

PERFORMANCE PERSPECTIVES

with David Spaulding



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MAKING SENSE OUT OF THE ASSET OWNERS' COMPOSITE RETURN

In a recent blog post,¹ I asked what question the GIPS® required composite return for asset owners answers. They are required to calculate a time-weighted return, just as asset managers. And so, we can easily see its source. But, again, what question does it answer?

Let's first consider what question the composite return for asset managers answers. The Standards explain that "The composite return is the asset-weighted average of the performance of all portfolios in the composite."² It tells us how the manager has performed, on average,³ over the specified period, for the accounts in the composite. We use time-weighting to eliminate or reduce the impact of cash flows. And, we do this because the manager doesn't control the cash flows: the client does.



Of course, in those cases when the manager does control the flows⁴ (e.g., closed-end private equity), money-weighting is used, in order to capture their effect.

Okay, so let's get back to the point: how about the composite return for asset owners? What questions *might* we want answers to? I can think of two:

- How did the managers do, in aggregate, in managing the fund's assets?
- How did the fund do across all the assets?

As noted above, the return is time-weighted, just like the asset managers, and so eliminates the effect of flows. But why would we do this? Is it to show how the underlying managers did?

Consider a typical pension fund who is invested across multiple asset classes, including public equities, public bonds, real estate, and private equities. If the plan was only invested in public assets, where the manager doesn't control any of the flows, time-weighting makes sense. But, if there are assets (e.g., private equity) where the manager controls the flows, why use time-weighting?

If we want to know how the fund has done, then using the IRR (money-weighting) makes sense.

1 <http://www.spauldinggrp.com/question-gips-asset-owners-composite-return-answer/>

2 See page 11 of the *GIPS Handbook*.

3 An asset-weighted, not equal-weighted, average, but this is an entirely different topic, probably not worth the effort to address.

4 Actually, in only a few cases. This question was posed in the GIPS 20/20 discussion paper. I favor a very simple rule to determine which (time- or money-weighted) return should be used: if the manager controls the flows, money-weighting; otherwise, time-weighting.

The Journal of Performance Measurement®

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**Puzzles in Risk and
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– Arno E. Weber

**Performance Attribution
for Passive Strategies**
– Dax Johnson

**The Case Against Time-
Weighted Return for
Alternative Investments**
– Timothy F. Peterson

But to know how the managers did *in aggregate*, time-weighting provides a result that could be, in my view, misleading.

In my post I suggested that the individual returns should be asset-weighted. That is, that we derive time-weighted returns for those assets where the manager does not control the flows, and money-weighted where they do, and asset-weight these returns.

This is an idea I've had for some time, and have, on at least a few occasions, referenced it, but, to be honest, have never tried out (it just seemed logical that it would work).

I put this simple example to demonstrate:

Line		VB	WB	Mid-mth C/F	C/F Wt	Pre-C/F value	VE	TWRR	TWRR/IRR	Wtd Rtn
(1)	Public Equity	500,000	43.5%	60,000	50%	505,000	600,000	7.26%	7.26%	3.34%
(2)	Private Equity	500,000	43.5%	60,000	50%	500,000	570,000	1.79%	1.91%	0.88%
(3)	Cash	150,000	13.0%	(120,000)	50%	150,000	30,000	0.00%	0.00%	0.00%
(4)	Portfolio (revalue)	1,150,000	100%	-		1,155,000	1,200,000	4.35%		
(5)	Portfolio (don't revalue)	1,150,000	100%				1,200,000	4.35%	4.35%	
(6)	Portfolio (asset-weight (VB))								3.99%	
(7)	Portfolio (asset-weight (VB+WCF))									4.23%

Admittedly, it's a really basic scenario, that involves only three asset classes: public equity, private equity, and cash. We could just as easily label these "TWRR assets" and "MWRR assets."

As you can see, there are no external flows, just internal, that occur at the mid-point of the month.

The public equity (line 1) is straightforward: we have a large cash flow (where I've defined "large" as 10%), so we want to revalue at mid-point. Our resulting return (7.26%) is shown.

The private equity (line 2) has the same values as public, with the exception that we are not revaluing it at the midpoint of the month, which I think is realistic. Because the flow is "large," we revalue.

As for cash, there is no appreciation shown, so the return, even when derived by taking the flow into consideration, is zero.

Line 5 shows the return that I think we'd be expected to show: that is, it's the time-weighted return for the portfolio. We do not have to concern ourselves with the returns of the underlying asset classes. And since there's no external flow, we need only concern ourselves with the starting and ending values. Our return is 4.35 percent. This is, again, a time-weighted return.

Line 4 (sorry that I'm taking this out of order) has us revalue at the mid-point, which technically isn't necessary, since the flows are only internal, and cancel out. But, since we have revalued the portfolio, we use this and, not surprisingly, get the same result (4.35%).

