

- Money can take many forms and is defined as anything that serves the three main functions of money: a medium of exchange, a standard of value (or unit of account), and a store of value.
- Financial assets include stocks and bonds. They represent a claim that entitles the buyer to future income from the seller.
- Decisions often have consequences that last well into the future. The concept of present value is used to address the issue of timing when measuring costs and benefits.
- The money supply is measured by *monetary aggregates* including M0, M1, and M2. Each monetary aggregate defines money somewhat differently. The M2, M1, and M0 money supply includes increasingly liquid assets.
- In a fractional reserve banking system, demand deposits lead to money creation. Money is created through the money multiplier process when banks make loans, and it is destroyed when loans are repaid.
- Banks are required to keep a percentage of their deposits as reserves. Reserves can be currency in the bank vault or deposits at the Federal Reserve Banks. The reserve requirement limits the amount of money banks can create.
- The simple deposit expansion multiplier is equal to 1 divided by the required reserve ratio (rr).

$$\text{Deposit expansion multiplier} = 1 / rr$$
- The demand for money is the sum of transactions demand, precautionary demand, and speculative demand. The demand for money is determined by interest rates, income, and the price level. The supply of money is set by the Federal Reserve (the Fed). Equilibrium in the money market determines the interest rate in the economy.
- The loanable funds market is made up of lenders, who supply funds, and borrowers, who demand funds. Equilibrium in the loanable funds market determines the interest rate and quantity of loanable funds.
- The Federal Reserve regulates financial institutions and controls the nation's money supply. The three main tools that the Fed can use to control the money supply are buying and selling government bonds (open market operations), changing the discount rate, and changing the reserve requirement.
- If the Fed wants to increase the money supply, it will encourage bank lending by buying bonds, decreasing the discount rate, or decreasing the reserve requirement. This is referred to as expansionary monetary policy and is used by the Fed to reduce unemployment.
- If the Fed wants to decrease the money supply, it will discourage bank lending by selling bonds, increasing the discount rate, or increasing the reserve requirement. This is called a contractionary monetary policy and is used by the Fed to control inflation.
- Open market operations are the most frequently used tool. Since changes in the reserve requirement can have substantial economic effects, the Fed rarely changes it.
- The federal funds rate (ffr) is the interest rate a bank charges when it lends excess reserves to other banks. The Fed currently targets the ffr to implement monetary policy because it is closely tied to economic activity.
- $MV = PQ$ is the equation of exchange: Money times velocity equals price times quantity of goods. PQ is the nominal GDP. Velocity is the number of times a year that the money supply is used to make payments for final goods and services.