive and managerial expertise to run and maintain the projects have led to the contracting out of many of the projects to inadequately qualified technical rather than executive personal from overseas who charge exorbitantly for less than optimum services rendered.
- e. Financial constraints of ten take the form of inadequate funds and lack of management of working capital or inadequate financial market capacity to raise funds required by the projects, though somehow the financial globalisations of countries seem to have ameliorated this problem to a large extent.
- f. Raw material constraints are a problem because of the import dependent nature of the manufacturing firms. These to a great extent have reduced the capacity utilisation of the sector. This often results in in the competitively priced outputs.
- g. Infrastructural deficiency is a bane of projects in Nigeria. The most critical of these problems are energy and road infrastructure. Also becoming a problem is the issue of security. The provision of these by the firms on unit basis tends to increase the costs structure of the firm, leading again to uncompetitive pricing and low quality goods. Save for a few states there are no industrial zones with the one available not having sufficient infrastructure to make attract industrial firms.

- h. Political stability is not ingrained in the system enough to enable investor with long term projects to commit themselves to the nation. There is so much political uncertainty in the country; there is more of security to the national building efforts now than ever. Since peace is precondition to real investment, Nigeria has received little investment as a result.
- i. Institutional problem is a problem because there bottlenecks to every project effort ranging from lack of accountability to good governance. In addition certain institutional practises make things worse as cultural practise inhibit the establishment and sustenance of good projects. These are a legion

(c) All projects must be monitored either public or private. Failure of the unmonitored project can be monumental are often irreversible. Three questions normally asked especially in public sector capital investment are:

- a. The likelihood of the completion date being met.
- b. The meeting of the specification of the project as planned and approved
- c. The probability of not exceeding the cost initially outlay for the project.

The key areas of monitoring and control is integrated within the three questions and normally dovetailed into the following addressing each of the questions: (a) time (b) Cost (c) Work quality.

(d) Project Follow up

This set of activities refer to the continuous process of checking and reviewing every stage of the project during its execution with the intent to

- 1. Detecting and eliminating any contingent material or financial bottlenecks
- 2. Collecting and collating data on the project in order to:
 - a. Establish firm information about the reliability of the costs forecasts and estimation procedures for future use in similar projects, and
 - b. Prepare progress report on the implementation of the project
- 3. Ensure a proper coordination of the project with other related projects.

Project Cycle

Project study is a continuous and self-sustaining cycle of activity which runs through the following stages:

- The identification of the project
- Its pre-preparations
- Its appraisal, approval, and financing
- Supervision through the stages to achieve its objectives.

Project cycle covers the whole sequence of studies and activities on the proposed the project from identification through to implementation and ex-post evaluation and possibly any feedbacks and other findings that may benefit the project or similar projects in the future.

Section B

4.

In setting up a cost-benefit framework, students are required to analyse the main issues to address:

-) Alternative-potential projects, policies, etc.

-) Costs - to determine opportunity cost for each project
 -) Benefits for each project
 -) Identify cost bearers and beneficiaries
 -) Evaluate cost, benefits and transfer payments
 -) Consider distributional impacts
 -) Chose a discount rate
- 1 mark for each 7 marks

b. To briefly show two main similarities and two critical differences between the process of social cost benefit analysis as performed by Not-For-Profit and Profit-Seeking Firms
(1½marks each for 4) 6 marks

c. Limitations of Cost-Benefit Analysis (CBA).

Limitations of CBA

-) there are project alternatives that CBA is incapable of handling
-) it cannot assess a set of comparative alternatives
-) it cannot work when a continuous choice must be made
-) it cannot automatically distinguish between private and/or society-wide public benefits
-) it is only as good as its assumptions

1 mark for any four, ½ marks for extra point 4½ marks
Total 17½ marks

5a	Project A	Project B
B/C ratio @ 10%	0.9449	1.123
B/C ratio @ 5%	1.128	1.2327

b. Project B will be chosen

c.(I) Both will be positive

(ii). Project B

Scoring: 1½ marks for each correct answer 6 marks
(b) 4 marks for correct answer 4 marks
(c) (i) 2 marks , (c)(ii) 2 marks 4 marks
3½ marks for other useful comments made 3½ marks
Total 17½ marks

6a. Analysis of major characteristics of what could make a project qualify as viable
(ii) Analysis of five major causes of project failure. 1 marks each, for 10 - 10 marks

b. Explanation of the employment of Limited Partnership Drilling Funds for exploration and development of oil and gas 2 marks

Use of appropriate illustration to explain 2 marks

To highlight:

- (i) The distinguishing financing roles, liability and benefits accruing to the general partner vis-à-vis the limited partner 2 marks
- (ii) Advantages to the general partner 1½ marks

Total 17½ marks

COVENANT UNIVERSITY
KM 10, IDIROKO ROAD CANAANLAND,
PMB 1023, OTA. NIGERIA.

