EC 208: Open Economy Macroeconomics
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Problem Set 1 (some answers provided)

Q1. Suppose the 12-month interest rates on simple deposits in Turkey and US are 10% and 5% are respectively. Current exchange rate, S_t, is 1.3. A risk-neutral Turkish investor has $10,000TL$ which he wants to invest either in a Turkish or US bank.

(i) Suppose the investor expects the US$ to depreciate by 10% Which country will he choose to invest his money in? Calculate the difference between expected nominal returns in each country in terms of TL.
$E_t(S_{t+T}) = 1.3 - 1.3 * 0.1 = 1.17$
$US : (10000/1.3) \times (1 + 0.05) * 1.17 = 9450$
$Turkey : (10000) \times (1 + 0.1) = 11000$
She is risk neutral and therefore chooses Turkey.

(ii) Assume the investor is risk-averse and requires at least 2% premium on the risky investment over the safe bet. In addition, assume now he expects US$ to depreciate by 30% Which country will he choose to invest his money in?

(iii) Suppose exchange rate forward contracts become available and the current 12 month forward rate between $ and TL is 1.4 ($F_t = 1.4$) The risk-neutral investor expects $ to depreciate by 10%. What is the best strategy for the investor?.

(iv) Now assume that al investors are fully informed and redo (iii). Explain the efficient market hypothesis.

Q2. Using the PPP condition show that one country's inflation rate can only be higher(lower) than another's to the extent that its currency loses value(gains value).

$P = SP^*$

$log(S) = log(P) - log(P^*)$

$\frac{dS_t}{S_t} = \frac{dP}{P} - \frac{dP^*}{P^*}$

Q3. Answer the following

(1) What is the difference between FDI and Foreign Portfolio Investment?

(2) What is the difference between real FX rates and real effective FX rates?

(3) TCMB reports Real FX such that an increase in real FX means an appreciation of the TL. True or False ?

(4) True or False? Why? BOP deficit is likely to cause depreciation of the currency

(5) Explain how a real estate bubble can affect CA surplus/deficit

(6) Explain how growth might financed through Current Account Deficit

(7) List and explain the items of CA, CPA and BOP

(8) True or False? Why? Under pure float: CA surplus + CPA surplus + CB reserves = 0 if there are no mismeasurements

(9) Explain law of One Price and PPP

(10) Why does PPP does not hold most of the time?

(11) What are extensions to PPP. Explain each of them.

(12) How can one calculate PPP adjusted GDP of Turkey expressed in US $

(13) Explain the steps need to be take to compare PPP adjusted GDP of India and Denmark

(14) Explain UIRP and CIRP

(15) Explain the relationship between concavity of a utility function and risk-averseness

(16) The risk-premium of a country depends on the risk-averseness of the perople who live in that country. True or false?