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You lend \$100,000 at 9% Nominal interest in 2020 to be repaid in 2021

The browser pays back $= 100,000(1.09) = 109,000$

CPI = 210

2020

You guess
Inflation will
be 5%

CPI = ?

2021

You want to earn a 4% Real interest rate

You earn

$$\text{Interest Income} = 100,000 \times 0.09 = \$9,000$$

If the **tax** on interest income is **25%**

Tax you owe

$$\$9,000 \times 0.25 = 2,250$$

If the **tax** on interest income was charged on the **Real** interest

Tax you really owe

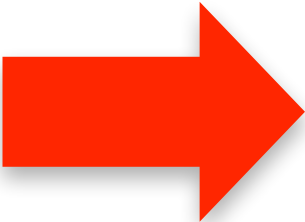
$$\$4,000 \times 0.25 = 1,000$$



You earn

$$\text{Real Interest Income} = 100,000 \times 0.04 = \$4,000$$

Even though your **Real** Income was only **\$4,000**
the government still makes you pay **\$2,250**

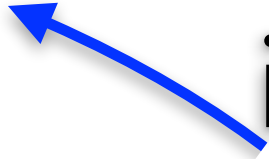


You pay 56%

instead of the 25%

you are supposed

to pay by law



$$\frac{2,250}{4,000} \times 100 = 56\% \text{ effective tax!}$$



If you
guessed
right and
inflation was
5%

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2020



CPI = ?
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You want to earn a 4% Real interest rate

You lend \$100,000 at 9% Nominal interest in 2020 to be repaid in 2021

The borrower pays back = $100,000(1.09) = 109,000$

You earn

Interest Income = $100,000 \times 0.09 = \$9,000$

If the tax on interest income is 25%

Tax you owe

$\$9,000 \times 0.25 = 2,250$

You pay 56%
instead of the 25%
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You earn

Real Interest Income = $100,000 \times 0.04 = \$4,000$

Even though your Real Income was only \$4,000
the government still makes you pay \$2,250

$\frac{2,250}{4,000} \times 100 = 56\% \text{ effective tax!}$

