



**STRATHMORE BUSINESS SCHOOL**  
MASTER OF SCIENCE IN DEVELOPMENT FINANCE  
**END OF SEMESTER EXAMINATION**

**MDF 8202: INTERNATIONAL FINANCE FOR DEVELOPMENT**

**Date:** Friday 2<sup>nd</sup> December 2022

**Time:** 3 Hours

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**Instructions**

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

**Question 1 (Compulsory) (50 Marks)**

(a) International Finance is supported by the world financial market. Briefly discuss the components of the financial market **(9 Marks)**

(b) Without deriving, consider the final model of the IS-LM curve and explain its importance in economic development **(6 Marks)**

(c) Motel Limited (A Kenyan Company) plans to invest in Rwanda to manufacture and sell its major product “Softa” beginning 2023. The currency of Motel is the Kenyan Shilling (Ksh.) and of Rwanda is the Rwandan Franc (RFRs).

Motel plans to invest mainly in new plant and machinery to meet the expected demand for product Softa. This machine will cost RFR 250 million and last for five years, at the end of which it will be sold for RFR 50 million. Working capital of RFR 30 million will be required in January 2023 of the project and will be recovered on 31 December 2027. This will not increase with inflation.

Motel expects demand for Softa to be as follows:

Year	2023	2024	2025	2026	2027
Demand(units)	35,000	40,000	50,000	25,000	20,000

The selling price for Softa is RFr 15,000.00 per unit and the variable cost of production is estimated at RFr 10,000.00 per unit. Incremental annual fixed production overheads of RFr 25 million per year will be incurred.

Selling price and costs (Variable and Fixed) are all in current price terms (End of year 2022) and are expected to increase with general inflation in Rwanda.

Other information:

1. In Kenya and Rwanda tax is paid at a rate of 30% one year in the same year. Capital allowances on the machine are on a 25% reducing balance basis. Tax will be paid or saved on the sale of the plant and machine. There is a double tax treaty between Kenya and Rwanda, so no tax is paid in Kenya on foreign income arising from Rwanda.
2. General inflation is expected to be 6% in Rwanda and 3% in Kenya over the next five years. The real weighted average cost of capital for Motel is 17%.
3. Motel plans to finance the project using the current funds and hence the project will not change the current debt equity structure.
4. Currently (End of 2022) Exchange rate between Kenya and Rwanda is Ksh.1 = RFr 10.

Required

- (i) Determine the projects cash flow in Rwanda Francs over the five years **(22 Marks)**
- (ii) Compute the Net Present Value of the Project in Kenya Shillings and advise whether the project should be undertaken **(5 Marks)**
- (iii) How would your computation of Net Present Value have changed if the Rwandan Government wa to restrict the subsidiary from sending the projects cash flow back to Kenya? **(4 Marks)**
- (iv) To finance the project in Rwanda, the company is considering raising either a Eurobond or a Euro currency loan. Distinguish between the two approaches and recommend the better option **(4 Marks)**

## **Question 2 (25 Marks)**

- (a) To enable efficient international finance and investing, federal reserve banks (central banks) can opt for fixed exchange rate or floating exchange rate systems of foreign currency management.
  - (i) Distinguish between the two forms of currency management **(6 Marks)**

(ii) The Central Bank of Kenya has opted to adopt the two systems. What is the name of this strategy and how does the Central Bank implement it **(4 Marks)**.

(b) Ms Florence Smith is the treasury manager of Mazada Limited, a local company with international business associates and clients. She has a number of issues to deal with.

(i) The company has just bought some goods from a US supplier and requires to pay \$100,000 in a few days. In addition, one of their customers in Tanzania has just paid Tsh.100 million for a credit sale that were done a month ago. Given the following exchange rates, what amounts will Florence transact in Kenya shillings? **(4 Marks)**

	Bid Price	Ask Price
Kenya – US (KSh./US\$)	120	125
Kenya – Tanzania (Tzsh./Ksh.)	18	24

(ii) Florence is now looking at additional exchange rates and she observes the following:

US \$ = Kenya sh.125

Kenya Sh. = Uganda sh.32

US \$=Uganda sh. 4,200.

