Money

ECO 301: Money and Banking

Goals

- Specific Goals:
  - Learn how quantity of money in the economy is measured.
  - Use supply and demand analysis to determine how changes in money market influence interest rates.
- Learning Objectives:
  - LO2: Understand the role money plays in the interaction with markets for other assets.
  - LO3: Predict changes in interest rates using fundamental economic theories including present value calculations, behavior towards risk, and supply and demand models of money and bond markets.

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Reading

- Chapter 3.
- Chapter 5: pages 109-119.

What is money?

- Money is a commodity or token that is generally acceptable as a means of payment.
- It may or may not have an inherent value.
  - Today the U.S. dollar has no inherent value.
  - In prisons cigarettes are sometimes used as money. Cigarettes have an inherent value.
  - From 1889-1932 and from 1946-1971 the U.S. would redeem dollars for gold. (Gold Standard).
  - Since the late 1970s no country in the world redeems their currency for anything of value.
- Money has three important functions:
  - Medium of exchange
  - Unit of account
  - Store of value.

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Functions of money

- Medium of exchange: eliminate the need for a double coincidence of wants.
- Unit of account: an agreed measure for stating the relative prices of goods and services.
  - Necessary in order for consumers to maximize utility.
- Store of value:
  - Money can be held and used for later consumption.
  - Money is not unique in this aspect. Stamps, baseball cards, houses, even computers and TV's can be stores of value.
  - With inflation, the value of money falls. Therefore currencies that undergo hyper-inflation cannot meet this function.

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Forms of money

- Two primary forms of money:
- Currency
- Deposits at banks and other depository institutions.
- Stupid trivia:
  - Largest denomination bill the Fed prints is the $100.
  - Largest denomination ever printed was the $10,000. Still some in circulation.
  - How many bills do not have presidents on them?

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    - $10,000 bill has Salmon P. Chase (Secretary of the treasury under Lincoln).

Official Measures of money

- Two measures of money called **M1** and **M2**
- M1: currency + checking deposits and traveler's checks.
- These types of assets can be used as immediate means of payment.
- M2: M1 + time deposits, savings deposits, and money market mutual funds.
- The additional items in M2 can *quickly* be converted into a means of payment.
- **Liquidity**: the property of an asset being quickly converted to a means of payment.

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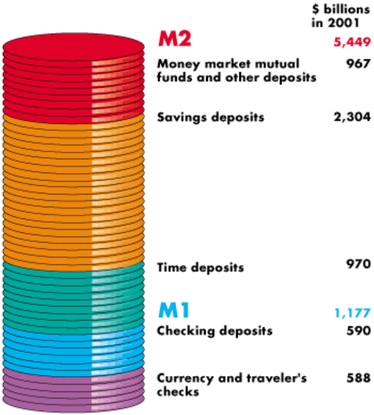

What is not included in money

- Checks are not money. The balances in the checking accounts are money.
- Credit cards are not money.
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Real vs. nominal money

- **Nominal money**: quantity of money measured in dollars.
- **Real money**: real purchasing power of money.

$$\text{Real money} = \frac{\text{Nominal money}}{\text{Price level}}$$

- What should we use as a price for real money?
- What will be the shape of the money demand curve?

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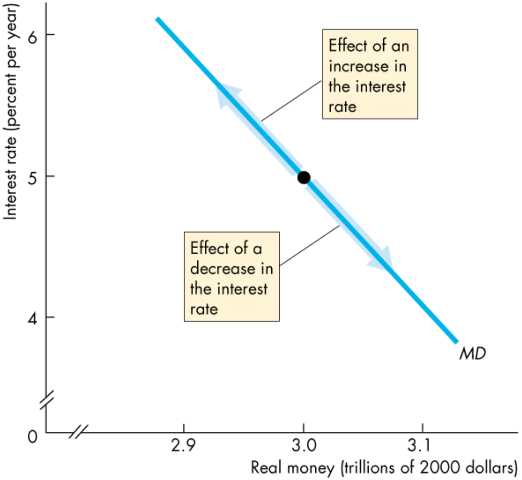

Influences of money holding

- The price level: only influences nominal money demand.
- The interest rate. Shift or movement?
- Real GDP.
  - How will an increase in real GDP affect the money demand curve?
- Financial innovation.
  - Examples: ATM's, online banking, automatic transfers between checking and savings accounts, credit and debit cards.
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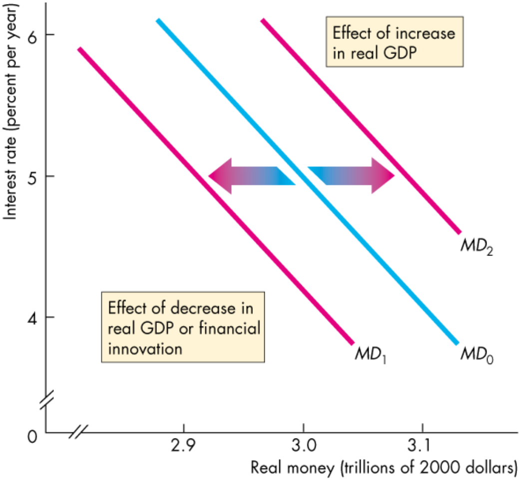
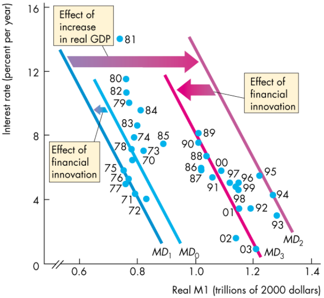
Shifts in money demand



Demand for M1 in the U.S.

1. In 1970, MD_1
2. Financial innovation in early 70s $\longrightarrow$ MD_1
3. Late 80s though the 90s increase in real GDP $\longrightarrow$ MD_2
4. Financial innovations in the 90s and 2000s $\longrightarrow$ MD_3



(a) M1 demand

Money Supply

- Nominal money supply determined?
- What about real money supply?
- In the short run the price level is fixed.
- What is the shape of the money supply curve?

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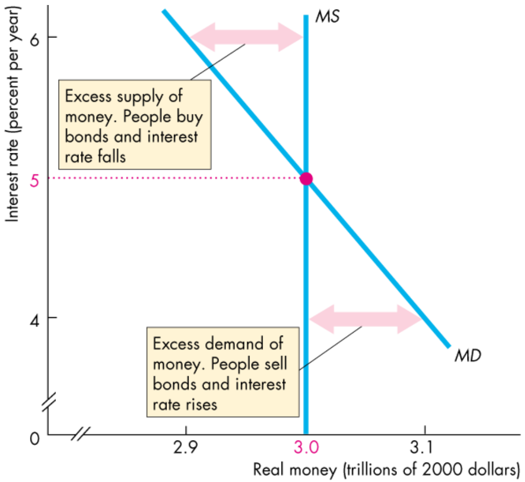
Money market equilibrium



Monetary policy

- **Contractionary monetary policy**: decrease in the money supply.
  - Fed conducts an open market ________ of bonds.
  - Shifts money supply from $MS_0 \rightarrow MS_1$.
- **Expansionary monetary policy**: increase in the money supply.
  - Fed conducts an open market ________ of bonds.
  - Shifts money supply from $MS_0 \rightarrow MS_2$.