
High turnover can have a big impact on your tax bill, reducing bottom-line returns, while a buy-and-hold strategy can significantly improve long-term aftertax results.

When Less Is More: How to Increase Aftertax Returns by Doing Less

By Rex Macey

A lot of attention is given to stock and market returns. However, most of the attention is focused on rates of return *before taxes*.

The bottom line, though, for any investor is what's left after all expenses, and for most taxable investors, taxes are the biggest expense an individual investor faces.

Buy and hold strategies defer or eliminate capital gains taxes. Since buying and selling frequency is largely within the control of the investor, this presents an opportunity for taxable investors. This article focuses on how frequent trading, or high portfolio turnover, increases taxes, which in turn reduces aftertax performance.

And since capital appreciation is more characteristic of stock than bond investing, the focus is on stock portfolios.

High Turnover = Higher Taxes

Portfolio turnover is commonly measured as the minimum of sales and purchases divided by the average value in the account. A turnover of 0% would imply that you never sell a security, a turnover of 100% would mean you replace your portfolio each year, and a turnover of 50% would mean you hold your securities for an average of two years.

To set the stage, let's describe two scenarios involving different portfolio turnover rates. In the first, you buy and hold a portfolio of stocks. Each year you receive dividends and pay taxes on them; you pay no capital gains taxes on appreciation because no gains are realized.

The second scenario is that you have 100% turnover. In this case, you pay taxes on the dividends and on the gains each year.

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In both scenarios, the taxes you do pay are no longer invested in the market. But if you buy and hold, as in the first scenario, you only pay taxes on dividends and you delay or avoid paying capital gains taxes.

The significance of the tax impact of turnover depends upon the amount of turnover, your overall time horizon, your tax rate, and your rate of return on your investments. It also depends on whether you liquidate your investments before you die.

In this article, I'll refer to selling stock before death as "pre-mortem" liquidation and to selling stock after death as "post-mortem" liquidation. When you die, the cost basis of your investments is "stepped-up." This means the cost basis is adjusted to the market value at the time of your death. Your heirs, were they to liquidate right after your death, would pay no capital gains taxes. The consequence of this twist in our tax code is that a buy and hold strategy avoids capital gains taxes in the event of your death, and it only defers them if you liquidate your investments while alive.

Table 1 shows the aftertax effect of various portfolio turnover rates on a \$100 stock portfolio after 20 years. It shows the aftertax value and effective aftertax rate of return on the portfolio after 20 years—assuming a 28% capital gains tax rate, a 35% tax on dividends and a total annual return of 10% (3% from dividends and 7% from capital appreciation). The pre-mortem columns show the value and return after 20 years, assuming the portfolio was then liquidated by the holder and taxes were paid on unrealized gains up to that point; the post-mortem columns assume that the portfolio holder died after 20 years, with heirs inheriting the portfolio and capital gains taxes on unrealized gains thus avoided.

The difference between a portfolio turnover of 0% (buy and hold) and 100% is very large in both the pre- and post-mortem cases. Given the same pretax rate of return of 10%, the difference is \$169 (\$555 – \$386) to the investor whose heirs liquidate after death and \$69 (\$455 – \$386) to the investor who liquidates before death. Since the original investment is \$100, this corresponds to an increased return of 169% (about 2% annually) post-mortem and 69% (0.89% annually) pre-mortem over the 20 years.

The tax impact created by increasing turnover is not linear. In fact, increasing the turnover from 0% to 10% creates a lot more

damage than increasing turnover from 75% to 100%. This is illustrated in Figure 1.

The Impact of Time

As you can see, turnover can have a dramatic effect on taxes over the longer term. But what about the impact of time?

Table 2 shows the different aftertax rates of return for various turnover and time frames assuming the final disposition occurs pre-mortem; Table 3 differs only in that the final disposition is assumed to occur post-mortem.

