After-Tax Returns

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Taxable investors should consider the impact of excess return expectations, fees, and tax drag on their portfolios. A diversified mix between active, passive, and tax-managed equity strategies can lead to superior after-tax returns.

Introduction

This white paper summarizes Canterbury's views on constructing equity portfolios while considering tax implications. We consider the excess returns from different asset classes, tax drag, and ways to maximize after-tax performance.

Active Management Excess Returns

The search for managers who can outperform their benchmarks on a net-of-fees basis is a process that requires much due diligence and monitoring. In the pursuit of strong management teams, we have found that certain asset classes have been more likely to beat their respective benchmarks. The table below is broken down by asset class and shows the average active manager's 10-year annualized excess return after fees for the period ending March 2017. U.S. value managers fared better against their benchmarks, as shown by their excess returns. On average, large value and small value managers beat their benchmarks by 1.39% and 3%, respectively. However, it's important to note that the large growth and small growth benchmark returns were 54% and 32% greater than their value benchmark counterparts, which created a much higher hurdle rate for growth managers. This is because active managers are generally more conservative and do not rise by as much during strong bull markets.[1] Finally, international developed-market and emerging-market equity managers on average provided healthy excess returns of 1.86% and 2.27%, respectively, net of fees.

10-Year Annualized Excess Return by Asset Class

Asset Class	Excess Return (net of fees)	Net Expense Ratio
Large Growth	-0.63	0.48
Large Value	1.39	0.45
Small Growth	0.98	0.63
Small Value	3.00	0.47
International Developed	1.86	0.41
Emerging Markets	2.27	0.64

Source: Morningstar. As of 3/31/2017.

Although the excess returns from active management look promising for most asset classes, these are pre-tax returns and do not consider that a taxable portfolio needs to overcome the additional hurdle of tax drag.

Tax Drag

In order to achieve excess returns, active managers typically trade (turn over) their portfolios at varying levels of frequency. The following table shows the impact of various levels of turnover on a hypothetical portfolio with 6% average annual returns.

Impact of Portfolio Turnover on After-Tax Returns (%)

Turnover Rate	Pre-Tax Return	After-Tax Return	Difference
0	6.0	6.0	0.0
5	6.0	5.4	-0.6
10	6.0	5.0	-1.0
25	6.0	4.4	-1.6
50	6.0	4.1	-1.9
100	6.0	3.9	-2.1

*Source: Arnott and Jeffrey, Journal of Portfolio Management 19, no. 3 (1993).**

* An effective tax rate of 35% was used here for illustration, but differences would not materially affect the conclusions. The 6% growth assumption approximates the Ibbotson Associates compound principal appreciation rate of common stocks for the 66 years ending in 1991.

Even at the relatively low 25% turnover level (equivalent to an average holding period of four years), the tax drag generated by realizing gains detracts around 160 basis points per year from a portfolio earning 6%. This tax drag will erode much of the outperformance from the first table. Therefore, for taxable clients, we typically recommend either active managers with very low

turnover, in order to minimize the effect of tax drag, or tax-managed and index options.

Passive Management

After-tax returns can be improved using low-cost indexing strategies, which have many benefits for the taxable investor.

Passive strategies, commonly referred to as index funds, are more tax efficient on average due to the broad tax-lot range, lower turnover relative to active managers, and the use of tax-efficient structures such as an ETF. For the taxable investor, minimizing investment costs and taxes plays a vital role in maximizing portfolio returns. A mutual fund's transaction pattern means that over time, the fund will accumulate a large number of tax lots with a wide dispersion between the low- and high-cost lots. The highest-in, first-out (HIFO) tax lots can be effective in limiting capital gains distributions. Selling the high-cost-basis holdings reduces the capital gains tax that results from fund redemptions.

By definition, passive strategies also have very low turnover. Outside of redemptions and subscriptions, any trades made for an index fund reflect changes in the index and not active management decisions. As an example, Vanguard's S&P 500 Index Fund has an annual turnover of around 4%, which results in minimal tax drag.

Low expenses for passive strategies are also an attractive feature. Vanguard offers an S&P 500 ETF and mutual fund for only four basis points, and separately managed index accounts can be had for less than 15 basis points.[2]

The ETF structure provides additional tax efficiency. When a mutual fund investor decides to sell shares, the fund must sell securities to raise cash, which may trigger capital gains. However, when an ETF investor sells their position, they simply sell it to another investor like they would a stock. As a result, the ETF does not have to incur capital gains.

The combination of many tax lots, low turnover, and near-zero-percent expense ratios for many index strategies provide great tailwinds for the taxable investor's portfolio.

Tax-Managed Indexing

Particular asset managers go a step further and offer tax-managed strategies designed for the taxable investor. Tax-managed equity index exposure can provide a source of loss harvesting used to offset realized capital gains generated elsewhere in a portfolio and improve after-tax performance.

