



## W08: Financial Markets

- Capital and financial capital
- Investment
- Saving
- Financial capital markets
- Interest rates
- Loanable funds market

***Reading: Ch.7, pg. 160-171***

***HW05 is assigned 03/04 and is due 03/18***



# Capital and Financial Capital

**Capital** is the tools, instruments, machines, buildings, and other items that have been produced in the past and that are used today to produce goods and services

The funds that firms use to buy physical capital are called **financial capital**



# Capital and Investment

**Gross investment** is the total amount spent on purchases of new capital and on replacing depreciated capital

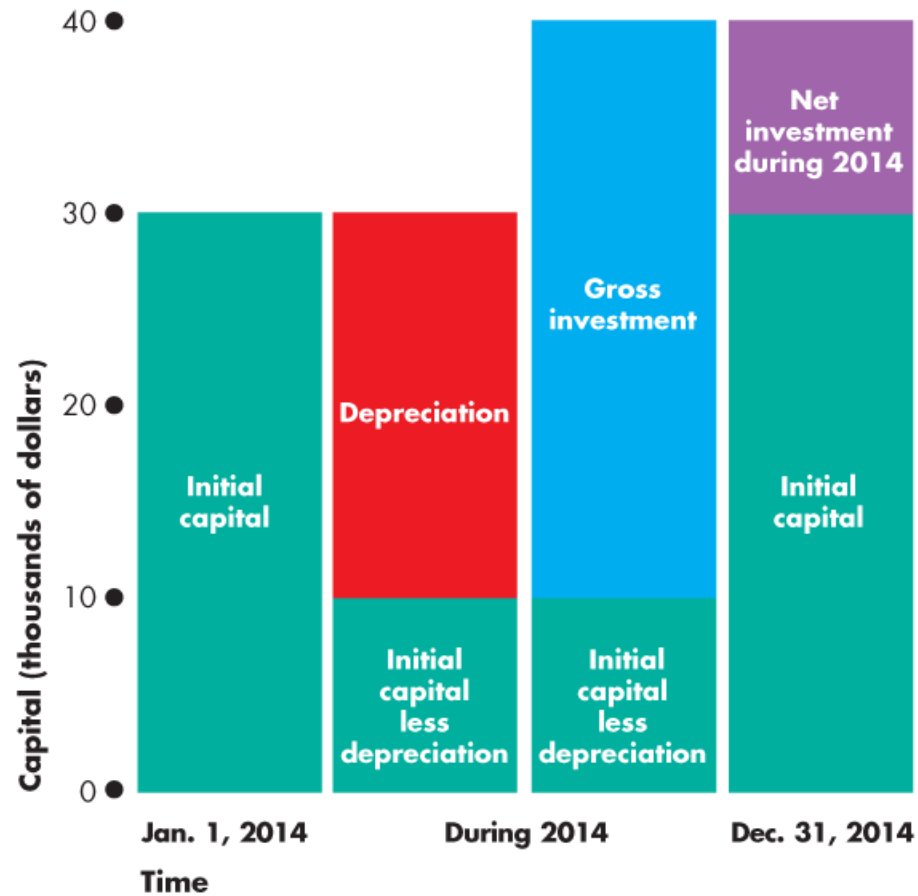
**Depreciation** is the decrease in the quantity of capital that results from wear and tear and obsolescence

**Net investment** is the change in the quantity of capital

$$\mathbf{Net\ investment = Gross\ investment - Depreciation}$$



# Capital and Investment





# What Finances Investment?

Funds come from three sources:

## 1. Household saving $S$

- the amount of income that is not paid in taxes or spent on consumption goods and services

## 2. Government budget surplus ( $T - G$ )

## 3. Borrowing from the rest of the world ( $M - X$ )





# Wealth and Saving

- **Wealth** is the value of all the things that people own
- **Saving** is the amount of income that is not paid in taxes or spent on consumption goods and services
- Saving increases wealth





# Financial Capital Markets

## Financial Capital Markets

- Saving is the source of funds used to finance investment
- These funds are supplied and demanded in three types of financial markets:
  - Loan markets
  - Bond markets
  - Stock markets



# Financial Institutions

- A **financial institution** is a firm that operates on both sides of the markets for financial capital
- It is a borrower in one market and a lender in another
- Key financial institutions are:
  - **Commercial banks**
  - Government-sponsored mortgage lenders
  - Pension funds
  - **Insurance companies**
  - **The Federal Reserve**



# Solvency of Financial Institutions

- A financial institution's **net worth** is the total market value of what it has lent minus the market value of what it has borrowed
- If net worth is positive, the institution is *solvent* and can remain in business
- 
- But if net worth is negative, the institution is *insolvent* and will go out of business



## Interest Rate and Asset Price

- The interest rate on a financial asset is the interest received expressed as a percentage of the price of the asset
- For example, if the price of the asset is \$50 and the interest is \$5, then the interest rate is 10 percent
- If the asset price rises (say to \$200), other things remaining the same, the interest rate falls (2.5 percent)
- If the asset price falls (say to \$20), other things remaining the same, the interest rate rises (to 25 percent)



