

What is the Difference between APR and APY?

The difference between APR and APY essentially boils down to compounding.

Annual Percentage **Rate**, or **APR**, is the rate most people normally think of when you consider the interest you're earning in an account and ignores the effect of compounding (e.g. being paid interest on not only the money you've put in, but the interest that you earned on that money in the previous period).

Annual Percentage **Yield**, or **APY**, is the more common calculation used by banks (and savvy investors) to make an apples-to-apples comparison of different CDs, savings accounts, and other investment vehicles of different lengths and terms by standardizing the term to one year (annual) and assuming compounding.

The general equation that converts **APR** into **APY** is the following:

$$\mathbf{APY = (1 + APR/n)^n - 1}$$

where n = the number of times in a year that you're paid. For example, if you're getting interest paid out each 6 months, then $n = 2$. If you're getting interest paid each quarter, then $n = 4$. If you're getting paid each month, then $n = 12$. And so on. So what happened to our reader? He misunderstood that the rate being typed into his passbook was in fact the **APR**, not the **APY**. The reader doesn't specify it, but if we assume World Savings compounds this CD daily in the same manner it does all the others, then:

$$\mathbf{APY = (1 + 5.6\%/365)^{365} - 1 = 0.05759314 \text{ or } 5.76\%}$$

However, keep in mind that this doesn't mean that if you bought a \$100 10-month CD that you'd get \$5.76 by the end of the term. You'd only get the full **APY** if you had bought a CD that lasted the full 12 months. On a 10-month CD, you'd actually only get around \$4.78, or 83.3% of the full \$5.76 because you invested your CD for 83.3% of a full year. Another example: I bought a 3-month CD from Schwab that earns 5.41% **APY**, but that doesn't mean I'm going to get 5.41% of my investment at the end of 3 months, but only 1/4th of it, or 1.3525%.

So, in summary, here are the key things you need to know to make a good investment in a CD, savings, or other interest-bearing account:

- Understand the difference between APR and APY
- Use the APY provided by financial institutions to make an apples-to-apples comparison across all the various opportunities out there
- Make sure you know the term of the investment (e.g. 3-months, 6-months, 13-months, etc.)
- Make sure you know how often the interest is compounded
- And most important, educate yourself so that “professionals” won’t lead you to make a bad decision when they make a mistake!