Wealth Management
Dominion Securities

Time-weighted vs. money-weighted rates of return

Understanding the differences

While there are a number of ways to calculate an investment rate of return, the time-weighted rate of return calculation is the more common method used in the investment industry. However, by early 2017, all investors will receive an annual money-weighted rate of return, included with a new annual investment performance report. Both are valid and acceptable calculation methods, but each has different uses and can be appropriate in different circumstances.

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Introduction

In new annual performance reports that investors will receive by early 2017, rates of return will reflect the mathematical money-weighted calculation, versus the more commonly used time-weighted calculation. The new regulatory requirement according to Canadian investment regulators is that all investors in Canada will receive this new report with the money-weighted rate of return.

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

Time-weighted

The time-weighted calculation is the financial industry and RBC Dominion Securities standard method to measure performance. For example, the methods most commonly used to calculate the performance of financial market indices and mutual funds are types of time-weighted calculation methods.

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 **does not include** 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 methods do not take into account the effect of an individual's contributions or withdrawals. This method is useful to calculate the performance of broad market indices or mutual funds because contributions and withdrawals – activities that can impact performance, but are not in the fund manager's control – are not taken into account 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 portfolio's performance rising, intuitively, this is a positive action. Now this larger portfolio benefits more, in dollar terms, from the portfolio's growth than if the contribution had not been made.

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

Why do the new performance reports use the money-weighted calculation?

The money-weighted rate of return factors in the impact of your contributions and withdrawals to and from your portfolio. And, because the timing and amount of these contributions and withdrawals can be different for each individual investor's portfolio, Canadian securities regulators see money-weighted as the most appropriate way to measure your portfolio return.

While time-weighted return calculations are useful for assessing the performance of your investment managers relative to market benchmarks, money-weighted calculations help you assess your personal performance relative to your individual financial plans and projections.

Simplified comparison of money-weighted to time-weighted

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

Portfolio activity	Portfolio's performance	
	↗ … a period of positive portfolio performance	↘ … a period of negative portfolio 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 to 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

If you have any questions about how your portfolio's rate of return is calculated, or about the performance of your account, please contact me to discuss.