# Interest Rates

The **nominal interest rate** is the number of dollars that a borrower pays and a lender receives in interest in a year expressed as a percentage of the number of dollars borrowed and lent

The **real interest rate** is the nominal interest rate adjusted to remove the effects of inflation on the buying power of money

$$r \approx i - \pi$$

The real interest rate is the opportunity cost of borrowing



# Interest Rates

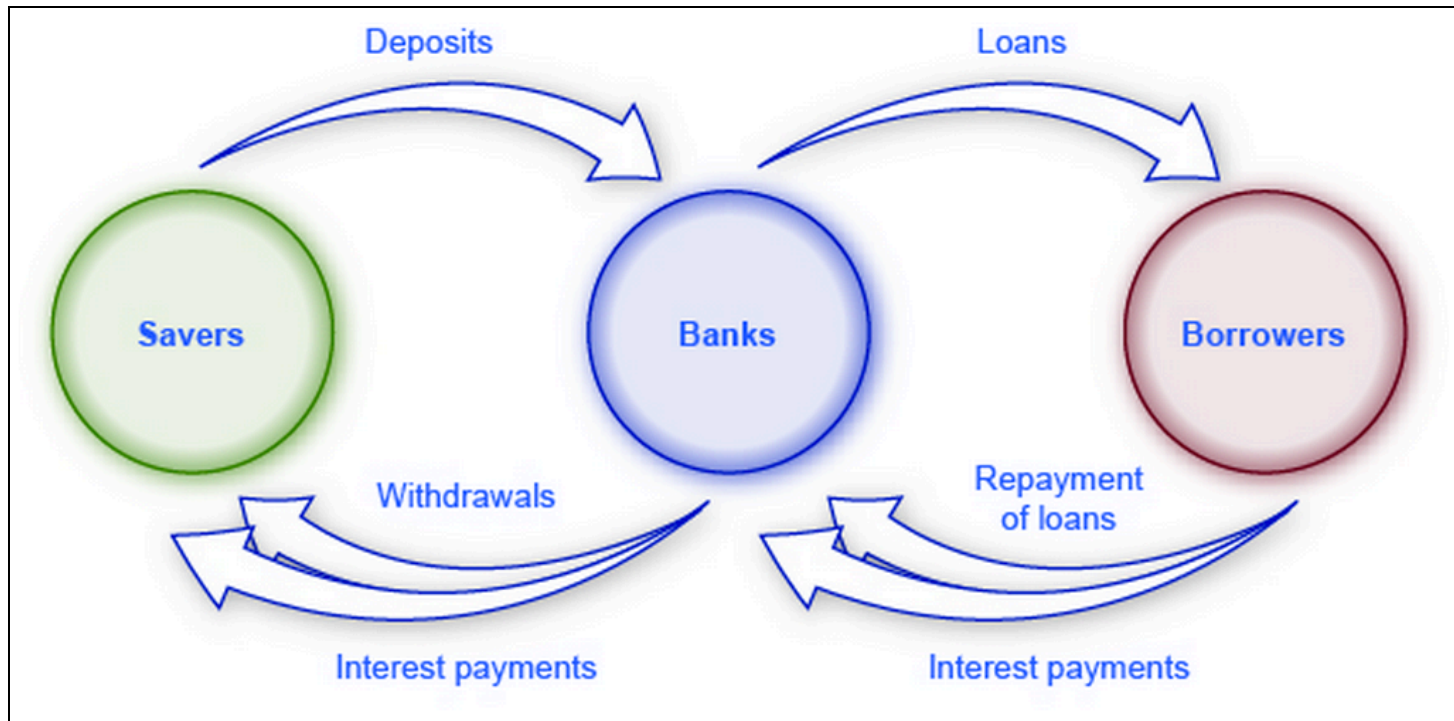
Nominal Interest Rate	Rate of Inflation	Real Interest Rate
1%	2%	
5%	2%	
10%	2%	
50%	2%	



# Interest Rates

Total Loan Amount	Nominal Interest Rate	Total Interest Payments
\$20,000	1%	
\$20,000	5%	
\$20,000	10%	
\$20,000	50%	

# The Loanable Funds Market





# The Loanable Funds Market

The market for loanable funds determines the real interest rate, the quantity of funds loaned, saving, and investment

