

# PERFORMANCE PERSPECTIVES

with David Spaulding



VOLUME 12 – ISSUE 1

SEPTEMBER 2014

Since 1990, The Spaulding Group has had an increasing presence in the money management industry. Unlike most consulting firms that support a variety of industries, our focus is on the money management industry.

Our involvement with the industry isn't limited to consulting. We're actively involved as members of the CFA Institute (formerly AIMR), the New York Society of Security Analysts (NYSSA), and other industry groups. Our president and founder regularly speaks at and/or chairs industry conferences and is a frequent author and source of information to various industry publications.

Our clients appreciate our industry focus. We understand their business, their needs, and the opportunities to make them more efficient and competitive.

For additional information about The Spaulding Group and our services, please visit our web site or contact Chris Spaulding at [CSpaulding@SpauldingGrp.com](mailto:CSpaulding@SpauldingGrp.com)

<http://www.SpauldingGrp.com>

## THE START OF A NEW YEAR!

This marks the 12th year for this newsletter. Having had two prior attempts at newsletters last no longer than a few years, I have to say that I'm somewhat amazed that we've been able to keep this going. We appreciate the comments we get, as well as the participation in our monthly puzzles. As always, your thoughts, ideas, suggestions, etc. are always invited and welcome!

## THE CONFUSING WAYS OF OFF-BENCHMARK BETS

It's quite common for firms to invest in sectors or asset types that aren't in the benchmark; perhaps the clearest and most common example is cash. How should this be handled in attribution?

I recently learned that this topic is addressed in the CIPM program.<sup>1</sup> My colleague, John Simpson, who teaches our CIPM prep classes<sup>2</sup>, recently gave a brief lecture on it during a monthly session of the Performance Measurement Think Tank.<sup>3</sup> I found it quite interesting. However, I also discovered that it's a bit misleading; I'll explain.

First, let's consider how the Brinson-Fachler model handles cases where the firm is investing in a sector that's not in the benchmark, without any modifications (Table 1).

	Weights		Returns		Attribution Effects	
	Portfolio	Index	Portfolio	Index	Allocation	Selection
Financials	30%	50%	2.50%	3.00%	-0.10%	-0.15%
Health Care	40%	50%	2.20%	2.00%	0.05%	0.08%
Utilities	30%	0%	2.80%		-0.75%	0.84%
Portfolio	100%	100%	2.47%	2.50%	-0.80%	0.77%
	Excess Return			-0.03%	Total Effects	-0.03%

Table 1

The manager chose to invest in a sector that isn't in the benchmark. This sector proved to have the highest return, and no doubt helped the manager avoid an even worse excess return. The allocation and selection effects don't seem to make much sense, do they? Since selection is comparing the portfolio's return against zero,<sup>4</sup> we see a sizable selection effect; but there was no selection going on, it was merely allocation, was it not? That is, the manager chose to allocate into a different sector. This is actually an example from our Fundamentals of Performance Measurement course,<sup>5</sup> where I typically suggest that firms combine both the allocation and selection values and either show it under allocation (with zero for selection) or to create an entirely separate column, perhaps labeled "Off Benchmark Bets."

1 Certificate in Investment Performance Measurement. To learn more, visit <http://cfainstitute.org/programs/cipm>

2 For more information, visit <http://spauldinggrp.com/cipm-principles-and-expert-preparation/>

3 To learn more, visit <http://spauldinggrp.com/performance-measurement-think-tank/>

4 While the benchmark's weight for this sector is clearly zero percent, its return is actually null values, which isn't zero. However, we expect that most systems will treat it as zero.

