Keeping Portfolio Costs Low

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The importance of keeping portfolio costs should be self-evident. Costs come directly out of the investor's pocket.

The two primary portfolio costs consist of the expense ratio of the mutual funds and/or ETFs being used in the portfolio and the advisory fee being charged (if there is a financial advisor involved). Therefore, both costs have to be kept as low as possible.

The first place to start is the cost of the funds being used in the portfolio. The average expense ratio among all mutual funds is roughly 100 bps. Assuming an annual advisory fee of 100 bps, the total portfolio cost is 200 bps. At that cost level, the average annual withdrawal for a retiree invested in a diversified 7-asset portfolio is approximately **$126,426** between the ages of 70 to 95 (assuming only the amount specified by the Required Minimum Distribution was withdrawn from the portfolio and assuming a starting balance of $1,000,000). This average annual withdrawal of $126,426 was calculated by analyzing the performance of an equally-weighted 7-index portfolio over the 23 rolling 25-year periods between 1970 and 2016. The 7 indexes in the portfolio covered the following asset classes: large cap US stock, small cap US stock, non-US stock, real estate, commodities, US bonds, and cash.

If the cost of funds in the portfolio is cut in half (from 100 bps to 50 bps) by utilizing mutual funds (or ETFs) with lower expense ratios, the overall portfolio cost can be reduced from 200 bps to 150 bps. By doing so, the average annual withdrawal for the retiree increases to **$136,218**, or roughly $10,000 more income each year. That works out to a "raise" of about $830 per month during retirement.

But, we can do even better. It is now possible, by using low-cost ETFs, to build a diversified retirement portfolio for as low as 10 bps. If the advisory fee were reduced by a mere 10% down to 90 bps, the overall portfolio cost could be lowered to 100 bps. At that cost level, the retiree withdrew an average of **$146,853** each year—or an additional $10,000 annually.

Finally, if the advisor lowered his or her advisory fee to 40 bps and the fund costs amounted to 10 bps, the total portfolio cost would be 50 bps. At that cost level, **$158,407** was the average amount withdrawn each year based on the historical analysis from 1970 through 2016 (using the RMD guidelines for annual withdrawals and investing in a diversified, multi-asset portfolio).

Thus, by slashing fund expense ratios from 100 bps to 10 bps and the advisory fee from 100 bps to 40 bps, the retiree could receive $32,000 additional annual retirement income—or roughly $2,600 more each month between the ages of 70 and 95 (the length of retirement in this analysis).

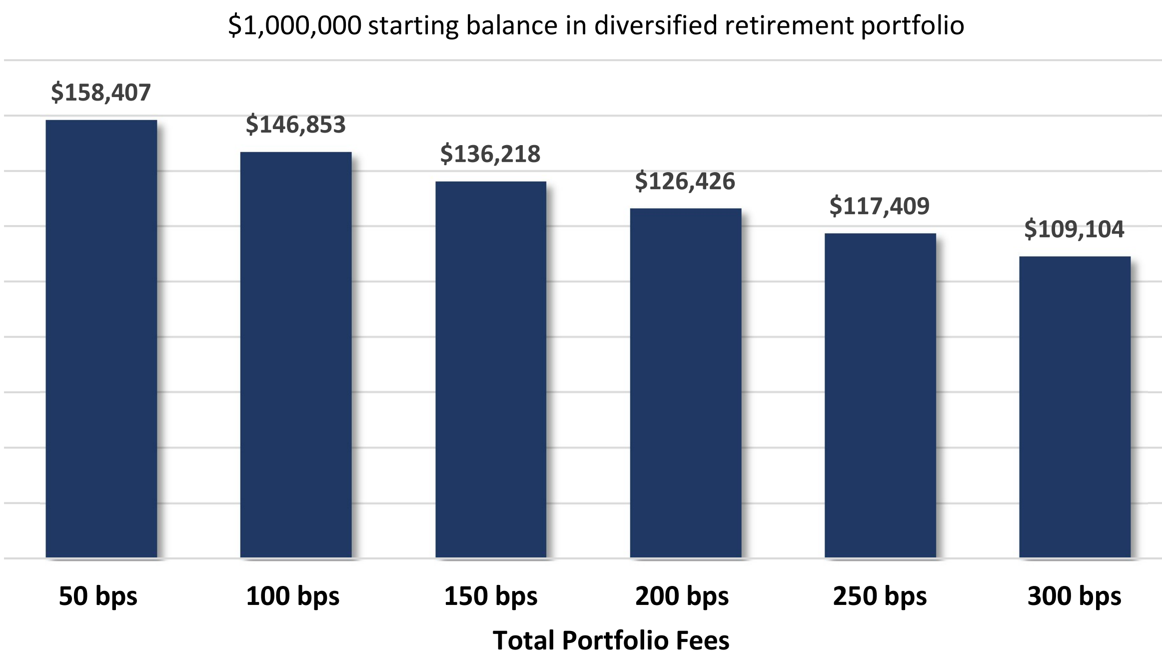
Clearly, the impact of portfolio costs is huge.