BFN 416 Suggested Solutions and Marking Guide for 2014 2015 SESSION

Questions1

Bubble and Burst Plc

(a) Total capital structure	
10% Debenture stocks 2010/2012	400
9.5% Preference shares	500
Ordinary shares of N1.00	1325
Total	2225

a. Income priority percentage				
Security	Net cost or Div		Priority %	Cover
10% Debenture	26(.1x 400 x .65)		0 - 8.25	12.15
9.5% Preference	9.5 (9.5 x500) 46	46 + 26 = 73.5 =	8.25-23.33	4.28
N1,325m	.25(1325m) 331	73.5 + 331 = 404.5 =	25.4 - 139	0.715
marks)				(6

b. Capital Priority Percentage				
10% Debenture	400 million	400/2225	0-18%	5.56
9.5% preference	500 million	900/2225	18-40.4	2.42
Ordinary Shares	1325 million	2225/2225	40.4-100	1 (4 marks)

The rating is not within the table above. It is not advisable for investors to invest in the mortgage bond as result of the imprudent way of managing resources of the company. (1 mark)

(c) The significance of dual dating is found in the alternative choices the company has to finance its capital structure. The two dates enables the company to choose the earliest date to redeem if the rates in the market is higher than its coupon rate and choose alternative source of financing.

The choice of rates to pay is limited to what the company has specified in its offer documents because the rates could be higher than what is presently offering or much less. When the rates are lower the

company pays the lower rates and the higher rates when the rates are high. The company nevertheless has a choice of which rates to pay. (2 marks)

(d) The rating to assign to this company is not listed here but would be lower than BBB (1 mark)

Question 2

(i) Chisom plc

$$\text{Conversion price} = \text{N}1050/30 = \text{N}35.00$$

$$\text{Conversion premium} = \text{N}35 - 28 = \text{N}7 = 25\% \text{ of the market price of the share (2 marks)}$$

Loko plc

$$\text{Conversion price} = \text{N}1420/38 = \text{N}37.4$$

$$\text{Conversion premium} = \text{N}37.4 - \text{N}37.00 = 40\text{k} = 1.08\% \text{ of the market price of the share (2 marks)}$$

(ii) Chisom plc	Market value	Gross income
N1000 stock @ N1050	1050	120
30 shares @ 28.00	840	42*
Difference	210	78

$$*98\text{k} \times 100/70 \times 30$$

Capital loss on conversion is N210 which is 20% of the market value of the convertible.

Reduction in income is N78.00 which is 65% of the gross income from the convertible (2 marks)

On the basis of the above figures and given the fact that the conversion rights are still available for some time to come and the opportunity can be utilised when the fundamental and the income and capital gain or losses are acceptable. The other choices remaining are to decide to retain or sell the convertible. If the customer is bullish about the convertible, he could retain it; otherwise he should sell and buy equity with the proceeds through the secondary market. This means that the floor of protection on income is lost. If she is bearish he should sell the convertible immediately. (2 marks)

Loko plc	Market Value	Gross income
N1000 stock @ N1420	N1420	50
38 shares @ N37.00	N1406	41.80*
Difference	14	8.20

$$*.77 \times 100/70 \times 38 \text{ shares}$$

Capital loss on immediate conversion is N14.00 which is 0.99% of the market value of the convertible (2 marks)

Reduction in gross income is N8.20 which is 16.4% of the gross income of the convertible

This is the last opportunity to convert and after this it will sell as straight loan stock. Conversion will involve a loss of 1% in capital and 16% loss on income. However, it is recommended that the conversion opportunity be accepted since this is the last opportunity and the maximum loss that can be incurred on the conversion is small. In addition if the opportunity is not utilised, the convertible will sell as a straight loan stock which implies that its price will be heavily influenced by the interest rate. The alternative available is to sell the convertible and buy equities on the market, the alternative is not recommended because the cost of broker services and other cost will wipe away any possible gain and result in more than the losses of 1% on capital gain. (2 marks)

(iii) Benefits for the Company;

1. Convertibles are sold on lower yields than pure loan stocks because of the element of in the price. Also the tax relief available reduces the cost of debt service
2. Extra risk attached to unsecured loan stock can be compensated for by offering the opportunity to participate in the success of the business through conversion without the risk of holding shares
3. Convertibles have been used to obtain some benefits and obtain a higher price for the company when it is facing a takeover bid from a predator company. It has been used to sell the shares of the company at high value.
4. It can provide an opportunity for the company to exploit a high existing price for its shares as it is seen as selling a pure loan stock with a future call option.

Benefits for the investor

1. There is no upside limit to their value, but the downside is generally limited to the value of pure loan stock and are therefore suitable for companies with uncertain future
2. It also useful for trustees of funds when the equity content is low and is normally used as backdoor way of boosting the equity value of the portfolio. (any four for 4 marks)
3. A bullish trend in the capital market is marked by continuous increase in the prices of stocks to the effect that price increases are not justified by either fundamental or performance. This normally heats the market up. The anticipation of further increases in price usually drives prices up through stockbrokers' actions.

