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On The Greatest Detriment to Investment Performance

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Which is more detrimental to long-term investment performance, an investment manager's behavior/actions or the fees it charges for its services?

Despite professionals and clients alike focusing on the latter, I have long suspected the former – particularly with respect to investment managers that utilize a "*model equity portfolio*" and a risk management technique known as "*portfolio rebalancing*". While I do not engage in such techniques or behavior, they are prevalent today and heavily relied upon by most investment managers, so I decided to research their application and usefulness.

First, let me briefly share a few key definitions and principles.

Definitions & Principles

A *model equity portfolio* is an approved list of securities established, and periodically revised, by an investment manager and/or its investment committee to which all of the investment manager's client portfolios must substantially conform. Based on Modern Portfolio Theory, a *model equity portfolio* is designed to maximize expected (not actual) return consistent with a comparable market return for a given level of portfolio risk. Expected returns ignore fees, taxes, and transaction costs. Before proceeding, I suggest you fully absorb the last two sentences.

Portfolio rebalancing is the exercise of buying/selling assets, as necessary, to periodically realign a client's portfolio so that it remains diversified and consistent with established allocation ranges based on such things as:

- Asset classes (e.g. equities, fixed income, cash, real estate, emerging markets, etc.)
- Broad industry sectors (e.g. healthcare, materials, technology, etc.)
- Individual securities (e.g. Alphabet stock as a percentage of a portfolio)

For this study, I used only broad industry sectors as defined by the S&P 500 Index to achieve and maintain portfolio diversification. Although in practice I favor some sectors over others, I make no sector bets here. For example, if the S&P 500's energy sector weighting was 5% for a given year, then the energy sector weighting for the portfolios in this study was also 5%. Allocating capital this way is among the most common risk management techniques. While I

support the concept and use of diversification as a general risk management tool, I reject its use as a means to accumulate wealth or to mitigate the occupational risk of an investment manager.

Competent investment management requires properly understanding and prioritizing the following interdependent goals:

- Wealth Preservation – i.e. preserving purchasing power
- Wealth Accumulation – i.e. capital appreciation/growth
- Risk Management – i.e. avoiding permanent losses of capital

After-tax returns are paramount. In other words, what should matter the most is how much you, the client, keep in your pocket after all bills are paid.

Assumptions & Methodology

In order to analyze the effects of a *model equity portfolio* and *portfolio rebalancing*, I created two all-equity large-cap model portfolios as shown in the table below. I selected 10 companies for each portfolio, one from each S&P industry sector. Each company had to have been publicly traded for at least 25 years (since 1995).

S&P Industry Sector*	**Model Dividend Portfolio**	**Model Growth Portfolio**
Communication Services	AT&T (T)	Comcast (CMCSA)
Consumer Discretionary	Nike (NKE)	Starbucks (SBUX)
Consumer Staples	Walmart (WMT)	Costco (COST)
Energy	Exxon Mobil (XOM)	Chesapeake Energy (CHK)
Financials	American Express (AXP)	Charles Schwab (SCHW)
Healthcare	Johnson & Johnson (JNJ)	Amgen (AMGN)
Industrials	3M (MMM)	Cintas (CTAS)
Information Technology	Intel (INTC)	Microsoft (MSFT)
Materials	DuPont de Nemours (DD)	Air Products & Chemicals (APD)
Utilities	Duke Energy (DUK)	Nextera Energy (NEE)

*Excludes the Real Estate sector, which was introduced in September 2016.

Then, I tabulated 25 years (1995 thru 2019) of historical price, dividend, and stock split data for each company. I also tabulated 26 years of S&P Industry Sector weights – i.e. the percentages that each sector represented of the S&P 500 Index for each year from 1994 thru 2019. For each model portfolio, I assumed:

a) an initial investment of $100,000;
b) it remains fully (100%) invested;
c) no additional contributions of assets/capital;
d) no withdrawals of capital, except for cash necessary to pay accrued capital gains and dividend income taxes;
e) no transactions costs;
f) no substitution – i.e. the same companies were held for the full 25-year test period and sufficient diversification is achieved/implied by sector representation;

g) rebalancing occurred once annually through purchases/sales, as necessary, of the same companies based on the relative performance of each company for the year just ended and the appropriate target S&P broad industry sector weights;
h) taxes on dividends and realized capital gains were paid at the end of each year with cash generated from dividend income and, in rebalancing scenarios, cash proceeds generated during the rebalancing process;
i) average state capital gains tax rates increased over time from 4.0% to 6.5%;
j) management fee rates decreased over time from 1.5% to 1.0%; and
k) annual inflation averaged 2.2%.

