

- 1 Banks are required to hold a fraction of demand deposits on reserve. These reserves are mostly held in accounts at the Federal Reserve district banks and pay a small amount of interest to the bank. Suppose the minimum reserve requirement is 5%, so banks must hold at least 5% of total demand deposits in reserve and may lend out the rest. Suppose the interest rates on loans the bank makes is 6% and suppose the interest rate paid on reserves is 1%. Suppose a bank has \$10 million in deposits.
- A What is the total amount of interest income that the bank earns if it holds exactly the minimum required amount of deposits in reserve?
 - B What is the total amount of interest income that the bank would earn if it did not have to keep any reserves and lent out all of its deposits?
 - C What is the opportunity cost for the bank for keeping reserves? This is sometimes called a "reserve tax." Calculate the opportunity cost both in terms of the dollar amount and as a percentage of the total demand deposits.

- 1 Banks are required to hold a fraction of demand deposits on reserve. These reserves are mostly held in accounts at the Federal Reserve district banks and pay a small amount of interest to the bank. Suppose the minimum reserve requirement is 5%, so banks must hold at least 5% of total demand deposits in reserve and may lend out the rest. Suppose the interest rates on loans the bank makes is 6% and suppose the interest rate paid on reserves is 1%. Suppose a bank has \$10 million in deposits.
- D What would happen to the opportunity cost of holding reserves for the bank if the Fed increased the interest rate on reserves?
 - E What would happen to the opportunity cost of holding reserves for the bank if the Fed increased the percentage of demand deposits required to keep on reserve?
 - F What would happen to the opportunity cost of holding reserves for the bank if the interest rate for loans increases?

- 2 Thomas Hoenig, former president of the Federal Reserve Bank of Kansas City, remarked about the Federal Reserve System: "It was designed as a public-private partnership, accountable to, and yet independent of, the government."
- A In two to four sentences, describe in what sense is the Federal Reserve System a public-private partnership.
 - B In two to four sentences, describe what sense is the Federal Reserve System both accountable to the government and independent of it?
 - C Describe two benefits of an independent central bank.