Major means of measuring performance of the capital market are as follows:

- a. New issues in terms of numbers of issues in the capital market as well as total amount raised. This is measured by Total issues/Gross Fixed Capital Formation
- b. Market Capitalisation: This is the total market value of the companies quoted on the SE. The market capitalization is arrived at by multiplying each share value by total number of shares issued and called of all the companies on the SE. This shows the level of capitalization on the SE and is the investors perception of the market, and is affected by increases (decreases) in shares value overtime.
- c. Traded volume and the total value of amounts traded on the stock market
- d. Market Float: This is the number of securities available for regular trading. This affects the trading volume considerably and this is low in Nigeria.
- e. Turnover ratio (transaction ratio) is the amount of traded value/market capitalization. This also measures the level of activity on the market.
- f. The number of the equity listing on the market determines the level of popularity of the market. The number of successful issues the SE has hosted can go a long way in the acceptance of the SE by the world financial markets.

The common indicators of market crash are as follows:

- a) Increase in short and long term interest rates
- b) Weakening currency
- c) Persistent current and capital account deficits
- d) Bullish expectations from investors
- e) Low dividend yields
- f) High PER for shares and stocks

Hyperactivity on the stock market can be also caused by the following factors:

- a. The level of liquidity,
- b. Efficiency of the instruments traded and infrastructural facilities available, and
- c. The investment culture of the people

Section B

Marking guide

Question 4

4a When stock B undergoes a 3 for 1 stock split and price falls to N15

$$\begin{aligned} \text{Price -weighted index} &= \frac{9 + (15 \times 3)}{2} && (1 \text{ mark}) \\ &= 27 && (1/2 \text{ mark}) \end{aligned}$$

$$\text{New denominator} = \frac{9 + 15}{D} = 27$$

$$\frac{D \times 27}{27} = \frac{24}{27}$$

$$D = 0.8 \quad 2 \text{ marks}$$

When stock A undergoes a stock split of 4 for 1 and price fall to N12

$$\begin{aligned} \text{Price - weighted index} &= \frac{(4 \times 12) + 10}{2} && 1 \text{ mark} \\ &= 29 && 1/2 \text{ mark} \end{aligned}$$

$$\text{New denominator} = \frac{12 + 10}{D} = 29$$

$$\frac{D \times 29}{29} = \frac{22}{29}$$

$$D = 0.75 \quad 2 \text{ marks}$$

Value Weighting

$$4b. \quad I_t = I_o \times \frac{MV_t}{MV_o} \quad (1 \text{ mark})$$

$$= 100 \times \frac{(13 \times 1100) + (11 \times 1500) + (6 \times 6000)}{(12 \times 1100) + (10 \times 1500) + (15 \times 2000)} \quad (1 \text{ mark})$$

$$= 100 \times \frac{14850 + 16500 + 36,000}{13200 + 15000 + 30,000} \quad (1 \text{ mark})$$

$$= 100 \times \frac{67,350}{58,200} \quad (1 \text{ mark})$$

$$= 100 \times 1.15 \quad (1/2 \text{ mark})$$

It = 115, that is the market has moved from 100 to 115, that is by 15% (½ mark).

4c. **Equal Weighting**

$$\text{Pr for stock C} = (6 \times 3) / 9.50 = 1.89 \quad (1 \text{ mark})$$

$$\text{Pr for Stock D} = (5 \times 4) / 13 = 1.54 \quad (1 \text{ mark})$$

$$\text{Pr for stock A} = 10 / 8 = 1.25 \quad (1/2 \text{ mark})$$

$$\text{Pr for stock B} = 11.50/12 = 0.96 \quad (1/2 \text{ mark})$$

$$\begin{aligned} \text{Equal weighting} &= \frac{(1.25 + 0.96 + 1.89 + 1.54)}{4} && (1 \text{ mark}) \\ &= 1.41 && (1/2 \text{ mark}) \end{aligned}$$

If the value of index on day 0 was 100, then the value on day 1 would be reported as 141, that is, 100×1.41 . The market has risen by 41%. (½ mark).

5a. In finance, the **Sharpe ratio** (also known as the **Sharpe index**, the **Sharpe measure**, and the **reward-to-volatility ratio**) is a way to examine the performance of an investment by adjusting for its risk. The ratio measures the excess return (or risk premium) per unit of deviation in an investment asset or a trading strategy, typically referred to as risk (and is a deviation risk measure), named after William Forsyth Sharpe. The Sharpe ratio has as its principal advantage that it is directly computable from any observed series of returns without need for additional information surrounding the source of profitability. Other ratios such as the bias ratio have recently been introduced into the literature to handle cases where the observed volatility may be an especially poor proxy for the risk inherent in a time-series of observed returns.

While the Treynor ratio works only with systematic risk of a portfolio, the Sharpe ratio observes both systematic and idiosyncratic risks.

The returns measured can be of any frequency (i.e. daily, weekly, monthly or annually), as long as they are normally distributed, as the returns can always be annualized. Herein lies the underlying weakness of the ratio - not all asset returns are normally distributed. Abnormalities like kurtosis, fatter tails and higher peaks, or skewness on the distribution can be problematic for the ratio, as standard deviation doesn't have the same effectiveness when these problems exist. Sometimes it can be downright dangerous to use this formula when returns are not normally distributed (2 ½ marks)

The **Treynor ratio** (sometimes called the **reward-to-volatility ratio** or **Treynor measure**), named after Jack L. Treynor,^[2] is a measurement of the returns earned in excess of that which could have been earned on an investment that has no diversifiable risk (e.g., Treasury bills or a completely diversified portfolio), per each unit of market risk assumed.

