THE INSTITUTE OF FINANCE MANAGEMENT

INSTITUTE OF FINANCE MANAGEMENT CHUO CHA USIMAMIZI WA FEDHA

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INTERNATIONAL FINANCE

PARITY RELATIONSHIPS IN INTERNATIONAL FINANCE

TUTORIAL QUESTIONS

TQ1. DOMESTIC CURRENCY PRICE OF A COMMODITY IN A FOREIGN COUNTRY

Consider the following information about TV sold in the Tanzanian and Ugandan markets.

Price of TV in Tanzanian market (P_{TZS})	TZS200,000
Price of TV in Ugandan market (P_{UGS})	UGS650,000
Spot exchange rate (UGS/TZS)	UGS4/TZS

REQUIRED:

(i) Calculate the TZS price of TV in Uganda
(ii) Does the LOP hold? Why?
(iii) Calculate the equilibrium exchange rate i.e. the exchange rate implied by the LOP.

TQ2. COMMODITY ARBITRAGE

Refer to TQ1 above. Explain how a Tanzanian arbitrageur can benefit from the above situation. Assume no transaction costs exist.

TQ3. CALCULATING THE EXCHANGE RATE ASSUMING THE PPP HOLDS: CONSTANT INFLATION RATES

The Tanzania and Britain are running annual inflation rates of 20% and 2% respectively. The initial exchange rate is £ 1= TZS2000. Calculate the value of the £ in 2 years. What is the percentage appreciation on the US$ against the TZS? (Assume the PPP holds).

TQ4. CALCULATING THE EXCHANGE RATE ASSUMING THE PPP HOLDS: NON-CONSTANT INFLATION RATES

A financial analyst provided the following forecasts for inflation rate in Tanzania and Uganda.

Expected Inflation Rates

Country	Year 1	Year2	Year 3
Tanzania	6%	8%	10%
Uganda	8%	11%	15%

REQUIRED:

Assuming the initial exchange rate between UGS and TZS was UGS3.50/TZS, what should be the exchange rate in Year 3 according to the PPP.

TQ5. THE PURCHASING POWER PARITY: RELATIVE VERSION

The Tanzania and Uganda are running annual inflation rates of 17% and 19% respectively. The initial exchange rate is TZS1= UGS3.50. Calculate the value of the TZS in 2 years (Assume the PPP holds)

TQ6. THE PURCHASING POWER PARITY AND PRICE INDEXES

The Tanzanian Price level is at 120 while the German Price level is at 97 relative to the base price levels of 100. If the initial value of the Euro (at price level of 100) was TZS1450 calculate the TZS value of the Euro according to the PPP.

TQ7. INTEREST RATE PARITY AND COVERED INTEREST ARBITRAGE

Suppose the interest rate on TZS is 13% in Dar es Salaam, and the interest rate on a comparable KES investment in Nairobi is 6%. The KES spot rate is TZS15 and the one-year forward rate is TZS13.50.

REQUIRED:

Are there opportunities for covered interest arbitrage? Illustrate the profits associated with covered interest arbitrage by showing the steps that an arbitrageur can take to profit from the discrepancy in rates based on 1,000,000 currency unit transaction. Assume that the borrowing and lending rates are identical and the bid–ask spread in the spot and forward market is zero.

TQ8. THE FISHER EFFECT

If expected inflation is 50% and the real required return is 9% what will the nominal-interest rate be according to the Fisher effect?

TQ9. THE INTERNATIONAL FISHER EFFECT

In November the one–year interest rate is 8% on the US$ and 10% on the Tanzanian Shilling. If the current exchange rate is TZS1622/US$, what is the expected future exchange rate in one year? If a change in expectations regarding future Tanzanian inflation causes the expected future spot rate to rise to TZS2300 what should happen to the Tanzanian interest rate according to the International Fisher Effect?

TQ10. FORWARD RATES AS UNBIASED PREDICTORS OF FUTURE SPOT RATES

If the 180-day forward rate is TZSS1440 = EURO1, what is the expected value of the EURO in 180 days (use the UFR to forecast the future TZS/EURO spot rate).

TQ11. THE FISHER EFFECT AND THE PPP

Due to integrated nature of their capital markets, investors in both Tanzania and Malawi require the same real interest rate 4%, on their lending. There is a consensus in capital markets that the annual inflation rate is likely to be 6% in the Tanzania and 3% in the Malawi for the next three years. The spot exchange rate is currently MK7.30/TZS.

REQUIRED:
Compute the nominal interest rate per annum in both the Tanzania and Malawi, assuming that the Fisher Effect holds. What is your expected future spot MK/TZS exchange rate in three years from now?

TQ12. THE INTERNATIONAL FISHER EFFECT

It is now the beginning of year 2006. The spot bid rate for the Euro is TZS1440 while the spot bid -ask spread is TZS25. A forecaster provides the following forecasts for the bid-ask spread and inflation rates for Tanzania and United States in the next four years.

YEAR	**2007**	**2008**	**2009**	**2010**
BID-ASK SPREAD [TZS]	28	31	33	40
FORECAST RATE OF INFLATION				
TANZANIA	7%	6%	5%	4%
FRANCE	4%	5%	4%	3%

REQUIRED:
On the basis of the bid-ask spread forecasts and the theory of PPP determine the expected exchange rates and the percentage bid ask-spread for the years 2007-2010.