





CPI = 200

2009



CPI = 210

2019

$$\text{Inflation} = \frac{210 - 200}{200} \times 100 = 5\%$$

Suppose you lend \$100,000 (one full basket) at **zero interest** in 2009 to be repaid in 2019

Loan = 1000,000

The borrower returns = 100,000



\$100,000

Full Basket





Full Basket

5% inflation means that the basket in 2019 costs 5% more:

$$\$100,000(1.05) = \$105,000$$

\$105,000

\$100,000 does not buy a full basket. It only buys:  
 $(100,000/105,000) \times 100 \sim$   
95% of the basket ...

The borrower  
returns less than  
what he  
borrowed



Lenders must protect from inflation by charging  
interest

95% of the basket



CPI = 200

2009

CPI = 210

2019

$$\text{Inflation} = \frac{210 - 200}{200} \times 100 = 5\%$$

Lenders must protect from inflation by charging interest



The borrower  
returns less than  
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\$100,000

Full Basket