5 To learn more, visit <http://spauldinggrp.com/fundamentals-of-performance-measurement/>

# The Journal of Performance Measurement®

## UPCOMING ARTICLES

### Mind the GAP: Questioning the Investment Manager's Stated Benchmark

– Panagiota Balfousia, CFA

### The Journal Interview

– Jenny Lor, CIPM, CFE, FRM

### Residual Interaction Compounding: A New Term in Multi-Period Arithmetic Attribution

– Joseph D'Alessandro

### Puzzles in Risk and Performance: Part 2

– Marcus Hedbring

### Contribution of Initial Holdings and Transactions to Performance

– Laurent Cantaluppi

### Exact Multi-Period Performance Attribution Model

– Carsten V. Berg

The CIPM offers three alternatives to handle this situation:

- 1) Manager has “Bottom-Up” the Utilities Sector, hence adaptation is to use the overall benchmark return as its return. Value added is thus measured as “Selection.”
- 2) Manager has “Top-Down” the Utilities Sector, hence adaptation is to use a substitute benchmark return. Value added is thus measured as Allocation and “Selection.”
- 3) Manager has added assets of a class unlike other benchmark assets, hence adaptation is to use the portfolio's sector's return for the benchmark. Value added is thus measured as Allocation.

Table 2 provides the results of doing this approach. And, as predicted, for case 1, we're ignoring allocation, so the entire effect is with selection; for case 2, both allocation and selection have results (and as we can see, the poor selection decision is evidenced by the lower return for this sector, vis-à-vis the proxy that is used); and for case 3, everything goes into allocation. Lovely!

There's just one small problem: what appears in selection is actually interaction, as the selection effect is zero. Recall that the

Brinson-Fachler selection effect formula is:  $Selection = (r_P - r_B) w_B$

If we substitute the portfolio weight in this formula, we actually are combining the interaction effect with selection.<sup>6</sup> Selection's contribution to this combined effect is zero, because the benchmark weight is zero; consequently, whatever value you substitute for the benchmark, the result has to be zero. Consequently, the value we're seeing is coming from:

$$Interaction = (w_P - w_B)(r_P - r_B)$$

And so, the selection effect's result is entirely attributable to interaction, or simply, the difference in weights times the difference in returns. Granted, there are many who think interaction belongs here, anyway.

Case 1	Weights		Returns		Attribution Effects	
	Portfolio	Index	Portfolio	Index	Allocation	Selection
Financials	30%	50%	2.50%	3.00%	-0.10%	-0.15%
Health Care	40%	50%	2.20%	2.00%	0.05%	0.08%
Utilities	30%	0%	2.80%	<b>2.50%</b>	<b>0.00%</b>	<b>0.09%</b>
Portfolio	100%	100%	2.47%	2.50%	-0.05%	0.02%
Excess Return				-0.03%	Total Effects	-0.03%
Case 2	Weights		Returns		Attribution Effects	
	Portfolio	Index	Portfolio	Index	Allocation	Selection
Financials	30%	50%	2.50%	3.00%	-0.10%	-0.15%
Health Care	40%	50%	2.20%	2.00%	0.05%	0.08%
Utilities	30%	0%	2.80%	<b>3.00%</b>	<b>0.15%</b>	<b>-0.06%</b>
Portfolio	100%	100%	2.47%	2.50%	0.10%	-0.13%
Excess Return				-0.03%	Total Effects	-0.03%
Case 3	Weights		Returns		Attribution Effects	
	Portfolio	Index	Portfolio	Index	Allocation	Selection
Financials	30%	50%	2.50%	3.00%	-0.10%	-0.15%
Health Care	40%	50%	2.20%	2.00%	0.05%	0.08%
Utilities	30%	0%	2.80%	<b>2.80%</b>	<b>0.09%</b>	<b>0.00%</b>
Portfolio	100%	100%	2.47%	2.50%	0.04%	-0.07%
Excess Return				-0.03%	Total Effects	-0.03%

Table 2

<sup>6</sup> Arguably, the column heading should read “Selection & Interaction.”

*The Journal of Performance Measurement* has begun a series on performance measurement professionals, and we need your help to identify the folks we should include. We focus on one or two people in each issue, with the list driven by input from other PMPs.

And so, please contact our editor, [Doug Spaulding](#) (732-873-5700) with your suggestions.

Table 3 shows the results if we include interaction. As you can see, in each case, selection is zero. Case 3, I believe, is the one that makes the most sense: a manager elected to invest in a sector that isn't in the benchmark; is this not an allocation decision? I understand the rationale behind wanting to use a proxy for the benchmark, but this could be considered arbitrary, since there's no control over what the source is.

