

In this class, we covered pages 648-657 of Obstfeld and Rogoff

1. Suppose that the government gives the following contract for a central banker

$$C(\pi) = \begin{cases} \bar{c} & \text{if } \pi > 0 \\ 0 & \text{if } \pi = 0 \\ \underline{c} & \text{if } \pi < 0 \end{cases}$$

such that the central banker minimizes $L = (y_t - \tilde{y}) + \chi\pi_t^2 + C(\pi_t)$

- a. How can we interpret this contract as one in which the central banker is penalized if the economy moves away from a fixed exchange rate?
 - b. Why are there multiple equilibria in the one shot game?
2. Two countries attempt to coordinate their inflation policies. The payoff for the home country is

$$y_t - \bar{y} = a_1 [\Delta m_t - E_{t-1} \Delta m_t] + a_2 [\Delta m_t^* - E_{t-1} \Delta m_t^*] + \epsilon_t$$

where ϵ_t captures exogenous shocks. The payoff for the foreign country is

$$y_t^* - \bar{y} = a_1 [\Delta m_t^* - E_{t-1} \Delta m_t^*] + a_2 [\Delta m_t - E_{t-1} \Delta m_t] + \epsilon_t^*$$

where ϵ_t^* captures exogenous shocks, which may or may not be correlated with ϵ_t . Suppose the loss functions of home and foreign central banks are given by $L_t = (y_t - \tilde{y}) + \chi(\Delta m_t)^2$ and $L_t^* = (y_t^* - \tilde{y}) + \chi(\Delta m_t^*)^2$, respectively.

- a. What is the expected sign of a_1 ?
- b. Why is the expected sign of a_2 ambiguous?
- c. Why is each country's Nash equilibrium monetary policy independent of a_2 ?
- d. Explain how policy coordination will incorporate the spillovers?
- e. Does coordinated monetary policy solve the problem of time consistency? Can it make the problem worse?