RBC Wealth Management
Dominion Securities

Understanding the Differences Between Time-weighted and Money-weighted Rates of Return

While there are multiple ways to calculate your investment rate of return, the time-weighted rate of return calculation is the more common method used in the investment industry. Canadian securities regulators are mandating firms to provide investors with an annual money-weighted rate of return by early 2017. Both are acceptable calculation methods, but each has different uses and can be appropriate in different circumstances.

Introduction

In new annual performance reports to be delivered to investors by early 2017, Canadian investment regulators have prescribed the mathematical calculation for rate of return to be the money-weighted calculation, versus the more commonly used time-weighted calculation.

This article is a general explanation of the differences between money-weighted and time-weighted, and examples of when you may see a difference in the rate of return for a given portfolio over the same time period.

A Quick Summary

- The timing of cash flows that you direct, such as contributions (which includes transfers in-kind) and withdrawals, can affect your portfolio's rate of return.
- Time-weighted rate of return calculation *removes* the effect of these cash flows.
- Money-weighted rate of return *includes* the effect of these cash flows.
- If there are no cash flows, the two methods will produce the same rate of return.

Time-Weighted

Time-weighted is the financial industry and RBC Dominion Securities standard method to measure performance. For example, the method most commonly used to calculate the performance of financial market indices and mutual funds is comparable to that of time-weighted.

Time-weighted or comparable methods are appropriate calculations in certain instances such as broad market indices and mutual funds because contributions and withdrawals – activities that can impact performance, but are not in the fund manager's control – are purposely omitted in this calculation method.

Money-Weighted

In contrast to time-weighted, money-weighted calculates the rate of return *including* the impact of contributions to, or withdrawals from, the portfolio.

For example, if an investor contributes a significant sum into their portfolio just prior to the overall market performance rising, intuitively, this is a positive action. Now this larger portfolio benefits more in dollar terms from the overall market move than if the contribution had not been made.

Conversely, if the investor withdraws a significant sum from their portfolio just prior to overall market performance rising, intuitively, this is a negative action. Now this smaller portfolio benefits less in dollar terms from the overall market move than if the withdrawal had not been made.

Why Regulators Selected Money-weighted

The timing and amount of contributions and withdrawals (which are included in the money-weighted calculation) differ among each individual investor portfolio. Regulators believe a rate of return that factors in the impact of these individual contributions and withdrawals is the most appropriate way to measure the returns of clients' portfolios.

While time-weighted or comparable methods are more appropriate for assessing fund manager performance relative to market benchmarks, money-weighted is more suitable for assessing a client's personal performance relative to their individual financial plans and projections.

Simplified comparison of Money-weighted to Time-weighted

The following generally compares money-weighted and time-weighted outcomes for a given portfolio and time period in six typical scenarios.

Portfolio Activity	Market Performance	
	 **... a period of positive market performance**	 **... a period of negative market performance**
Material contribution into the portfolio just before ...	Money-weighted rate of return will tend to be greater than time-weighted rate of return	Money-weighted rate of return will tend to be less than time-weighted rate of return
Material withdrawal from the portfolio just before ...	Money-weighted rate of return will tend to be less than time-weighted rate of return	Money-weighted rate of return will tend to be greater than time-weighted rate of return
No material contributions or withdrawals from the portfolio just before ...	Money-weighted rate of return and time-weighted rate of return will be very similar, if not the same	Money-weighted rate of return and time-weighted rate of return will be very similar, if not the same