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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 you exactly how your investment account performed, taking all factors impacting it into account. In contrast to a time-weighted rate of return calculation, here your deposits, withdrawals and transfers do affect the account's money-weighted rate of return.

What Is MWRR Used For?

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

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 expected rate of return 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 your PM decides to buy and/or sell
- When these transactions are executed in your account
- How the underlying market affects your securities over the course of the time period measured

Additional factors in MWRR only

- The timing of when you make deposits to, withdrawals from, and transfers into or out of your account, 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 account will have beginning and ending values, as well as cash flows in (deposits, transfers in) and out (withdrawals, transfers out). A 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 that 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

Source: National Bank Financial

Putting Your MWRR in Context

Your money-weighted rate of return is a function of the mix of investments and risk level of your account based on your personal investor profile, as well as the timing and amounts that you add or withdraw from the account. It is the measurement to use for determining how well you are doing in terms of the expected rate of return associated with achieving a personal financial goal – not for comparisons with indices and benchmarks, nor for evaluating your Portfolio Manager.