Suffice it to say, the case 1 (overall benchmark return) and 2 substitutions (proxy return) for the benchmark return only work if you use the version of the model that combines interaction with selection.

The blog post resulted in loads of comments, and this remains a controversial issue.

Case 1	Weights		Returns		Attribution Effects		
	Portfolio	Index	Portfolio	Index	Allocation	Selection	Interaction
Financials	30%	50%	2.50%	3.00%	-0.10%	-0.25%	0.10%
Health Care	40%	50%	2.20%	2.00%	0.05%	0.10%	-0.02%
Utilities	30%	0%	2.80%	<b>2.50%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.09%</b>
Portfolio	100%	100%	2.47%	2.50%	-0.05%	-0.15%	0.17%
Excess Return			-0.03%		Total Effects		-0.03%
Case 2	Weights		Returns		Attribution Effects		
	Portfolio	Index	Portfolio	Index	Allocation	Selection	Interaction
Financials	30%	50%	2.50%	3.00%	-0.10%	-0.25%	0.10%
Health Care	40%	50%	2.20%	2.00%	0.05%	0.10%	-0.02%
Utilities	30%	0%	2.80%	<b>3.00%</b>	<b>0.15%</b>	<b>0.00%</b>	<b>-0.06%</b>
Portfolio	100%	100%	2.47%	2.50%	0.10%	-0.15%	0.02%
Excess Return			-0.03%		Total Effects		-0.03%
Case 3	Weights		Returns		Attribution Effects		
	Portfolio	Index	Portfolio	Index	Allocation	Selection	Interaction
Financials	30%	50%	2.50%	3.00%	-0.10%	-0.25%	0.10%
Health Care	40%	50%	2.20%	2.00%	0.05%	0.10%	-0.02%
Utilities	30%	0%	2.80%	<b>2.80%</b>	<b>0.09%</b>	<b>0.00%</b>	<b>0.00%</b>
Portfolio	100%	100%	2.47%	2.50%	0.04%	-0.15%	0.08%
Excess Return			-0.03%		Total Effects		-0.03%

Table 3

## EXTENDING ATTRIBUTION ACROSS TIME ... SURVEY RESULTS

We ran a survey online, and got a moderate level of response (74 participants). Despite the somewhat disappointing number, the results are still interesting, I believe. As I've suggested previously, this is a topic I wish to explore further, and this information may prove helpful.

We began by asking what lengths of periods the firm extends attribution for (please refer to Table 4). A small percent (5.4%) don't extend beyond a month. Most report on both three (62.2%), one-year (81.1%) and multiple years (55.4%). And, a sizable amount (44.6%) report since inception attribution.

Our next question asked if they annualize their values for periods longer than a year (see Table 5). Most either do (41.9%) or would like to (13.5%), while a still sizable number (44.6%) have no interest in annualizing their attribution results. Perhaps a question for a future survey would be "why," on both sides of this question. What does an annualized value tell you, and why wouldn't you want to?

## Can robo-advisors win control of investor assets?

According to a CNBC published article, “Their low-cost service delivery models and the increasingly sophisticated tools they offer to investors represent the future of the industry. Leaders of top wealth management firms may not see them as immediate threats, but they ultimately could have a major impact on the market for financial advice.”

Are you wondering if online investing/robo-advisors will become a threat or opportunity?

If yes, then check out more information about First Rate’s FREE event in Boston on Thursday, October 23rd where Advisor Partners CIO Dan Kern will be presenting on the future of online investing and what it means to you and your firm.

For more information, visit - [www.firstrate.com/2014-roadshow/](http://www.firstrate.com/2014-roadshow/)

We next drifted away from the topic of multi-period attribution, and asked a few other questions that we thought would be interesting. First, we asked if they report the interaction effect, and perhaps not surprisingly, roughly one third do, while the balance (two-thirds, roughly) do not. This is and will remain a controversial topic. (Table 6)

We wanted to know what the dominant attribution model is for equities, fully expecting it to be Brinson-Fachler; well, we weren’t disappointed (see Table 7). At one time, we found that most firms used Brinson-Hood-Beebower; but we believe that through education, most firms have realized that there is a significant difference between these models, and that Brinson-Fachler makes the most sense, at least for most managers. And so, no surprises here.

