

# PERFORMANCE PERSPECTIVES

with David Spaulding



VOLUME 11 – ISSUE 2

OCTOBER 2013

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)

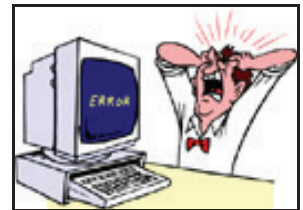
## ERROR CORRECTION: HOW TO DEFINE MATERIALITY

It is critically important that all firms have an error correction policy, whether they claim compliance with the Global Investment Performance Standards (GIPS®) or not. One aspect of the policy needs to address corrections to rates of return. We typically see two levels: material errors and errors that don't quite reach the level of being material. With non-material errors, simply correcting the error is probably sufficient; for material, we most likely will need to alert anyone who received the materials with the error.

What is meant by a "material error"? There is no definition within the GIPS standards,

I found the following definition for material: "an occurrence, event, or information that is sufficiently significant to influence an individual into acting in a certain way."<sup>1</sup>

I also found the following: "Omissions or misstatements of items are material if they could, by their size or nature, individually or collectively, influence the economic decisions of users taken on the basis of the financial statements."<sup>2</sup>



Note that both deal with the potential to influence the actions of someone. When it comes to material errors with performance, I believe the same concept holds true: that is, material errors are omissions or misstatements of information that might influence the decisions of recipients of the documents that contain such information. I'm sure we could come up with a better way of phrasing it, but I believe this is fundamentally correct.

And so, how do we decide the threshold to use for our returns?

I have discovered two common methods, which I label arithmetic absolute and arithmetic relative.<sup>3</sup> These methods can be described as follows:

- **Arithmetic Absolute:** an approach where you simply subtract the corrected return from the original, and if the absolute value is greater than some threshold (e.g., 50 basis points), you classify the error as being "material."
- **Arithmetic Relative:** a method where you take the absolute difference and determine the percentage change it represents relative to the originally reported return (e.g., if the arithmetic absolute is 0.50%, and the original return is 15.00%, divide 0.50 by 15.00 to get 3.33%).

1 <http://legal-dictionary.thefreedictionary.com/material>

2 <http://www.accountingweb.co.uk/anyanswers/question/material-and-fundamental-errors>

3 To my knowledge, I'm the first to actually give these two approaches names, and first did so in a recent blog post: <http://investmentperformanceguy.blogspot.com/2013/10/a-geometric-approach-to-materiality.html>

# The Journal of Performance Measurement®

## UPCOMING ARTICLES

### Fixed Income Attribution: The Constant Quest to Explain Residuals

– Bai Gu

### Effective Return of Portfolio Positions

– Peter Todd

### Mathematics Behind Multi- Level Attribution Keeping Apples and Oranges Separate

– Dmitry Cherkasov

### A Modification of the Modified Dietz Approach

– PA Cucurachi, V. Pomante

### The Journal Interview

– Joseph McDonagh, CFA

It appears that the arithmetic absolute is more common, though I prefer arithmetic relative. The reason has to do with the issue of proportionality; that is, depending on the magnitude of the returns (original and corrected) relative to the size of the threshold, different responses might result; that is, the *influence* that the error may have upon me may vary, depending on the size of the returns relative to the size of the error.

We are all familiar with this idea. In my blog I mentioned how we choose to represent our age can vary depending on how old we are. My younger grandson will be two in November, so we might say that he's one year and 11 months old. I, too, will have a birthday in November, but wouldn't say that I'm 62 years and 11 months old: imagine how people would react!<sup>4</sup>

Everett Dirksen once remarked "Mr. President, what is five million dollars compared to a \$95 or \$99 billion budget? It is a drop in the bucket." five million dollars is a lot of money, but apparently not when it's compared with many billions of dollars.

To me, it's not the absolute magnitude of the error, but whether the error, in the context of where it occurred, will influence me in such a way that I will draw a different conclusion. If I was told that the return was 23.54% and then a few weeks later told it was actually 23.04% or 24.04% (i.e., a 50 basis point correction), would it have a different affect on me than the originally reported return? Probably not. But, if I was told the return was 1.54% but now am told it was actually 1.04% or 2.04%, chances are I'd react differently; or, if it was reported as 1.04% but is actually 0.54 percent.