The Treynor ratio relates excess return over the risk-free rate to the additional risk taken; however, systematic risk is used instead of total risk. The higher the Treynor ratio, the better the performance of the portfolio under analysis. Like the Sharpe ratio, the Treynor ratio (*T*) does not quantify the value added, if any, of active portfolio management. It is a ranking criterion only. A ranking of

portfolios based on the Treynor Ratio is only useful if the portfolios under consideration are sub-portfolios of a broader, fully diversified portfolio. If this is not the case, portfolios with identical systematic risk, but different total risk, will be rated the same. But the portfolio with a higher total risk is less diversified and therefore has a higher unsystematic risk which is not priced in the market.

An alternative method of ranking portfolio management is Jensen's alpha, which quantifies the added return as the excess return above the security

Question 5 b - Solution

Workings

The average values of the Variables are:

Mutual fund Beta = 0.88

Mutual fund return = 114.75/11 = 10.43%

Return on market index = 82.05/11 = 7.46%

Return on govt. securities = 64.55/11 = 5.87%

Return to variability = Sharpe ratio = $\frac{(r_p - r_f)}{p}$

p

For the calculation of this ratio we have to calculate the mutual fund standard deviation. The mutual fund standard deviation is calculated as follows:

Year	Mutual Fund Return X	X ²
1	-4.00	16
2	1.75	3.063
3	15.00	225
4	20.00	400
5	10.00	100
6	7.00	49
7	16.00	256
8	22.00	484
9	14.00	196
10	18.00	324
11	-5.00	25
Total	114.75	2,078.063

$$p = \frac{\sqrt{N \sum X^2 - (\sum x)^2}}{N^2}$$

$$p = \frac{\sqrt{11 \times 2078.063 - (114.75)^2}}{11^2}$$

$$p = \frac{\sqrt{22,858.693 - 13,167.563}}{121}$$

$$p = \frac{\sqrt{22,858.693 - 13,167.563}}{121}$$

$$p = \sqrt{80.09}$$

$$= 8.95 \% \text{ (2 } \frac{1}{2} \text{ marks)}$$

$$\text{Sharpe Ratio} = \frac{(rp - rf)}{p}$$

$$\text{SR} = \frac{10.43 - 5.87}{8.95}$$

$$= 0.509 \text{ (1 mark)}$$

$$\text{b. Reward to volatility} = \text{Treynor ratio} = \frac{(rp - rf)}{p}$$

$$\frac{10.43 - 5.87}{0.88}$$

$$= 5.18 \text{ (1 mark)}$$

To compare to the market we need to calculate the market standard deviation

Year	Return on Market index (X)	X ²
1	-9.5	90.25
2	3.5	12.24
3	13.50	182.25
4	17.50	306.25
5	7.50	56.25
6	1.55	2.4025
7	15.00	225
8	6.00	36
9	9.5	90.25
10	10.00	100
11	7.5	56.25
Total	85.05	1,157.14

$$p = \sqrt{\frac{N \sum X^2 - (\sum x)^2}{N^2}}$$

$$p = \sqrt{\frac{11 \times 1,157.14 - (82.05)^2}{11^2}}$$

$$p = \sqrt{\frac{12,728.54 - 6,732.20}{121}}$$

$$p = \sqrt{\frac{5,996.34}{121}}$$

$$p = \sqrt{49.557}$$

$$= 7.04 \% \text{ (2 } \frac{1}{2} \text{ marks)}$$

$$\text{Sharpe ratio} = \frac{7.46 - 5.87}{7.04}$$

$$\frac{1.59}{7.04}$$

$$= 0.23 \text{ (1 mark)}$$

$$\text{Treynor} = \frac{7.46 - 5.87}{0.88}$$

1.2
1.33 (1 mark)

In comparison to the market

Ratio	Mutual Fund	Market Index
Sharpe	0.509	0.23
Treynor	5.18	1.33

Mutual fund has performed better than the market. (2 marks)

Question 6a - Solution

THE CHARACTERISTIC LINE /SECURITY MARKET LINE.

The characteristic line is used to measure statistically the undiversifiable risk and diversifiable risk of individual assets and portfolios. Total risk of any asset can be assessed by measuring variability of its returns. Total risk can be divided into two parts—diversifiable risk (unsystematic risk) and non-diversifiable risk (systematic risk).

