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University Examinations 2023/2024

THIRD YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS ADMINISTRATION

BFC 3337: INVESTMENT AND RISK MANAGEMENT

DATE: APRIL 2024   TIME: 2 HOURS

INSTRUCTIONS: *Answer question **one** and any other **two** questions*

QUESTION ONE (30 MARKS)

A U.S.A. company wish to pay its German supplier £1.2 million in 90 days' time. The current spot rate is $1.2582: £1 and the 90 days forward rate is $1.2636: £1. A call option on the Euro expiring in 90 days has an exercise price of $1.260: £1 and a premium of 0.0098: £1. The option is only exercisable at the end of the period. The forecast at the end of the 90days is $1.264: £1. Evaluate how much the USA Company will pay its German supplier under each of the following alternatives:

a.   No hedging takes place   (4 marks)

b.   Arranging a forward contract hedge   (8 marks)

c.   Explain how a firm may get exposed to currency risk and hence describe various types of currency exposure   (10 marks)

d.   Explain, using clear illustrations, how the following instruments can be used as hedging tools:

i. Futures (4 marks)

ii. Options (4 marks)

QUESTION TWO (20 MARKS)

An investor has two assets, A and B, and he has allocated his wealth equally in each of them. The assets returns are dependent on states of economy as shown in the table below:

S_i	P_i	R_{Ai}	R_{Bi}
Boom	0.3	20	11
Normal	0.5	14	15
Depression	0.2	10	6

Calculate by assuming equal proportion

   i)   Expected return of each asset and of the portfolio (4 marks)
   ii) Co-variance between A and B (6 marks)
   iii) Co- relation coefficient (4 marks)
   iv) Variance and standard deviation of each asset and of the portfolio (6 marks)

QUESTION THREE (20 MARKS)

a) Describe various types of financial risk and for each, state what circumstances may give rise to such a risk (12 marks)

b) A Kenyan exporter enters into for $3 million. He expects to in the value of the US dollar which may diminish the export earnings in terms of Kenya shillings. To mitigate this risk, the exporter opts for a three months contract. If the spot rate as well as the forward rate is sh 110 per dollar. Determine the exporters position if the dollar depreciates to Kshs 109 for three months. (8 marks)

QUESTION FOUR (20 MARKS)

Explain the role of the following parties in risk management

   i)   Board of directors

ii) Senior management

iii) Risk manager   (9 marks)

i.   A manager in charge of foreign exchange risk management may use internal hedging techniques that don't involve any contractual relationship with any other party outside the firm. Describe any five such techniques   (11 marks)

QUESTION FIVE (20 MARKS)

a) Compare the extent of credit risk in digital lending and conventional lending (5 marks)

b) A Kenyan importer has just ordered a machinery worth $1,200,000 which should be paid in two months time. He is worried that the rising political temperatures may cause the shilling to depreciate against the dollar and thus make his product expensive. Kenyan shilling futures were available in the market and could be bought in blocks of Ks100,000 and the cost of each future is KSH 1,000. The current Spot exchange rate is Ksh110 per dollar. The two months forward rate is expected to be 113.50 per dolar and the spot exchange rate in two months' time is 111.5. Determine the net gain or loss for using the futures contract   (10 Marks)

c) As an agri-processor, you are faced with large price fluctuations of prices of inputs especially during periods when the product is off season. Suggest various ways you can manage commodity price risk   (5 marks)