Chapter 17 Practice Problems

1. Follow the impact of a $100 cash withdrawal through the entire banking system, assuming that the reserve requirement is 10 percent and that banks have no desire to hold excess reserves.

2. Compute the impact on the money multiplier of an increase in desired currency holdings from 10 percent to 15 percent of deposits when the reserve requirement is 10 percent of deposits, and banks’ desired excess reserves are 3 percent of deposits.

3. Consider an open market purchase by the Fed of $3 billion of Treasury bonds. Show the impact of the purchase on the bank from which the Fed bought the securities. Then, using the assumptions in problem 2, compute the impact on M1.

4. Why is currency circulating in the hands of the nonbank public considered a liability of the central bank?

5. The U.S. Treasury maintains accounts at commercial banks. What would be the consequences if the Treasury shifted funds from one of those banks to the Fed?

6. Suppose the Fed buys $1 billion in Japanese yen, paying in dollars. What is the impact on the monetary base? What would the Fed need to do to keep the monetary base from changing following the purchase?

7. List the factors that you suspect may have caused the Federal Reserve to lose control of the quantity of money in the economy. Explain your reasoning.

8. Suppose you examine the central bank’s balance sheet and observe that since the previous day, reserves had fallen by $100 million. In addition, on the asset side of the central bank’s balance sheet, securities had fallen by $100 million. What activity might the central bank have carry out earlier in the day to lead to these changes in the balance sheet?

9. In carrying out open market operations, the Federal Reserve buys and sells U.S. Treasury securities. Suppose the U.S. government paid off all its debt. Could the Federal Reserve continue to carry out open market operations?

10. In which of the following cases will the size of the central bank’s balance sheet change?
   a. The Federal Reserve conducts an open market purchase of $100 million US treasury securities
   b. A commercial bank borrows $100 million from the Federal Reserve
   c. The amount of cash in the vaults of commercial banks falls by $100 due to withdrawals by the public.

11. You are an economic adviser to a country whose central bank has recently been granted the power to conduct monetary policy. The central bank is considering increasing reserve requirements in an effort to ensure the stability of the banking system and seeks your advice.
What factors would you recommend the central bank take into account when trying to predict the impact of such a policy?

12. You pick up the morning newspaper and note a headline reporting a major scandal about the Federal Deposit Insurance Corporation that is likely to undermine the public’s confidence in the banking system. What impact, if any, do you think this scandal might have on the relationship between the monetary base and the money supply?

13. Suppose someone keeps $100 in cash under her pillow. One day she takes it out and deposits it in a checking account. Does this action immediately affect the money base or the M1 money supply? Does this action eventually lead to a change in the money base or the M1 money supply?

14. Suppose the Fed wants to reduce the M1 money supply by $100. Should it buy or sell government bonds? How much should it buy or sell?

15. “If reserve requirements on checkable deposits were set at zero, the amount of multiple deposit expansion would go on indefinitely.” Is this statement true, false, or uncertain?