Problem Set 05

Instructions: Answers must be submitted online through the designated Canvas assignment. This Problem Set is due on **March 05 at 01:59pm**. Please write as legible and clearly as possible. You will not be given full credit if your answers cannot be easily understood.

Questions

1. Consider the following demand and supply curves for foreign currency, where **ExR** represents the exchange rate of local currency to foreign currency (e.g. USD: GBP). **FC** represents the units of foreign currency reserves held in the "local" economy.

$$\text{Demand : ExR} = 3 - 0.075FC \quad ; \quad \text{Supply : ExR} = 0.5 + 0.025FC$$

   (a) What is the **Exchange Rate** and **Foreign Currency Reserves** amount?

   (b) Consider a case in which the foreign interest rate, i^*, rises such that demand sees a **0.8 level-shift increase** and the new demand curve can be represented by $D^{'} = D + 0.8$. What are the new exchange rate and currency reserve values?

   (c) How would you describe the change in **both currencies**? Which has depreciated and which has appreciated?

2. Consider purchasing power parity (PPP) holding across long-run exchange rates. Suppose an identical basket of goods is available in the US and Japan. In the US, the goods are valued at 1,400 USD whereas in Japan they are valued at 194,775 Japanese Yen (JPY).

   (a) What is the implicit USD-JPY exchange rate, if the PPP relationship is satisfied?

   (b) Suppose that the exchange rate, USD-JPY, is currently 112 JPY per USD. Is the USD undervalued or overvalued? Explain why.

   (c) How would a Japanese merchant go about exploiting price differences between the US and Japan for the same basket of identical goods?

   (d) What effect would these actions have on the USD-JPY exchange rate? When would price pressures on the exchange rate stop?