Global Investment Performance Standards

CFA Institute

Recruiting Volunteers for the United States Investment Performance Committee

We are actively recruiting volunteers to serve on the Global Investment Performance Standards (GIPS®) United States Investment Performance Committee (USIPC) as well as a new chairperson. The USIPC serves as the United States GIPS Sponsor and acts as a forum for stakeholders of the GIPS standards. The USIPC is tasked with promoting the adoption, implementation, and development of the GIPS standards as industry best practice for calculating and presenting investment performance. In addition, the committee discusses pertinent issues faced by investment industry professionals in the US market and develops resources, provides feedback on technical guidance, and promotes the GIPS standards through outreach activities.

To apply, please visit **CFA Institute Volunteer Opportunities** to review the role responsibilities and to select the volunteer role that interests you. **The deadline to submit applications is 30 April 2019 by 17:00 U.S. ET.** If you have any questions, please contact **volunteers@cfainstitute.org.**

Additional GIPS Standards Committee Volunteer Recruitment in May

Recruitment for volunteers to serve on the other GIPS standards committees will be announced in mid-May 2019. Information on how to apply will be provided at that time.

GIPS Standards Help Desk Question–Understanding the XIRR function

Over the past month we received several Help Desk questions related to Excel's XIRR function. This function is very useful, but it is important to understand the results that it produces.

Prior to delving into the details of XIRR, let's first review the difference between time-weighted returns (TWR) and money-weighted returns (MWR). A TWR attempts to remove the effect of cash flow activity. For example, assume your firm manages a portfolio that has a beginning value of $1,000,000 on 1 September. Your client contributes an additional $75,000 on 10 September, and the portfolio has an ending value of $1,100,000 on 30 September. During the month the portfolio increased in value by $100,000, but $75,000 of that increase was due to the client's contribution. When calculating performance for the month, you get credit for only $25,000. With TWRs, an asset manager is not rewarded or penalized for investment decisions outside of its control. There are multiple methods for calculating TWRs, and some of these methods are explained in the **Guidance Statement on Calculation Methodology**. Assuming the modified Dietz method is used, the return would be calculated as:

$$\frac{(\$1{,}100{,}000 - \$1{,}000{,}000 - \$75{,}000)}{(\$1{,}000{,}000 + (\$75{,}000 \times .70))} = 2.38\%$$

A MWR, on the other hand, does not attempt to remove the effect of cash flow activity. In some

portfolios, such as a private equity fund, the decisions to call capital from investors and distribute proceeds are at the discretion of the firm. The timing of these cash flows is part of the investment decision process. The performance must reflect those cash flow timing decisions, and a MWR is appropriate. There are also different methods that can be used to calculate MWRs, with the most common method being the internal rate of return (IRR). Assuming the same example as above, if IRR is used, the IRR return would be 1.20%, calculated as:

Period	IRR Formula (Discounted at IRR of 1.20%)	Discounted Cash Flow
0	-$1,000,000/(1 + 0.012)^0	-$1,000,000.00
1	-$75,000/(1 + 0.012)^1	-$74,112.21
2	$1,100,000/(1 + 0.012)^2	$1,074,112.21
Sum		$0

In an IRR calculation contributions are recorded as negative values and the sum of the discounted cash flows will equal zero. The IRR is the discount rate that sets the net present value of the cash flows equal to zero. The IRR assumes equal period cash flows.

So now let's look at XIRR. Unlike IRR, XIRR calculates an annualized internal rate of return and allows for uneven periods of time between compounding dates. Using the same example as above, the XIRR function calculates a return of 34.41%, but this is an annualized return. It assumes that profits were earned throughout a 12-month period. To unannualize the XIRR return you take (1 + annualized return)^(days in the period/365) - 1. In our example, this would be (1 + 0.3441)^(29/365) = 2.38%.

Using the XIRR annualized return of 34.41% we get:

Period	XIRR Formula (Discounted at annualized rate of 34.41%)	Discounted Cash Flow
1 September 2018	-$1,000,000/(1 + 0.3441)^0	-$1,000,000.00
10 September 2018	-$75,000/(1 + 0.3441)^(9/365)	-$74,455.09
30 September 2018	$1,100,000/(1 + 0.3441)^(29/365)	$1,074,455.09
Sum		$0

Using the converted unannualized XIRR return of 2.38% we get:

Period	XIRR Formula (Discounted at annualized rate of 2.38%)	Discounted Cash Flow
1 September 2018	-$1,000,000/(1 + 0.0238)^0	-$1,000,000.00
10 September 2018	-$75,000/(1 + 0.0238)^(9/29)	-$74,455.09
30 September 2018	$1,100,000/(1 + 0.0238)^(29/29)	$1,074,455.09
Sum		$0

Note that this return is the same as the modified Dietz return. An IRR can be used as a MWR or an approximation of a TWR when there is no mid-period revaluation. Yes, this is confusing, and some performance systems even refer to their TWR calculations as IRRs. But this also means that you can use the modified Dietz method over extended periods as an approximation of a MWR.

Many firms currently use the XIRR function to calculate since inception internal rates of return

(SI-IRR). In the Exposure Draft of the 2020 GIPS standards, we replaced the term *internal rate of return* with *money-weighted return*, to acknowledge that methods other than IRR may be used. Depending on the values and timing of cash flows you won't always get the exact same returns with different methodologies, but the differences will generally be small. In extreme examples, with very large cash flows toward one end of the return calculation period, MWR calculations can fail. Users of MWRs should be alert to such situations.

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