It’s Time for Transparency in Tax Management

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We believe many investment firms tout their tax management capabilities. Based on these claims and advertisements, investors make important decisions. Yet, there are no common reporting standards that ensure accuracy, or at least allow comparisons among competing claims. Today, some reported numbers are questionable and an apples-to-apples comparison is challenging. Investment management firms often make different assumptions to document the benefit of tax optimization. Further, these benefits are often defined differently by different firms. Further, we believe some of these metrics are convoluted and biased to exaggerate the tax management benefits to an investor.

Below we explain several aspects of a typical tax management exercise, while highlighting some metrics used to report the benefits of tax optimization, and what we believe to be some common assumptions made that can have an impact on the reported numbers.

The Crux of Tax Optimization

We believe a central feature of tax optimization is to be conscious of how the pre-tax returns are split between the short-term realized returns and the long-term unrealized returns. Tax optimization attempts to manage the portfolio and its trading to minimize the short-term realized gains while maximizing the longer term unrealized gains. How is this done?

We believe the most common tax aware strategies defer capital gains and "harvest" unrealized short-term losses.[2] The latter is typically the larger contributor and is achieved by selling such positions and converting them to realized short-term losses thus decreasing the short-term capital gains.

Assuming such tax optimization does not modify the pre-tax returns, this maximizes the post-tax returns since longer term capital gains are taxed at a lower rate than short-term capital gains.

What Happens to Pre-Tax Returns?

However, tax optimization modifies the pre-tax returns compared to an identical investment strategy that is not being optimized for taxes. There are at least two aspects that create a difference between the pre-tax returns of the tax managed and the unmanaged strategy.

First, converting short-term unrealized losses to realized losses requires substituting a loss generating position with a similar but new position. The substitution should of course not violate the wash sales rules. Some legalese here that is important: the IRS defines a wash sale as one that occurs when an individual sells or trades a security at a loss, and within 30 days before or after this sale, buys a "substantially identical" stock or security, or acquires a contract or option to do so. Therefore, to the extent the wash sales rules are in effect, the substitute position will behave differently from the original intended position. In many cases, this substitution error can be material.

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[2] Tax aware strategies also try to realize a long-term gain to reset the basis, and increase the chances of generating short-term losses in the future. There are other approaches to optimize taxes unrelated to the investment strategy such as asset location, giving etc.

Second, converting unrealized to realized losses requires trading. As a result, there are costs associated with trading and slippage (since decision time and trading time are not identical in most cases).

These features create a difference between the pre-tax returns of tax managed and unmanaged strategies. Tax optimization changes not only the post-tax returns but the pre-tax returns as well!

Though tax optimization has an impact on the pre-tax returns, many managers don't report or discuss this aspect. For example, some robo-advisors who tout their tax management expertise are entirely silent on what would have happened to pre-tax returns without such tax optimization.

Some firms do note this – an example is Parametric, a firm that is a leader in providing customized tax managed portfolio solutions. Yet, how this is accounted for may not be intuitive.

Before we proceed, let's survey some metrics used to report the benefits of tax management.

Metrics Used to Report Benefits of Tax Optimization

We believe the most natural and obvious characterization of tax benefits can be assessed by simply comparing the final post-tax returns of the tax managed and the unmanaged strategy.
The industry however reports differently.

THE ROBO-ADVISOR DEFINITION

Many robo-advisors define tax alpha as:

$(Tax_{Short\text{-}term} * Loss_{Short\text{-}term} + Tax_{Long\text{-}term} * Loss_{Long\text{-}Term})$ / (Portfolio Value beginning of year)

This definition shows a number that corresponds to the total amount of losses harvested. While helpful, it does not address any deviations in pre-tax returns due to tax management and, as a result, does not provide guidance to an investor on how better or worse off they are because of tax management. The assumption that pre-tax returns are the same for the tax managed and unmanaged strategy appears implicit. It's also likely beneficial to the reported "tax alpha".

