Econ 1
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Problem No. 7
Monetary Policy

I. The Federal Reserve decides to pursue a contractionary monetary policy to decrease the money supply. Let initial bank reserves be $120,000 and bank deposits be $600,000. The required reserve ratio is 20 per cent. Assume that banks hold no excess reserves and the public's currency holdings do not change.

1. The Fed sells $50,000 in government securities. What is the reserve deficiency in the banking system?

2. If banks eliminate the reserve deficiency by selling off securities and reducing loans, how much does the money supply contract?

3. How does your answer to question 2 change if banks initially held excess reserves?

4. Go back to the case of zero initial excess reserves. If banks eliminate the reserve deficiency by borrowing from the Federal Reserve, how much does the money supply contract? Explain any difference in your answer to this question and question 2.

5. If the Fed raised the required reserve ratio to 26.67 per cent, instead of selling securities, what will be the banking system's reserve deficiency? What will the new equilibrium money supply? Assume again zero excess reserves.

6. Explain how these various actions affect interest rates and the economy. Does it matter if banks hold excess reserves?

II. The interest-elasticity of investment spending and the interest elasticity of money demand are important variables in macroeconomics. (The interest elasticities are the responsiveness of investment and money demand to interest rates, respectively.)

1. Explain how these elasticities affect the power of monetary policy on GNP.

2. Explain how these elasticities affect the magnitude of the crowding-out effect of fiscal policy on GDP.