These two tables illustrate two important points:

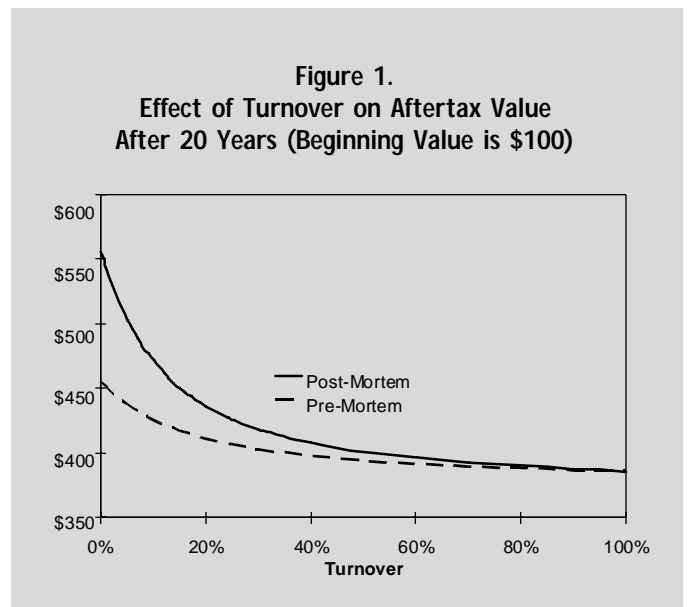
- For the investor who plans to bequeath securities, a low-turnover strategy is very appealing.
- The benefits of a low-turnover strategy accrue over the long term.

Of course, equity investors should have a long time horizon, and it helps to remember that a 50-year old may not retire until 70 and has a life expectancy in the 80s.

Overcoming Tax Effects With Return

Some investors feel that they can earn a greater return if they trade more frequently or if they choose a high-returning mutual fund that may have a high portfolio turnover. The obvious question then is how much higher must your before-tax return be in a high-turnover portfolio to equal the portfolio of a low-turnover portfolio after taxes are considered?

The answer to this question is shown in Tables 4 and 5. The first rows of the two tables show the zero turnover portfolio earning a 10% (7% appreciation and 3% dividend) pretax return; subsequent rows indicate the before-tax rates of return that would be required for the higher-turnover portfolios so that their aftertax values would match the aftertax value of the zero turnover portfolio. For example, a 100% turnover portfolio in the pre-mortem case would have to earn 11.2% (8.2% appreciation, 3%



dividend) annually over 20 years to match the aftertax value of a zero turnover portfolio earning 10% before taxes.

Over a 20-year period, a 100% turnover portfolio has to outperform the 0% turnover portfolio by 1.2% annually in the pre-mortem case and over 2% in the post-mortem case.

A few points are worth mentioning. This analysis assumes transactions costs of zero. In reality, a high turnover portfolio also incurs commissions and the cost of the bid-ask spread. Commissions appear on your confirmations and go to pay the broker; bid-ask spreads refer to the fact that at any given time, you have to pay more to buy a stock than to sell it.

Consequently, an investor (or a mutual fund portfolio manager) with a high-turnover portfolio must not only outperform to beat this tax effect, but must also outperform to offset the transaction costs.

Strategy Implications

Of course, you might ask, what about a truly great performing fund like Fidelity's Magellan? Let's take a look at the estimated effect of taxes and fees on Magellan. According to Morningstar, Magellan racked up an impressive 18.3% annual return over the 10 years ending June 1995, putting it in the top 3% of funds. This compares with 14.7% for the S&P 500 index. However, after adjusting for the front-end load, Magellan's performance was 17.9% before taxes. Morningstar puts Magellan's turnover at 120%. The 17.9% return is reduced to 12.7% after paying a 35% tax on the dividends (assuming a 3% dividend yield) and 28% of the capital gains in taxes each year; the S&P 500's before-tax return of 14.7% is whittled to 11.5% after paying the taxes on the dividends each year and the capital gains taxes at the end. If you can avoid the capital gains taxes (because of death), the S&P 500's aftertax return would be 13.6%.

