PERFORMANCE PERSPECTIVES

with David Spaulding

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WHEN ASSET-WEIGHTING WORKS (AND WHEN IT DOESN'T)

Let's say you have a client with multiple accounts and you want to represent for them their overall experience. How should you calculate this return? Let's assume that we're using time-weighted returns.

I'd say there are two ways: treat the accounts as an aggregate (*i.e.*, as a single account) or asset-weight the individual account returns.

If we look to the GIPS® standards for help on this, we'll be told that either approach works.[1] But we recently encountered a situation where the results were strikingly different. Let's look at an example *(see Figure 1)*.

Account	BMV	Mid-month Value	EMV	ROR
A	250,000	242,000	260,000	4.00%
B	0	250,000	255,000	2.00%
Total	**250,000**	**492,000**	**515,000**	

Figure 1

We have a client that begins the period with a single account, valued at £250,000. Midway through the month, a second account is opened for £250,000. At this time, our first account was valued at £242,000. As you can see, the first account recovered from its downturn to increase to £260,000. Figure 1 shows the returns for each of these accounts.[2]

So, what's our overall return?

If we want to use the aggregation method, we would use the bottom line values. And since the mid-period flow was quite large, we would expect to revalue the portfolio at that time, which we also show. Consequently, our return is:

$$R_{Aggregate} \quad \prod_{i-1}^{n} \frac{EMV_i}{BMV_i} - 1 =$$

$$\frac{242{,}000}{250{,}000} \text{ x } \frac{515{,}000}{492{,}000} - 1 = 1.33\%$$

I don't know about you, but when I saw this I was a bit perplexed. How can we have a return for the overall client that falls below each of the accounts?

1 Global Investment Performance Standards (GIPS®) Handbook. Second edition. (2006: 89-90).

2 Please note that for the first account ("A"), since there is no cash flow into it, the return is simply the ending value versus the starting value).

The Journal of Performance Measurement®:

UPCOMING ARTICLES

A General Approach for Linking Arithmetic Attribution Results Over Time
– *Mikael Broberg*

Fixed Income Attribution: A Unified Framework Part 1
– *Bernard Murira and Hector Sierra*

Is Sharpe Ratio Still Effective?
– *Yasuaki Watanabe*

Risk Attribution
– *Philippe Grégoire and Herve van Oppens*

Do Stock Indexes Have Abnormal Performance?
– *Bruce Costa and Keith Jakob*

Let's try the asset-weighted approach. Here, we will use the beginning market value plus the weighted cash flows. Since the second account's flow occurred mid-month, we'll use 0.5 as our weight.

$$ROR_{WeightedFlows} = \frac{\sum_{i=1}^{n}\left[BMV_i + \sum_{j=1}^{m} C_j\right] \text{ x } ROR_i}{\sum_{i=1}^{n}\left[BMV_i + \sum_{j=1}^{m} C_j\right]} =$$

$$\frac{250{,}000 \text{ x } 0.04 + (0 + (0.5 \text{ x } 250{,}000)) \text{ x } 0.02}{(250{,}000) + (0 + (0.5 \text{ x } 250{,}000))} = 3.33\%$$

Quite a difference, yes? So (a) what's the reason for the difference and (b) which is correct?

The aggregate method treats the portfolio as if the two accounts were managed by the same individual…the same process. It's analogous to Account A receiving £250,000 during the month. And because when the cash flow hit, the account had dropped in value, we revalue the portfolio (because it's a large cash flow) and evaluate the manager's return in two pieces for this month: the pre-cash flow portion and the post-cash flow portion. The return for the first half of the month was -3.20% while the return for the second half was 4.67 percent. When we link these values, we get the 1.33% we showed earlier.

The asset-weighted approach treats the two accounts separately and seeks to find the average for them. As we saw with Figure 1, the first account had a return for the month of 4.00%, while the second manager's return was 2.00%. The average is weighted by the beginning market values and the weighted cash flows.

Which is correct? Well, what are you looking to represent? I think in most cases the asset-weighted method is better, since this shows the overall return for this client and treats the managers, who work independently of one another, independently.

So, when is the aggregate method okay? Good question. It's permitted in GIPS, but does it make sense if there are intra-period cash flows? I'm not so sure. Many vendors support this approach but is it correct to allow these kind of situations to occur? I don't believe so.

As long as we only use accounts that are there the full time, then the aggregate and asset-weighted method yield equivalent results. However, if there are accounts added or removed during the period, then we run the risk of having returns which I would question.

Your thoughts?

PMAR V

We will host our fifth annual Performance Measurement Conference on May 15-16, 2007. We're very excited to achieve this milestone. PMAR has become the conference for performance measurement professionals. It is truly a global event, with many participants and speakers coming from outside the U.S. This event is unique in many ways. Please plan to attend…you'll enjoy it; we guarantee!

