

**Problem Set 5**  
**Timing of Balance of Payments Crisis**

1. Suppose that the central bank extends a \$1 loan to a troubled commercial bank. Show the effect on the balance sheets of the central bank and all commercial banks. What are the effects on monetary base and money supply?
2. Suppose further that the country is small, PPP holds, has a fixed exchange rate and perfect capital mobility. Show the adjustment that takes place after central bank's "bail out".
3. Suppose further that the central bank has to "bail out" one troubled bank a year (the amount of real resources each year is \$1). Assume that the demand for monetary base is  $L(i) = 22/i - 10$ , where  $i$  is the nominal interest rate. The world nominal interest rate  $i^* = 1\%$ . The central bank initially has \$10 of reserves. How many years will this regime last? (Assume that when collecting the inflation tax, the central bank operates on the left side of the Laffer curve.)
4. How long will the regime last if market participants expect the central bank to operate on the right side of the Laffer curve?