We opened the survey up to other comments, and received quite a lot:<sup>7</sup>

- If a fuller piece of research is being considered, it would be interesting to explore the value of calculating and presenting attribution over very long time periods as a single set of results. I have a maxim “just because it can be calculated does not mean it should be shown” that I frequently cite, particularly when asked for long term attribution as statistical noise and the evolving investment process makes long term single period attribution less reliable and usable; preferring instead discrete sub-period attribution.
- We have also been trying all sector macro attribution but the returns differ very greatly over time from the actual returns.
- We have only done attribution for two years, and currently the Bloomberg system is not good for attribution longer than one year. However we are looking for a system, which can do long attributions.

For what lengths of periods do you extend attribution effects? (check all that apply)		
Answer Options	Response Percent	Response Count
Do not extend more than a month	5.4%	4
Three months	62.2%	46
One year	81.1%	60
Multiple years	55.4%	41
Since inception	44.6%	33
<b>answered question</b>		<b>74</b>
<b>skipped question</b>		<b>0</b>

Table 4

For periods longer than a year, do you annualize the linked attribution effects?		
Answer Options	Response Percent	Response Count
Yes	41.9%	31
No, but would like to	13.5%	10
No, and have no interest in annualizing	44.6%	33
<b>answered question</b>		<b>74</b>
<b>skipped question</b>		<b>0</b>

Table 5

For equity attribution, do you typically report the interaction effect?		
Answer Options	Response Percent	Response Count
Yes	34.2%	25
No	65.8%	48
<b>answered question</b>		<b>73</b>
<b>skipped question</b>		<b>1</b>

Table 6

What attribution model do you most often employ?		
Answer Options	Response Percent	Response Count
Brinson-Fachler	82.4%	61
Brinson, Hood, Beebower	5.4%	4
Some other method	12.2%	9
<b>answered question</b>		<b>74</b>
<b>skipped question</b>		<b>0</b>

Table 7

<sup>7</sup> Please note that I took the opportunity to edit out comments that were more of a marketing nature; since the intent of this survey wasn’t to allow vendors to promote their systems; sorry.

## BEHIND THE SCENES AT TSG

Linda Burk



I am the Vice President of Administration (Office Manager) at The Spaulding group, and will be at the firm three years in January.

I was born in Ireland and moved to the US eighteen years ago. I am married to Dave and we have two sons Odin and Sean. I received an Associate's Degree in Communication from Union County College and a Bachelor's Degree in Journalism from Rutgers University. I enjoy photography, blogging, spending time with my family, and walks with my Australian Shepherd Dakota.

I love working at TSG because we are like a family unit and everyone works together as a team. I feel blessed to work with such a great group of people!

