

Homework 6

due: Thursday, December 11, in class

Problem 1: Currency crises.

- Derive the equation $m = \ln e - \lambda \Delta \ln e + (p^* + \eta y - \lambda i^*)$ from its three constituent parts. Clearly state those three parts and briefly explain each of them.
- Using the equation from a) and an appropriate diagram, explain conceptionally why the crisis happens before the country runs out of foreign reserves. What is the fundamental reason for a currency crisis in this context?
- During the run-up to its crisis, the Argentinian government decreed that all private, dollar-denominated assets be converted into local currency. Discuss the rationale behind this measure.

Problem 2: Consider a highly indebted country. The face value of its debt is 80. 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 | 40 | 80 |
| probability | 1/5 | 4/5 |

- What is the price of the country's debt?
- Suppose the IMF uses funds of 10 to buy back part of the country's debt? What is the price after it announces the buy-back and how much debt can it buy back. What are the effects on the country and on its creditors?
- Suppose now that the buy-back reduces the probability of the bad state to 1/10. Repeat b).