Now, we turn to the blending which I propose. As you can see, I've inserted a column labeled TWRR/IRR. Here, I have the TWRR for the public equities and cash, and the IRR for private equities. This, in my view, is a better approach.

First, I calculated the composite return by simply using the beginning values (line 6). This is a permitted method, by GIPS, though, of course, it doesn't currently address blending returns, only asset-weighting the underlying accounts. Our result is 3.99 percent.

I believe a better approach is to take the weighted flows into consideration, which I do with line 7. Here, the result is 4.23 percent.

What's the difference?

Is there much of a difference between it and the time-weighted result? Not really. At least in this case. But, then again, it's only for a single month. And, there are no doubt times when the results will be quite close; even the same, if there are no flows.⁵

How do we extend across time?

This example was for a single month, but what are we going to do as we extend across time, to the full year? Will we geometrically link the composite returns?

Please recall that when we geometrically link money-weighted returns (e.g., monthly IRRs), the result is an *approximation* to the time-weighted return. And since the underlying composite returns are a blend of TWRR and MWRR, the geometric result would also be expected to approximate a time-weighted return, which I don't believe would be appropriate.

The solution, I believe, is to extend the composite weighting, using the beginning value and weighted flows.

For example, consider the second month. We would again derive a TWRR for those assets where the manager doesn't control the flows. We would then geometrically link these results.

For the MWRR assets, we would derive the return across the two months, valuing the portfolio only at the start and end.

We would then use the beginning values, plus weight any intra-period cash flows, to derive our two-month composite result.

We continue this through the full twelve month period, geometrically linking the 12 monthly TWRR returns, and deriving our IRR across the full 12 month period; and then, asset weighting using the beginning of year value and the asset-weighted cash flows.

The result would be a blended result, which would then tell us how the underlying managers performed. I believe that external to GIPS, this is a value that asset owners should have interest in seeing. That is, it answer the question "how did our asset managers do, in aggregate, over the period?"

This approach could be extended across multiple years, too, as long as the process is consistent.

What do others think?

Until now, no one, as far as I know, has seen this approach. We did have a few comments to the blog post, which you're invited to review, if you'd like.

This isn't the first time I've posed this question. For example, I brought it up at an NYSSA⁶ event that I participated in. I'll confess that I was probably unfair in asking one of the panelists who addressed this topic, as I knew the answer to the question, "what question does the return answer?" It doesn't answer anything!

⁵ Recall that when there are no cash flows, the TWRR and MWRR will provide the same result. It's the cash flows that cause the differences.

⁶ New York Society of Security Analysts, which has recently been rebranded the CFA Society New York.

KEEP THOSE CARDS & LETTERS COMING

We appreciate the emails we receive regarding our newsletter. Mostly, we hear positive feedback while at other times, we hear opposition to what we suggest. That's fine. We can take it. And more important, we encourage the dialogue. We see this newsletter as one way to communicate ideas and want to hear your thoughts.

It's been suggested that by using TWRR, it facilitates comparisons; that is, it allows funds to compare themselves to others. But why? Because everyone uses an inappropriate measure, that somehow yields valuable information? Sorry, but I don't get it.

Can IRRs be compared?

Occasionally we'll hear that it's not possible to compare IRRs. That is, it would not be appropriate for one pension fund to compare its IRR with another's. Why is that?

Let's be a bit more basic than that. Consider two retail investors, who each invest in a mutual fund, and each invest the exact same amount of money at the start of the year, and each makes similar trades during the year. But, where one has the philosophy "buy high, sell low," the other has it backwards. Because it's a mutual fund, the time-weighted result will be the same. However, the IRRs will differ. The investor who buys low/sells high would be expected to have a higher IRR than the one who buys high and sells low, right?

We can't compare these results? Why not?

Since the IRR tells us how the investor did with their investments, when that investor is a pension fund, wouldn't one want to know how they did investing their funds versus another fund? There's no value here?

The IRR tells us "how did we do?" And so, to compare that answer with how another fund did should have some value. Likewise, to ask "how did our managers do?," and compare that with the results of others, can have value.

A time-weighted result that includes asset classes where TWRR is generally not used (because the manager controls the flows) yields a result that answers no questions. At least the blended and IRR results provide meaningful returns.

But what about the index?

Occasionally we'll hear about the problem with comparing a money-weighted return with a time-weighted index: this would be "mixing apples and oranges." True! And so, why not convert the index to a money-weighted equivalent?

I came up with an approach more than ten years ago, which is pretty straightforward. It appears in our May 2006 issue.⁷ There are other methods, too.

Bottom line: we can have a money-weighted benchmark.

And what about the blended approach? Why not blend the underlying indexes?

Conclusion

This is quite a lengthy piece: sorry about that. There is a lot more that can be said, and surely more examples should be included; perhaps in an article.

For now, my point is that I question the value of the composite return that GIPS requires asset managers to provide. A time-weighted return, across assets where the IRR is generally used, is, in my view, wrong. Some form of blending should provide value. I proposed one here. Further analysis is in order, and I intend to conduct it. As always, your thoughts are invited!

