

Get "Sharpe" With Mutual Funds - Part 1: Bond Funds

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What!? You don't know what the Sharpe Measure is? Don't feel badly. Most people in the investment business that I speak with don't have a clue either. Yet it is one of the most effective tools for selecting the right mutual fund for your portfolio.

The "Sharpe Measure" is a risk¹ adjusted return that also takes into account the return on risk-free investments. It is available in PALTRAK² database for each mutual fund with 3, 5, 10 and 15-year time periods.

Mathematically it is expressed as:

$$SM = \frac{AAR - RFR}{SD}$$

- AAR- average annualized rate of return
 RFR- risk-free rate of return, such as T-bill rate
 SD- standard deviation, a measure of volatility
 SM- Sharpe Measure

Generally, the higher the Sharpe Measure, the better the fund performance compared to T-bills, and also the less its volatility over the specific time period.

Figure 1 depicts the relationship between the Sharpe Measure and the compound annual return of Canadian bond funds. The direct relationship between these two numbers is marked by the solid trend line. What you are looking for is a mutual fund with a Sharpe Measure that is exceptionally above the trend line.

¹ Standard deviation is used as a measure of risk.

² Portfolio Analytics Limited (800) 531-4725. All data in this article is courtesy of PalTrak database.

In fixed-income funds, the most significant factor affecting the performance is the talent of the fund manager in anticipating the direction of the interest rates and the freedom s/he has to implement various strategies to maximize your return. The fund manager buys longer or shorter duration bonds for his portfolio (duration is the combined effect of time to maturity and the coupon rate of the bond, expressed in years) whether s/he expects the interest rates to decrease or increase.

Some bond funds have the mandate of holding long-term bonds or strip bonds. The manager of such a fund is more restricted in how much s/he can play with the duration. These bond funds are more volatile than other bond funds.

One of the purposes of fixed-income funds is to bring stability to your portfolio. Bond funds are considered to be less volatile than equity investments.

Here is how I use the Sharpe Measure in my bond portfolios.

Buy-and-hold portfolio

Figure 2 depicts the performance of the Dynamic Income Fund, which has the highest Sharpe Measure (SM=2.6), and the MD Bond Fund (SM=1.4). They both returned about the same percentage over the same time period, ie 8.4%. This is where the similarity ends. The value of Dynamic Income Fund grew steadily. The MD Bond Fund had a rough ride. It surpassed Dynamic Income Fund in the first four months, declined for the next five, and it took twenty-seven months to catch up.

I want steadiness in my "safe" bond portfolio, and, therefore, I include the bond fund with the highest Sharpe Measure in my buy-and-hold portfolio.

Here is the list of the bond funds with the highest Sharpe Measure for different time horizons:

Figure 1: The correlation between the 3-year return and Sharpe measure for Canadian bond funds.