Table 1. The Impact of Reducing Portfolio Cost

Combinations of fund expenses and advisory fee	**Total Portfolio Cost** (aggregate expense ratio of funds and advisory fee)	**Average Annual Withdrawal from a Retirement Portfolio between the ages of 70 to 95* (using RMD guidelines)**
Total fund expenses of 100 bps Advisory Fee of 100 bps	200 bps	$126,426
Total fund expenses of 50 bps Advisory Fee of 100 bps	150 bps	$136,218
Total fund expenses of 10 bps Advisory Fee of 90 bps	100 bps	$146,853
Total Fund expenses of 10 bps Advisory fee of 40 bps	50 bps	$158,407

** Assuming a $1,000,000 starting balance at the age of 70*

Figure 1. Average Annual RMD-Based Withdrawal from a Diversified Retirement Account from Age 70 to 95



A Modern Diversified Portfolio

A modern diversified portfolio is the 7Twelve® portfolio (shown in Figure 2). It is an investment model that can be built very easily and at very low cost. For example, as shown in Table 2, if actively managed funds from various fund families are used to build the 7Twelve portfolio the overall fund expense can be as low as 54 bps. If the 7Twelve model is built using ETFs from various fund families the cost can drop to 16 bps. However, if using only Vanguard ETFs the overall fund expense ratio can be as low as 10 bps.

The idea of building a diversified portfolio for as little as 10 bps is not theoretical—it is a reality and can and should be considered by investors and retirees. If there is no financial advisor involved, the total portfolio cost could be as low at 10 bps! For those who want to build a more conservative version of the 7Twelve model, simply weight the four fixed income ingredients (US Bonds, TIPS, non-US bonds, and cash) more heavily.

Figure 2. The *7Twelve®* Model
Each of the 12 mutual funds in the model is equally weighted

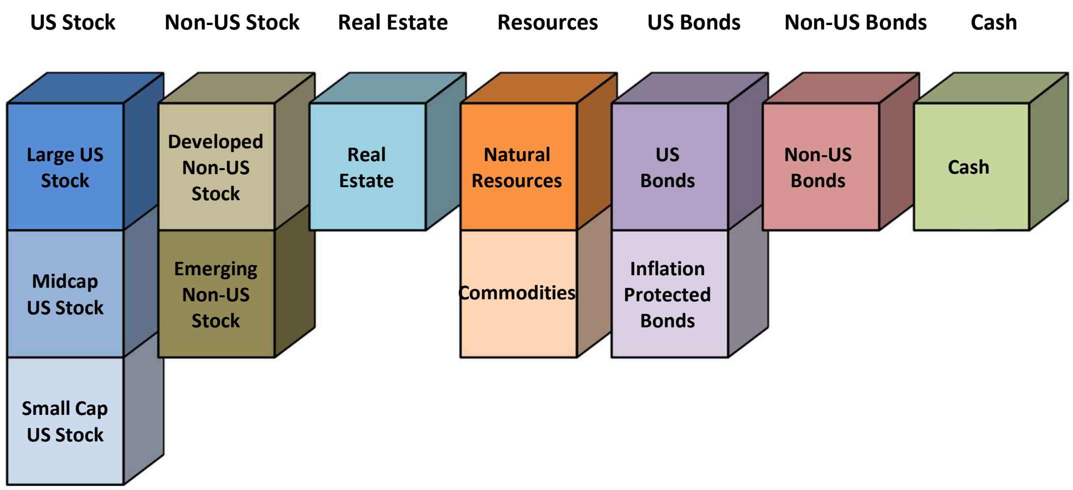


Table 2. Specific Low-Cost Retirement Portfolios using the 7Twelve model

12-Asset Class *7Twelve®* model	*12 Actively Managed Mutual Funds*	*12 ETFs from various fund families*	*12 Vanguard Mutual Funds*	*12 Vanguard ETFs*	*12 Fidelity* Mutual funds	*12 ETFs available at Schwab*
Portfolio Aggregate Annual Expense Ratio	**54 bps**	**16 bps**	**22 bps**	**10 bps**	**40 bps**	**18 bps**
15-Year Average Annualized Return (2002-2016)	**7.71%**	**7.51%**	**7.88%**	**8.10%**	**8.09%**	**7.68%**