

Econ 1115: Principles of Macroeconomics

Lecture 17: Money and Banks

Rizwanur Rob

rob.r@husky.neu.edu

302 Holmes Hall
Department of Economics
Northeastern University

June 5, 2019

Outline

double coincidence of
wants

1 Money

- Fractional reserve system

2 Reserve Banking

- What is money?

- What is money?
- What if we did not have money?

- What is money?
- What if we did not have money?
- Barter

- What is money?
- What if we did not have money?
- Barter
 - ① Requires the double coincidence of wants

- What is money?
- What if we did not have money?
- Barter
 - 1 Requires the double coincidence of wants
 - 2 If not, results in a series of exchanges

- What is money?
- What if we did not have money?
- Barter
 - 1 Requires the double coincidence of wants
 - 2 If not, results in a series of exchanges
 - 3 Waste of time searching, and transaction costs

Functions of money

Functions of money

- Medium of exchange

— intermediary
good

Functions of money

Functions of money

- Medium of exchange
- Unit of account

Functions of money

Functions of money

- Medium of exchange
- Unit of account
- Store of value

Types of money

- Commodity money:

Types of money

- Commodity money: Assets and commodities that have intrinsic value, value gained from its other uses. (examples include gold, silver, coins etc.)

Types of money

- Commodity money: Assets and commodities that have intrinsic value, value gained from its other uses. (examples include gold, silver, coins etc.)

Can you think of other examples?

Types of money

- Commodity money: Assets and commodities that have intrinsic value, value gained from its other uses. (examples include gold, silver, coins etc.)

Can you think of other examples?

- Fiat money:

Types of money

- Commodity money: Assets and commodities that have intrinsic value, value gained from its other uses. (examples include gold, silver, coins etc.)

Can you think of other examples?

- Fiat money: Money that has no intrinsic value, only has value because of government decree

Types of money

- Commodity money: Assets and commodities that have intrinsic value, value gained from its other uses. (examples include gold, silver, coins etc.)

Can you think of other examples?

- Fiat money: Money that has no intrinsic value, only has value because of government decree
- What are cryptocurrencies and virtual money then?

The measures of money

The definitions of money stock generally include currency in circulation (notes and coins) and deposits in bank accounts.

The measures of money

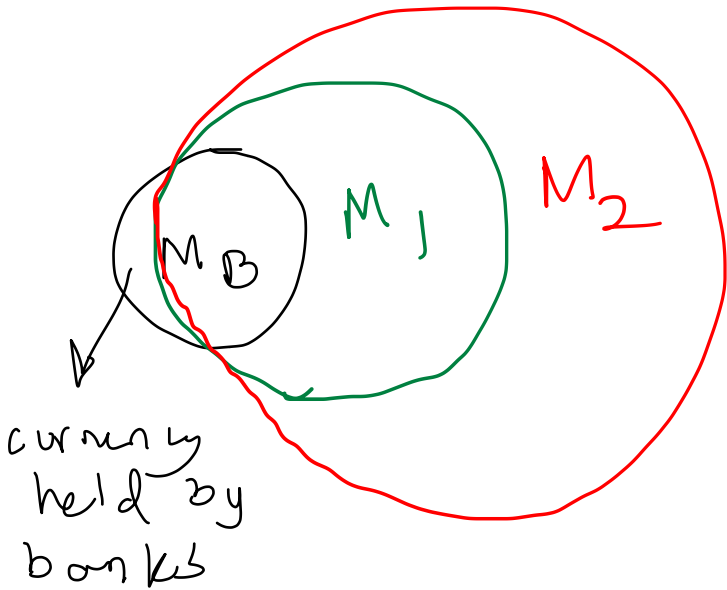
The definitions of money stock generally include currency in circulation (notes and coins) and deposits in bank accounts.

- Monetary Base = currency in circulation + currency held by banks

The measures of money

The definitions of money stock generally include currency in circulation (notes and coins) and deposits in bank accounts.

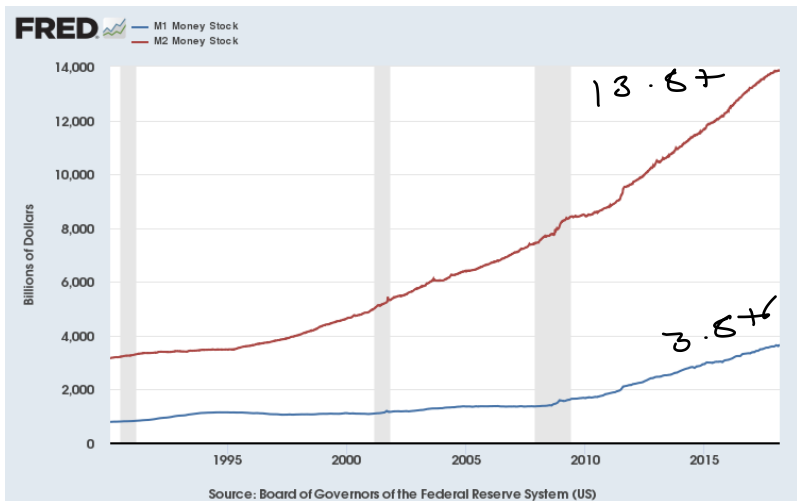
- Monetary Base = currency in circulation + currency held by banks
→ includes banks
- M1 = currency in circulation + checkable deposits (demand deposits + traveler's checks etc.)



