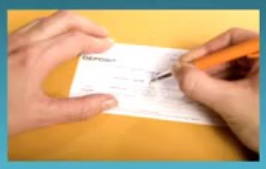
LECTURE FOUR - PART THREE

Interest Rates Are Critical

- When we examine how money affects economic activity, we will focus on the impact of the interest rate.
- The interest rate is the amount of interest paid per unit of time expressed as a percentage of the amount borrowed.
- Interest is the payment made for the use of money.
- The interest rate is often called the *"price of money."*

An Example



Deposit $2000

- The interest rate is 4% or .04
- Therefore, the bank pays you $80 in interest for the year.
- The math? .04 X $2000 = $80.
- So your deposit will be worth $2080.

Many Different Interest Rates

- There is a vast array of interest rates.
- There are three major reasons why interest rates differ.

Term or Maturity of the Loan

- The length of time to pay off a loan.
- Term ranges from overnight loans to 30 year home mortgages.
- In general, the longer the term of the loan, the higher the interest rate borrowers have to pay.
- Lenders must be compensated for the risk of providing a longer term loan.

The "Riskless Rate"

- Some loans, such as the securities of the U.S. government, are virtually riskless.
- The interest rate on U.S. government securities is often called the "riskless" rate.

Higher Risk Investments Have Higher Interest Rates

- Bonds that face a higher risk of non-payment have higher interest rates:
  - The "junk bonds" of businesses close to bankruptcy,
  - The municipal bonds of cities with shrinking tax bases,
  - Countries with large overseas debt and unstable political systems.
- These riskier investments might pay 1, 2, or even 5 percent or more per year above the "riskless" rate.

The More Liquid the Loan, The Lower the Interest Rate

- A "liquid asset" can be converted into cash quickly with little loss of value.
- Illiquid assets or loans which cannot be readily converted to cash usually command higher interest rates.

Nominal Versus Real Interest Rates

- The nominal interest rate measures the yield in dollars per year per dollar of investment.
- Inflation can make the dollar a distorted yardstick.
  - e.g. when inflation rises, the value of the dollar falls.

Real Interest Rate

- The real interest rate corrects for inflation.
- $R_{nominal}$ – Inflation = R_{real}

QUESTION

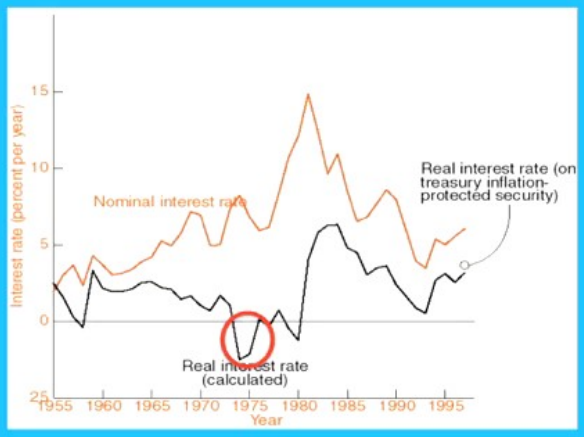
- **Nominal interest rate = 8%**
- **Inflation rate is 3%**
- **So what's the real interest rate?**

The Answer

$$R_{real} = R_{nominal} - Inflation$$

$$R_{real} = 8\%-3\% = 5\%$$

Negative Real Interests Rates Are Possible!



- Investors earned a <u>negative</u> rate of real interest from 1973 to 1975 -- even though nominal rates were high!!!!