STRATHMORE BUSINESS SCHOOL

MASTER OF SCIENCE IN DEVELOPMENT FINANCE

END OF SEMESTER EXAMINATION

MDF 8202: INTERNATIONAL FINANCE FOR DEVELOPMENT

Date: Monday 6th December 2021 **Time: 3** Hours

Instructions

1. This examination consists of **FOUR** questions.
2. Answer **QUESTION ONE** and **ANY OTHER TWO** questions.

Question 1 (Compulsory) (50 Marks)

(a) (i) Using suitable examples, distinguish between a financial crisis and financial contagion **(4 Marks).**

(ii) Highlight three theories that discuss financial crisis and three theories that apply to financial contagion **(6 Marks)**

(b) Use the IS-LM model to analyze the effects of:

(i) a boom in the stock market that makes consumers wealthier **(5 Marks).**

(ii) after a wave of credit card fraud, consumers using cash more frequently in transactions **(5 Marks)**

NB) For each shock,
a. use the IS-LM diagram to show the effects of the shock on Y and r.
b. determine what happens to C, I, and the unemployment rate.

(c) Lexus Limited (A US Company) is evaluating the feasibility of launching a new product called Tetra at the beginning 2022. The product will be launched in Burahi, a foreign country whose currency is the Bris. Lexus plans to buy a new machine to meet expected demand for product Tosta. This machine will cost Bris 2,500,000 and last for four years, at the end of which it will be sold for Bris 500, 000. Working capital of Bris 300,000 will be required in January 2022 of the project and will be recovered on 31 December 2025. This will not increase with inflation.

Lexus expects demand for Tetra to be as follows:

Year	2022	2023	2024	2025
Demand (units)	35,000	40,000	50,000	25,000

The selling price for Tetra is Bris 120.00 per unit and the variable cost of production is estimated at Bris 78.00 per unit. Incremental annual fixed production overheads of Bris 250,000 per year will be incurred. Selling price and costs (Variable and Fixed) are all in current price terms (Year 0/End of year 2021) and are expected to increase with general inflation.

Other information:

1. In US and Burahi tax is paid at a rate of 30% one year in arrears i.e. tax for year 1 is paid at end of year 2. Capital allowances on the machine are on a 25% reducing balance basis. Tax will be paid or saved on the sale of the machine. There is a double tax treaty between US and Burahi, so no tax is paid in US on foreign income arising from Burahi.
2. General inflation is expected to be 6% in Burahi and 3% in US over the next five years.
3. The risk-free rate in both countries is 5% and the market return is 20% and before tax cost of debt is 9%. Burahi has a debt equity ratio of 1:1 and equity beta of 1.2.
4. Burahi plans to finance the project using the current funds and hence the project will not change the current debt equity structure.
5. Burahi is considered riskier than US and hence the equity beta is estimated at 1.4. The cost of equity and Weighted Average Cost of Capital estimated is the real rate. So, consider inflation rate to get the nominal rate using the Fisher equation.
6. Currently (Year 0) Exchange rate between US $ and Burahi is $ = Bris 10.

Required:

(i) Calculate the NPV of the project assuming that Lexus cannot access the cash flows until the end of the project, and hence, whether Lexus should launch Tetra **(24 Marks)**

(ii) Discuss various ways that Lexus can optimize cash flows from the project **(6 Marks)**

Question 2 (25 Marks)

(a) Briefly discuss THREE participants in the forex markets **(6 Marks)**

(b) Lucy Mutua is the treasurer of Waumini Development Finance Institution and is about to receive $100,000 from a donor, for a project to be carried out soon. She is is looking to profit from potential arbitrage opportunities. She obtains the following exchange rates:

US$ = Ksh.111
Ksh. = Ug.sh.32
US$ = Ug.sh. 3,450

Required

(i) Compute the cross rate between US$ and Ug. Sh. and comment on whether there is an arbitrage opportunity **(2 Marks)**

(ii) Demonstrate how she can execute an arbitrage and the estimated gain in dollars **(4 Marks)**

(c) After executing the above arbitrage, Lucy is informed that the project will delay for another three months. She then decides she will invest in 1000 shares of Micron, a US based company quoted on the NYSE. Each share was valued at $100 at the time of investment, with the market price being $105 at the end of three months.

Required.

Assist Lucy report from a Kenyan perspective, the total gain/loss on the investment assuming that the exchange rate at the end of three months was $ = ksh.107. Unbundle the gain or loss into market value and exchange rate both in % and Ksh. **(7 Marks)**

(d) Lucy is now debating with the CFO on whether she should have hedged her investment against currency risk. Discuss three reasons for and three reason against hedging currency risk

(6 Marks).

Question 3 (25 Marks)

(a) Distinguish briefly between the following sources of finance:

(i) Euro Commercial Paper and Euro Notes **(4 Marks)**

(ii) Syndicated Credit and Syndicated Loan **(4 Marks)**

(b) Venturo Limited is a US multinational corporation financing its operation using international sources of equity and debt. The debt equity ratio is 40% to 60%. Currently the US treasury bond rate is 10%.

Most of the equity of Venturo is held by foreign investors and the main market index of the shares is the Morgan Stanley Capital International global Index (MSCI global). Currently the MSCI has a return of 20%.

Venturo has estimated its beta i.e. systematic risk relative to MSCI at 1.2. The cost of debt for Agrico before tax is 10% and the tax rates are 30%.

Required

(i) Compute the International Weighted Average Cost of Capital for Must **(6 Marks)**

(ii) Discuss the impact on the WACC of Venturo assuming that Venturo operates in a highly segmented but liquid market **(6 Marks)**

(c) Kenya Power and Lighting is a Kenyan Company supplying electricity for commercial and residential households. The company is highly financed by foreign debt and by year ended 30 June 2021, reported debt level of 75%.

In evaluating various options to finance the company and reduce the debts levels, highlight any five factors that the company should consider **(5 Marks)**

Question 4 (25 Marks)

(a)Evaluate the following basic foreign currency hedging strategies in terms of what they are, their benefits and limitations:

(i) Trading in local currency **(3 Marks)**

(ii) Netting **(3 Marks)**

(iii) Leading and Lagging **(3 Marks)**

(b) David Chestnut is the finance director of Empowering People society, an NGO based in the UK. David is expecting to receive $600,000 in three months from a US donor and is considering various hedge strategies. He obtains the following information:

Exchange rate now: $1.3361: £
Forward rates $1.3452: £
Deposit rates (3 months) UK 4.5% annual US 4.2% annual
Borrowing rates (3 months) UK 5.75% US 5.1% annual
Futures Contract valued at £125,000 per contract with a Futures Price of $1.3400:£
Put Options with Exercise Price of $1.3390:£. Option Premium is 1% of the transaction amount.

Required

Evaluate the effectiveness of the following hedging strategies if at the end of three months the spot exchange rate is $1.3520: £

(i)	Money Market Hedge	**(6 Marks)**
(ii)	Forward contract	**(2 Marks)**
(iii)	Futures Contract	**(4 Marks)**
(iv)	Option Contract	**(4 Marks)**