- Daily transaction-based returns at all levels (including security-level) provide a much more accurate result than just using monthly returns.
- I'd like to see what other firms (asset owners especially) use for attribution on their total fund and over which periods.
- Periods longer than one year are only done on special requests
- The first question was not clear to me. It is answered as the generally reported periods (M, Q and YtD). Also for multiple years is reported, but only on request.
- I do not think annualizing attribution is a good idea due to the mathematical inconsistencies between geometric linking and arithmetic relative return effects. That being said, it seems that there has been an increasing desire for clients to see annualized attribution over long time periods. So I would be curious to learn the different approaches practitioners have used to provide this type of attribution.
- Brinson-Fachler, and Karnosky and Singer
- Our attribution system does not currently have the ability to annualize, so we do this manually.
- The importance of the investment decision making process is often overlooked or not considered when individuals are building reports. Managers themselves are unaware of this fact, and so continue to utilize output that draws the wrong conclusion. Within some training events this topic is either not covered or glossed over.
- We currently only carry out attribution on equities. I personally believe the interaction effect is meaningful as a discrete data point. But, my firms' PMs view it as unnecessarily complicating, so it is not included in our performance reports (combined with selection - arghhh!). We are 100% SMA so attribution is carried out on a "model" portfolio. Data errors resulting from trades/prices, dividends, and security drift make attribution results for periods over six months oftentimes difficult to interpret. Those errors aside, we use the Brinson-Fachler notional portfolios and smooth using Laker's approach, which is applicable over any time period in my view.
- Equity attribution is basic, fixed income and multi asset more challenging. Top down / bottom up / hybrid etc. Check out Attribution LAB on linked in
- Brinson Fachler combined model with Cariño or Frangello smoothing algorithms for multi period attribution
- There should perhaps be a question about the level of attribution: Manager, asset type, country, sector or stock level"
- We use a proprietary fixed income model.
- We use Brinson-Fachler for equity and some fixed income attribution, but we most often use factor-based attribution for fixed income.
- CNP method works best for arithmetic attribution
- I favor a geometric methodology. Multi-year attribution is a little problematic and I tend to avoid producing it if I can! Better in my view to show consistency of the investment process. Show calendar annual attribution through time and show that the preponderance of value add comes from either policy and/or selection.

## 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.*

- I would like to know more on smoothing method which eliminates any residual in multi period attribution.
- Would like to use geometric attribution but it's difficult to do since the norm in our country is to use arithmetic return and therefore arithmetic attribution. It could be great to have a best practice saying geometric attribution and return is the proper way to go.
- We can report with or without Interaction effect. Standard is transaction based approach, but we do have buy & hold methodology available too.
- Q1: extend the attribution effects for too long time is not appropriate, that is right. The lengths depends on the decision cycle! so this question is not good enough.
- Q2: annualization is good and meaningful only on total level, it is not a good indicator at sector level.
- Q3: Better to have the interaction to make the other two decisions pure
- Q4: Brinson-Fachler is most used, but I prefer to a nested attribution. BF one is only working on a two layers decision, for a real 'top down' decision, 'nested attribution' should be the right one to reflect the investment process."
- Regarding #3, the report interaction but as part of security selection.
- We report two-factor (Selection + Interaction)
- Apply attribution models as per client requirements (interaction/no-interaction, top-down-bottom-up, equity/fixed-income/hybrid, cashflow BOD/EOD)...
- Long period attribution reports are most of the time requested by clients or prospects. As a performance specialist I don't see the point to go longer than three months.
- We provide both arithmetic (using Carino smoothing ) and geometric.

If there's a topic you think we should research, please let us know!

## PUZZLE TIME

### August Puzzle

*At first glance, this puzzle seems challenging; however, in reality, I don't think it's too difficult.*

*Two trains begin their respective journeys 150 miles apart from each other. They travel toward each other along the same track. The first (Train A) is traveling at 60 miles per hour (mph); the second travels at 90 mph. A fly goes back and forth between the two trains until they collide. If the fly's speed is 120 mph, how far will it travel?*

What do we know? Well,

Debi Rossi	USA
Hans Braker	Netherlands
Anthony Howland	UK
Andrew Peakman	UK
Alex Saldarriaga	USA
Dorian Young	USA
Gerard van Breukelen	Netherlands
Malcolm Smith	UK

To ensure that the CIPM Program Candidate Body of Knowledge (CBOK) stays relevant and up-to-date, CFA Institute needs input from industry experts involved with performance and risk measurement, performance and risk attribution, and/or performance appraisal on what knowledge, skills and abilities are important. Feedback to this survey serves as critical input in CFA Institute's continuous practice analysis process.

**Survey Link:**

[https://cfainstitute.qualtrics.com/SE/?SID=SV\\_9NVd7PsvhGb01eZ](https://cfainstitute.qualtrics.com/SE/?SID=SV_9NVd7PsvhGb01eZ)

The distance at the start is 150 miles.

- Train A travels at 60 miles per hour.
- Train B travels at 90 miles per hour.
- The trains are approaching each other.
- The fly is traveling at 120 miles per hour.