Depending on your situation, you may want to compare the 12.7% Magellan return to either 11.5% or 13.6%. Assuming you plan to live to enjoy the returns from your investments, you must

Table 1.
Turnover Effect on a \$100 Portfolio
Over a 20-Year Period*

Turnover (%)	Aftertax Value		Aftertax Return	
	Post-Mortem (\$)	Pre-Mortem (\$)	Post-Mortem (%)	Pre-Mortem (%)
0	555.32	455.61	8.95	7.88
5	503.55	438.11	8.42	7.67
10	471.39	426.08	8.06	7.52
25	425.99	406.63	7.52	7.27
50	401.18	394.30	7.19	7.10
75	392.87	389.87	7.08	7.04
100	386.25	386.25	6.99	6.99

*Pre-tax return of 10%

Table 2.
Effect of Time on Returns:
Pre-Mortem Final Disposition
(For Pre-Tax Returns of 10% [3% Divs, 7% Apprec])

Turnover (%)	1	3	5	10	20
	Year	Years	Years	Years	Years
	Aftertax Rates of Return (%)				
0	6.99	7.12	7.23	7.49	7.88
5	6.99	7.11	7.21	7.41	7.67
10	6.99	7.10	7.19	7.35	7.52
25	6.99	7.08	7.13	7.21	7.27
50	6.99	7.04	7.07	7.09	7.10
75	6.99	7.01	7.02	7.03	7.03
100	6.99	6.99	6.99	6.99	6.99

Table 3.
Effect of Time on Returns:
Post-Mortem Final Disposition
(For Pre-Tax Returns of 10% [3% Divs, 7% Apprec])

Turnover (%)	1	3	5	10	20
	Year	Years	Years	Years	Years
	Aftertax Rates of Return (%)				
0	8.95	8.95	8.95	8.95	8.95
5	8.85	8.77	8.70	8.57	8.42
10	8.75	8.60	8.48	8.27	8.06
25	8.46	8.16	7.96	7.70	7.52
50	7.97	7.60	7.43	7.27	7.19
75	7.48	7.22	7.15	7.09	7.06
100	6.99	6.99	6.99	6.99	6.99

Table 4.
Pre-Tax Required Returns for Aftertax Equivalency:
(Pre-Mortem Disposition)

Turnover (%)	1	3	5	10	20
	Year	Years	Years	Years	Years
0	10.0	10.0	10.0	10.0	10.0
5	10.0	10.0	10.0	10.1	10.2
10	10.0	10.0	10.1	10.2	10.4
25	10.0	10.1	10.1	10.4	10.8
50	10.0	10.1	10.2	10.5	11.0
75	10.0	10.1	10.3	10.6	11.2
100	10.0	10.2	10.3	10.7	11.2

Table 5.
Pre-Tax Required Returns for Aftertax Equivalency:
(Post-Mortem Disposition)

Turnover (%)	1	3	5	10	20
	Year	Years	Years	Years	Years
0	10.0	10.0	10.0	10.0	10.0
5	10.1	10.2	10.3	10.4	10.6
10	10.2	10.4	10.5	10.7	11.0
25	10.5	10.9	11.1	11.5	11.8
50	11.1	11.7	11.9	12.2	12.3
75	11.9	12.3	12.4	12.5	12.6
100	12.7	12.7	12.7	12.7	12.7

ask yourself how likely you are to be able to pick a fund in the top 3% over the next 10 years, or the likelihood that your own stock-picking strategy would be as successful as that of the Magellan managers. Doing so would have provided you with an extra 1.2% per year. While this is significant, your chances are slim.

Before you adopt an active strategy designed to beat the market, you must have strong evidence to believe it will

outperform a buy-and-hold portfolio.

How does one implement a buy-and-hold strategy? One tactic is to use a passive mutual fund, such as an S&P 500 index fund (which has minimum turnover), or an S&P 500 depository receipt (abbreviated SPDR; symbol SPY) which avoids the tax impact of any turnover. Index funds not only enable you to adopt a buy-and-hold strategy, but they also provide a market rate of return—a difficult bogey to beat even on a before-tax basis.