PARAMETRIC'S DEFINITION

More institutional tax-aware managers report their tax alpha using a metric introduced by Stein (CIO of Parametric) in 1998 that is defined as the after-tax excess return minus any pre-tax excess return.[3]

Tax Alpha = Excess after-tax return – Excess pre-tax return,

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[3] In Parametric's "Tax Efficient Investing" article published in the Jan./Feb. 2015 issue by the Investment Management Consultants Association, they define tax alpha as: "We use a concept we call 'tax alpha' to measure the value of our active tax-management strategies. Tax alpha compares the after-tax performance of a portfolio against that of a benchmark, adjusted for any excess pre-tax return. This adjustment reflects our mandate to track a target, either an index or an active manager, on a pre-tax basis and ensures that tax alpha is not influenced by unintended tracking error."

where

Excess after-tax return = After-tax return$_{Portfolio}$ – After-tax return$_{Benchmark}$
Excess pre-tax return = Pre-tax return$_{Portfolio}$ – Pre-tax return$_{Benchmark}$

This metric accounts for pre-tax return differences in two ways.

The first is through its effect on the post-tax return. A lower pre-tax return, all else being equal, generates a lower post-tax return. The post-tax return also captures the tax benefits. This is why the post-tax returns are the metric of interest to the investor.

The second is through the deviation in pre-tax returns. By itself, this is not of interest to the investor. Perversely, the definition helps increase the reported tax alpha if the pre-tax returns of the managed strategy is worse. These two ways of accounting for pre-tax returns effectively negate each other and eventually does not attribute pre-tax deviations to tax benefits. On a theoretical basis, this may be fine. To a practical investor, this could be misleading.

Even as the characterization of tax benefits differ and use definitions that we believe need more transparency, the actual calculations also make several important assumptions.

Some Important Assumptions in Characterizing Tax Benefits

TAX RATES

As mentioned earlier, we believe the central feature of tax management is to take advantage of the differential tax rates between long-term and short-term capital gains rates. This difference depends on several factors – some of which are individual specific. For purposes of reporting, firms often assume differences that are significant. For investors in California, the benefits of tax management on an average appear to be higher.

Firms such as Parametric and Wealthfront use differences of ~19.6% and 18% respectively for their high-income customers. Betterment for example uses a difference of 15.8%.[4] Needless to say all else being equal, their reported metrics for "tax alpha" would differ simply because of this assumption. This is material and can contribute to reported benefits that differ by around 20%. However, from an investor's perspective this has absolutely no information on which firms have better inbuilt tax management capabilities. Investors should ensure that they are not picking firms simply because they report tax benefits that are higher because of more aggressive assumptions on the difference between long-term and short-term rates when evaluating tax harvesting performance across providers.

Tax rates assumed in robo-advisors to report benefits of tax optimization

	Short-term rate	Long-term rate	Difference

[4] These numbers typically are applicable to the wealthiest customers on the robo-advisor platforms. Investors with lower wealth – of which there are many on such platforms – should make adjustments to reported numbers to get a more accurate picture.

Betterment	39.60%	23.80%	**15.80%**
Wealthfront	42.70%	24.7%	**18.00%**

WHAT HAPPENS EVENTUALLY?

Since most tax management defers short-term gains into longer term gains, the total tax benefits crucially depend on assumptions on what the investor will eventually do. Will they liquidate? Will they carry on forever?

The CFA Institute published a research paper in January 2006, "Investment Management for Taxable Private Investors," by Wilcox, Horvitz, diBartolomeo, that stated:

> Since 16 April 2001, the U.S. Security and Exchange Commission (SEC) has required that all public mutual funds that accept capital from taxable investors report after-tax returns for 1, 5, and 10 calendar years in their advertisements (see SEC 2001). Two forms of the after-tax computation are required. The first assumes that the investor still holds his or her fund shares but has paid taxes due on any income or capital gain distributions during the measurement period. The second method assumes that the fund shares were sold at the end of the measurement period.