Actual historical federal tax rates were used to compute applicable taxes, and cost basis was adjusted annually, as necessary, based on purchases/sales and dividends/splits.

Results & Observations

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
	Annual	Portfolio Value[2]	Fees Paid[3]		Taxes Paid[3]		Value Foregone	
Model Portfolio	Return[1]	("PV")	($)	% of PV	($)	% of PV	($)	% of PV
Dividend - Rebalanced	19.5%	$8,650,788	$1,072,849	*12.4%*	$2,040,395	*23.6%*	$3,113,243	*36.0%*
Dividend - Untouched	21.0%	$11,816,777	$1,166,012	*9.9%*	$283,484	*2.4%*	$1,449,496	*12.3%*
Growth - Rebalanced	25.9%	$31,522,383	$3,642,361	*11.6%*	$7,516,644	*23.8%*	$11,159,005	*35.4%*
Growth - Untouched	28.0%	$47,521,388	$4,285,051	*9.0%*	$710,991	*1.5%*	$4,996,041	*10.5%*

(1) Compound annual returns net of fees and taxes over the 25-year period (1995 thru 2019), excluding transaction costs.
(2) As of 12/31/2019; based on an initial investment of $100,000.
(3) Present value of management fees paid and taxes paid, respectively, over the 25-year period (1995 thru 2019).

The results of this study indicate that *portfolio rebalancing* is ineffective and wealth destructive. Clients are better off not allowing their portfolios to be conformed/rebalanced to a *model equity portfolio*. Further, clients have been trained to focus almost exclusively on fees paid. More attention needs to be directed toward the greatest costs to a client's portfolio, specifically taxes paid and detrimental investment manager behavior.

I share the following observations about the results in the preceding table:

1) While the differences in annual returns in column (A) between the corresponding *rebalanced* and *untouched* portfolios appear relatively insignificant in percentage terms, the differences in corresponding portfolio values in column (B) are quite significant in dollar terms due to taxes paid and compounding over 25 years.

2) Columns (C) and (D) show cumulative management fees paid in present value dollar terms and as percentages of portfolio values, respectively. Since these fees were incurred over a period of 25 years, we adjusted them for inflation (i.e. valued them in present dollars) in order to make them comparable to the portfolio values shown in column (B). Management fees on the *rebalanced* portfolios are higher in percentage

terms but lower in dollar terms than those for the *untouched* portfolios. The reason is that management fees are assessed based on portfolio value. Naturally, a higher portfolio value (i.e. better portfolio performance) results in higher management fees in dollar terms and lower management fees as a percentage of portfolio value.

3) Data in columns (E) thru (H) is presented similarly to the management fee data. With regard to taxes paid, take note of the dollar amounts and the roughly tenfold differences between the corresponding portfolios. Regarding the *rebalanced* portfolios in particular, notice that the percentages of portfolio values paid in taxes (nearly 24% in each case) are about 2*x* the percentages of portfolio values paid in management fees. In other words, taxes are twice as harmful as management fees.

4) Data in columns (G) and (H), regarding value foregone, reflect the sum of fees and taxes. An average of 36% of portfolio value is foregone to fees and taxes in the *rebalanced* portfolios, whereas an average of approximately 11% of portfolio value is foregone in the *untouched* portfolios. This difference is perhaps even more striking when framed in dollar terms. Consider the two corresponding dividend portfolios in the table. With the *rebalanced* portfolio, a client would have to spend $3.1 million to get a portfolio worth $8.7 million, whereas with the *untouched* portfolio, a client would have to spend just $1.4 million (less than half that spent by a *rebalanced* portfolio client) to get a portfolio worth $11.8 million.

5) The annual return data presented in column (A) is well above the historical compound annual returns of the S&P 500 of about 10% for the 25-year study period. The primary reasons for the difference are portfolio concentration and stock selection. Although the presence of selection bias (i.e. the benefit of hindsight in picking great companies) had an impact, these portfolios also benefitted from portfolio concentration. Most *model equity portfolios*, by definition, are never this concentrated. Therefore, actual performance results from *model equity portfolios* are typically far worse, often less than market returns due to benchmark hugging.

As you are now aware, the most significant reason for the difference in performance is detrimental investment manager behavior. Misguided beliefs and the use of fundamentally flawed investment techniques lead to value destructive portfolio activities, such as prioritizing short-term risk (i.e. price volatility) over long-term wealth preservation/accumulation and using techniques that prioritize asset/client retention (i.e. firm efficiency and profitability) over performance.

