

Homework 4

Due date: March 12 at noon

Question 1: Currency regimes.

- List at least five different currency regimes and order them ranging from completely flexible to fixed. Briefly explain the regimes and find at least one real world example for each.
- Mathematically, combine the log-linear money market, PPP, and uncovered interest rate equations to establish a relationship between nominal money supply, the exchange rate, its expected rate of change, domestic output, the foreign price level (all in logs), and the foreign or world interest rate. Using this equation, explain how fixing the exchange rate restricts domestic monetary policy.
- NAFTA could potentially move towards a monetary union. Discuss the pros and cons of such a move.

Question 2: Consider a developing country whose semi-elasticity of money demand with respect to the interest rate is 1 and for which $\eta y + p^* - \lambda i^* = 10$.

- Suppose the central bank wants to fix the exchange rate at 100 local currency units to the Euro — how does it have to set money supply?
- Suppose a quarter of the money supply you just found is domestic credit. The government lacks fiscal discipline and the central bank has to finance its free-spending ways by increasing domestic credit by 10% per month. When will the country be forced to abandon its peg?
- Depict the money supply and its composition over time.

Question 3: Consider a highly indebted country. The face value of its debt is 90. The following table gives the amounts it can pay in different states of the world as well as their respective probabilities:

	bad state	good state
payment	30	90
probability	1/5	4/5

It has international reserves of 10 which it can use to carry out a buy back and which would be seized by its creditors in case of default.

- a) What is the price of the country's debt before and after it announces the buy back?
- b) How are the gains distributed between the debtor and its creditors? As the country's finance minister, would you recommend the buy back?
- c) Suppose the buy back reduces the probability of the bad state to zero. Discuss the desirability of a buy back in this case.