



AFRICAN ECONOMIC RESEARCH CONSORTIUM

Collaborative MA Programme in Economics for Anglophone Africa
(Except Nigeria)

JOINT FACILITY FOR ELECTIVES (JFE)

JUNE – OCTOBER 2009

CORPORATE FINANCE AND INVESTMENT I

First Semester: Final Examination

Duration: 3 Hours

Date: Wednesday, August 12, 2009

INSTRUCTIONS:

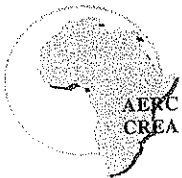
1. Answer ANY FOUR of the following six questions. Each question carries 25 marks.
 2. Candidates are allowed to bring into the examination room calculators and written formulas with **NO TEXT WRITTEN ON THEM.**
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Question 1

Explain briefly how stock markets work and assess their usefulness to firms as a source of long-term finance. [25 Marks]

Question 2

- (a) Differentiate between a nominal annual rate and an effective annual rate. [3 Marks]
- (b) What is the difference between an ordinary annuity and an annuity due? [3 Marks]
- (c) Explain the effect of more frequent compounding on the:
 - (i) Future value [2 Marks]
 - (ii) Effective annual rate [2 Marks]
- (d) James is analysing the last five years of earnings per share data for Kenya Bolts plc. The figures are Ksh 40, Ksh 45, Ksh 50, Ksh 60 and Ksh 70. At what compound annual rate did the earnings per share for Kenya Bolts plc grow during these years? [4 Marks]



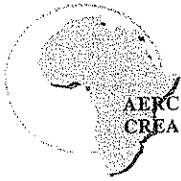
- (e) A client has agreed to invest Ksh 100,000,000 five years from now in a business planning to expand and she has decided to set aside the funds today in a bank account that pays 8 % compounded quarterly. How much does she need to set aside? **[5 Marks]**
- (f) At retirement, J. Smith has two payment options: a 20-year annuity at Ksh 50,000,000 per year starting after one year or a lump sum of ^{Ksh} 450,000,000 today. If Mr Smith's required rate of return on retirement fund investments is 8 % per annum, which plan has the higher present value and by how much? **[6 Marks]**

Question 3

- (a) Consider the following financial information for Kenya Electronics Ltd for each of the past 4 years.

	2003 Ksh	2004 Ksh	2005 Ksh	2006 Ksh
Turnover	160,765,456	180,467,897	200,505,789	210,104,678
Inventory	8,012,321	8,111,444 8,111,444	9,876,231	9,223,456
Profit before interest and tax	20,045,758	20,331,266	10,587,213	20,610,456
Fixed assets	10,498,766	10,489,745	10,249,654	10,154,321
Current assets	80,123,321	80,796,776	90,703,456	90,370,234
Current liability	60,789,654	80,123,546	80,703,456	80,370,234

- (i) Calculate the quick (acid- test) ratios for each year and comment on the company's liquidity position over the 2003-2006 period. How useful are these ratios to creditors of Kenya Electronics Ltd? **[5 Marks]**
- (ii) Calculate the return on capital employed (ROCE) ratios for each year and comment on the performance of the Kenya Electronics Ltd over the 2003-2006 period. How useful are these ratios to senior managers of Kenya Electronics Ltd? **[5 Marks]**
- (b) Briefly explain the following concepts
- (i) Average payment period **[2 Marks]**
 - (ii) Average collection period **[2 Marks]**
 - (iii) Time series ratio analysis **[3 Marks]**
 - (iv) Cross sectional ratio analysis **[4 Marks]**
 - (v) DuPont system of analysis **[4 Marks]**



Question 4

- (a) How does the security market line (SML) differ from the capital market line (CML)?
[3 Marks]
- (b) Suppose that the risk-free rate is 6 % and the expected return on the investor's tangency portfolio is 14 %, with a standard deviation of 24 %.
- (i) Calculate the investor's expected risk premium per unit of risk. [2 Marks]
- (ii) Calculate the portfolio's expected return if the standard deviation of return is 20 %.
[3 Marks]
- (c) Alisa is evaluating the following three investments:

