

Economics 3107  
Global Economic Analysis  
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**Practice Problems – ANSWERS**

I. If the exchange rate between the yen and the dollar is  $E_{¥/\$} = 88.85$  and the exchange rate between the dollar and the euro is  $E_{\$/\text{€}} = 1.486$ , then what is the exchange rate between the yen and the euro, i.e.  $E_{¥/\text{€}} = ?$

$$E_{¥/\text{€}} = E_{¥/\$} \times E_{\$/\text{€}} = 88.85 \times 1.486 = 132.031$$

II. Suppose the price level in Mexico,  $PM$ , is 2280 pesos and the price level in the U.S.,  $PUS$  is 200 dollars, then according to purchasing power parity, what should the peso/dollar exchange rate approximately be?

$$\text{According to PPP, } E_{\text{Peso}/\$} = PM/PUS = 2280/200 = 11.4$$

III. Consider two currencies, the U.S. dollar and the Euro.

a. Suppose the U.S. interest rate,  $R_{US} = 0.04$ , and the Euro zone interest rate is  $R_{EZ} = 0.03$ . The current exchange rate is,  $E_{\$/\text{€}} = 1.31$ . In order for the interest parity condition (IPC) to hold, what must the expected dollar/euro exchange rate,  $E^e_{\$/\text{€}}$  be?

*According to IPC,*

$$R_{US} = R_{EZ} + (E^e_{\$/\text{€}} - E_{\$/\text{€}}) / E_{\$/\text{€}}$$

*Or,*

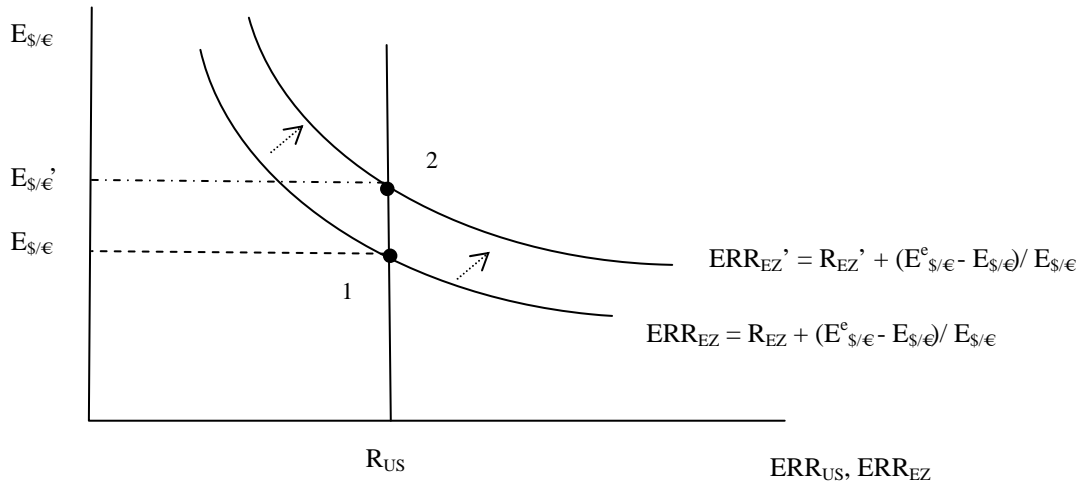
$$0.04 = 0.03 + (E^e_{\$/\text{€}} - 1.31) / 1.31$$

*Solving for  $E^e_{\$/\text{€}}$  we get,*

$$E^e_{\$/\text{€}} = 1.323$$

- b. Suppose the European Central Bank raises  $R_{EZ}$ . Explain the effects on:
- the asset market, (use the IPC graph developed in class).
  - the effect on foreign savings in the U.S. market,  $S_F$ .
  - the effect on the trade deficit, (use a graph similar to 14.6).

i. *If  $R_{EZ}$  increases, then this shifts the  $ERR_{EZ}$  curve up to the right and a new, higher  $E_{\$/\epsilon}$  is the equilibrium exchange rate, (note the dollar has depreciated as we move from point 1 to point 2).*



- If  $R_{EZ}$  increases, then there is less desire to hold dollar-denominated assets and greater desire to hold euro-denominated assets, thus  $S_F$  (demand for dollars) will decline. (This is shown as the leftward shift of  $S_F$  in the following graph.)*
- As shown in the graph, the trade deficit declines, as we move from equilibrium point 1 to point 2.*

