Problem 1. Home country pegs its currency to the USD. Both Home and US interest rate are 2%. Home output is 1000 when the interest rate is 2%, but Home output falls by 1 every time Home interest rate increases by 1 percentage point. There is no default risk.

(a) Suppose the peg is credible. For US interest rates $i^* \in \{2,3,4,5,6,7,8\}$, determine corresponding Home interest rates and output.

(b) Suppose the peg is not credible: everyone knows that Home government will allow depreciation of 1% for one year if output falls to 997 or lower. For US interest rates $i^* \in \{2,3,4,5,6,7,8\}$, determine corresponding Home interest rates and output.

(c) Whether (a) or (b) holds depends on whether investors believe that the peg is credible. Regardless of beliefs, which US interest rates will not lead to speculative attack?

(d) Regardless of beliefs, which US interest rates guarantee speculative attack?

(e) At what US interest rate are there two equilibria?

Problem 2 (Partial Sample Final Question 1). Here, have some short answer questions.

(a) In a hyperinflation, the rate of inflation exceeds _____% per month.

(b) What is meant by home bias in an investment portfolio?

(c) What is a currency board?

(d) As of now (2022) how many countries are in the Eurozone? Which countries are the most recent to have joined?

(e) Which two EU countries appear unlikely to join the euro?

Problem 3 (Sample Final Question 3). In the years leading up to the Great Depression, a key objective of the federal government was to balance the government budget.

(a) Suppose that tax revenue collected by the government depends on income. During a recession, what happens to government tax revenues? What does this imply about the government budget?

(b) If the government wants to keep the budget balanced, what type of fiscal policy must the government implement? Illustrate the effects of this policy using the IS-LM-FX diagram, assuming a floating exchange rate regime.

(c) State how the fiscal policy affects Y, i, E, C, I, and TB. Is this a stabilization policy?

(d) The US was part of the gold standard, fixing its exchange rate to the value of gold. Illustrate how the policy described in part (b) affects the economy differently under a fixed exchange rate regime. State how the fiscal policy affects Y, i, E, C, I, and TB.

(e) How did the macroeconomic regime affect stabilization policy in this scenario?

Problem 4 (Sample Final Question 2). The foreign country has a fixed price level of $P^* = 1$ and a fixed interest rate of i^*. The home country initially has an interest rate $i = i^* = 8\%$ and a price level of $P = 1$. There are no changes in monetary policy in the foreign country at any time. Home and foreign output are assumed fixed at Y and Y^* respectively. At present the exchange rate is at its PPP value of $E = 1$ (home per foreign currency). Home real money demand responds to the interest rate in such a way that a 2 percentage point drop in the home nominal interest rate would cause home real money demand to rise by 10%. The home country contemplates a change in monetary policy to increase the home money supply M by 10%.

(a) At first, let us suppose the increase in M is temporary, and the price level remains anchored at $P = 1$ forever. What is the temporary impact of the policy change on the home interest rate?

(b) Suppose that the policy will endure for one year. According to uncovered interest parity, what will be the expected rate of appreciation of the home currency in that year (approximately)?

(c) In this case, what will be the spot exchange rate E today (approximately)?

(d) Now suppose the policy change is permanent. Assume that prices adjust after one year to their new long-run level. What will be the new long-run (future expected) level of the home price level P^e? Of the home exchange rate E^e?

(e) In this case, what will be the spot exchange rate E today (approximately)?