Realizing that we are talking about proportionality, it occurred to me that perhaps a geometric approach might work well. Recall that geometric excess returns are used when dealing with geometric attribution. With arithmetic, the attribution effects are to reconcile to the arithmetic excess return; and for geometric, they reconcile to the geometric form.

To me, the proportionality characteristic of geometric is the only thing going for it, as I prefer arithmetic otherwise. But putting that aside, it seems to have potential here. And so, I decided to run a few tests.

Consider the following:

Original	0.25%	0.25%	15.00%	15.00%	27.35%	27.35%
Corrected	1.25%	-0.75%	16.00%	14.00%	28.35%	26.35%
Arithmetic Absolute	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Arithmetic Relative	400.00%	400.00%	6.67%	6.67%	3.66%	3.66%
Geometric	1.00%	1.00%	0.870%	0.870%	0.785%	0.785%

The threshold is set to 100 basis points or more for materiality. At the low end (where the originally reported return was 0.25%), a change of 100 bps seems pretty significant, but much less so when the return was 27.35 percent. Arithmetic absolute treats them all the same; arithmetic relative doesn't. If we were to use an arithmetic relative approach, clearly 1% wouldn't work; we'd want something like 10%. The 400% clearly "blows that threshold away," screaming material, while it wouldn't apply for the other cases. But that 400%, though mathematically accurate, does seem a bit hyperbolic.

<sup>4</sup> Not so much to my advancing age, but the fact that I'd go out of my way of using months along with years.

# ATTRIBUTION *Week*

NOVEMBER 11-15, 2013  
an online  
 conference event

*“The Spaulding Group’s webinars are a cost effective way to train and keep my staff up to date on topics related to performance measurement, attribution, risk and GIPS. The online convenience allows us to train all of our staff without the hassle and expense of travel. It also provides us with an opportunity to get together and ask questions from industry experts that we would not otherwise have access to.”*

– Cinda Whitten

*Director of Investment Operations  
 at Principal Global Investors*

**November 11, 2013 - 11:00 AM (EST)**

## **Fundamentals of Performance Attribution**

*Stephen Campisi, CFA, US Trust*

- Learn the Fundamentals of Performance Attribution
- Learn how and why they are important to the overall investment story
- Learn how to begin to translate the story

**November 12, 2013 - 10:00 AM (EST)**

## **Factor Attribution for Fixed Income**

*Mary Cait McCarthy, Credit Suisse*

**November 13, 2013 - 12:00 Noon (EST)**

## **Multi-currency Attribution**

*John D. Simpson, CIPM,  
 The Spaulding Group*

**November 14, 2013 - 12:00 Noon (EST)**

## **Multi-Factor Attribution**

*Jose Menchero, Ph.D., CFA, MSCI*

**November 15, 2013 - 11:00 AM (EST)**

## **Transaction vs Holdings Based Attribution**

*David Spaulding, CIPM  
 The Spaulding Group*

Now, consider the geometric approach (which is also an absolute one). We can still use the 100 basis point threshold, which applies at the lowest end, but not at the higher; I happen to think this makes more sense and is, I believe, more in line with how one would respond to such errors.

Now, consider these examples:

Original	0.25%	0.25%	15.00%	15.00%	27.35%	27.35%
Corrected	0.75%	-0.25%	15.50%	14.50%	27.85%	26.85%
Arithmetic Absolute	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Arithmetic Relative	200.00%	200.00%	3.33%	3.33%	1.83%	1.83%
Geometric	0.50%	0.50%	0.435%	0.435%	0.393%	0.393%

The threshold here is 50 basis points. Again, we see that arithmetic absolute would consider all these to be material errors. Arithmetic relative, with a 10% threshold, would only consider the lowest. Again, a reading of 200% seems excessive and would cause the 10% to appear to be way too low for declaring materiality. Geometric, which aligns with arithmetic in deciding on materiality but in a more subtle way, seems better.