The Spaulding Group can address any of the six common problem areas

Types of Assignments

General Performance Measurement Issues

TSG assists firms in evaluating the broader areas of performance to include calculations (which to use and when), reporting (for internal use, for prospects, and for clients), systems issues, and other areas.

Verification/Certification

We also offer GIPS verification, and if you are not claiming compliance but need your numbers certified, we can assist with that as well.

GIPS Compliance

Many firms need understanding the GIPS standards and determining whether they should comply. Also, many need help developing a strategy of compliance and/or help becoming compliant. Often, in just a day or two, TSG can help you address the opportunities, benefits, and tasks to be tackled in order to comply.

System Design

TSG can support you in the design and development of your performance system. We can also assist in documentation and testing.

Software Searches

TSG can help you decide which software product best meets your firm's needs, and we also support the implementation process.

Operational/Control Issues

TSG can assist you in dealing with a host of operational challenges including data integrity, reconciliation, policies and procedures, and much more.

A QUESTION FROM A READER

Hi David,

First, I look forward to receiving your newsletter every month. Perhaps there is an area you could address in an upcoming issue. Recently, I was asked about the validity of stating, if a portfolio was up 24% for a year, while the benchmark it aims to beat was up 12%, if it would be proper to state that the returns 'beat' the index on a relative case by 100%. In other words, from a starting value of $100 a passive investor would have earned $12, while the active investor with this strategy earned $24. Thus his gain was indeed twice as much. I know that the portfolio as a whole beat the index by only 12%, but was the profit not 100% greater? Have you ever seen performance reported in this manner? I have not. I am not asking in any way from a GIPS compliant composite, simply as a general question. For instance, if a benchmark was up 1% for the year and our portfolio up 5%, is that not more impressive than when benchmark is up 25% and we're up 29%? Negative numbers also throw a kink – say benchmark was –24%, and portfolio -12%. Would the relative out-performance be 50% or 100%?

Again, I was curious and as the authority on the subject I was curious to your opinion. Again, we're aware the portfolio return is 'what it is' but is there a general way to state the % that you out-distanced/under-performed on a relative basis?

Interesting question, yes? And, statistics are such wonderful things to deal with. I recall a few years ago during a presidential election, when one candidate said that unemployment was at its highest level in a decade, while the other said that more people were employed than ever before…both were correct.

Back to the question. My first reaction was that there's probably nothing wrong in saying that you "beat the index by 100%" if the return of the index was 12% and your return was 24 percent. Statistically, this is an accurate statement. And, it's true that when we deal with negatives, we hear some funny statements being made. If the portfolio is -12% while the index is -24%, you did outperform by 100%…or, you lost only half as much money as the client would have lost had they been in the index. No doubt there would be some selective use of this approach.

In one of our training classes, we have a table that shows the manager outperform each sector but underperform the index, (23% for the portfolio; 46% for the index), and I've occasionally pointed out that the index had twice the return of the portfolio.

However, there is room for some misuse with this approach. For example, let's say that the portfolio's return was 2% while the index's return was 1 percent. Using this logic we'd say that the manager outperformed the index by 100 percent. While this is statistically true, I'd say that there's a risk of being accused of using hyperbole to use this approach to represent a scenario where the client only saw a one percent increase in return.

Therefore, my recommendation would be to avoid this method, except perhaps on a one-on-one discussion with a client. And even then, it's a bit risky, depending on the level of sophistication of the client. So, probably in general something to avoid. Sorry.

KEEP THOSE CARDS & LETTERS COMING

We appreciate the occasional e-mail we get regarding our newsletter. Occasionally, 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.

A FACELIFT

We recently held our fourth-quarter company retreat, which also serves as our planning session for the new year. While we didn't have enough time to cover everything, we did decide to do two exciting things in the world of training: (a) to increase our attribution class from one-and-a-half day to two full days and (b) to introduce an Advanced Performance Measurement class.

John Simpson and I began working on the advanced class earlier this year but held off because of the need to develop the CGIPS (now CIPM) prep classes. But we've seen a lot of interest in this class over the years and feel compelled to put one together.

Our Advanced class will go well beyond what we have presented in our Introduction class and will include hedge fund attribution, returns on derivatives, returns on hedge funds, after-tax performance, attribution on derivatives, returns using leverage and much, much more.

The attribution class will be expanded to include hedge fund attribution, macro attribution, and attribution of derivatives.

