1. (2 points) Suppose that the interest rate on the dollar deposit is 1% per annum. Let the spot rate be $1.30 per euro and the euro interest rate is 3% per annum. Calculate the forward exchange rate and the forward premium using the covered interest parity.

2. (2 points) Assume that investors are risk neutral. Let the exchange rate be $1.30 per euro, the euro interest rate is 3%, and the expected future spot rate be $1.35 per euro.
   (a) Calculate the dollar interest rate using the uncovered interest parity.
   (b) Suppose the euro interest rate rises to 4%. Assume that future expected spot rate is unchanged. Will the rise in the euro interest rate make the dollar appreciate or depreciate today?

3. (3 points) Suppose that trade between the US and Europe is free from transaction costs such as shipping costs, taxes and tariffs. One unit of U.S. consumption basket costs $100. But the European basket of the same goods costs $130. For the next year, the Fed is predicted to keep the U.S. inflation at 4% and the European Central Bank is predicted to keep the Euro area inflation at 2%. The speed of convergence to the long run real exchange rate is 20% per year.
   (a) Calculate the real exchange rate between the Euro area and the US today.
   (b) Calculate forecast for the dollar-euro exchange rate one year from now.
   (c) Display the time path of the real exchange rate.

4. (3 points) Suppose Korea’s money growth rate is currently 15% and Korea’s output growth is 5%. Suppose the money growth rate of Japan is 25% and its output growth rate is 2%. The world real interest rate is 1%. The elasticity of money demand with respect to output is 1. Define the exchange rate as the units of Korean won per Japanese yen and denote it by $E_{₩/¥}$.
   (a) Calculate the expected rate of depreciation of the won relative to the yen.
   (b) Suppose the Bank of Korea lowers the money growth rate from 15% to 10%. How does this policy affect the expected rate of depreciation of the won relative to the yen?
   (c) Suppose the Bank of Japan’s policy goal is to maintain the won-yen exchange rate that is consistent with the expected rate of depreciation in Part (a). What policy will the Bank of Japan implement in response to the change of Bank of Korea’s policy in Part (b)?