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Are Bonds Still the Most Important Asset To Be Overweighted In One's Retirement Account? *

Derek Horstmeyer

ABSTRACT

How should you allocate your bonds/stocks/REITs between taxable and tax-deferred retirement accounts? The conventional wisdom says that bonds should be allocated to tax-deferred accounts because of their tax inefficiencies. Yet, with yields hovering around 2% this may no longer be the case. In fact, investigating the tax sheltering benefits present in various mutual fund types highlights that small caps and actively managed REITs enjoy the greatest benefits when shielded from taxes in a retirement account.

*Contact the author at School of Business, George Mason University, 4400 University Drive, Fairfax, VA 22030; fax: 703-993-1867, tel: 650-862-9582, email: dhorstme@gmu.edu.

I Introduction

The conventional wisdom in the financial advising world is that every investor should overweight their retirement account (or other tax sheltered/tax deferred accounts) with bonds because they are tax inefficient securities, and overweight their taxable account with equities because they are more tax efficient. Yet, this wisdom may not entirely hold any more in this low yield environment, and further the correct choice of which asset class you should overweight in a retirement account may depend on whether you are an indexer or a true believer in active management.

Tax deferred, tax-exempt, and tax sheltered accounts like 401(k)s, IRAs, and ROTH IRAs offer investors an amazing opportunity to let their investments grow free from being subject to taxes. The more tax inefficient your particular asset is, the greater the value a tax sheltered account holds to an investor.

In the early 1980s these accounts offered substantial benefits to individuals that held bonds or fixed income mutual funds. Because yields at this time hovered between 10 and 15%, the coupon rate that the average bond paid out also reflected something close to this range. This meant that as a bond investor you could expect to earn somewhere around 125 dollars on a 1000 dollar investment per year as interest income. Because this income is taxed at one's marginal tax rate (excluding municipal bonds), protecting it in a retirement account and letting it grow tax-free offered a huge potential monetary windfall to an individual. Yet, with yields now sitting around 2-3%, do these accounts still offer the same advantage to bond investors?

To take stock of where present day yields are, consider the Vanguard Total Bond Market Index Fund (VBMFX). The current yield to maturity of this all-inclusive bond fund is 3.3% and the average coupon rate is 3.1%. This means on a 1000 dollar investment, one can expect to earn 31 dollars a year in interest income. If your marginal income tax rate comes in at 25% then you are just protecting around 7.75 dollars a year in a tax deferred retirement account as opposed to holding this fund in a regular brokerage account.

The most accurate way to measure the potential benefit that a tax sheltered account offers is to examine the difference between the total return to a fund minus the return to a fund after taxes on distributions (also called 'post-tax return, pre-liquidation'). This difference captures the amount of money on an annual basis that an investor could protect from taxes if they held their securities in a tax deferred, tax-exempt, or tax sheltered account.

Examining this difference in returns for all US mutual funds over the past 10 years, shows a few really interesting results. First off, across all asset classes, if you believe in active management then a tax sheltered account will offer you substantially greater benefits than if you believe in index investing. This is not surprising given that active managed accounts usually have greater turnover of assets, which leads to a greater tax bill.

Next, if you believe in index investing then the asset class that gets the most benefits by being held in a tax deferred (tax-exempt) account over the past 10 years is small cap mutual funds. By holding these index funds in a tax sheltered account, an investor can protect an extra 1.36% per year from taxes. Over a ten-year period this can yield an extra 14.5% in returns if protected from taxes.

If you are a strong believer in active management, then the best option may be to go with an overweighting of REITs in your tax-exempt or tax deferred retirement accounts. By holding REITs in such an account, an investor will be able to protect an extra 1.73% per year from taxes (according to a 10 year horizon). Interestingly enough is that fixed income mutual funds (excluding muni focused mutual funds) only will only gain an additional 1.37% in returns per year if held in a tax sheltered account. This result puts it in the middle of the pack with respect to the other choices and the benefits that they accrue in a tax-exempt account.

Though, it is important to note that the Tax Cut and Jobs Act may affect these results going forward, especially for REITs since the single major change in the Act which targeted specific investments was a tax break for investors holding REITs. The Act changed the current law to allow individuals to deduct up to 20% of ordinary REIT dividends, with the remainder of the income still being taxed at the investor's marginal rate. This, in effect, reduced the effective tax rate on ordinary REIT dividends by approximately 7 percentage points for the median investor. Since the Act took effect in 2018, there isn't sufficient data to see the immediate consequences of this change in the data just yet, but a back of the envelope calculation highlights that this may reduce the tax shielding benefits to actively managed REITs all the way down to 1.38% (using the 10 year horizon data).

All told it may be a long time before bond investors see yields again like those in the 1980s. And because of this it may be a long time before investors see the tax-sheltering benefits for bond mutual funds that they once saw. Tax-inefficient actively managed REITs or small-cap stocks might be the more efficient route for investors deciding what to hold in their retirement accounts.

This paper proceeds as follows. Section II highlights the data construction and empirical analysis. Section III concludes the paper.