Portfolio	Variance (%)	Return (%)
A	225	12
B	64	10
C	81	10

- (i) Explain the choice among portfolios A, B and C using the Markowitz decision rule.
[3 Marks]
- (ii) Explain the choice among portfolios A, B and C assuming that borrowing and lending at a risk-free rate of 2% is possible.
[4 Marks]
- (d) Kenya Holdings plc is a company that has diversified into five different industries in Botswana, Ghana, Kenya, Malawi and South Africa. The investments are each approximately equal in value. The company's objective is to reduce risk through diversification, and it believes that the return on any investment is not correlated with the return on any other investment. The estimated risk and return (in present value terms) of the five investments are shown below.

Investments	Risk (% standard deviation)	Return (%)
Botswana	8	14
Ghana	10	16
Kenya	7	12
Malawi	4	9
South Africa	16	22

- (i) Estimate the risk and return of the portfolio of the five investments and briefly explain the significance of your results.
[5 Marks]
- (ii) Discuss the validity to investors of Kenya Holdings' objective for risk reduction through international diversification.
[5 Marks]



Question 5

- (a) Discuss any **three** benefits of leasing versus owning a car. [3 Marks]
- (b) Suppose Kenya Bolts plc has a proposal for a four-year financial lease and the firm constructs a table showing the lease cash flows as shown below.

	Year 0	Year 1	Year 2	Year 3
Lease cash flow (Ksh 000)	62,000	-26,800	-22,200	-17,600

These cash flows reflect the cost of the machine, depreciation, tax shields and after tax lease payments. Ignore salvage value. Assume the firm could borrow at 10 % and faces a 35 % marginal tax rate.

- (i) What is the value of the equivalent loan? [2 Marks]
- (ii) What is the value of the lease? [1 Mark]
- (iii) Suppose the machine's NPV under normal financing is -Ksh 5,000,000. Should Kenya Bolts plc sign the lease? [1 Mark]
- (c) What are the differences between an operating lease and a financial lease? [6 Marks]
- (d) Discuss the validity of each of the following statements:
- (i) Leasing reduces risk and can reduce a firm's cost of capital. [3 Marks]
- (ii) Leasing provides 100 percent financing. [3 Marks]
- (iii) Firms that do a large amount of leasing will not do much borrowing. [3 Marks]
- (iv) If the tax advantages of leasing were eliminated leasing would disappear. [3 Marks]

Question 6

- (a) Kenya Electronics plc has the following cash balances:

Company's ledger balance	Ksh 48,000,000
Banker's ledger balance	Ksh 50,000,000
Available balance	Ksh 44,000,000

- (i) Calculate the payment float and available float [1 Mark]
- (ii) How does the company gain from the payment float? [1 Mark]
- (iii) Suppose the company adopts a policy of writing checks on a remote bank. How is this likely to affect the above three measures of cash balance? [3 Marks]



- (b) The management of Kenya Bolts Inc, is considering dropping its policy of no credit in favour of a credit policy as follows.

	No credit	Credit
Price per unit	Ksh 2,800	Ksh 3,200
Cost per unit	Ksh 2,000	Ksh 2,560
Quantity per sold	2,000	3,000
Probability of payment	100%	90%
Credit period	0	1
Discount rate	0	2%

- (i) Should Kenya Bolts Inc offer credit to its customers? [3 Marks]
- (ii) What must be the probability of payment before Kenya Bolts Inc would adopt the policy? [2 Marks]
- (c) The treasurer of Kenya Electronics plc has forecast that over the next year, the company will generate cash flows in excess of its requirements. Discuss three possible reasons for such a surplus, and explain the circumstances under which the board of directors might decide to keep the excess in liquid form. [7 Marks]
- (d) Explain the Baumol model approach to cash management and discuss its limitations? [8 Marks]