

Determination of Interest Rates

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4. Real interest rate.
5. Correlation between inflation and the nominal rate.

Markets for Loans

The markets for loans broadly include all markets where money today is exchanged for money at a future date. These markets comprise three main categories:

- Debt:
 - Bonds
 - Bank accounts, CDs
 - Commercial loans
 - Mortgages
- Equity.
- Insurance.

The Competitive Market for Loans

The horizontal axis represents the net demand for loans. A positive quantity represents excess demand for loans, by borrowers, exceeding the quantity supplied by lenders. A negative quantity represents excess supply of loans.

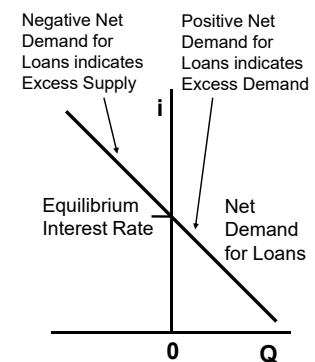
Equilibrium occurs where the net demand for loans is zero.

The price on the vertical axis is the annualized interest rate: the price of borrowing money today, measured by how much must be repaid later.

Equilibrium in the Market for Loans

High interest rates lead to excess supply of loans. Low interest rates lead to excess demand.

Equilibrium occurs where the excess demand is zero.



Inflation Affects the Demand for Loans

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Nominal vs. Real Interest Rates

The nominal interest rate is the rate at which dollars borrowed now are repaid in dollars later.

The real interest rate represents the rate at which dollars borrowed now are repaid in *inflation-adjusted* dollars later.

Real interest rate = nominal interest rate
— (expected) inflation rate

Example

If the interest rate is 7% but the (expected) inflation rate is 4%, then consumers who save money are staying only 3% = 7% — 4% ahead of inflation: their purchasing power increases by only 3% per year.

Anyone who borrows from these consumers is repaying in dollars that are degraded by inflation, so they are paying only 3% interest, as measured by purchasing power.

Importance of the Real Rate

Because economists believe that the real interest rate is more relevant for most firm and consumer decisions, they typically assume that the real interest rate is more important than the nominal rate.

They often base their supply and demand analysis on the real rate, which is usually abbreviated as “r,” as opposed to the “i” used as an abbreviation for the nominal rate.

Correlation of Interest and Inflation Rates

When inflation is high, interest rates are usually also high, to compensate. Therefore, real interest rates fluctuate much less than nominal rates.

Historically, the real rate of interest in the U.S. varies from about 1-5%.