II Data Construction and Empirical Analysis

In this section, I first detail the construction of the dataset used in this investigation and provide summary statistics. Following this, I summarize the empirical methodology and results.

A Construction of the Data

The dataset used in the proceeding analysis was produced via the Morningstar Direct database. From the Morningstar platform, information on all equity/fixed income focused mutual funds trading in the U.S. (U.S. dollar based mutual funds) was pulled. This initial list of mutual funds included all open-end funds (currently active or defunct) with assets under management listed as non-zero at anytime from 1988 and forward.

From Morningstar information on each fund's objective was pulled, as well as, information on its AUM, monthly returns, and volatility. To categorize each fund by its style, funds were partitioned into groups that focused on small cap stocks, large cap stocks, growth, value stocks, international equity, fixed income (excluding municipal bond mutual funds), and REITs. Each of these fund types are again partitioned by actively managed funds and those that are passive (index).

B Empirical Analysis

Next, with these partitions define, I look at returns to each fund over 5, 10, and 15 year horizons. I pulled two sets of returns over these horizons: the annualized return for each fund before taxes, and the return to a fund after taxes on distributions (also called 'post-tax return, pre-liquidation' in Morningstar). The difference between these two numbers defines the benefits of tax sheltering. These results are presented below and all differences in means are statistically significant at the 1% level.

It is important to note that this 'post-tax return, pre-liquidation' is not the post-tax and post-redemption return. A post-tax and post-redemption return would reflect capital gains taxes which both a regular brokerage account and a tax shielded account will be subject to eventually. For this reason, the difference between the pre-tax return and the 'post-tax return, pre-liquidation' is the prefferred measure to capture the benefit of a retirement account.

Below in the first chart is the annualized return difference between average total return to a particular mutual fund and the average return post-taxes on distributions for active mutual funds (sorted by 10yr horizon).

	Active Managed Funds	
	Difference at 5yr Horizon	Difference at 10yr Horizon
REITs	2.452524167	1.727280075
US Small Cap	2.342332645	1.433077322
US Value	2.090039168	1.389811961
Fixed Income	1.299215806	1.367553153
US Large Cap	2.042647141	1.284182284
US Growth	2.23073427	1.279095741
Large Cap International	1.517957882	1.008226629

Figure 1: Annualized Return Difference between pre-tax and post-taxes on distributions for various mutual funds

Below in the second chart is the annualized return difference between average total return to a particular mutual fund and the average return post-taxes on distributions for index mutual funds (sorted by 10yr horizon):

Figure 2: Annualized Return Difference between pre-tax and post-taxes on distributions for various mutual funds

	Index Funds	
	Difference at 5yr Horizon	Difference at 10yr Horizon
US Small Cap	1.837430299	1.361089362
REITs	1.469442857	1.356796667
Fixed Income	1.069542295	1.167094571
US Large Cap	1.423719034	1.108346063
US Value	1.122538462	0.8178575
US Growth	1.102342941	0.72983
Large Cap International	0.69767	0.532473333

III Conclusion

For older investors considering which allocations to overweight and underweight in their retirement accounts, the advice most frequently given by financial advisers for years has been to favor the bonds.

This was good advice once. But not any longer – in the early 1980s, bonds or fixed-income mutual funds held the advantage, because yields on those types of funds then ranged from 10% to 15%. A bond investor thus could expect to earn around $125 on a $1,000 investment per year as interest income, and that income would be tax-free if held in a tax-advantaged account. With yields now sitting around 2% to 3%, these accounts no longer offer the same advantage to bond investors.

Examining this difference in returns for all U.S. mutual funds over the past 10 years shows, first off, that actively managed funds will benefit from being in a tax-sheltered account much more than an index fund will, a fact that holds for actively managed funds across all types of asset classes.

Actively managed funds, of course, charge higher expenses and fees than index funds. Thus, many investors prefer to use index funds to keep their investment costs down. For investors who prefer index funds, the asset class that gets the most benefit from being held in a tax-deferred (or tax-exempt) account over the past 10 years is small-cap index funds. By holding small-cap index funds in a tax-sheltered account, an investor can protect an extra 1.36% a year from taxes.

For investors who prefer actively managed funds, the best option may be to overweight real-estate investment trusts in your tax-exempt or tax-deferred retirement accounts. The annual return for a REIT held in such an account is 1.73 percentage points higher than the return for the same REIT held in a taxable account (according to a 10-year horizon). Interestingly, fixed-income mutual funds (excluding muni-focused mutual funds) hold only a 1.37-point advantage. This puts the fixed-income funds at the middle of the pack with respect to the other choices and the benefits that they accrue in a tax-exempt account.

With the Federal Reserve keeping short term interest rates down around 2% it may be a long time before bond investors see yields up around those in the 1980s. And because of this it may be a long time before investors see the tax sheltering benefits for bond mutual funds that they once saw. Allocating one's tax inefficient actively managed REITs or small cap stocks might just be the more efficient route for investors deciding what to hold in their retirement accounts.

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