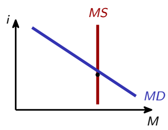
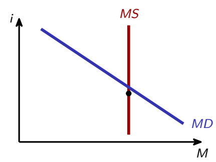
Financial Sector

AP Macroeconomics ▪ Unit 4

AP Macroeconomics



What we will cover



1 Financial assets

Three financial assets

Stock 股票: a share of ownership in a company

Bond 债券: a loan that pays fixed interest

Bank deposit 银行存款: safe, easy to spend

Every asset trades off three features:

- **risk** 风险 – chance of a worse return
- **return** 回报 – how much it earns
- **liquidity** 流动性 – how fast it becomes cash

> Higher risk must pay a higher return; the most liquid assets pay least.

Bond price and yield move opposite

A bond pays a fixed number of dollars each year. So its **yield** 收益率 depends on its price:

Worked example (fixed $50/year)

price $1000 \Rightarrow$ yield $= \frac{50}{1000} = 5\%$
price $500 \Rightarrow$ yield $= \frac{50}{500} = 10\%$

price ↓

inverse

yield ↑

This is why bond prices fall when market interest rates rise.

2 Interest rates

Nominal vs real interest rates

The quoted rate is **nominal** 名义利率; inflation eats its value, so what matters is the **real rate** 实际利率.

The Fisher equation

real ≈ nominal − expected inflation

inflation higher than expected
⇒ **borrowers win**

inflation lower than expected
⇒ **lenders win**

Lend at 6%, expect 2% (plan 4% real); if inflation is 5%, real is only 1%.

3 Money

What money does, and how we measure it

Money is anything widely accepted in trade. Three jobs:

- **Medium of exchange** 交换媒介 – accepted in payment
- **Store of value** 价值储藏 – holds worth over time
- **Unit of account** 记账单位 – a common price stick

M1 = cash + checking; **M2** = M1 + savings.

Fiat money 法定货币 has value by government declaration.

Fiat money works because people accept it

Banking creates money

Under **fractional reserve banking** 部分准备金银行制度 a bank keeps a fraction as **required reserves** 法定准备金 and lends the rest. Loans become new deposits – re-lent again and again.

Money multiplier

$$\text{money multiplier} = \frac{1}{\text{reserve ratio}}$$

Worked example

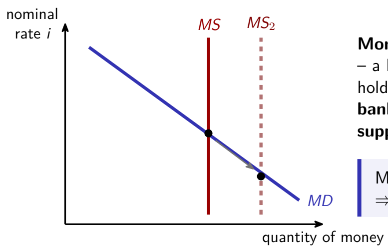
Reserve ratio $= 10\%$ so multiplier $= \frac{1}{0.10} = 10$.

1000 new reserves ⇒ up to $10{,}000$

In reality less – people hold cash, banks keep extra. This is the maximum.

4 Money market

The money market



Money demand 货币需求 slopes down – a high rate is the opportunity cost of holding cash. The **central bank** 中央银行 sets **money supply** 货币供给: a vertical line.

More money supply ($MS \to MS_2$)
⇒ the interest rate falls.

5 Monetary policy

Monetary policy

Monetary policy 货币政策: the central bank moves the money supply and interest rates.

- **Expansionary**: buy bonds ⇒ rate down (recession)
- **Contractionary**: sell bonds ⇒ rate up (inflation)

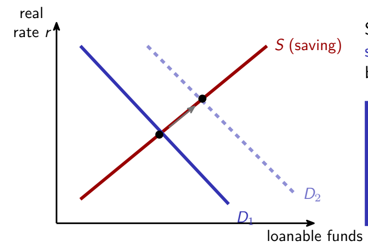
Three tools: open-market operations (main), reserve requirement, discount rate.

> $MS \uparrow \Rightarrow i \downarrow \Rightarrow$ investment $\uparrow \Rightarrow AD$ right.

Central banks steer rates and credit

6 Loanable funds

The loanable funds market



Sets the **real interest rate** 实际利率: saving supplies funds (up), investment borrows them (down).

> Government borrowing shifts demand right ($D_1 \to D_2$): the real rate rises and private investment is squeezed – **crowding out** 挤出效应.

7 Recap

Unit 4 – key takeaways

1 Assets
bond price and yield move opposite; risk, return, liquidity trade off

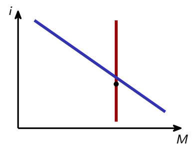
2 Money
three functions; multiplier $= 1/\text{reserve ratio}$

3 Money market
MD down, MS vertical; more money ⇒ lower rate

4 Loanable funds
sets the real rate; deficits crowd out investment

Check yourself

1. A bond's price falls. What happens to its yield?
2. Reserve ratio $= 20\%$. What is the money multiplier?
3. The central bank buys bonds. Which way does the rate move?
4. Government borrows heavily. What happens to private investment?



Answers **1.** it rises **2.** 5 **3.** it falls **4.** it falls (crowding out)