

3

3

You lend \$100,000 at 9% Nominal interest in 2024 to be repaid in 2025

The borrower pays back $= 1000,000(1.09) = 109,000$

CPI = 210

2024



CPI = ?

2025

Real interest rate = 9% - 5% = 4%

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 instead



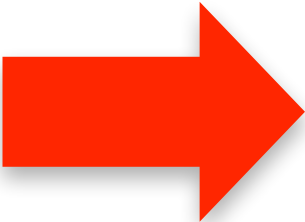
Tax you really owe $\$4,000 \times 0.25 = 1,000$



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**

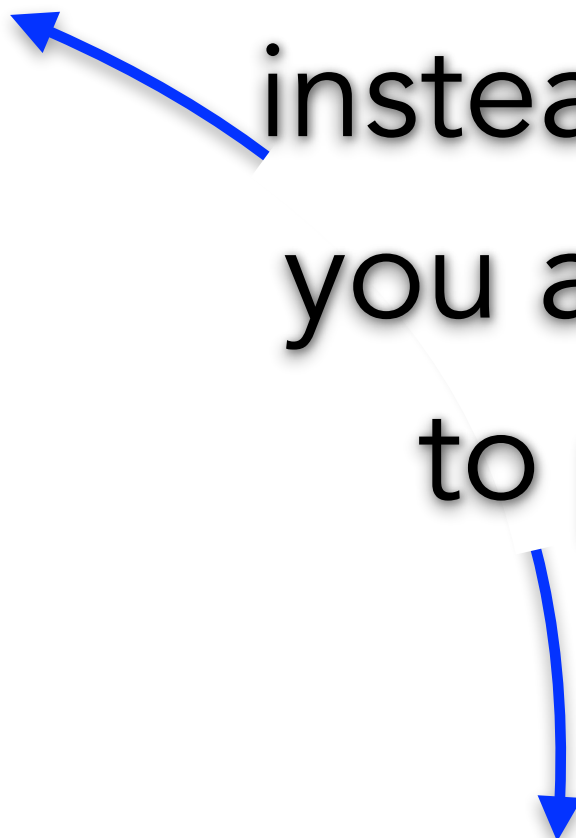


You pay 56%

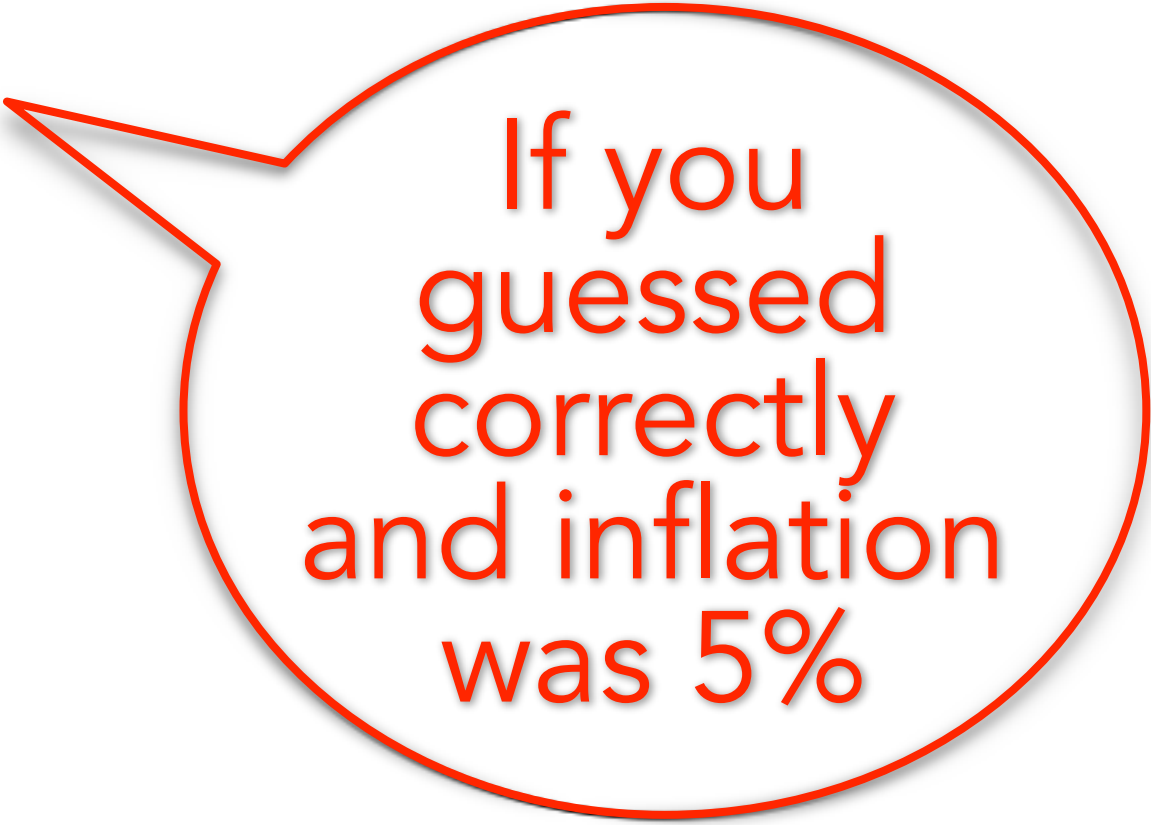
instead of the 25%

you are supposed

to pay by law



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



If you
guessed
correctly
and inflation
was 5%

CPI = 210
2024



CPI = ?
2025

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government still makes you pay **\$2,250**

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%
you are supposed
to pay by law

You earn

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

Tax you really owe

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

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

