The Monetary System

THE MEANING OF MONEY

•*Money* is the set of assets in an economy that people regularly use to buy goods and services from other people.

The Functions of Money

•Money has three functions in the economy:

1. Medium of exchange
   •A *medium of exchange* is an item that buyers give to sellers when they want to purchase goods and services.
   •A medium of exchange is anything that is readily acceptable as payment.
2. Unit of account
   •A *unit of account* is the yardstick people use to post prices and record debts.
3. Store of value
   •A *store of value* is an item that people can use to transfer purchasing power from the present to the future.

•Liquidity
•*Liquidity* is the ease with which an asset can be converted into the economy's medium of exchange.

The Kinds of Money

•*Commodity money* takes the form of a commodity with intrinsic value.
•Examples: Gold, silver, cigarettes.
•*Fiat money* is used as money because of government decree.
•It does not have intrinsic value.
•Examples: Coins, currency, check deposits.

Money in the U.S. Economy

•*Currency* is the paper bills and coins in the hands of the public.
•*Demand deposits* are balances in bank accounts that depositors can access on demand by writing a check.

CASE STUDY: Where Is All The Currency?

•In 2001 there was about $580 billion of U.S. currency outstanding.
•That is $2,734 in currency per adult.
•Who is holding all this currency?
•Currency held abroad
•Currency held by illegal entities

The Federal Open Market Committee

•Three Primary Functions of the Fed
•Regulates banks to ensure they follow federal laws intended to promote safe and sound banking practices.
•Acts as a banker's bank, making loans to banks and as a lender of last resort.
•Conducts *monetary policy* by controlling the money supply.

•Open-Market Operations
•The *money supply* is the quantity of money available in the economy.
•The primary way in which the Fed changes the money supply is through open-market operations.
•The Fed purchases and sells U.S. government bonds.
•To increase the money supply, the Fed *buys* government bonds from the public.
•To decrease the money supply, the Fed *sells* government bonds to the public.

BANKS AND THE MONEY SUPPLY
•Banks can influence the quantity of demand deposits in the economy and the money supply.
•*Reserves* are deposits that banks have received but have not loaned out.
•In a *fractional-reserve banking* system, banks hold a fraction of the money deposited as reserves and lend out the rest.
•Reserve Ratio
•The *reserve ratio* is the fraction of deposits that banks hold as reserves.

Money Creation with Fractional-Reserve Banking
•When a bank makes a loan from its reserves, the money supply increases.
•The money supply is affected by the amount deposited in banks and the amount that banks loan.
•Deposits into a bank are recorded as both assets and liabilities.
•The fraction of total deposits that a bank has to keep as reserves is called the reserve ratio.
•Loans become an asset to the bank.
•This T-Account shows a bank that…
    •accepts deposits,
    •keeps a portion as reserves,
    •and lends out the rest.
•It assumes a reserve ratio of 10%.
•When one bank loans money, that money is generally deposited into another bank.
•This creates more deposits and more reserves to be lent out.
•When a bank makes a loan from its reserves, the money supply increases.

The Money Multiplier
•How much money is eventually created in this economy?
•The *money multiplier* is the amount of money the banking system generates with each dollar of reserves.
•The money multiplier is the reciprocal of the reserve ratio:

$$M = 1/R$$

•With a reserve requirement, $R = 20\%$ or $1/5$,•The multiplier is 5.

The Fed's Tools of Monetary Control
•The Fed has three tools in its monetary toolbox:
    1•Open-market operations
    2•Changing the reserve requirement

3•Changing the discount rate
1•Open-Market Operations
•The Fed conducts *open-market operations* when it buys government bonds from or sells government bonds to the public:
•When the Fed buys government bonds, the money supply increases.
•The money supply decreases when the Fed sells government bonds.
•Reserve Requirements
•The Fed also influences the money supply with *reserve requirements*.

2•Reserve requirements are regulations on the minimum amount of reserves that banks must hold against deposits.
•Changing the Reserve Requirement
•The *reserve requirement* is the amount (%) of a bank's total reserves that may not be loaned out.
•Increasing the reserve requirement decreases the money supply.
•Decreasing the reserve requirement increases the money supply.

3•Changing the Discount Rate
•The *discount rate* is the interest rate the Fed charges banks for loans.
•Increasing the discount rate decreases the money supply.
•Decreasing the discount rate increases the money supply.

