How to Add 170 Basis Points to Investor Returns

Roger Silk, Sterling Foundation
8/28/2023

We observed that only a small fraction of investors use the services of professional financial advisors.

And we also reported on studies that show that being more intelligent, and more educated make a person more likely (everything else equal) to employ a professional financial advisor.

And we also reported (as though you didn't already know this!) that sometimes prospects are skeptical about the ability of financial advisors to add value.

Today we are going to review some research that measures part of the value that advisors can add. We will see that advisors can, in theory, add 650 basis points (a full 6.5%) annual over the "do it yourself" active stock trader.

Many individuals have learned that to have the best returns, they shouldn't trade stocks. So many do-it-yourselfers have switched to buying funds.

New research finds that in the most recent period studied, even fund investors underperformed the same funds by about 170 basis points, that is, they earned, on average, 170 basis points *less* than the fund's average return.[1]

Individual Traders Underperform

It has been known for decades that individual investors who trade actively, as a group, badly underperform the market. For example, in a study published twenty years ago,[2] Terence Odean of UC Berkeley and Brad Barber of UC Davis gathered data on 78,000 households that had active brokerage accounts from January 1991 to December 1996.

The study, which runs 34 pages, covers a great deal of ground. Among the significant findings is this: "high turnover households…underperform the low turnover households…. The underperformance ranges from… 5.5% percent per year, … to an astoundingly high...9.6% percent per year."[3]

They also state:

An investment mimicking the average household of the high turnover quintile would have earned a net annualized mean geometric return of 11.4 percent, while an investment that mimicked the low turnover quintile would have earned 18.5 percent.

Owning Individual Stocks Can be Rational

Odean is known for his work in behavioral finance. This is a branch of theoretical finance that focuses on people's alleged irrational behavior. Odean addresses the potential reasons for holding individual stocks, instead of funds. The strongest such reason, he says, is taxes. "The single most compelling reason for investors to hold individual common stocks in lieu of mutual funds is taxes."

Do Individuals Do Better Buying Mutual Funds?

Yes, they do better than trailing the market by 5% to 9%.

But, they still trail the funds the themselves. That seems paradoxical. We'll come back to the paradox shortly.

A recently published study by Morningstar[4] reported that over the ten year period ending in December, 2022, the average investor in mutual funds and exchange-traded funds (ETFs), earned a return of 1.7% less (6% vs 7.7%) on an average annual basis than the funds themselves.

The compounded effect of this difference is large. One million dollars compounded at 6% annually grows to $1.79 million after ten years. In contrast, that some million dollars, compounding at 7.7% annually grows to $2.1 million.

Back to the paradox. How can it be that the investors in a fund do worse than the fund itself? We'll try to give you a concise description of how the study was done, and how they reached the conclusions they did.

Time-Weighted Returns vs. Dollar Weighted Returns

The answer to the apparent paradox is found in the difference between time-weighted returns and dollar weighted returns.

In simple cases, an annual return is easy to calculate. For example, if at the beginning of the year a stock is worth $100, there are no dividends during the year, and ends at $110, we can all agree that the annual return on the stock was 10%. Anyone who owned it for the whole year would have earned 10%.

But if there are cash flows, such as dividends, the calculation becomes more complicated. Some assumptions must be made. One set of assumptions are made to calculate the *time-weighted return*.

The returns normally reported by investment managers, mutual funds, and various reporting services are calculated at *time-weighted* returns. Here is the formula,[5] which we'll explain, for *time-weighted return*:

$$R_{\mathrm{TW}} = \prod_{i=1}^{n}(1 + r_i) - 1$$

Where r_i is the return for period *I*, and "Π" is the symbol for product notation. We'll explain using an example. Suppose that we have three periods, with duration and return as shown in the following table:

Period	*Duration in Months*	*Return*
1	2	4%
2	1	-1%
3	9	11%

The formula tells us that we should calculate the following:

$$R_{\mathrm{TW}} = (1 + .04) \times (1 - .01) \times (1 + .11) - 1 = .1428 = 14.28\%$$

Because the periods all together are one year, the time-weighted return for the year is 14.28%.

Now suppose that an investor had perfect foresight. The investor invests for period 1, goes to cash (assume zero return on cash), and reinvests for period 3. Ignore taxes. The investor will now end with (1.04) x (1.11) = 1.1544 dollars for each dollar invested, an annual return of 15.44%.

This investor's return is called a dollar weighted return, because it is weighted by the number of dollars invested in each period.

The entire time period is still one year, but the return was calculated using the number of dollars invested to weight the returns for each sub-period.

Unfortunately, the data show, individual investors as a group, left to their own devices, consistently have bad timing. They are consistently out of the market when they shouldn't be. It's not that these people do not invest with professionals

– the people managing the mutual funds and ETFs are professionals. These individual investors are underperforming the very funds in which they are invested.

One of the major ways that financial advisors help individual investors is by preventing individuals from being their own worst enemies.

As Ben Graham is widely reported to have said, “the investor's chief problem—and even his worst enemy—is likely to be himself.”[6]

So one of a financial advisor’s major tasks is to protect clients from themselves.

[1]Mind the Gap: A Report on Investor Returns in the US, 2023, Jeffrey Ptak and Amy Arnott
[2] Brad M. Barber, Terrance Odean, Trading Is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors, Journal of Finance, Volume 55, Issue2, April 2000 Pages 773-806
[3] The words removed, represented by the ellipses marks (…), provide additional technical detail.
[4] Mind the Gap, 2023, Jeffrey Ptak and Amy Arnott.
[5] As described by the CFA Institute
[6] I have been unable to find the original source for this alleged Graham quote. But the evidence nevertheless suggests that the sentiment is true.