We believe that in some marketing materials, the computations used assume no liquidation.[5] Investors should be careful. The reported benefits will be higher if the investor never liquidates their portfolio and this is what is often assumed in reported numbers. In other words, the whole point of being in a liquid investment to account for any liquidity needs is ignored. In reality, the tax benefits are likely to be lower than what is reported because of this assumption. The differences can be material. In our calculations, the tax benefits could be increased by an average of 18% because of this assumption.

USING SHORT-TERM TAX LOSSES

We believe many firms assume that any short-term losses generated will be used to offset gains even if the strategy has no gains. This means that the short-term losses will be used to offset gains in other investments. In other words, they assume that gains exist outside the portfolio. Since the losses harvested are likely to be the highest precisely when markets drop the most, it is unlikely an average investor is sitting on gains when the losses are the highest. What happens if there are no gains to be offset? The investor can carry forward these losses. Our research shows the impact of this assumption on total tax savings is likely to be insignificant.

However, it does change when tax savings are the highest compared to how these numbers are typically reported. For example, short-term losses that can be harvested are the highest in years that are generally poor for all investments, such as 2008. So even while there could be significant short-term losses, no short-term gains may exist to offset these losses towards and decrease tax liability. The short-term losses are indeed likely to then be rolled forward, and the tax savings are not likely to be high in 2008 but in the following years. To the extent, investors look at the reported

[5] In materials available publicly, Parametric presents their S&P500 results pre-liquidation but the robo-advisors show both.

annual tax alpha they may walk away with an impression that the tax alpha allows them to make money in 2008, when everything else has performed poorly. This may not be the case.

REINVESTMENT OF TAX SAVINGS

We believe many investment managers who report harvested losses typically assume that the taxes saved by offsetting these losses are reinvested into the strategy. However, they do not deduct the taxes actually paid from the value of the portfolio. This is not consistent. Based on our calculation, under some reasonable scenarios, the impact of this assumption could decrease the reported tax savings by up to 5%.

MARKET ENVIRONMENT

Based on our research, firms often report the benefits of their tax optimization by testing and using historical performance.

While the general concerns of datamining are less relevant for back tests that highlight tax management capabilities, there are other concerns on choices made regarding the time period used.

We believe the two biggest factors that affect the amount of reported tax benefits using historical tests are the time period and the number of market downturns captured in the sample. The former is beneficial because a longer time period allows stronger compounding of any deferred taxes. The latter is important because market downturns create more opportunities to harvest losses. So, the same tax management algorithm or skill will generate very different number if tested from 2005-2010 or from 2010-2015. The latter will, of course, be much weaker since it lacks any serious market correction.

We observe some firms use forward-looking, Monte Carlo-style simulations, where they project different scenarios and average out the tax benefits. These firms often use much longer time periods, up to 30 years. Needless to say, the results are highly sensitive to assumptions used in generating future returns – while transparency around these assumptions is low.

IMPORTANCE OF ADD-ON DEPOSITS

Tax losses reported also often assume an investor who will add capital to their tax managed strategy on a regular basis. We believe it is assumed that clients will add money in their stock account on a quarterly basis. The amount added varies across investment managers and impacts results significantly. To see this, note that after a market rally, old securities will have gains, making it more difficult to observe any unrealized losses to harvest. Adding capital and, as a result, securities with a new basis each quarter is beneficial to the reported tax harvesting. Based on our tests, quarterly flows of 10% of the initial investment can improve results by approximately 20%.

Conclusion

As investment management firms provide more services to the tax-sensitive investor, we believe tax aware implementation of investment strategies is becoming the norm. This is allowing more information around tax optimization to become public – a welcome development. Yet, there are no common standards to report the benefits of tax management. Yes, there are guidelines, but with providers choosing different guidelines, there isn't any consistency.

This makes it difficult for investors, especially retail clients, to truly assess the tax benefits and compare competing investment managers. In this note, we have highlighted some of the important metrics used to characterize tax benefits as well as the assumptions that drive these results. We hope this allows investors and their advisors to ask the right questions and make better decisions. We also hope the industry evolves to a common standard for the common benefit of both the investor and the investment manager.