

## **THE INSTITUTE OF FINANCE MANAGEMENT**



**INSTITUTE OF FINANCE MANAGEMENT**

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### **THE ECONOMICS OF FOREIGN EXCHANGE MARKET TUTORIAL QUESTIONS**

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- TQ1. Provide a precise definition of the market for foreign exchange.
- TQ2. What does the term foreign exchange rate mean? Briefly identify the factors affecting foreign exchange rate.
- TQ3. Who are the market participants in the foreign exchange market and what is the difference between the retail or client market and the wholesale or interbank market for foreign exchange?
- TQ4. What is meant by a currency trading at a discount or at a premium in the forward market?
- TQ5. What is triangular arbitrage? What is a condition that will give rise to a triangular arbitrage opportunity?
- TQ6. Why is the profit from triangular arbitrage riskless?
- TQ7. What is a forward contract and what do the terms premium and discount mean in this context?
- TQ8. Define a Point. When do we say that the points are rising and when do we classify points as being falling?
- TQ9. What are the principal uses/functions of the foreign exchange market?
- TQ10. Four concepts: appreciation, depreciation, revaluation, and devaluation are all related to changing the value of a currency. Provide a concise definition of each.

**TQ11: [Currency Trading]**

The following spot rates are observed in the foreign exchange market:

Currency	Units Required to Buy One TZS
Kenya (KES)	0.15
Uganda (UGS)	3.45
Zambia (ZK)	6.75
Malawi (MK)	5.85

**Required:**

On the basis of this information, compute to the nearest second decimal the number of

- TZS that can be acquired for UGS25,000
- MK that can be acquired for TZS30,000,000
- UGS dollar that TZS9,000,000 can buy
- KES that TZS200,000 will buy

**TQ12: [Forward Differentials]**

Given below are spot and forward rates expressed in TZS per unit of the KES and UGS

Rates	Kenyan Shilling (KES)	Ugandan Shilling (UGS)
Spot	15.60	0.30
30-days forward	16.10	0.25
60-days forward	16.40	0.50
90-days forward	16.90	0.59
180-days forward	17.80	0.58

**Required:**

- Is the 90 day forward **KES** quoted at a discount or at a premium?
- Is the 90- day forward contract in UGS trading at a discount or at a premium?
- Relative to the UGS is the 180 – day forward TZS quoted at a discount?
- Relative to the TZS is the 90 – day forward KES quoted at a discount?

Compute the forward premium or discount in each of the above cases.

**TQ13: [Forward Differentials]**

Given below are spot and forward quotations for the US\$ against the Tanzanian shilling (TZS).

Spot Rate: US\$: TZS 1560 – 1572

1 Month Forward: 5 – 8 dis.

3 Months forward 9 – 3 pm

45 Days Forward 7 – 5 pm

Assume a 365 Day Year

**Required:**

- One month forward percentage bid-ask spread on the US\$
- 45 Days forward percentage bid-ask spread on the TZS
- Three month forward premium or discount on the US\$
- One month forward premium or discount on the TZS

**TQ14: [Swap Rates and Outright Rate Quotations]**

The following quotes are received for spot, one month, three month and six month Euro (€) and Pound sterling (£):

Spot	One Month	Three	Six Month
£: \$2.0015 – 30	19 – 17	26 – 22	42 – 35
€: \$1.6963 – 68	4 – 6	9 – 14	25 – 38

**Required:** Convert the above swap rates in outright rates.

**TQ15: [Foreign Exchange Trading]**

You are given the following information about currency rates for pound sterling spot and forward.

Currency	Spot	1 Month Forward	3 month Forward
US (Dollar)	1.5200 - 1.5210	0.32 - 0.27c pm	0.89 - 0.84 c pm
Kenya (KES)	24.05¼ - 28.06¼	2¾ - 1 7/8c pm	6¾ - 6¼ c pm
Tanzania (TZS)	2072.20 - 2079.30	10 - 20c dis	45 - 55c dis

**Required:**

Calculate the cost or value in pounds to a customer who wishes to:

- (a) buy US \$ 1400 one month forward from his bank
- (b) sell KES 28,000 one month forward
- (c) sell TZS 20,000 three months forward

**TQ16: [Cross Rates and Triangular Arbitrage]**

- The TZS/US\$ exchange rate is TZS1500 = US\$1, and the UGS/TZS exchange rate is TZS1 = UGS3.50. What is the UGS/US\$ exchange rate?
- The following exchange rates are available:
 

TZS per US\$	TZS1650/US\$
Canadian dollar per US dollar	C \$1.2646/US \$
TZS per Canadian Dollar	TZS1390/C\$

**Required**

Are there any opportunities for market arbitrage? Show how a Tanzanian arbitrageur can benefit from the possible arbitrage between the three markets.

- Assuming no transaction costs, suppose: £1 = US\$ 2.4110 in New York, US\$ = TZS 1,400 in Tanzania, and TZS2300 = £1 in London. How would you take profitable advantage of these rates?

**TQ17: [Cross Rates in the Presence of Bid-Ask Spread]**

- (a) Suppose the direct quote for sterling in New York is 1.7110-5. What is the direct quote for dollars in London?
- (b) Suppose the spot quote on the EURO in New York is \$ 1.3302-10, and the spot quote on the £ is \$ 1.9180-90
- What is the direct spot quote for the £ in Frankfurt?
  - Compute the percentage bid-ask spreads on the £ and the EURO.

**TQ18: [Cross Rates and Foreign Exchange Trading]**

A commercial bank in Dar es Salaam, Tanzania, provided the following foreign exchange quotes on 30<sup>th</sup> April, 2006.

	<b>TZS/£</b>	<b>£/Euro</b>	<b>TZS/US\$</b>
Spot	2404 – 2420	0.4852 – 0.4892	1050 – 1060
1 Year Forward	2456 – 2474	0.4956 – 0.4966	1200 – 1260

**REQUIRED:**

- (i) How many TZS will the bank pay to purchase one Euro one year forward from a customer?
- (ii) Determine the one year forward percentage bid-ask spread on the £ against the US\$.
- (iii) Calculate the spot and one year forward mid-prices for the £ against the Euro and determine the one year forward premium or discount on the Euro against the £.

**STQ19: [Cross Rates and Foreign Exchange Trading]**

A foreign exchange dealer provided the following quotations for the South-African Rand (SAR) against the Tanzanian shilling (TZS) on the 31<sup>st</sup> September 2004:

TZS/SAR Spot	50 – 55
Three Months Forward	2 – 7 dis.

**Required:**

- (i) Calculate the percentage bid-ask spread on the three month forward TZS
- (ii) Calculate the profit made by the dealer in purchasing and selling SAR1, 000,000 three month forward.
- (iii) Using the spot and forward offer prices calculate the forward premium/discount on the SAR