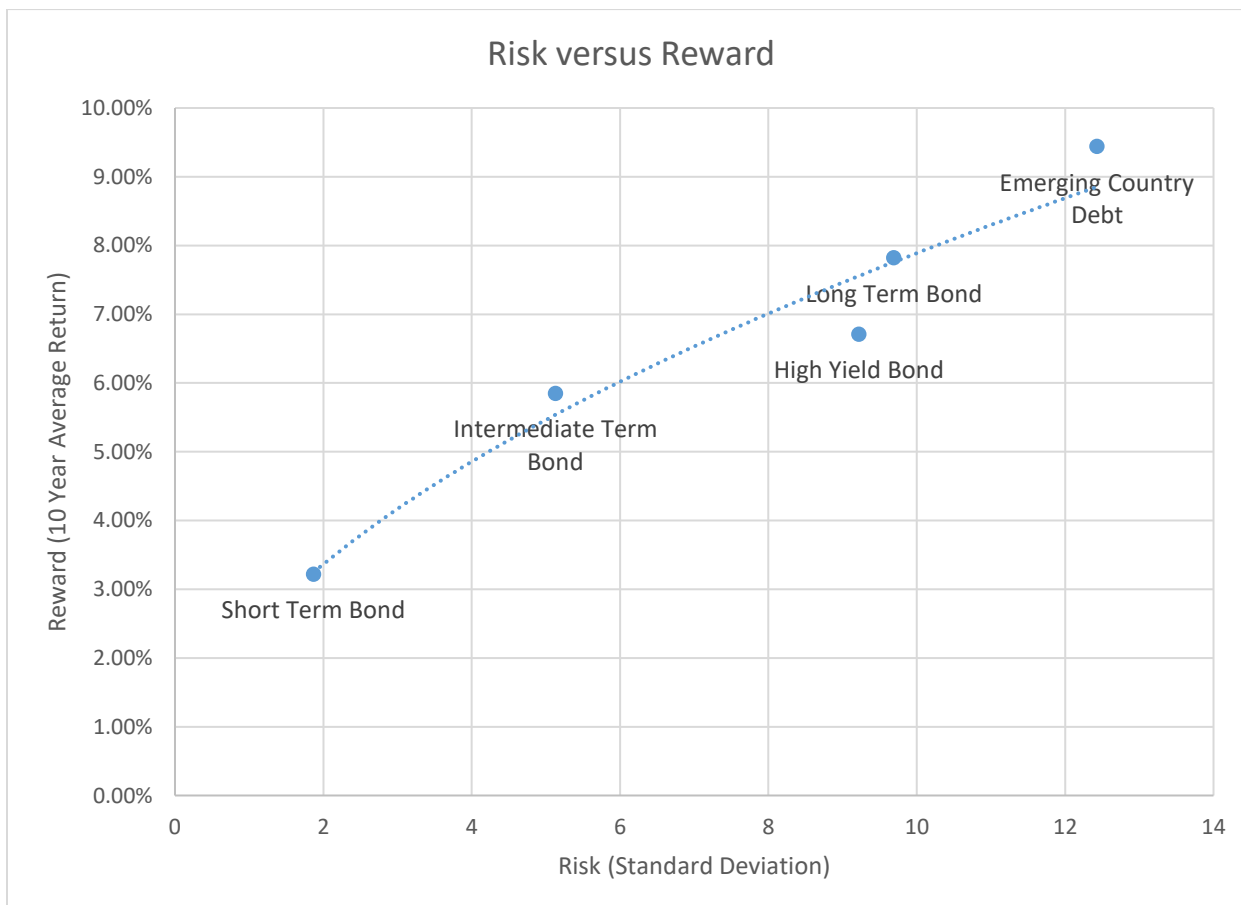


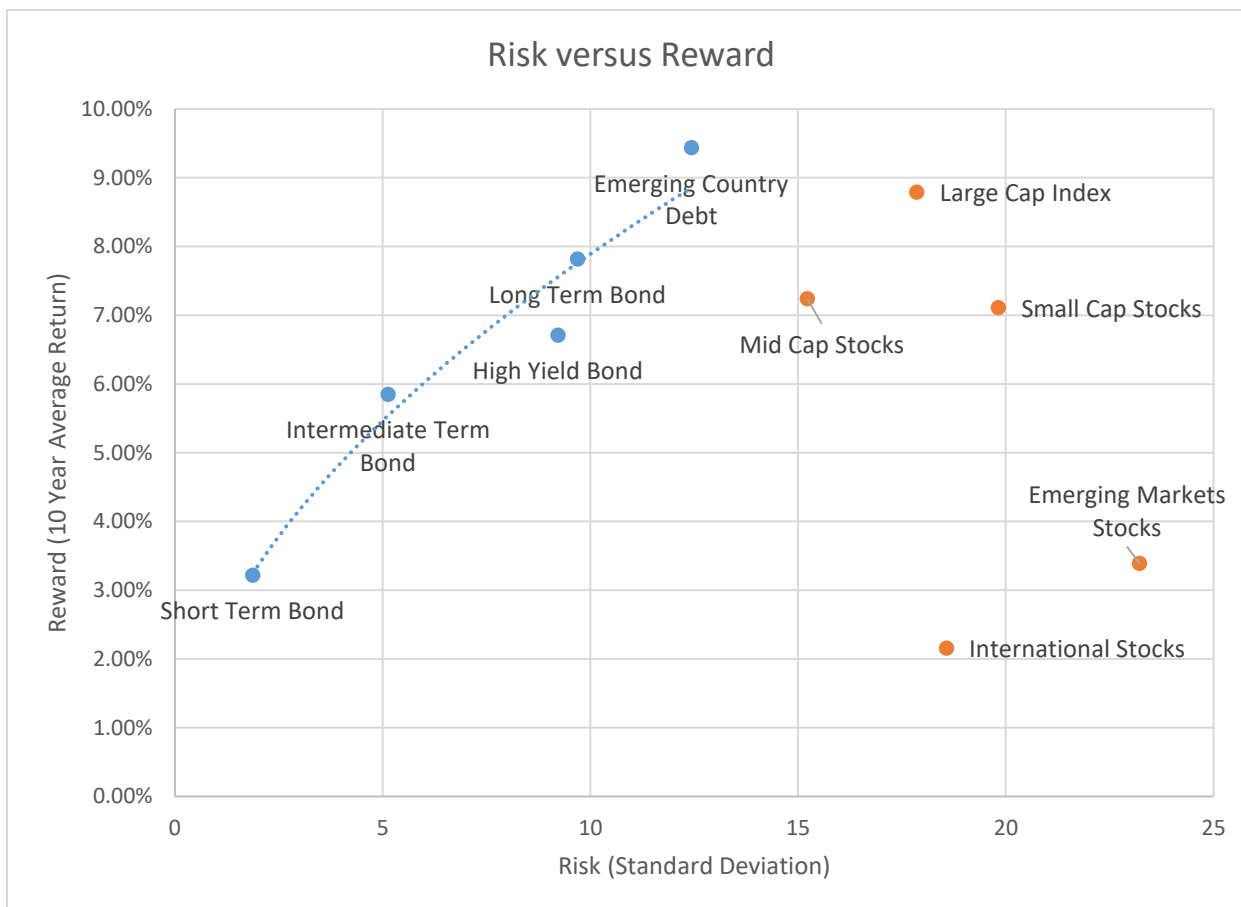
What is the Risk of Your Fixed Income Holdings?

One of the first lessons you learn in investing is that every investment opportunity has a risk and reward profile. One of the foundations of finance is that when comparing different investment opportunities an investment that is riskier should potentially offer a higher return. One measurement of risk is the standard deviation of a fund. Standard deviation is a measurement of the historical range of returns for a fund. Virtue Asset Management reviewed the 10 year average returns and standard deviations of the following Vanguard bond funds: Short-Term, Intermediate-Term, Long-Term and High Yield. We included the GMO Emerging Country Debt mutual fund because Vanguard’s Emerging Debt mutual fund is not 10 years old. Below is a graph outlining the risk vs reward profile of each bond fund. This graph is what you would expect to see, the fund with the lowest standard deviation has delivered the lowest annual return and the largest standard deviation fund has the highest return. In fact, other than high yield bonds, everything is very close to the best fit curve.



