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

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

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

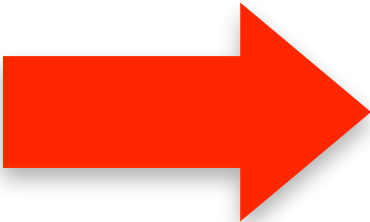


You earn

$$\text{Real Interest rate} = 9\% - 7\% = 2\%$$

$$\text{Real Interest Income} = 100,000 \times 0.02 = 2,000$$

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

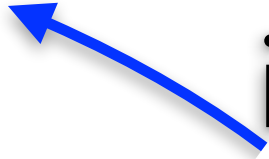


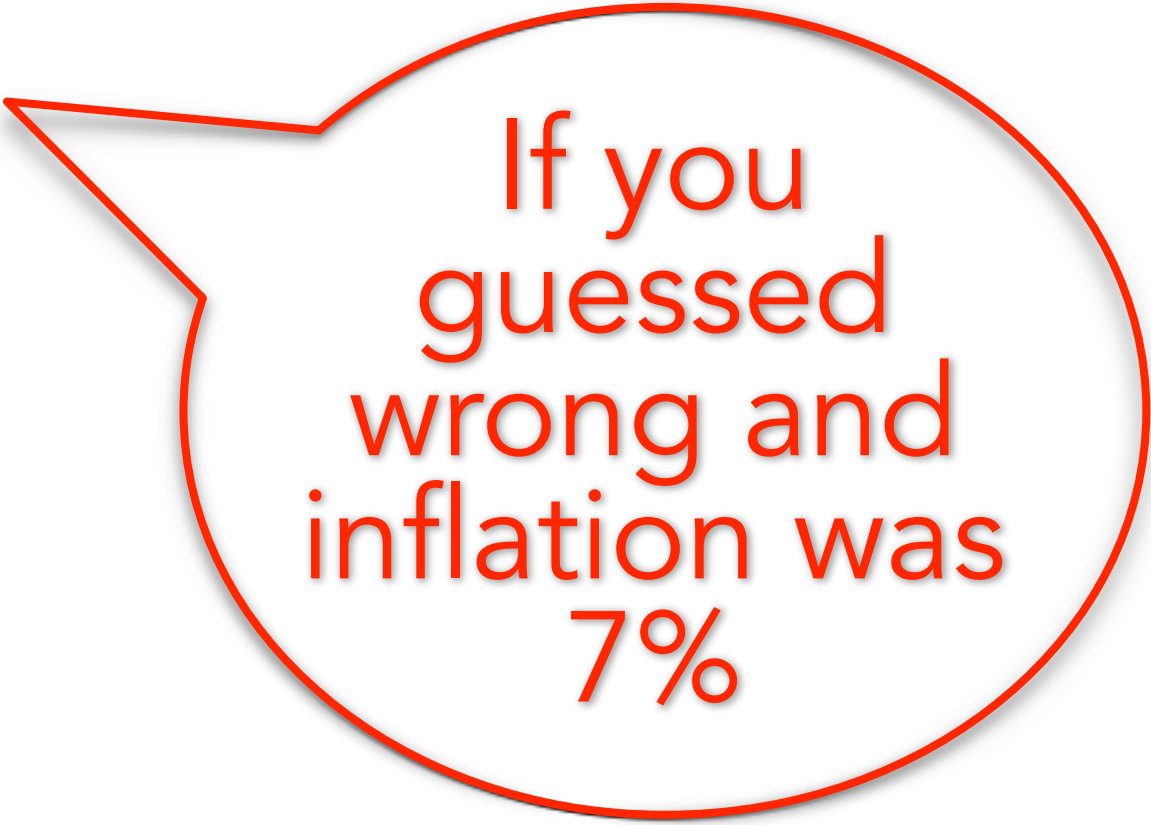
You pay 112%

instead of the 25%

you are supposed

to pay by law





If you
guessed
wrong and
inflation was
7%

Inflation imposes an **unfair** tax on Interest Income

$$\frac{2,250}{2,000} \times 100 = 112\% \text{ effective tax!}$$

CPI = 210
2020



CPI = ?
2021

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7%

Inflation imposes an **unfair** tax on Interest Income

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 earn

Real Interest rate = $9\% - 7\% = 2\%$

Real Interest Income = $100,000 \times 0.02 = 2,000$

You pay **112%**
instead of the 25%
you are supposed
to pay by law

Even though your **Real** Income was only **\$2,000**
the government still makes you pay **\$2,250** $\rightarrow \frac{2,250}{2,000} \times 100 = 112\% \text{ effective tax!}$

CPI = 210
2020



CPI = ?
2021