**Homework #4**

Due: 26 February 2024

1. **MECHANICS OF FOREIGN EXCHANGE MARKETS**

Please use a supply and demand graph to illustrate the impact of each of the following on the market for US dollars priced in the relevant currency.

1. Japan receives a burst of capital inflows upon a favorable shift in investor sentiment.
2. Indonesia faces a decline in the price of its oil exports.
3. Overseas Filipino workers come back home under the pandemic.

**2. STABILIZING THE VALUE OF A CURRENCY**

Suppose the US raises interest rates inducing capital outflows from the Philippines.

a) What effect would these outflows have on the value of the peso? Please depict this in a graph capturing the market for US dollars priced in pesos.

b) Suppose the Bangko Sentral ng Pilipinas wishes to stabilize the peso exchange rate to the dollar at its value preceding the capital outflows. Within the framework of your graph, please indicate the currency trade the BSP would need to undertake.

c) What limitations will the BSP face in this endeavor?

**3. BILATERAL, REER, AND NEER EXCHANGE RATES**

Between mid 2014 and mid 2015, the Philippine peso varied in value relative to the US dollar by less than 3% even as the US dollar appreciated by roughly 20% in relation to the euro and the yen.

* 1. What happened to the nominal effective exchange rate of the peso?
	2. Suppose Philippine inflation was higher than inflation generally in the countries captured in the pesos’s effective exchange rate basket. What would have happened to the real effective exchange rate?

**4. BALANCE OF PAYMENTS ADJUSTMENT UNDER A FIXED EXCHANGE RATE**

Consider the market for US dollars priced in Chinese renminbi at an initial equilibrium.

1. Suppose foreign businesses cut back on investing in China. How would this be represented in a supply/demand graph for dollars?
2. If the People’s Bank of China (PBoC) wishes to stabilize the value of the renminbi vs the dollar, what action must it take in the forex market?
3. How will this affect the PBoC balance sheet?
4. How will it affect nominal GDP (PQ)?
5. What can the PBoC do to sterilize its action in the foreign exchange market?

**5. RESPONSE TO SHOCK UNDER FLOATING VS FIXED EXCHANGE RATES**

With an increase in oil prices, both Japan and Hong Kong face higher expenditures on imports. For Japan, balance of payments adjustment occurs through the exchange rate. For Hong Kong, adjustment occurs through action of the monetary authority.

1. In the Japan case, what happens to the value of the yen?
2. How does the change in the value of the yen affect exports and imports?
3. How does the change in the value of the yen affect capital flows acting through the value of assets?
4. In the Hong Kong case, what must the monetary authority do?
5. How does this action affect nominal GDP (PQ)?
6. How does the change in nominal GDP affect the balance of payments?