How long will it take for the two trains to meet? Hint: add the speeds each is travelling.

Okay, now that you did that, you know it's 150 miles. Therefore, they will, together, cover the 150 miles in one hour.

That means the fly has one hour to fly back and forth. Since we know it's traveling at 120 MPH, the answer has to be ....

120 miles!

**July Puzzle**

We got a late participant with the right answer: Henning Varner from Norway.

Oh, and I failed to include Neil Riddles in our list.

**September Puzzle**

This month's puzzle was submitted by our friend, colleague, and regular puzzle participant, Anthony Howland.

Anthony suggests that "the trick is actually in HOW to solve it, not simply finding the solution. If you work out HOW to solve it, it should take less than 20 seconds."

Therefore, when you submit your answer, please include *how* you solve it! (BTW, I took the long route).

€	+	\$	+	€	+	¥	=	19
+		+		+		+		
¥		¥		\$		\$	=	26
+		+		+		+		
\$		\$		€		£	=	18
+		+		+		+		
€		€		\$		€	=	14
=		=		=		=		
19		21		16		?		

**THE SPAULDING GROUP'S 2014  
INVESTMENT PERFORMANCE MEASUREMENT CALENDAR OF EVENTS**

DATE	EVENT	LOCATION
October 14-15	Fundamentals of Performance Measurement	Chicago, IL (USA)
October 16-17	Performance Measurement Attribution	Chicago, IL (USA)
November 11-12	Fundamentals of Performance Measurement	Dallas, TX (USA)
November 13-14	Performance Measurement Attribution	Dallas, TX (USA)
December 9-10	Fundamentals of Performance Measurement	New Brunswick, NJ (USA)
December 11-12	Performance Measurement Attribution	New Brunswick, NJ (USA)

*For additional information on any of our 2014 events, please contact Christopher Spaulding at 732-873-5700*

## TRAINING...

*Gain the Critical Knowledge Needed for Performance Measurement and Performance Attribution*

### TO REGISTER:

**Phone: 1-732-873-5700**

**Fax: 1-732-873-3997**

**E-mail: [info@SpauldingGrp.com](mailto:info@SpauldingGrp.com)**



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### FUNDAMENTALS OF 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 Fundamentals of Performance Measurement on these dates:

October 14-15, 2014 – Chicago, IL

December 9-10, 2014 – New Brunswick, NJ

November 11-12, 2014 – Dallas, TX

15 CPE & 12 PD Credits upon course completion

CFA Institute has approved this program, offered by The Spaulding Group, for 12 CE credit hours. If you are a CFA Institute member, CE credit for your participation in this program will be automatically recorded in your CE tracking tool.

CE Qualified Activity  CFA Institute

### PERFORMANCE MEASUREMENT ATTRIBUTION

Two full days devoted to this increasingly important topic. The Spaulding Group, Inc. invites you to attend Performance Measurement Attribution on these dates:

October 16-17, 2014 – Chicago, IL

December 11-12, 2014 – New Brunswick, NJ

November 13-14, 2014 – Dallas, TX

15 CPE & 12 PD Credits upon course completion

CFA Institute has approved this program, offered by The Spaulding Group, for 12 CE credit hours. If you are a CFA Institute member, CE credit for your participation in this program will be automatically recorded in your CE tracking tool.

CE Qualified Activity  CFA Institute

### 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 CIPM program. To date, close to 3,000 individuals have participated in our training programs, with numbers increasing monthly.

**UPDATED CIPM Principles and Expert Flash cards are now available on our web store. Please visit [www.SpgShop.com](http://www.SpgShop.com) today to order your set.**

Our performance experts have created a study aid which can't be beat: *flash cards!* These handy cards will help you and your associates prepare for the upcoming CIPM Principles Exam. Unlike a computer-based study aid, you can take them anywhere to help you test your knowledge.

Benefits of Flash Cards:

- Work at your own pace
- Immediate feedback
- Strengthen and reinforce core CIPM principles

These cards are a *must have* for anyone preparing to take the CIPM Exams.