ENLIST NOW

The Spaulding Group's Investment Performance Measurement Boot Camp will be held July 16-20, 2007 in New Brunswick, N.J. A full week of intensive, Real World Training Experience designed to saturate new hires and staff in various situations and arm them with the tools of the performance trade. Seating is limited…contact us today for details at 732-873-5700 or info@SpauldingGrp.com

THE SPAULDING GROUP'S 2006-2007 INVESTMENT PERFORMANCE MEASUREMENT CALENDAR OF EVENTS

DATE	EVENT	LOCATION	DEADLINE TO REGISTER
Nov. 30 - Dec. 1	Performance Measurement Forum	Orlando, FL (USA)	November 24
December 5-6	Introduction to Performance Measurement Training	Chicago, IL (USA)	December 1
December 7-8	Performance Measurement Attribution Training	Chicago, IL (USA)	December 1
2007			
January 23-24	Introduction to Performance Measurement Training	Reykjavik, Iceland	
January 25-26	Performance Measurement Attribution Training	Reykjavik, Iceland	
February 12-13	Introduction to Performance Measurement Training	New York, NY (USA)	
February 14-15	Performance Measurement Attribution Training	New York, NY (USA)	
February 26-27	CIPM Principles Exam Preparation	Los Angeles, CA (USA)	
February 28-March 2	CIPM Expert Exam Preparation	Los Angeles, CA (USA)	
March 5-6	CIPM Principles Exam Preparation	New Brunswick, NJ (USA)	
March 7-9	CIPM Expert Exam Preparation	New Brunswick, NJ (USA)	
March 12-13	Introduction to Performance Measurement Training	Boston, MA (USA)	
April 16-17	Introduction to Performance Measurement Training	San Francisco, CA (USA)	
April 18-19	Performance Measurement Attribution Training	San Francisco, CA (USA)	
May 8-9	Introduction to Performance Measurement Training	Chicago, IL (USA)	
May 10-11	Performance Measurement Attribution Training	Chicago, IL (USA)	
June 4-5	Advanced Performance Measurement Training	New Brunswick, NJ (USA)	
July 16-20	Investment Performance Measurement Boot Camp	New Brunswick, NJ (USA)	
August 20-21	CIPM Principles Exam Preparation	Boston, MA (USA)	
August 22-24	CIPM Expert Exam Preparation	Boston, MA (USA)	
August 27-28	CIPM Principles Exam Preparation	Los Angeles, CA (USA)	
August 29-31	CIPM Expert Exam Preparation	Los Angeles, CA (USA)	
September 17-18	Introduction to Performance Measurement Training	Los Angeles, CA (USA)	
September 25-26	Introduction to Performance Measurement Training	Chicago, IL (USA)	
September 27-28	Performance Measurement Attribution Training	Chicago, IL (USA)	
October 8-9	Introduction to Performance Measurement Training	Boston, MA (USA)	
October 10-11	Performance Measurement Attribution Training	Boston, MA (USA)	
October 15-16	Advanced Performance Measurement Training	San Francisco, CA (USA)	
December 3-4	Introduction to Performance Measurement Training	New Brunswick, NJ (USA)	
December 5-6	Performance Measurement Attribution Training	New Brunswick, NJ (USA)	

For Additional information on any of our 2006 events, please contact Christopher Spaulding at 732-873-5700

Save The Date!

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INTRODUCTION TO PERFORMANCE MEASUREMENT

A unique introduction to Performance Measurement specially designed for those individuals who require a solid grounding in all aspects of performance measurement. The Spaulding Group, Inc. invites you to attend Introduction to Performance Measurement on these dates:

December 5-6, 2006 – Chicago, IL
January 23-24, 2007 – Reykjavik, Iceland
February 12-13, 2007 – New York, NY
March 12-13, 2007 – Boston, MA
April 16-17, 2007 – San Francisco, CA
May 8-9, 2007 – Chicago, IL
September 17-18, 2007 – Los Angeles, CA
September 25-26, 2007 – Chicago, IL
October 8-9, 2007 – Boston, MA
December 3-4, 2007 – New Brunswick, NJ

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A day and a half devoted to this increasingly important topic. The Spaulding Group, Inc. invites you to attend Performance Measurement Attribution on these dates:

December 7-8, 2006 – Chicago, IL
January 25-26, 2007 – Reykjavik, Iceland
February 14-15, 2007 – New York, NY
April 18-19, 2007 – San Francisco, CA
May 10-11, 2007 – Chicago, IL
September 27-28, 2007 – Chicago, IL
October 10-11, 2007 – Boston, MA
December 5-6, 2007 – New Brunswick, NJ

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IN-HOUSE TRAINING

The Spaulding Group has offered in-house training to our clients since 1995. Beginning in 1998, we formalized our training, first with our Introduction to Performance Measurement class and later with our Performance Measurement Attribution class. We now also offer training for the CGIPS/CIPM program. To date, over 1,500 individuals have participated in our training programs, with numbers increasing monthly.

We were quite pleased when so many firms asked us to continue to provide training in-house, at their facilities. This saves our clients the cost to transport their staff to our training location and limits their time away from the office. And, because we discount the tuition for in-house training, it saves them even more! We can teach the same class we conduct to the general market, or we can develop a class that's suited specifically to meet your needs.

The two-day introductory class is based on David Spaulding's book, Measuring Investment Performance (McGraw-Hill, 1997). The attribution class draws from on David's second book Investment Performance Attribution (McGraw-Hill, 2003).

For as little as 10 people your firm can hold a Spaulding Group training session. And you can have the training customized to meet your unique needs.