## Demand for Loanable Funds Curve

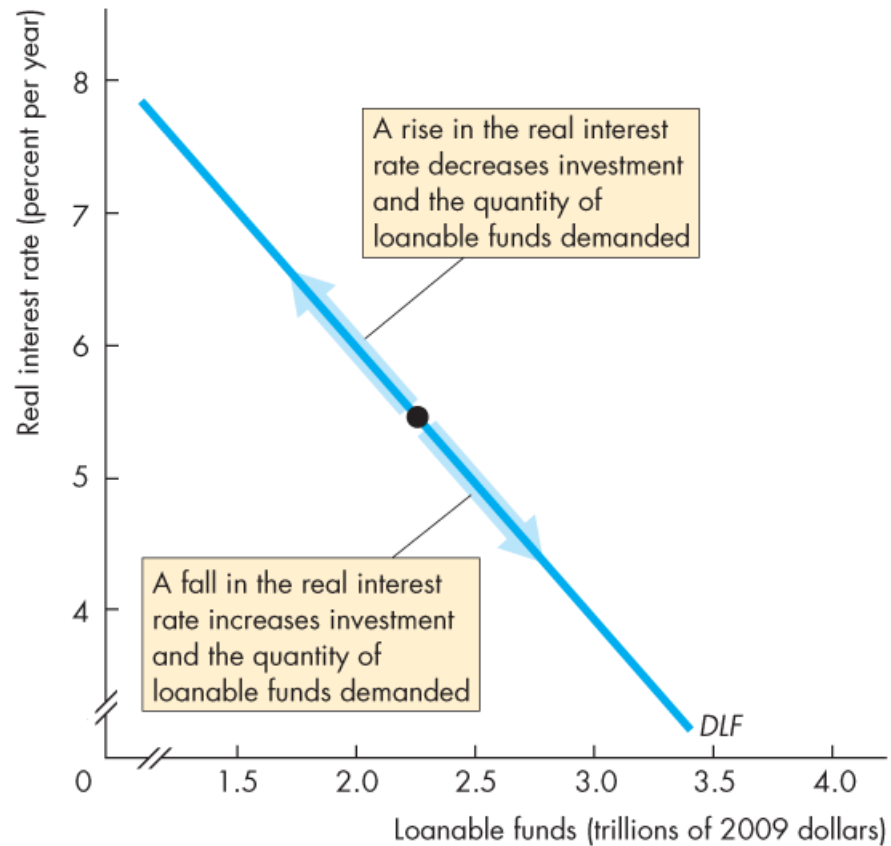
Relationship between the quantity of loanable funds demanded and the real interest rate, all else help constant

Business investment is the main item that makes up the demand for loanable funds





# The Loanable Funds Market





# The Loanable Funds Market

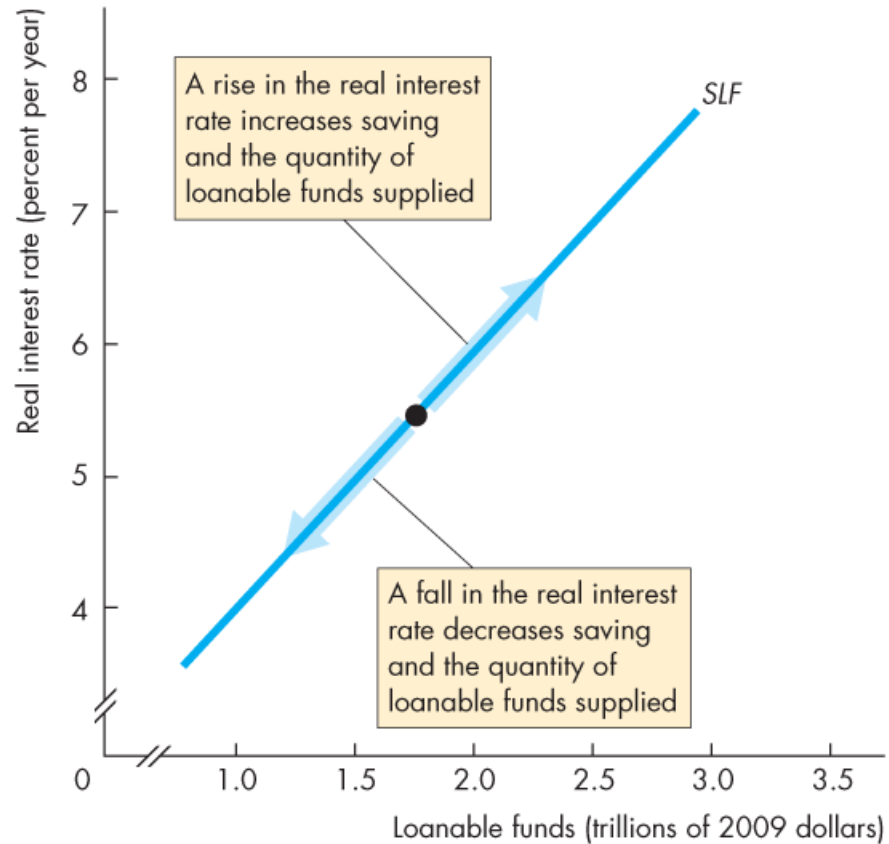
## The Supply of Loanable Funds Curve

Relationship between the quantity of loanable funds supplied and the real interest rate, all else help constant

Saving is the main item that makes up the supply of loanable funds



# The Loanable Funds Market





# The Loanable Funds Market

## Equilibrium in the Loanable Funds Market

The loanable funds market is in equilibrium at the real interest rate at which the quantity of loanable funds demanded equals the quantity of loanable funds supplied



# The Loanable Funds Market