The geometric approach would essentially involve the same formula we use for geometric excess return, but using the original and corrected returns:

$$Geometric\ Materiality = \left| \frac{(1 + Original\ Return)}{(1 + Corrected\ Return)} - 1 \right|$$

You’ll notice that I took the absolute value, since we really are not concerned with the sign, but rather the magnitude of the error.

I think this approach has some merit, and am open to your thoughts; please email me (DSpaulding@SpauldingGrp.com).

## **PUZZLE TIME**

### **September Puzzle**

Last month’s puzzle did not garner the degree of participation that others often do, and this is either because of (a) lack of interest or (b) inability to figure out the answers. I failed to say that individuals could answer as many as they wanted; there was no requirement that all be completed. Perhaps this stifled a few.

As I made clear, I am a fan of acronyms and abbreviations. Here are the answers:

First, those dealing with our industry:

1. GIPS: Global Investment Performance Standards
2. AIMR-PPS: Association for Investment Management and Research, Performance Presentation Standards
3. CIPM: Certificate in Investment Performance Measurement
4. GRAP: in French, Groupe de Réflexion en Attribution de Performance, and in

## KEEP THOSE CARDS & LETTERS COMING

*We appreciate the e-mails 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.*

English, Group Reflection Attribution Performance<sup>5</sup>

5. VWAP: Volume Weighted Average Price<sup>6</sup>
6. TWRR: time-weighted rate of return
7. MWRR: money-weighted rate of return
8. IMCA: Investment Management Consultants' Association
9. Investment Council Association of America (now the IAA)
10. MAR: Minimal (or Minimum) Acceptable Return.

Next, the ones from programming:

1. COBOL: Common Business Oriented Programming
2. FORTRAN: Formula Translator (although there may be other variations of this)
3. PL/1: Programming Language one
4. APL: A Programming Language
5. BASIC: Beginner's All purpose Symbolic Instruction Code.

Allow me to pause here briefly. I spent many years both programming and teaching what was then called "systems" or "data processing" (now generally called information technology). My primary language was COBOL, though I also was familiar with others. I taught an introductory class at the University of Baltimore where BASIC was the language we used. Most people no doubt think it's called BASIC because, well, it's pretty basic! But alas, it IS an acronym. I've even asked folks who program in this language what it stands for and most don't know.

As for PL/1, as I recall, it was a language designed to replace both COBOL and FORTRAN; I don't think that happened. I learned a long time ago that you shouldn't have a "1" without a "2,"<sup>7</sup> and so, where is PL/2?

My favorite name is APL: that took a lot of creativity, didn't it? This is a fairly complex language, that uses its own keyboard; it is hardly just "a programming language."

As for the Army terms, if you are interested, I suggest you look up FUBAR and SNAFU, as they both are somewhat profane, though the terms are regularly tossed about. "M" in M-16 stands for "Model." Sometimes you'll see an "X" in front of it (e.g., XM1); this means "experimental." The "D" in "D Day" and "H" in "H Hour" stand for "day" and "hour," respectively.

None of those who submitted answers got them all correct, but enough that they deserve recognition.

Chaitanya Panchamukhi
Tanpreet Singh
Sanjeev Saha
Salil Natu

<sup>5</sup> See Giguère, Claude. 2005. "Thinking Through Fixed Income Attribution – Reflections From a Group of French Practitioners." *The Journal of Performance Measurement*. Summer.

<sup>6</sup> This may have been a bit unfair: it comes from transaction cost measurement.

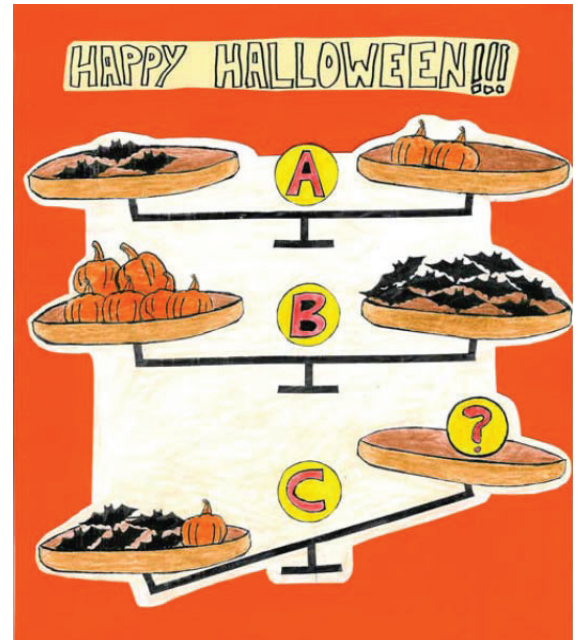
<sup>7</sup> For example, Pope Francis is NOT Pope Francis I, because that would say there has to be a II, which there isn't. If one day there is, then the first will get the "I" added, but not before

