

Problem Set 4

Due Wednesday May 20 in class

1 Fed and Money Supply

Assume that the Fed issues \$1000 in currency and distributes it to the public. Individuals have preferences regarding the amount of currency and deposits they want to hold. Those preferences are expressed as a ratio of currency to deposits c . Let $c = .20$. Banks are required to keep reserves in, at least, the amount of 30% of total deposits in order to meet possible withdrawals ($r = .30$).

a) Write down the balance sheets of the Fed, Commercial banks, and the households. Calculate the Money Multiplier m , money supply $M1$, and the equilibrium amount of deposits D , reserves R , and currency C .

Questions b)-d) involve modifications to the original environment of the question. That is, do not answer c) by modifying the environment of question b).

b) Suppose banks purchase a \$200 Treasury bond sold by the Fed. What happens to the money multiplier and to $M1$ money supply as a result of the bond's purchase?

c) Assume that the Fed prints \$50 in extra currency and gives it to an individual. How does $M1$ change?

d) Assume that the Fed decreases Reserve Requirements of the banks to $r = .2$. What happens to the Money Multiplier and to $M1$ in this case?