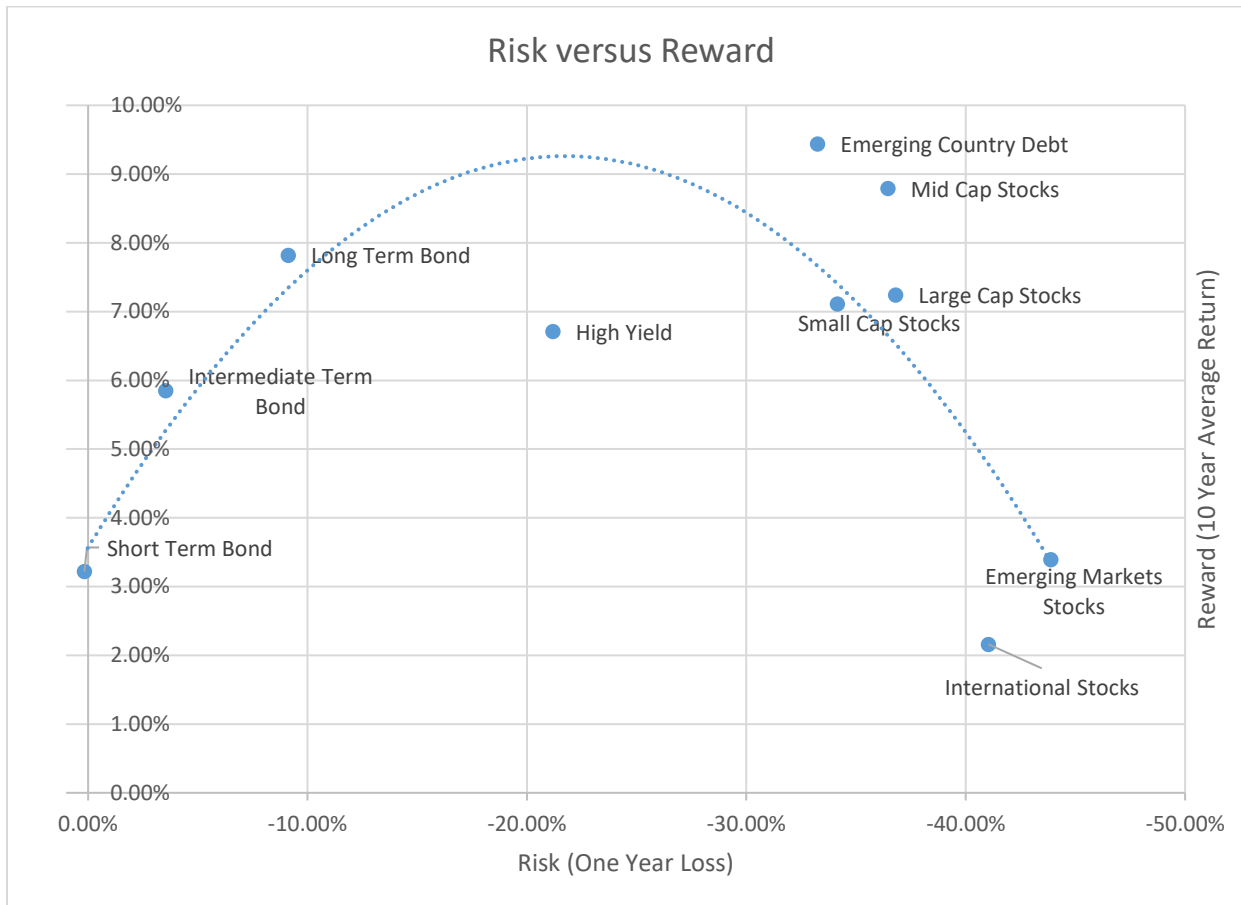
We have also reviewed the 10 year average returns and standard deviations of the following iShares equity index funds: Large Cap, Mid Cap, Small Cap, International and Emerging Markets. In the graph, the risk/reward relationship breaks down when we add the equity index funds to the bond mutual fund graph.

This graph indicates that all five equity indexes offer a worse risk/reward profile than the bond curve. Every single bond mutual fund has a lower standard deviation than the stock indexes. There is a simple answer to what has distorted the market. The Federal Reserve, starting in November 2008 and ending in 2014, purchased \$4.5 trillion in bonds. Clearly, these routine purchases have lowered the volatility of the bond market compared to the equity market.



In our experience, most investors can't tell you the historical standard deviation of their portfolios. However, most investors can remember the worst one year performance of their portfolios. Our goal is to prevent clients from panicking and to properly understand the downside risk of both their individual investments and their overall portfolio. We believe the Federal Reserve bond purchases have artificially lowered the standard deviation for bond funds. Therefore, we chose to replace the standard deviation as the risk measure with the worst one-year return over the last 10 years.

When you replace standard deviation with the one-year loss you see a graph that displays the risk/reward profile that resembles the foundation of finance. The higher returning assets have had the higher risk when using the one-year loss. Virtue Asset Management feels that if you use standard deviation as the risk profile, it will skew your asset allocation models. We worry that investors are using standard deviation to make their asset allocation decisions. We feel this process is underestimating the risk in fixed income and specifically Emerging Country Debt and High Yield. We worry that investing in these asset classes is akin to picking up pennies in front of a steam roller. The risk of losing your arm is not worth the reward of pennies. Therefore, we currently recommend zero weighting to these asset classes. Contact us to discuss further.



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