### October puzzle

Okay, this month we return to a mathematical challenge, which I hope is more to your liking.

Since we are in October and will celebrate Halloween, I thought a Halloween-based puzzle would be appropriate.

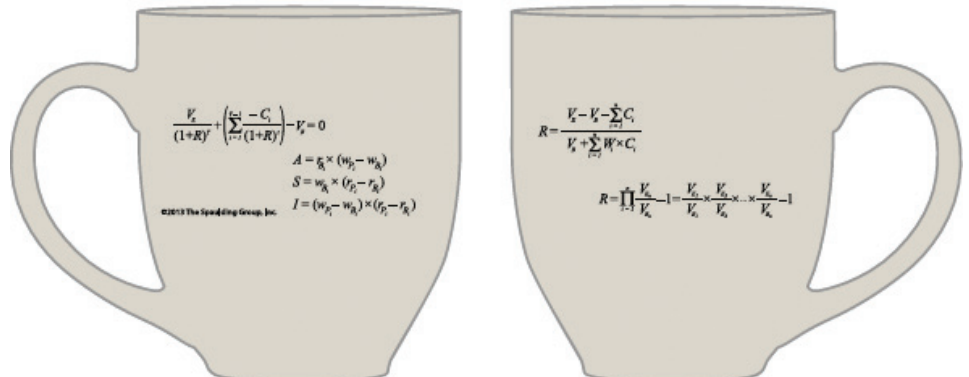
Please refer to the accompanying graphic, as that is the basis for the puzzle. You'll observe that the first two scales are in balance, while the third is not. Given what you can detect from the first two, how many bat cookies must you place on the empty side of scale C in order to form a balance with the left-hand side of that scale (which has five bat cookies and one pumpkin cookie)?

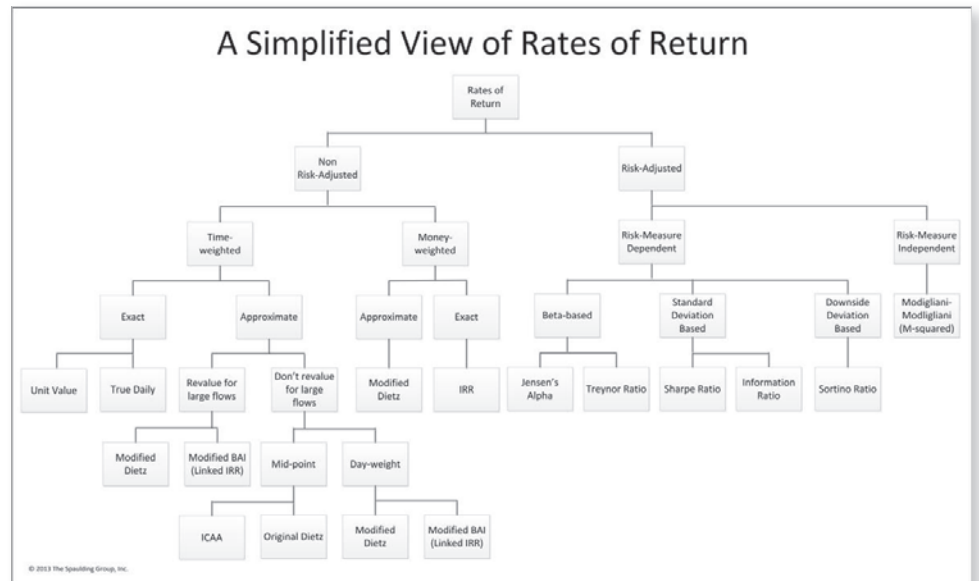


Note: both types of cookies have a soft line down the back so that they be broken into two even halves. This means your answer can, if necessary, use a half cookie.