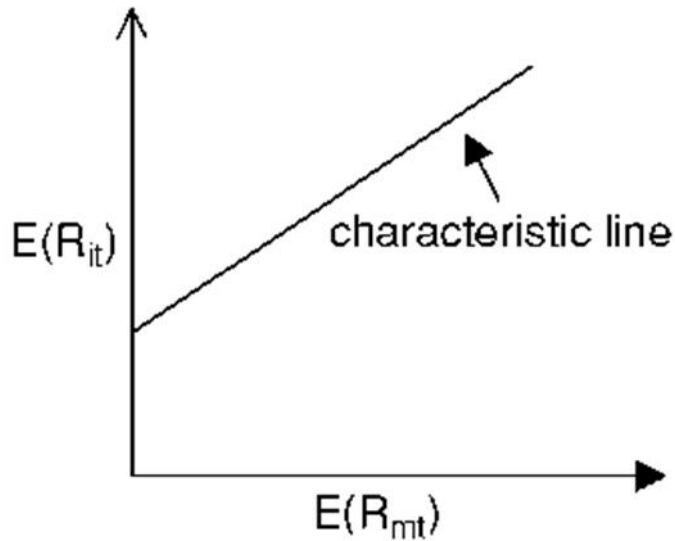
The SML essentially graphs the results from the capital asset pricing model (CAPM) formula. The x-axis represents the risk (beta), and the y-axis represents the expected return. The market risk premium is determined from the slope of the SML.

The relationship between β and required return is plotted on the securities market line (SML) which shows expected return as a function of β . The intercept is the nominal risk-free rate available for the market, while the slope is the market premium, $E(R_m) - R_f$. The securities market line can be regarded as representing a single-factor model of the asset price, where Beta is exposure to changes in value of the Market. The equation of the SML is thus:

$$\text{SML: } E(R_i) = R_f + \beta_i(E(R_m) - R_f)$$

It is a useful tool in determining if an asset being considered for a portfolio offers a reasonable expected return for risk. Individual securities are plotted on the SML graph. If the security's expected return versus risk is plotted above the SML, it is undervalued since the investor can expect a greater return for the inherent risk. And a security plotted below the SML is overvalued since the investor would be accepting less return for the amount of risk assumed.

Expected Return



Security Market Line (5 marks)

Question 6b - Solution

Characteristic line is given by

$$i + i R_m$$

where $i = \frac{\sum xy - n\bar{x}\bar{y}}{\sum x^2 - n(\bar{x})^2}$
 $i = \bar{y} - \bar{x}$ (1/2 mark)

Return On A (Y)	Return on Market (X)	XY	X ²	(X-X̄)	(X-X̄) ²	(y - ȳ)	(y - ȳ) ²
15	12	180	144	5.42	29.38	8.84	78.15
12	8	96	54	1.42	2.016	5.84	34.11
4	13	52	169	6.42	41.22	-2.16	4.67
10	-2	-20	4	-8.58	73.62	-3.84	14.75
6	15.5	93	240.25	8.92	79.57	-0.16	0.026
<u>-10</u>	<u>-7</u>	<u>70</u>	<u>49</u>	<u>-13.58</u>	<u>184.42</u>	<u>-16.16</u>	<u>261.15</u>
<u>37</u>	<u>39.5</u>	<u>471</u>	<u>660.25</u>		<u>410.23</u>		<u>392.86</u> (4 marks)

$\bar{y} = 37/6 = 6.16$ (1/2 mark)

$\bar{x} = 39.5/6 = 6.58$ (1/2 mark)

$$i = \frac{\sum xy - n\bar{x}\bar{y}}{\sum x^2 - n(\bar{x})^2} = \frac{471 - 6(6.58)(6.16)}{660.25 - 6(6.58)^2} = \frac{471 - 243.20}{660.25 - 259.78} = \frac{227.8}{400.47} = .569$$
 (2 marks)

$$\bar{y} - \beta \bar{x} = 6.16 - .433(6.58) = 3.311$$

Hence the characteristic line is $3.311 + 0.433(R_m)$ (1 mark)

$$\text{Total Risk of market} = \frac{\sum(x - \bar{x})^2}{n-1} = \frac{410.23}{5} = 82.05\% \text{ (1 mark)}$$

$$\text{Total Risk of Stock A} = \frac{392.86}{5} = 78.57\% \text{ (1 mark)}$$

$$\text{Systematic Risk} = \beta^2 \cdot \sigma_m^2 = (.433)^2 \times 82.05 = 15.38\% \text{ (1 mark)}$$

$$\begin{aligned} \text{Unsystematic risk} &= \text{Total risk of stock A} - \text{Systematic risk} \\ &= 78.57 - 15.38 \\ &= 63.19 \text{ (1 mark)} \end{aligned}$$

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The balance sheet is analysed as follows

Liquidity and profitability runs at parallel opposites in the financial system. Liquidity is the ability of the bank to meet its daily running financial needs without having to dispose any of its assets. The more profitable a bank is the less liquid it is likely to be. The impact of liquidity is such that the bank cannot do its ordinary business if there is a shortfall in liquidity. It is also important for the bank to remain profitable in order for it to command the investors' confidence. In this situation the bank needs to balance the two to ensure that the two ends are satisfied for the bank to continue to exist profitably.

This calls for the bank to choose its investment assets carefully and in the appropriate proportions. The choice is made with the benefit of the bank's risk appetite and the financial policy. Another consideration is the monetary and fiscal policies in existence. This seems to be changing parameter while the other may remain constant over a period of time.

The bank's assets as displayed in the balance sheet are made up of three broad segments. They are the (a) liquid (b) the earning and (c) non-earning assets. The liquid assets do not yield much profit. The investments made of the earning assets are the major driver of the banks profit. And non-earning assets do earn but unreported profits. The examples are the cash, risk assets and property and equipment respectively.

