Macro Problem Set 6

Do not submit this problem set – your tutors are not required to grade them and will not discuss them during tutorial. Instead, discuss the questions with your fellow students. Suggested solutions will be provided during Reading Week.

Q1

Suppose the exchange rate between the British pound and the US dollar is 0.8 British pounds per dollar in New York, but 0.64 pounds per dollar in London.

A. Describe how a currency trader holding 80 pounds can make a profit by exploiting the difference in the exchange rates.
B. Describe how a currency trader holding 100 dollars can make a profit by exploiting the difference in the exchange rates.
C. How will actions as described in Parts A and B affect the exchange rates in New York and London? Discuss by considering the effect on demand and supply for pounds in each location.

Q2

Suppose the exchange rate between the British pound and the US dollar is 0.8 British pounds per dollar, the exchange rate between the British pound and the Saudi riyal is 6 riyals per pound, and the exchange rate between the Saudi riyal and the US dollar is 4 riyals per dollar.

A. Describe how a currency trader holding 90 riyals can make a profit by exploiting the exchange rates.
B. How will actions as described in Part A affect the exchange rates of the three currencies?

Q3

Suppose the Central Bank of Argentina pegs its peso to the US dollar at 30 pesos per dollar. Initially, the interest rate in both countries is 2 percent per year, and the equilibrium (i.e., without intervention) exchange rate is 30 pesos per dollar. The US Federal Reserve then raises the US interest rate to 5 percent per year.

A. If the Central Bank of Argentina does not intervene to maintain the peg, how will the equilibrium exchange rate change?

B. How does the Central Bank of Argentina maintain the peg in the face of the change in the equilibrium exchange rate? Can it do so indefinitely?

Q4

As a continuation of Q3, suppose the Argentinian economy is in a slump when the US Federal Reserve raises its interest rate. How does the need to maintain the peg constrain the Central Bank of Argentina's ability to conduct the appropriate counter-cyclical monetary policy?

Q5

Suppose UK residents decide to reduce their purchases of US assets by $1 billion. Describe how this affects the exchange rate, and thus, the US trade balance with the UK. You may construct a diagram of the currency market (place US dollars on the horizontal axis) to aid in your explanation.