

The Magic of Compounding

“Compound interest is the eighth wonder of the world. He who understands it, earns it ... he who doesn't ... pays it.”

– Albert Einstein (1879 - 1955)

There is some question as to whether Einstein actually uttered these words, as someone who was brilliant enough to conceive the Theory of Relativity might not find a geometric series to be all that fascinating. Nonetheless, it illustrates what is probably the most powerful, and least utilized, truism of investing. The math is simple; the results are amazing. By combining time and discipline, you can accomplish outstanding returns on your investments.

The essence of compounding can be best described as continually earning returns on your past returns. Let me illustrate this with a story I like to tell to my kids.

A tale of two twins

Twin brothers decided that they needed to start saving for retirement, so they each came up with a plan for doing so. Twin #1 started at the age of 21, putting \$10,000 at the beginning of the year into his retirement plan, and continued to do this for ten years, making his last contribution when he turned 30. Twin #2, beset by the usual expenses that one encounters in their 20s, decided to start contributing to his retirement account at age 31, putting \$10,000 in annually for 30 years, making his last contribution when he turned 60 years old.

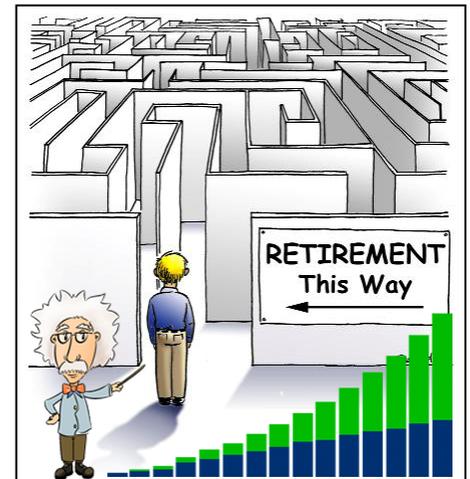
Being twins, both of them chose the same investment, a low-fee index that tracked the S&P 500. Dividends and gains were reinvested back into the fund. Historically, the average compounded annual rate of return for the S&P 500 – price gains plus dividends – over the 60 years through the end of 2013 was 10.95 percent, so we'll assume that their fund achieved the same average return over the 40 years that they held it.

When the twins turned 60, they each looked at the balance of their respective retirement accounts. The winner? Well, actually both were winners in that they had successfully executed their retirement savings plans. The surprise? Twin #1, who had invested only one-third of what his brother had, now owned a retirement account worth \$4.1 million, compared to his brother's account with a \$2.2 million balance. Even if the compound annual return had been only 7 percent per year, Twin #1 would have still ended up with 10 percent more.

Invest early, often, and reinvest

The “secret” to achieving these seemingly extraordinary returns boils down to two key factors: time and reinvestment. (A third one, low fund fees, is one that I've discussed in the past.) The earlier you start investing, the longer your money has to keep making money. When Twin #2 started

Navigating the Retirement Maze



investing, Twin #1 already had an account worth \$184,500 which by that time was earning, on average, \$20,000 a year while his brother was adding only \$10,000 a year to his. By starting earlier, Twin #1 got a head start that his brother was never able to surpass.

The second factor is continually reinvesting your returns, because that is what gives you the "earning returns on your returns" effect. Nearly all of the major brokerage and mutual fund firms will automatically reinvest your dividends at no cost if you select that option on your account. If you hold individual stocks where dividends are not automatically reinvested by the custodian, check to see whether those companies offer a DRIP – Dividend Reinvestment Plan – option. Those that do will take your dividends and use them to purchase additional fractional shares for you, often at a discount. The reinvested shares are then included in computing future dividends, in effect providing automatic compounding.

Time can be your friend (or enemy)

In one of my favorite financial planning books, [*Yes, You Can Still Retire Comfortably \(Stein and DeMuth\)*](#), there is a chart that I use as a reality check for my clients. It compares the amount that one has saved for retirement versus age, with values in the matrix showing the percentage of income that needs to be saved until age 70 in order to retire successfully, assuming no other supplemental retirement income like pensions. For example, if a person has saved a year's worth of salary by age 35, the table shows that they would need to continue saving 6 percent of income each year to make it to their goal. Contrast that with the 50-year old who has also saved a year's worth of salary. To reach their retirement goal by age 70 would require putting away 26 percent of their income each year. It's one more example of why it pays to start saving early and sticking with the program.

George Gagliardi is a fee-only financial advisor with Coromandel Wealth Management in Lexington, where he helps clients develop and implement investment and retirement strategies. He can be reached at (781) 728-9001 or george@CoromandelWM.com. George is affiliated with Trust Advisory Group, Ltd., a Registered Investment Advisor. This article is intended for general information purposes only, and may not be appropriate for your specific circumstances. Investment advice is particular to each individual, and should only be given after an individual situation has been reviewed.



Coromandel Wealth Management
15 Muzzey Street
Lexington, MA 02421

Phone: 781.728.9001
info@CoromandelWM.com
www.CoromandelWM.com