Tax-loss harvesting entails regularly monitoring portfolio holdings for losses and any undesirable changes in risk exposures relative to the target benchmark. To provide superior after-tax performance, the ability to execute transactions at the individual tax-lot level is critical, as a manager can identify the highest-basis lots and avoid selling the lowest-basis lots, in order to maximize realized losses and minimize realized gains. A manager can even go as far as to produce excess capital losses that can be applied against capital gains elsewhere in the client's total portfolio to ensure tax-management opportunities are fully captured.

To improve after-tax returns, a manager will use three methods:

1) Hold securities long enough to qualify for the lower long-term tax rate,
2) Select loss-maximizing or gain-minimizing tax lots for trades, and
3) Avoid repurchases that would disallow a loss.

These methods are typically a secondary concern for active managers in the pursuit of excess pre-tax returns but are a primary concern for the taxable investor. Many managers are active in stock selection but passive when it comes to taxes. A tax-managed strategy will provide passive exposure to stock picking and allow the manager to focus their efforts on tax efficiency.

The table below provides a simple example of utilizing tax lots effectively for the taxable investor. Suppose a manager purchases 100 shares of XYZ in year one at $50 per share. In year two, they purchase the same

Tax Lot #	Cost Per Share	Shares	Current Price	Holding Period	Gain
1	$50	100	$80	Long-term	$30
2	$60	100	$80	Long-term	$20
3	$70	100	$80	Short-term	$10

number of XYZ shares at $60 per share. In year three, the manager purchases a final lot of 100 shares at $70.

A month later, the manager needs to sell 100 shares of XYZ, which are now trading at $80 per share. Under the first-in, first-out (FIFO) method, she would sell lot 1, resulting in a long-term gain of $30. Under the highest-in, first-out method, she would sell lot #3, resulting in a short-term gain of $10. Under a tax-lot optimized method, she would sell lot 2, resulting in a long-term gain of $20. This example illustrates the value that can be added by selecting the appropriate tax lot for trades.

Just how much of a positive impact or "tax alpha" can a tax-managed indexing strategy generate for a taxable portfolio? Assuming a taxable investor has realized gains and is a federal-only taxable investor in the top tax bracket, this benefit has translated into tax alpha as high as 1.9% per year for assets passed through an estate or charity. For investors seeking to liquidate at the end of a ten-year holding period, the tax benefit has been as high as 1%.[3] These gains, which are essentially tax deferrals, can be effective over 20- to 30-year time periods as well, although the opportunities diminish in the later years. In states with high tax rates, such as California, where effective tax rates can be upwards of 50%[4], tax drag becomes more of an issue. Therefore, being tax aware is of greater importance.

Diversification

As we cover the implications for tax management for the taxable investor, it is clear that active managers have a high hurdle to outperform. This is not to say that active management should not be part of a taxable investor's portfolio. Active strategies can provide alpha and have proven to do so in particular asset classes more often than others. The combination of active, passive, and tax-managed strategies within a portfolio can provide diversification benefits that may ultimately improve net-of-tax returns. The table below shows the objectives and return expectations for the three strategies discussed.

Features	Active Management	Passive Management	Tax-Managed Indexing
Goal	Outperform a benchmark	Replicate the performance of a benchmark	Track the performance of a benchmark while generating tax alpha
Tracking Error	Generally Higher	Minimal	Slightly Higher than Passive
Fees	Generally Higher	Minimal	Slightly Higher than Passive
Tax Efficiency	Less Tax Efficient	Tax Efficient	Most Tax Efficient

Each type of strategy has its own strengths. An active manager seeks to outperform a benchmark and thus can provide excess returns. An index strategy will mirror an index while keeping fees as low as possible. It will also minimize tracking error and trading cost while providing flexibility through lower minimums and higher liquidity. A tax-managed indexing strategy seeks to outperform on an after-tax basis while tracking an index.

While it may be tempting to go all-in on one of these three approaches, there are diversification benefits from owning a balanced mix. Investors with tax-managed accounts may consistently generate realized losses, but those losses become more valuable when used to offset gains (particularly short-term gains) generated by active managers in the pursuit of excess returns. Realized capital losses can be used to offset realized capital gains and up to $3,000 of ordinary income (any amount beyond this can be carried forward from year to year), but lose their value if there are no gains to offset. Finally, repeatedly harvesting tax losses over time may result in a portfolio full of unrealized gains, as losses and the prospect for future losses are reduced to zero. In upward-trending markets, this may make it difficult to implement rebalancing or portfolio changes without incurring a significant tax bill for that year. We agree with the following admonition against over-reliance on tax-loss harvesting: "Rather than a panacea, taxable investors might better think of realizable losses as simply opportunities to periodically refresh their portfolios by realizing offsetting capital gains tax-free."[5]

Conclusion

In his book, *Unconventional Success*, David Swensen wrote, "a serious fiduciary with responsibility for taxable assets recognizes that only extraordinary circumstances justify deviation from a simple strategy of selling losers and holding winners."[6] This emphatic statement illustrates the importance of focusing on after-tax returns for the taxable investor. A thoughtful allocation to active, passive, and tax-managed investment strategies plays an important role in maximizing after-tax returns.

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Sources

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