Assets	% Diff
Cash and balances with banks	136.98
Deposits/Loans to banks	54.22653
Loans and advances to customers	50.77175
Financial assets held for trading	1020.561
Investment securities:	
-Available-for-sale investments	-87.6712
-Held to maturity investments	6.562533
Asset pledged as collateral	126.9677
Insurance receivables	#VALUE!
Other assets	29.34943
Investments in associates	-0.07219
Investment property	6.182736
Property, plant and equipment	13.40211

Intangible assets	1.921556
Deferred tax	-33.1457

The largest changes have occurred in financial assets held for trading which grew by 1020% over the previous year followed by cash balances at 136%. This underscores the bank intent to be more liquid while preferring profitability. On the negative side is the reduction by 87.6 5 of the investments held for sale and a reduction in in the deferred tax assets. The bank by the current Balance sheet does not intend to trade securities and is reducing future tax liability. On the whole the bank's profitability intent is more visible while shifting assets into fairly liquid investments.

2. (a) Operational risk is defined as “the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events

(b) Typical treasury operational risks are:

1. Infrastructure and technology failures covering computer systems, power, telecommunications, data and physical records
2. Incidents where access to premises is denied, either through inaccessibility or building damage
3. Dependencies on third party key service providers such as the central and/or commercial banks, telecom and internet providers, and other outsourced operations, or resource failures from such incidents as a pandemic.
4. Human errors or failures through lack of resources, skills, training, policies, procedures, delegations, code of conduct, and poor management
5. Failure to meet statutory, legal or contractual, human resources and other obligations including management objectives and reporting obligations
6. Natural and regional disasters covering incidents such as earthquake, tsunami, severe flooding, hurricane/typhoon, volcanic eruption, severe fires, landslides and civil disturbance or terrorism

3. Required Skills, Knowledge and Competencies

Knowledge of investment portfolio strategy, banking, and financial instruments.

1. General knowledge of, SEC and CBN reporting requirements for investments and other financial instruments.
2. Knowledge of treasury software, expertise a plus.
3. Advanced analytical, organization, and interpersonal skills.
4. Advanced spreadsheet and modelling skills.
5. Excellent collaboration, verbal and written communication skills.
6. Able to break down problems into meaningful parts and come to rational and well-thought out conclusions.
7. Demonstrated strong project management skills.
8. Attention to detail and accuracy.

9. Interested in process improvement.
10. Willing to adapt quickly to quick changes in direction.
11. Internally motivated to seek out answers, generate ideas, and develop new skills.

Essential Functions:

1. Understand, manage, and supervise all aspects of cash flow.
 2. Forecast daily cash requirements and execute daily financing decisions.
 3. Manage all aspects of In-house investment portfolios.
 4. Direct, monitor and trade investment portfolios including Working capital, High-Yield, Escrow, and other portfolios.
 5. Manage long-term and short-term investment strategies.
 6. Determine the Bank's goals and risk tolerance.
 7. Determine the Bank's tax position and its applicability to taxable/non-taxable instruments.
 8. Assess risk/return trade-offs in guidelines.
 9. Assess performance benchmarks and recommend changes when warranted.
 10. Review and recommend changes to the investment policies based on the market conditions.
 11. Prepare or monitor bank's various cash flow forecasts and perform financial modelling.
 12. Evaluate, develop and implement cash management systems to optimize efficiencies.
 13. Understand and manage appropriate accounting procedures and processes.
 14. Manage relationships with financial service providers.
 15. Monitor bank service fees and address quality issues.
 16. Conduct benchmark studies of other banks and their services to evaluate whether it fits own requirements.
 17. Meet with cash management banks to plan cash management
 18. Evaluate alternative long-term borrowing strategies and make recommendations in accordance with the capital structure guidelines.
 19. Manage, direct, and develop Cash Management staff.
 20. Recommend, implement and maintain process improvements.
 21. Provide technical and other support for mergers and acquisitions and other projects as needed.
- Additional duties as directed by supervisor.

Section B

Answer to Question 4

- A. The principles involved in effective cashiering are:
- a. The cashier should attend to one person at a time, and should not allow himself to be distracted in order to avoid mistakes that may lead to cash shortages.
 - b. The cash function is a function requiring dual operation – the cashier and the customer must dually agree on the amount paid or received over the counter, the cashier and the cash officer must agree on the start of the day's operations, and they must dually agree also to the amount returned to the vault by the cashier at the end of the day's operation.

- c. If a cashier wants to leave his cage/cubicle he needs to keep both the till and the cage under lock and key in order to secure his cash and working tools.
- d. All the money being received and being paid must be counted by cashier/customer in the presence of both parties.
- e. On no occasion should a cashier leave/abandon his cage/cubicle with cash unlocked.
- f. In the event of a cash difference by the cashier during balancing of cash at the end of the day or during vault/strong room cash balance

B. (i). CASH MOVEMENTS IN AND OUT

This is the process by which banks arrange to replenish their cash holding for the supply of their customers from the Central bank (in) or arrange to lodge in their excess cash holding over and above their strong room insured limit (out). The process by which the Head Office of a bank arranges to supply its branches with cash or take excess cash from their branches is also described as *Cash movement*

In any of these processes (In & out Movement) bullion vans are used with security (polices) as escorts in order to ensure adequate security. At times, CBN arranges to move coins by train from one location to the other, or move cash (currency notes) by air from one location to the other.