The measures of money

The definitions of money stock generally include currency in circulation (notes and coins) and deposits in bank accounts.

- Monetary Base = currency in circulation + currency held by banks
- M1 = currency in circulation + checkable deposits (demand deposits + traveler's checks etc.)
- M2 = M1 + savings deposits, small time deposits, money market accounts



Central bank: The financial institution that oversees the banking system and regulates the money supply in a country. The central bank administrates the monetary policy.

Central bank: The financial institution that oversees the banking system and regulates the money supply in a country. The central bank administrates the monetary policy.

In the United States, the Federal Reserve (the Fed) is the Central Bank and responsible for monetary policy.

Central bank: The financial institution that oversees the banking system and regulates the money supply in a country. The central bank administrates the monetary policy.

In the United States, the Federal Reserve (the Fed) is the Central Bank and responsible for monetary policy.

We will discuss the Fed and its role in more details tomorrow.

Fractional Reserve Banking

Banks are financial intermediaries. They take in deposits, and then lend out that money at a slightly higher interest rate.

Fractional Reserve Banking

Banks are financial intermediaries. They take in deposits, and then lend out that money at a slightly higher interest rate.

- The fractional reserve banking system creates money supply in the economy.

Fractional Reserve Banking

Banks are financial intermediaries. They take in deposits, and then lend out that money at a slightly higher interest rate.

- The fractional reserve banking system creates money supply in the economy.
- Banks keep a fraction of deposits as reserves and use the rest to make loans.

$$r \leq 10\%$$

3%
(small banks)

Fractional Reserve Banking

Banks are financial intermediaries. They take in deposits, and then lend out that money at a slightly higher interest rate.

- The fractional reserve banking system creates money supply in the economy.
- Banks keep a fraction of deposits as reserves and use the rest to make loans.
- The reserve requirements are set by the Federal Reserve, and sets the minimum proportion of liabilities that the bank must hold in reserve.

Fractional Reserve Banking

Banks are financial intermediaries. They take in deposits, and then lend out that money at a slightly higher interest rate.

- The fractional reserve banking system creates money supply in the economy.
- Banks keep a fraction of deposits as reserves and use the rest to make loans.
- The reserve requirements are set by the Federal Reserve, and sets the minimum proportion of liabilities that the bank must hold in reserve.
- Banks can hold excess reserves.

Fractional Reserve Banking

Banks are financial intermediaries. They take in deposits, and then lend out that money at a slightly higher interest rate.

- The fractional reserve banking system creates money supply in the economy.
- Banks keep a fraction of deposits as reserves and use the rest to make loans.
- The reserve requirements are set by the Federal Reserve, and sets the minimum proportion of liabilities that the bank must hold in reserve.
- Banks can hold excess reserves.
- 100% reserve

$$M_1 = \text{Currency} + \text{C/D}$$

- \$500 + \$50

Outline

- 1 Money
 - Fractional reserve system
- 2 Reserve Banking

Money multiplier

- Bank reserves = Required reserves + Excess reserves

Money multiplier

- Bank reserves = Required reserves + Excess reserves
- Required reserve ratio = $\frac{\text{Required reserves}}{\text{Total deposits}}$
- The reserve ratio = $\frac{\text{Total reserves}}{\text{Total deposits}}$

It is the fraction of deposits that banks hold as reserves as a percentage of total deposits. This is equal to the reserve ratio when there are no excess reserves.

Money multiplier

- Bank reserves = Required reserves + Excess reserves
- Required reserve ratio = $\frac{\text{Required reserves}}{\text{Total deposits}}$
- The reserve ratio = $\frac{\text{Total reserves}}{\text{Total deposits}}$

It is the fraction of deposits that banks hold as reserves as a percentage of total deposits. This is equal to the reserve ratio when there are no excess reserves.

- Money Multiplier = $\frac{1}{\text{Reserve Ratio}}$

Money multiplier

- Bank reserves = Required reserves + Excess reserves
- Required reserve ratio = $\frac{\text{Required reserves}}{\text{Total deposits}}$
- The reserve ratio = $\frac{\text{Total reserves}}{\text{Total deposits}}$

It is the fraction of deposits that banks hold as reserves as a percentage of total deposits. This is equal to the reserve ratio when there are no excess reserves.

- Money Multiplier = $\frac{1}{\text{Reserve Ratio}}$
- Calculate money multiplier if RR = 5% or 0.05