SR Exchange Rate Determination

Relationship between Interest Rates and Exchange Rates

Interest and Exchange Rates

- We have previously discussed why SR exchange rates may fluctuate
- Here are some additional potential influences on SR exchange rates
  - Interest rate changes
  - Changes in the expected future spot rate (e_{r^2})

Return on Foreign Assets

- What determines the expected return on a foreign asset? (eg. A bond denominated in Mexican pesos)
  - Basic return on the bond itself
  - Expected gain loss on currency exchanges
- Recall that the real return on a domestic investment is equal to the (Nominal Return) - (Inflation Rate) - For an international investment, we must consider exchange rate changes as well.
Example #1

• Suppose you have $1000 to invest
• Current US$/MXP exchange rate is 3MXP/1$
• Return on Mexican Bond ($i_f$) = 5%
• Suppose, after 1 year, (unexpected) 3.3% depreciation of MXP
• What is the real return on the bond?

We can extend this example by including the domestic interest rate ($i$) and the expected future exchange rate ($e^{r_e}$)

• Suppose that ($i$) changes while $i_f$ and $e^{r_e}$ remain constant
  – This should cause the domestic currency to appreciate

Example #2

• Suppose US, Swiss 90-day bonds
• US interest rate ($i$) = 9%
• Swiss interest rate ($i_f$) = 5%
• $e_r = $.50/1SF
• $e^{r_e} = $.505/1SF

What will happen to the current spot rate if $i$ rises to 11%? If $i_f$ rose to 7%?
Example #3

- What happens if the expected future spot rate (er*) changes?
- Suppose US, Swiss 90-day bonds
- US interest rate (i) = 9%
- Swiss interest rate (i*) = 5%
- er = $.50/1SF
- er* = $.505/1SF

What will happen to er if er* changes to $.515/1SF?