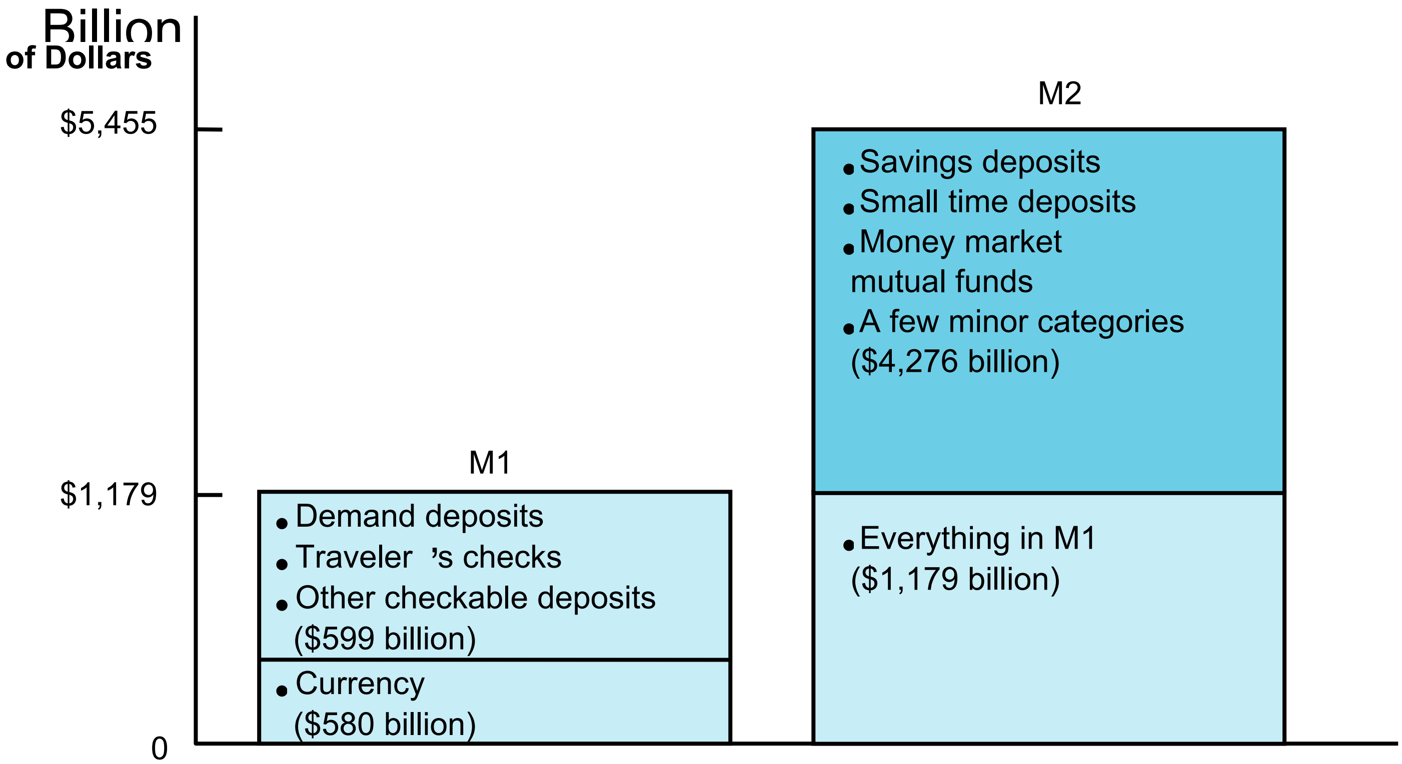
Problems in Controlling the Money Supply

•The Fed's control of the money supply is not precise.
•The Fed must wrestle with two problems that arise due to fractional-reserve banking.
•The Fed does not control the amount of money that households choose to hold as deposits in banks.
•The Fed does not control the amount of money that bankers choose to lend.

Summary

•The term money refers to assets that people regularly use to buy goods and services.
•Money serves three functions in an economy: as a medium of exchange, a unit of account, and a store of value.
•Commodity money is money that has intrinsic value.
•Fiat money is money without intrinsic value.
•The Federal Reserve, the central bank of the United States, regulates the U.S. monetary system.
•It controls the money supply through open-market operations or by changing reserve requirements or the discount rate.
•When banks loan out their deposits, they increase the quantity of money in the economy.
•Because the Fed cannot control the amount bankers choose to lend or the amount households choose to deposit in banks, the Fed's control of the money supply is imperfect.

Figure 1 Money in the U.S. Economy



Money Creation with Fractional-Reserve Banking

•This T-Account shows a bank that…

•accepts deposits,

•keeps a portion as reserves,

•and lends out the rest.

•It assumes a reserve ratio of 10%.

First National Bank

Assets	Liabilities
Reserves $10.00	Deposits $100.00
Loans $90.00	
Total Assets $100.00	Total Liabilities $100.00

The Money Multiplier

First National Bank

Assets	Liabilities
Reserves $10.00	Deposits $100.00
Loans $90.00	
Total Assets $100.00	Total Liabilities $100.00

Second National Bank

Assets	Liabilities
Reserves $9.00	Deposits $90.00
Loans $81.00	
Total Assets $90.00	Total Liabilities $90.00

Money Supply = $190.00!