Florence suspects that she can make an arbitrage profit from the cross rate. She wants to use the \$100,000 before she pays the US supplier.

Required

Explain how Florence can carry out the arbitrage and how much profit she will make in dollars?

**(6 Marks)**

(iii) Florence is now evaluating other exchange rates to identify potential for interest rate arbitrage. She finds out that, the annual interest rate in the AUS (currency is \$) and in the UK (Currency is £) are 5% and 8% respectively. The current spot rate is \$1.80/£ and the 1-year forward rate is \$1.78/£.

Required

Assume that Florence can borrow AUS\$ 500,000. Compute the potential profit that she can make from interest rate arbitrage **(5 Marks)**.

### Question 3 (25 Marks)

(a) The government of Catalunya is in the process of preparing its balance of payments account. The following data is given in millions of dollars is presented as at 30 June 2022:

Net exports of goods and services	-498.1
Net labor income from Rest of World	-5.5
Net capital income from Rest of World	38.8
Net taxes and transfers from Rest of World	-67.4
Net direct investment in Catalunya	133.9
Net purchase of private securities	251.0
Net purchase of Catalunya government securities	248.6
Net loans and other	-102.8

Required:

- (i) Explain what a balance of payments account is. **(2 Marks)**
- (ii) Prepare the balance of payment account for Catalunya. Note that the Statistical discrepancy is the balancing figure. **(8 Marks)**

(b) Federico 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 8%. Most of the equity of Federico 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%.

Federico has estimated its beta i.e. systematic risk relative to MSCI at 1.15. The cost of debt for Agrico before tax is 10% and the tax rate is 30%.

Required

- (i) Compute the International Weighted Average Cost of Capital for Federico **(4 Marks)**
- (ii) Explain the effect of market segmentation and market liquidity on the international Weighted Average Cost of Capital for Federico **(4 Marks)**
- (c) Max limited, a Kenyan company, has just bought 1,000 shares of Dell, a company quoted in the NYSE at a price of \$50 per share. On the same date the exchange rate was \$ = Ksh.119. Assume

that after one month, the share price for Dell will decline marginally to \$47.50, while the exchange rate will be \$=Ksh.122.

**Required**

Compute the expected total return (%) and (Ksh.) and split into the fair value and exchange rate components. **(7 Marks)**

#### **Question 4 (25 Marks)**

(a) Explain the meaning of a currency crisis and Highlight TWO indicators of a currency crisis **(5 Marks)**

(b) Explain THREE techniques that the CFO of a multinational organization can use to optimize cash flows **(6 Marks)**

(c) (i)The Managing Director and Finance Director of Hoist Limited (a UK company) expects to receive \$4,200,000 in 3 months. The Finance Director is considering Four Hedging Strategies.

##### **1. A money market hedge**

Exchange	rate	now:	\$1.2361:£
Deposit rates (3 months)	UK 4.5%	p.a.	US 4.2% p.a.
Borrowing rates (3 months)	UK 5.75% p.a.		US 5.1% p.a.

##### **2.Foward contract**

A forward contract with the bank at a forward rate of £=\$1.2516.

##### **3.Futures contract**

A dollar futures currency contract. Currency dollar futures currency contract is standardized at \$250,000 per contract. The company can only buy one full contract and not partial. The Futures Price for settlement in three months is £=\$1.2556

##### **4.Option Contract**

A put option contract with total premium of £1,000. The exercise price is given at £=\$1.2510.

**Required**

Evaluate the effectiveness of each strategy and suggest optimal one assuming that the spot rate in three months turns out to be £=\$1.2425. Indicate one benefit and one limitation of each strategy

**(14 Marks).**