(ii) VAULT PROCESS

Typically the branch of a bank starts cash operation in the morning with all cashiers, cash officer and the Treasury Manager assembling in the vault/strong room. At the strong room cash is issued to all the paying cashiers according to their capacity/status. They then take the cash to their cubicles to begin the day's work (payments). The receiving cashiers only take their tills from the strong room; they do not require taking cash. At the end of the day the cashiers are checked when they balance their books. Cash is then taken back to the vault duly checked and balanced. No one goes home until vault cash balances. In the course of the day, the receiving cashiers surrender cash received to the Treasury via the Cash Officer & the *Treasury Manager*. All these processes are regarded as *Vault Process*. We must note that as soon as there is excess cash lodged in the strong room, arrangement is made to deposit such excess cash at the Central Bank of Nigeria via Cash Movement

Answer to Question 5

The risks are as follows: (1) Liquidity Risk (2) Market Risk (3) Interest Risk (4) Foreign Exchange Risk (5) Running Out of Cash Risk and (6) Carrying Excess Cash Risk.

1. Liquid Risk

This is the risk that bank is unable to meet its commitments to its customers due to lack of sufficient liquid assets. This risk has made some banks to fold up because they did not have enough cash to meet their immediate commitments.

In practice, liquidity risk arises when a bank is lending long and taking funds short. This is a mismatch for portfolio as to dates of business transactions. For example, a bank lends money out for a period of one year but funds the lending with a three -month facility; this is a mismatch as there will be liquidity exposure for nine months (12 months -3months). If this pattern continues, the bank's operations will certain become unsustainable and the bank will have to close down or fold up.

To Avoid Liquidity Risk

- a. In order to control/avoid such risks, the bank will have to monitor the maturity of its liabilities against the maturity of its assets.
- b. Arranging for special liquidity facilities with other banks.
- c. Maintain sufficient committed lines of credit as appropriates with various other banking groups.
- d. Treasurers will also have to track the line of credit available to them for the purpose of maintaining their short-term funding position.
- e. They (Treasures) will have to match the maturity of the assets and liabilities on daily basis
- f. Day to day matching and detailed monitoring of so that appropriate money market can be accessed to find the most appropriate funding facility.
- g. Learn to direct the resources available to where there is little known risk-play safe with the resources at hand.
- h. Do effective cash management by forecasting future cash flows.
- i. It is advised that bank should invest their excess funds into marketable securities which they can fall back upon in the time of crisis by turning such security to cash. Such securities are prime certificates of deposit with first class banks, treasury bills and interbank placements.
- j. Also in an effort to avoid liquidity risks in the sector, it is in order for banks in liquidity crisis as a way of bail out.

2. Market Risks

By market we refer to the marketable instruments that are dealt with in both the money and capital markets- some of the instruments are treasury bills, Treasury Certificates, Short-Term bonds, Long Term bonds, fixed deposits, Shares, and Debentures etc.

Market risk deals with risks from **adverse movements** of market prices or market rates. This also has to do with interest rates, equity price rates, exchange rate risks and commodity price risks. Market risk revolves those instruments whose values change frequently.

Market risk has risen in importance for the last 30 years as a result of the high level of instability in the environment within which banks operate. The recent global meltdown in the economy of virtually every nation, affecting the banking institutions is a case in point.

Development in technology has emboldened banks to take on more risks than before as technology allows more and better understanding of market behaviors and the movements are better and more accurately predicted.

To Avoid market Risks

- a. To avoid market risks, trade in securities with caution. Do not be over ambitious.
- b. Apply dealing limits as a risk management tools that is to say markup how much funds you want to invest in the market per time. The aim is to provide management with some confidence that its risk parameters are not exceeded.
- c. Another type of risk management tool is *stop loss* limit which can be applied to most instruments. It enables the bank to limit further losses at a specified level by disposing the instrument rather than waiting to see if the instrument will have a turnaround price and move into profitability- it can go worse like we recently observed on the Nigerian Stock Exchange market.
- d. Ensure transparency in the whole market. A situation where some members of the market operators have undue advantages over the others usually brings fraudulent practices.
- e. Hedging is a management risk tool. To hedge is to protect the market instrument against losing its value. Hedging therefore can be in the form of investing in several types of market instruments at the same time, so that if some lose in value, others will gain in value, so there will be compensation- a balancing situation.

3. Interest Rate Risk

Interest rate risk is the exposure which a bank has to adverse movement in interest rates. It is a major risk that banks face as they carry out their traditional functions of lending to customers and taking funds (deposit) from customers all based on interest rates. Change in interest rates affect the value of bank's asset (loan) and liabilities (deposits) and hence its profitability or otherwise, ultimate the financial stability of the bank.

