

RETURN ON INVESTMENTS(ROI)

1. What is ROI?

ROI (Return of Investments) is a key financial ratio that helps evaluate how efficiently an investment generates profit. It shows the relationship between profit gained and the amount invested.

2. How to calculate the return on investment?

$$\text{Return of Investments(ROI)} = \frac{\text{Net Income}}{\text{Total Assets}}$$

3. Using ROI to evaluate a business

If we want to check how well a company business is performing financially, we can use ROI to see how much profit it makes compared to what it owns or invests. This is often called Return on Total Assets.

It is calculated by dividing net income by the total assets the company has.

$$\text{Return of Investments(ROI)} = \frac{\text{Net Income}}{\text{Total Assets}} * 100$$

EXAMPLE

Assume that a company earns 80.000€ of its total assets in profit over a year, and the total value of its assets is 1.000.000 €.

Therefore,

$$\text{Return of Investments(ROI)} = \frac{\text{Net Income}}{\text{Total Assets}} * 100 = \frac{80.000\text{€}}{1.000.000\text{€}} * 100 = 8\%$$

Interpretation: The company earns back 8% of its total assets in profit. That helps assess how efficiently it's using what it owns.

4. Using ROI to evaluate a property investment

ROI in real estate can be measured by buying property, selling it at a higher price, or earning rental income from it.

EXAMPLE

You buy a house for 500.000 € and sell it one year later for 550.000 €

So,

$$\text{Net Income for Sale} = 550.000\text{€} - 50.0000\text{€} = 50.000\text{€}$$

And

$$\text{Return of Investments(ROI)} = \frac{\text{Net Income}}{\text{Total Assets}} * 100 = \frac{50.000\text{€}}{500.000\text{€}} * 100 = 10\%$$

The results show that you earned a 10% return on your initial investment. That is a strong return, especially for one year.

5. What does “Rate of Return on Investment «mean?

This allows for a fair comparison of results, even if one project lasts 6 months and another lasts 1 year. Comparing only the ROI without adjusting for time could lead to incorrect decisions.

6. How do you calculate the annual ROI?

When investments have different time periods (e.g., 6 months vs 1 year), it is important to adjust them to a common time frame, usually one year, to make a fair comparison.

EXAMPLE

An investment of 1.000.000 € is made to purchase 10.000 shares at 100 € each. After 6 months, the value of each share increases to 108 € (without receiving any dividends).

So,

Profit per share: $108\text{€} - 100\text{€} = 8\text{€}$

$$\text{6-month ROI} = \left(\frac{8}{100} \right) * 100 = 8\%$$

To calculate the annual ROI, multiply the 6-month return by 2:

Therefore,

$$\text{Annual ROI} = 8\% * 2 = 16\%$$

7. Why is ROI important for businesses?

When making business decisions, comparing different investment options is common. For instance, a company may need to select between two models of a new machine. The ROI of both models can be analyzed to identify which one offers better profitability after one year.

EXAMPLE

Product A

- Net income from operations after 1 year: 120.000 €
- Total cost of the machine: 1.200.000€

$$\text{Return of Investments(ROI)} = \frac{\text{Net Income}}{\text{Total Assets}} * 100 = \frac{120.000\text{€}}{1.200.000 \text{ €}} * 100 = 10\%$$

Product B

- Net income from operations after 1 year: 250.000 €
- Total cost of the machine: 1.500.000€

$$\text{Return of Investments(ROI)} = \frac{\text{Net Income}}{\text{Total Assets}} * 100 = \frac{250.000\text{€}}{1.500.000 \text{ €}} * 100 = 16,6\%$$

So, Product B offers a higher return on investment. However, the company will also need to spend more money to buy it.