Incidentally, anyone with access to Yahoo Finance and a spreadsheet is capable of re-creating my research and results.

The Impact of Detrimental Behavior

While paying management fees of some amount is unavoidable, paying taxes is largely avoidable. Paying taxes on capital gains inflicts the greatest harm, and this harm is directly caused

by investment managers that utilize *model equity portfolios* and *portfolio rebalancing* risk management techniques.

As musicians like to say, let's break it down further. Avoiding capital gains taxes is virtually impossible in the most likely scenarios, when an investment manager either (a) conforms a new client's portfolio to a *model equity portfolio* or (b) periodically rebalances an existing client's portfolio to adhere to risk management policies.

In scenario (a) above, for example, let's assume that 50% of a new client's $2 million portfolio consists of inherited low-basis (a penny per share) stock in Exxon Mobil because the client happens to be the great-grandson of John D. Rockefeller. An investment manager that has a *model equity portfolio* with a 2% allocation to Exxon Mobil would be selling shares for $60 per share today to reduce the perceived (not actual) risk (i.e. short-term price volatility) of this holding, and consequently generating a very large unwanted tax bill of $959,840. Paying federal and state capital gains taxes of approximately $291,000 would leave $668,840 available for reinvestment. However, the client is now less wealthy, with about $1.7 million, and the reinvested capital of $668,840 must generate a minimum 49.6% first-year return in order to restore the portfolio – i.e. bring it back to the initial $2 million. Such performance is unrealistic. A more realistic first-year return might be 8.0% and, at this annual rate, it would take 5.2 years to restore the portfolio. While these efforts would restore the portfolio to its initial value, they would fail to preserve the client's wealth or purchasing power.

This study's *rebalanced* portfolio results are examples of scenario (b) above. Portfolios are dynamic in that each investment in a portfolio performs differently, at different times. This means that a rebalanced portfolio will require periodic rebalancing to keep it within risk management parameters – sector allocation and individual equity policy targets. To accomplish these goals, winners are sold or reduced because of size or concentration. The after-tax proceeds from these sales are reinvested in new equities that, more often than not, fail to outperform the winners that they replaced. As stated in the previous paragraph, new investments need to substantially outperform what was sold in order to recover what was lost to taxes. As pervasive as *portfolio rebalancing* is today, the results speak for themselves, it's an awful idea. At best, it redistributes a client's wealth. At worst, it destroys a client's wealth.

Reasons (not excuses) for Detrimental Behavior

Investment managers tend to show only pre-tax portfolio performance results. The main reason is that tax rates vary among clients and, given regulations, it is easier and legally safer to directly compare pre-tax performance results across investment managers. The inherent problems with this behavior are that pre-tax results can be materially misleading, and investment managers need to be held accountable for actions/decisions within their discretion. A market-thumping pre-tax return of 25% is meaningless if, in order to achieve it, an investment manager incurs taxes which result in a below-market after-tax return. What should matter to you, the client, is after-tax results – i.e. how much you actually keep in your pocket.

Investment managers that utilize a *model equity portfolio* and *sector allocation*/*rebalancing* techniques do so for a handful reasons. The primary reason is ease of management. A single *model equity portfolio* is easier to manage than hundreds of customized portfolios since there are fewer companies to research and track, and it has less variability in performance or what professionals refer to as "dispersion of returns". In essence, such investment managers are offering homogenized commodity services to what they view as homogenized commodity clients. Every client receives the same services and the same results. This has led to some unfortunate consequences, such as: (1) investment managers competing primarily on fees, the folly of which is revealed herein to the keen observer; (2) clients relying on subjective qualitative factors instead of objective quantitative ones when evaluating their investment managers; and (3) clients focusing too much on fees and not enough on taxes and detrimental investment manager behavior.

Conclusion

By now, I hope you have realized that the wealth management techniques analyzed here are better at managing you and your perception of wealth management than your actual wealth. Having undertaken this research and gained greater clarity through the process, I leave you with the following summary points:

1. An investment manager's behavior impacts a client's wealth far more than its fees

2. Despite perhaps good intentions, most investment managers are too active for the good of the client, as well as their own good; less is more

3. Compounding is your friend, the taxman is not

4. Avoid active and passive investment managers that use *model equity portfolios* and *rebalancing* because these techniques are detrimental to you and your wealth

5. Focus on after-tax returns, even if it takes more effort/insistence on your part