

MWRR

Money-Weighted Rate of Return

What Is It?

A money-weighted rate of return (MWRR) is designed to measure your specific investment experience – it will show exactly how your investment portfolio performed, taking all factors impacting it into account. In contrast to a time-weighted rate of return calculation, here deposits, withdrawals and transfers do affect your portfolio's money-weighted rate of return.

What Is MWRR Used For?

Your money-weighted rate of return is unique to your portfolio, since it incorporates the impact of the timing and size of cash flows you initiate into and out of your portfolio – factors which are usually independent from actual investment decisions, and not under the control of your Investment Advisor.

Therefore, MWRR must not be used to compare with performances published for indices, benchmarks, and managed products. But, it has other very important uses. When you have targeted a specific amount of savings to accumulate, it's your money-weighted return that identifies how quickly you will get there.

Also, the scenarios incorporated into a financial plan are based upon a rate of return assumption. Comparing your MWRR with this rate of return assumption will tell you whether you are on track to reach your goal in the timeframe you had anticipated.

Factors Impacting Your Money-Weighted Rate of Return

Common to MWRR and TWRR

- ▶ Which securities you and your IA decide to buy and/or sell
- ▶ When these transactions are executed
- ▶ How the underlying market affects your securities over the course of the period measured

Additional factors in MWRR only

- ▶ The timing of when you make deposits to, withdrawals from, and transfers into or out of your portfolio, as well as the size of these cash flows.
 - ▶ Additions to your portfolio at or near a market bottom, or withdrawals at or near a market top, will have a beneficial impact on your MWRR
 - ▶ Additions to your portfolio at or near a market top, or withdrawals at or near a market bottom, will have the opposite effect.

Methodology

MWRR is determined using an internal rate of return (IRR) calculation. Over the period measured, your portfolio will have beginning and ending values, as well as cash flows in (interest, dividends, realized capital gains, deposits, transfers in) and out (withdrawals, transfers out). An MWRR computation involves applying the formula in the shaded area and solving for the missing factor – the IRR. This is best done with a financial calculator, since otherwise you will have to use a trial and error approach which could require numerous iterations. MWRR is typically calculated using trade-date valuations, including fees.

How To Calculate MWRR

First, calculate a daily rate by solving for IRR_d in the following formula:

$$TVB = \frac{TVE}{(1 + IRR_d)^n} + \left(\sum_{i=1}^{n-1} \frac{-CF_i}{(1 + IRR_d)^i} \right)$$

Where:

- TVB = Total account value at the beginning of the period
- TVE = Total account value at the end of the period
- IRR_d = Daily average internal rate of return for the period
- CF_i = Net value of cash flows on the given date
- n = Total number of days
- i = Selected daily period

Then, convert the daily rate of return into a rate of return for the total period rate using:

$$IRR_{tp} = ((1 + IRR_d)^{365/n}) - 1$$

Where:

- IRR_{tp} = Internal rate of return for the total period
- IRR_d = Daily average internal rate of return for the period
- n = Number of days in the period

Putting Your MWRR in Context

Your money-weighted rate of return is a function of the mix of investments and risk level of your portfolio based on your personal investor profile, as well as the timing and amounts that you add or withdraw from the portfolio.

It is the measurement to use for determining how well you are doing in terms of the rate of return associated with achieving a personal financial goal – not for comparisons with indices and benchmarks, nor for evaluating your Investment Advisor.

Frequently Asked Questions (FAQ)

	Question	Answer
1	When will the performance calculation start?	The beginning of the first overall period measured will be January 1, 2016. The first <i>Performance Report</i> sent out in January 2017 will therefore cover the entire calendar year 2016.
2	Is the performance calculated by account, by root, or by client?	As required by the Regulators, the <i>Performance Report</i> will show rates of return on a per account basis.
3	What is included in the total account value used to calculate the performance?	Cash and all types of securities held in the account are included in the total account value, as well as accrued interest and dividends.
4	How is the performance calculated for accounts denominated in currencies other than Canadian dollar?	The performance is always calculated in the account's currency. All amounts displayed in the <i>Performance Report</i> will also be in the account's currency.
5	Is the Money-Weighted Rate of Return Calculation annualized?	Performances for periods longer than one year are annualized.
6	Will back-dated transactions be included in the performance calculation?	Back-dated transactions made after December 31 will not be included in the calculation. These back-dated transactions may have an impact on the next <i>Performance Report</i> .
7	Are the transactions impacting performance determined by Trade Date or on a Settlement Date basis?	The account return calculation is based on the trade date.
8	What happens to my rate of return when a price for a security is unknown?	Unknown or undetermined prices will be deemed to be \$0 for the performance calculation. If the price was unknown and later becomes available, it will boost the account's performance artificially. The opposite is also true. If the price that was available becomes unknown at a later date, the performance will decrease. This can also happen in the case of a transaction back-dated to when a security code had not yet been created in our systems because the product was new.
9	What happens when a deposit to settle a purchase is made after the purchase's Trade Date?	Transactions are included in the <i>Performance Report</i> based on the Trade Date.
10	When will the <i>Performance Report</i> be shipped?	The <i>Performance Report</i> will be sent annually together with the December statement. The first mailing will be made in January 2017, and will cover the rates of return for calendar 2016.