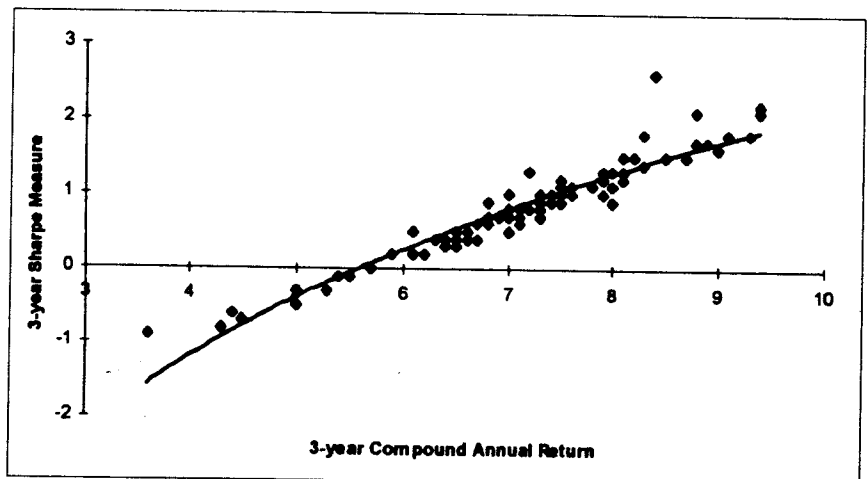
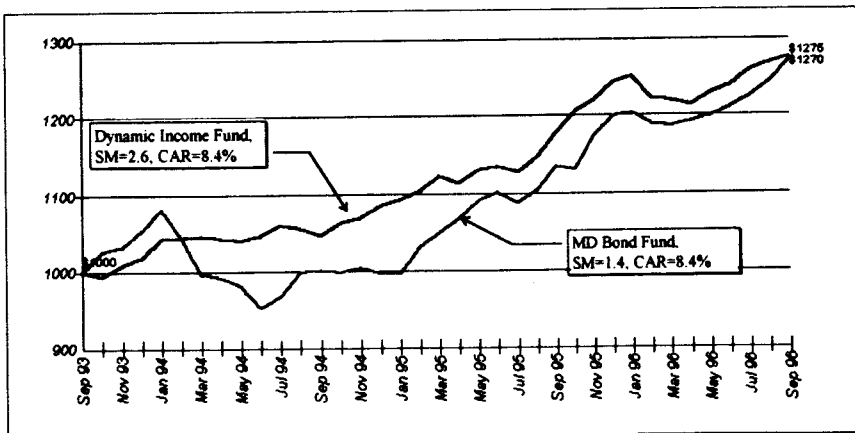


Figure 2: Comparison of two bond funds with same rate of return over a 3-year period, but with different Sharpe Measures.



	FUND NAME	SHARPE MEASURE
3-year	Dynamic Income	2.6
	Empire Group Bond	2.2
	SSQ-Obligation	2.1
5-year	Dynamic Income	3.4
	Empire Group Bond	3.1
	SSQ-Obligation	3.0
10-year	SSQ-Obligation	1.9
	Altamira Income	1.8
	PH & N Bond	1.7

Blended Portfolio

In a deflationary economic environment like we have been experiencing since 1982, it may pay well to mix a low volatility bond fund with a high yield (and generally higher volatility) bond fund. In this case, the long-term deflation is one big market timing cycle. If you blend Dynamic Income Fund at a ratio of between 3:1 to 5:1 (depending on your investment time horizon and risk capacity) with Trimark Advantage Bond Fund or O'Donnell High Income Fund, then you will take advantage of two different investment styles in an optimum manner. When long-term yield is rising, just switch the high yield fund to a money market fund. This way you are more likely to protect your capital when markets are nervous. And if you made the wrong call, little is lost.

As always, these conclusions are based on historical data and future performance may be different than the past performance. The statements made in this article are of a pure mathematical nature and may not be applicable to your individual situation. CEMIL OTAR, P. ENG., INDEPENDENT FINANCIAL ADVISOR, W H STUART ASSOCIATES, 96 WILLOWBROOK ROAD, THORNHILL, ONTARIO L3T 5P5 (905) 889-7170

Market-Timing Portfolio

If you are a market timer and you want to play the yield game, buy bond funds with the longest duration when interest rates are going down. Switch to money market funds when interest rates start going up. This is easier said than done. As the Sharpe Measures of most bond funds suggest, even the most experienced fund managers have difficulty making the correct call.

In my timing portfolio, I choose bond funds with a high volatility coupled with a reasonably high Sharpe Measure, certainly not less than 0.85. My timing system is based on a technical analysis system.

Accordingly, here are the bond funds that I use in my market-timing portfolio, based on 3-year performance data:

FUND NAME	STANDARD DEVIATION	SHARPE MEASURE
Altamira Bond	2.7	0.9
Beutel Goodman Income	2.2	0.9
Green Line Can. Bond	2.1	1.6

Editor's note: The Sharpe Measure is now included with our Top Performing Mutual Funds' chart.