

## 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**

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## 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

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

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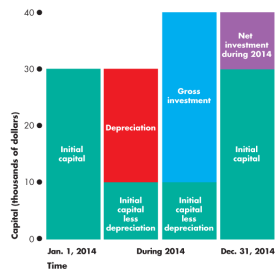
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## Capital and Investment



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## 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 ( $M - X$ )

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## 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

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## Interest Rates

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

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## Interest Rates

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

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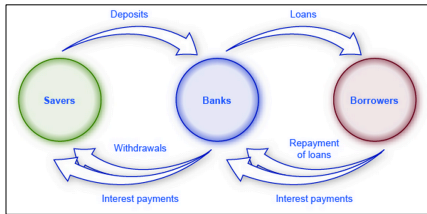
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## The Loanable Funds Market



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## 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

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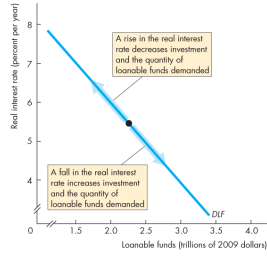
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## The Loanable Funds Market



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## 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

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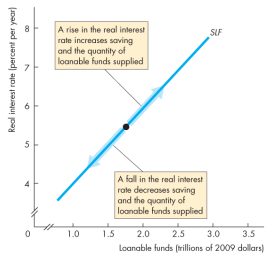
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## The Loanable Funds Market



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## 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

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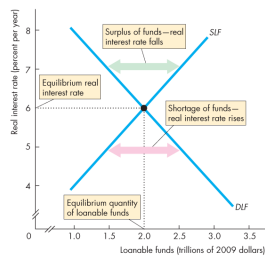
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## The Loanable Funds Market



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## The Loanable Funds Market

Suppose you have \$1,000 set aside for next year

If there are *no* loanable funds markets...

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