Managing Interest Rate Risk Involves The Following:

- a. Sell off securities that have fixed rate of incoming and re-invest the proceeds in securities that have different maturities and higher rates of income.
- b. Sell of all the market instruments entirely so that cash can be made available for other purposes including re -investment in new product.
- c. Reverse Repurchase is another tool to manage interest rate risk. It involves the sales of securities with the intention to repurchase them at a date in future at various maturities.
- d. Introduction of new products will however be marketed effectively to be of impact. This may be in the form of new loan type or deposit product.
- e. Financial Futures - this is a contract to sell a financial instrument on or before a specified date at an agreed price. This could be an interest bearing instrument such as a Treasury Bill/Bond.
- f. Financial Options - this is a contract that gives the holder the right to buy or sell a security at a fixed price at or before a specific date. These options contracts are in structured so as to limit the holder's risks up to a level.

4. Foreign Exchange Risk

Foreign exchange risk is the risk associated with the movement of the value of one currency against the other. Movements in exchange rates can result in significant increases or decreases in the profits of banks.

To manage foreign exchange risks, banks take the following measures:

- a. They usually diversify currency portfolio in order to control the level of risk exposure
- b. In foreign exchange transactions, banks need to take due caution in order to avoid fraudulent practices among the market operators-avoid duping.
- c. Ensure appropriate training for the bank's staff so that will operate effectively at the weekly forex bidding at the CBN.

5. Risks of Running out of Cash

A bank management must strike a balance between the risk of carrying excess cash the risk of running out of cash for daily operations.

Risks of Running out of Cash

- a. Loss of goodwill of customers who are disappointed for not obtaining the cash they want for their business. Such customers may move their operations from that bank to another.
- b. Financial risks as follows:
 - i. Cost of issuing bank draft to a neighbouring bank that is in the position to supply cash to the customer.
 - ii. Cost of transporting cash from a nearby bank or branch that may be willing to supply the needed cash.
 - iii. Claim on demand-breach of contract

6. Risks of Carrying Excess Cash

- a. Interest income forgone for carrying excess cash
- b. Cost of security for security the excess cash in the vault
- c. Risk of armed robbery attack, fire, if vault is not fire proof.
- d. Risk of pilferage by staff

Answer to Question 6

A. MANAGEMENT OF MARKETABLE SECURITIES

At times, the bank has excess cash over its immediate needs – say it needs N500m per time while it has N750m. It will be reasonable for it to invest the excess funds of N250m, in some short term instruments such as money at call with other banks, bonds, treasury bills and any other short maturing instruments.

When cash balance level falls, the marketable securities are then sold at short notice for cash replenishment to keep the operation going.

Criteria for selecting marketable securities are:

i. Safety/Riskiness

From experience, the bank should be able to select which securities has less risk and can earn high returns.

ii. Maturity

Time period over which principle and interest will be paid is of essence. If a security matures within 7 days and another matures within 45 days, one can predict what can happen within 7 days more than 45 days, though interest on the security which matures within 45 days will be higher than that of 7 days.

iii. Profitability

Like in the case sighted above, if profitability is the bank's priority, it is likely to invest in the security maturing within 45 days with higher interest rate.

iv. Marketability (Convertibility)

This refers to the convenience and speed with which the security can be converted to cash. If it can be sold within a short period of time, then it is considered liquid. *Government Treasury Bills, Money at Call, Short Bonds* (3 months-6 months) *Treasury certificates and Fixed Deposits* fall under this category of marketable securities.

B. (i) The Nigerian Stock Exchange

- This is the market for primary and secondary trading of securities- primary market is the market where newly issued shares are sold for the first time while secondary market is the market for the sale of existing stocks and shares by investors. The sale is usually effected by stockbrokers.

Functions of Stock Exchange

1. To act as a central meeting place for members in order to buy existing shares and stocks.
2. For granting quotations to new issues.
3. To provide machinery for mobilizing private and public savings and making such savings available for productive investment
4. To facilitate the purchase and sale of securities in order to reduce the risk of liquidity

5. Acts as channel to attract foreign capital into Nigeria
6. It facilitates dealings in Government securities such as long-term bonds and Development Stock of 5 -10 years maturity.

(ii). The Securities and Exchange Commission

This is the apex institution of the Capital Market and it provides the framework within which Capital Market activities take place. It ensures the orderliness and efficient operations of the Capital Market.

A major role which it plays is the Protection of interests of investors so as to maintain confidence in the Capital Market.

Functions of the Securities and Exchange Commission

1. Determines the amount of securities that are to be offered for sale
2. Determines the time when to offer the security
3. Determines the price at which to sell security
4. Registers all security dealers - issuing House, Registrars, Investment bankers, Stock Exchange etc.
5. Supervises the securities market including the Stock Exchange
6. Organizes seminars and lectures as well as publishes journals in order to enhance the awareness of the public in Capital Market Operations.
7. Determines the contents of the prospectus and other issuing memorandum as proposed by vendors of new securities.
8. Grants approval in respect of merger/ acquisition and all forms of businesses
9. Regulates the Market and Avoids insider trading
10. Audits all the books of companies involved in securities business directly or indirectly.