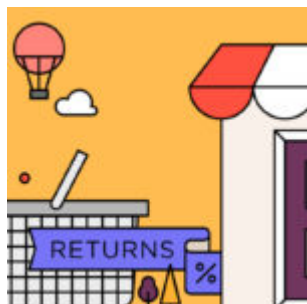


How Do Compounding Returns Affect My Portfolio?



My teenage son has really gotten into lifting weights this year. It's brought up memories of when I used to lift weights every day in high school and then check myself out in the mirror to see if my muscles were getting bigger. Now I look in the mirror and notice how it didn't take long for those muscles to shift.



Weight lifting is similar to portfolio returns. You can see gains over time, but it's easy to see those gains disappear with little effort. We can see how this is done with compounding returns.

What are Compounding Returns?

Compounding returns will show how the investment has benefited from previous period gains/losses. The period returns are geometrically linked together (multiplied) to show how an investment has grown over time.

A compounded return is similar to compounded interest in a savings account. The first month you open a savings account, you get interest on your deposit. The next month, you not only get interest on the original deposit, but interest on the interest.

For investments, compounding has a similar effect, but the investment may experience negative returns as well as positive.

Here's How it Works

Now that we have defined what compounding returns are, let's analyze an example with two monthly period returns.

✖ There is a lot happening in the example above. The portfolio started with \$10,000 and during the first period the portfolio went up +25%, which increased the portfolio value by +\$2,500 for a total of \$12,500. During the second period the portfolio dropped -20% for a loss of -\$2,500 dropping the portfolio value back to \$10,000.

If we took the average of the two returns we would end up with +2.5%, which we would then expect a total gain greater than \$0. When we geometrically link the two period returns $((1 + +25\%) * (1 + -20\%) - 1)$ we get a total return of 0%, which we would then expect to see a total gain/loss of \$0, which is what we do see.

When the portfolio was up +25% it only had to drop -20% to lose all of the gains the portfolio had made. Then when a portfolio starts with a loss it takes a lot more effort to climb out of the hole as we can see in the example below.

✖ Compounding Returns and Your Portfolio

- You have to geometrically link returns to take into account compounding of previous periods.
- It doesn't take as big of a negative return to lose your gains.
- It takes more gains to dig out of a hole.
- In up markets, compounding is a powerful force.

Being aware of how easy it is to flip a portfolio upside down will help you take on the right amount of risk that fits your client's level of comfort. That way you aren't having to dig yourself out of a hole like I am in my old age - trying to gain back in time that muscle I quickly lost.

If you have any questions about the content covered in today's article, please contact our SME Performance Team via the online chat in your

Orion Social app.

*If periods are annual periods then we would annualize using $\wedge (1 / \# \text{ of years})$ in the formula.

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