

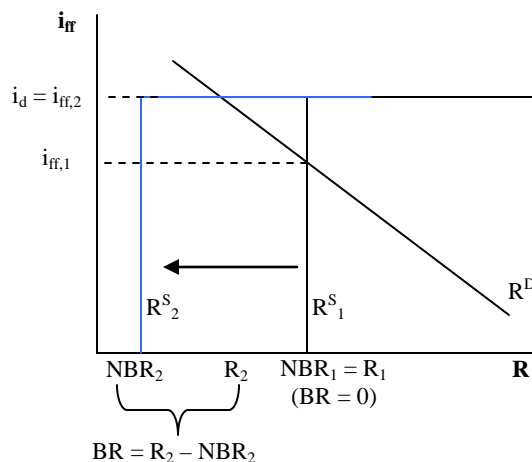
In-class exercise 2/13/14

1. During Christmastime, when the public's holdings of currency increase, what defensive open market operations typically occur?

An increase in currency holdings causes the currency ratio to rise and the money multiplier to fall. As a result, there will be a decrease in the money supply. To maintain the money supply, the Fed must make a defensive purchase of bonds on the open market, raising the monetary base to counter the decline in the multiplier.

2. "The only way the Fed can affect the level of borrowed reserves is by adjusting the discount rate." Is this statement true, false, or uncertain? Explain your answer.

This statement is false. The Fed could affect the level of borrowed reserves in two ways. First, they could directly limit the amount of discount loans an individual bank can take out. Second, they could reduce non-borrowed reserves to such a point that even with a fixed discount rate, borrowed reserves will rise, as outlined in the diagram below:



In the diagram above, the Fed cuts non-borrowed reserves by making open-market sales of bonds. This causes the federal funds rate to rise above the discount rate, prompting banks to borrow from the Fed. As a result, the total reserves held by banks (R_2) will be equal to NBR_2 supplied by the Fed and reserved borrowed directly from the Fed (BR).

3. Using the supply and demand analysis of the market for reserves, show what happens to the federal funds rate, holding everything else constant, if the economy is surprisingly strong, leading to an increase in checkable deposits.

As checkable deposits increase, banks will have to hold more reserves (for fixed required and excess reserve ratios). The demand for reserves will shift to the right, causing the federal funds rate to increase. If the increase in reserve demand is large enough, the federal funds rate may rise as high as the discount rate. It will not rise above the discount rate, since any rate above i_d will cause banks to borrow directly from the Fed at the discount window.