⁷ <http://www.spauldinggrp.com/wp-content/uploads/2014/05/May06NL.pdf>



June Puzzle

There are four brothers, One, Two, Three and Four.

Four says to One, "I have four apples more than you."

Three says to Four, "I have two apples more than Two."

Two says to Three, "I have One apples less than Four."

One says to Two, "I have three apples less than you."

There are total 40 apples.

Who has the most apples?

MORE FROM GIPS

The folks at the CFA Institute, as well as those responsible for the GIPS standards, are keeping very busy these days.

We've seen the release of the GIPS 20/20 Consultation Paper.⁸ If you haven't done so already, please have a look and offer your comments (you have until July 16). Not too many folks have offered their comments, yet, though I understand it's typical for most to come in on the last day. I have sent mine in; all are posted for your review.⁹



A guidance statement on Risk has just been released.¹⁰ I haven't had a look, yet, but will shortly. We have three months to review and offer our comments. Given the importance that risk has, it's understandable why this topic was taken up by the GIPS Executive Committee.

PUZZLE TIME

May Puzzle

This unusual one came from the "I Love Mathematics" page on Facebook.

I suggested that something must be dreadfully wrong, and asked that you find the mistake(s).

$$\begin{aligned}
 -20 &= -20 \\
 16 - 36 &= 25 - 45 \\
 (2+2)^2 - (2+2) \times 9 &= 5^2 - 5 \times 9 \\
 (2+2)^2 - 2 \times (2+2) \times \frac{9}{2} &= 5^2 - 2 \times 5 \times \frac{9}{2} \\
 (2+2)^2 - 2 \times (2+2) \times \frac{9}{2} + \left(\frac{9}{2}\right)^2 &= 5^2 - 2 \times 5 \times \frac{9}{2} + \left(\frac{9}{2}\right)^2 \\
 \left(2+2-\frac{9}{2}\right)^2 &= \left(5-\frac{9}{2}\right)^2 \\
 2+2-\frac{9}{2} &= 5-\frac{9}{2} \\
 2+2 &= 5
 \end{aligned}$$

I stepped through this equation by equation:

- (1) $-20 = -20$ (fine)
- (2) $16 - 36 = 25 - 45$ (true; same as (1))
- (3) $(2 + 2)2 - (2+2) \times 9 = 5^2 - 5 \times 9$
 $= (4)2 - 4 \times 9 = 25 - 45$
 $= 16 - 36 = 25 - 45$ (same as (2))
- (4) $(2 + 2)2 - 2 \times (2+2) \times 9/2 = 5^2 - 2 \times 5 \times 9/2$ (true; equivalent to (3), since the multiplication and division by 2 cancel on each side.
- (5) $(2 + 2)2 - 2 \times (2+2) \times 9/2 + (9/2)2 = 5^2 - 2 \times 5 \times 9/2 + (9/2)2$ (holds, since the addition is the same to both sides)
- (6) $[2+2-9/2]2 = [5-9/2]2$ (I'm guessing this was supposed to have been derived from (5), but I don't follow the logic, and clearly it's not correct; the subsequent equations, derived from (6), therefore don't hold).

We heard from several readers:

Anthony Howland
Dan Leher

Malcolm Smith
Prashant Sakrawar

Usama Mazhar

⁸ https://www.gipsstandards.org/standards/Documents/Guidance/gips_2020_consultation_paper.pdf

⁹ https://www.gipsstandards.org/standards/Pages/guidance_comments_gips_2020.aspx

¹⁰ https://www.gipsstandards.org/standards/Documents/Guidance/exposure_draft_public_comment_risk.pdf

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DATE	EVENT	LOCATION
June 14-15, 2017	PMAR Europe	London, England
June 22-23, 2017	Performance Measurement Forum	Vienna, Austria
July 17-21, 2017	Performance Measurement Boot Camp	New Brunswick, NJ
August 7-11, 2017	Performance Measurement Boot Camp	London, England
August 15-16, 2017	Fundamentals of Performance Measurement	Toronto, Ontario
August 17-18, 2017	Performance Measurement Attribution	Toronto, Ontario
September 2017	Basic Risk Measures Webcast	
October 16-17, 2017	Fundamentals of Performance Measurement	Los Angeles, CA
October 18, 2017	PMAR West Coast	Los Angeles, CA
October 19-20, 2017	Performance Measurement Attribution	Los Angeles, CA
November 2-3, 2017	Performance Measurement Forum	Rome, Italy
November 14, 2017	Asset Owner Roundtable	Orlando, FL
November 15-16, 2017	Performance Measurement Forum	Orlando, FL
December 2017	Performance Measurement for Non-Performance Professionals Webcast	
December 11-12, 2017	Fundamentals of Performance Measurement	New Brunswick, NJ
December 13-14, 2017	Performance Measurement Attribution	New Brunswick, NJ

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