### GIFT IDEAS, JUST IN TIME FOR THE HOLIDAYS!

At a recent meeting with a client, they remarked how they wanted to purchase a “performance” specific gift for their team to acknowledge their hard work and their focus. A suggestion was made that there should be a coffee mug available with various formulas we use and take for granted in our daily endeavors. So we took it upon ourselves to create a “must-have” mug for the performance professional who has everything. Imagine sipping your favorite warm beverage while knowing that you harness the mathematical nature of the universe in your hands. These coffee mugs will be available for \$14.95 each. If you would like to purchase one (or more for your team), please reach out to us at [JPuerschner@SpauldingGrp.com](mailto:JPuerschner@SpauldingGrp.com). We won't divulge the formulas just yet, as that's part of the fun!





Along the same lines as the mugs, we created a poster titled, “A Simplified View of Rates of Return.”

We think this chart will serve multiple purposes. First, it will be an attractive addition to your office or conference room! Second, it is practical, in that it helps communicate how the various formulas arise. And third, it serves to demonstrate that performance measurement isn’t all that simple.

If you’d like more information on this poster, please contact Jaime.



**Venue:** Grace Hotel Sydney

**Host:** International Business Review Conferences -IBR Conferences

**18-20 November 2013**

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## Martin Bjørn Jensen, CFA

### **Bio:**

Martin Bjørn Jensen, CFA is Head of Middle Office at Danske Capital, the asset management division of Danske Bank A/S. He specializes in performance measurement and attribution with more than 10 years of experience. In addition to running the performance team, Martin has responsibility for the Risk team as well as a team that supports the Managed Account products for retail clients. The risk team focuses on UCITS IV compliant risk measurement and reporting. Martin previously worked as a senior consultant at SimCorp A/S implementing performance solutions. He is a Chartered Financial Analyst (CFA) and holds a MSc in Mathematics and Economics from University of Southern Denmark.



## CLIENT'S CORNER

### *1. How long have you been involved in performance?*

I started in the asset management industry in 2003 specializing in performance and the SimCorp Dimension product. From the very start performance and SimCorp Dimension have been at the center for my professional development and continue to this day.

### *2. What do you enjoy most about it?*

I enjoy that performance is almost at the end of the value chain. To truly understand performance numbers you have to understand all the previous steps in the value chain. This means that in many cases have close contact with the Back Office team, the Static Data and Prices teams as well as the Front Office. When you get a question from either an internal or an external client, you often have to put yourself in Sherlock Holmes mode and start investigating. This forces you to be a major stakeholder within all of those teams.

### *3. What role does The Spaulding Group play at your firm?*

I participate in the European Performance Measurement Forums on a regular basis. I very much enjoy the informal discussions at the Forums and I bring back a lot of valuable insights and inputs to my daily work.

The Spaulding Series of books, including David Spaulding's Handbook of Investment Performance are staples at our firm when introducing new people to performance. I find that they are written in an easy to read language and that the books build upon themselves layer by layer allowing your knowledge to grow throughout each of the books.

Both me and my team members keep ourselves updated through the different medias including the monthly webcast, Journal of Performance Measurement and surveys that The Spaulding Group puts out there and we very much appreciate the effort that they have done for the industry.

## THE SPAULDING GROUP'S 2013 INVESTMENT PERFORMANCE MEASUREMENT CALENDAR OF EVENTS

DATE	EVENT	LOCATION
November 7-8, 2013	Performance Measurement Forum	Lisbon, Portugal
November 11-15, 2013	Attribution Week	Online
November 19-20, 2013	Fundamentals of Performance Measurement Training	Boston, MA (USA)
November 21-22, 2013	Performance Measurement Attribution Training	Boston, MA (USA)
November 21-22, 2013	Performance Measurement Attribution Training	Melbourne, Australia
December 5-6, 2013	Performance Measurement Forum	Orlando, FL (USA)
December 10-11, 2013	Fundamentals of Performance Measurement Training	New Brunswick, NJ (USA)
December 12-13, 2013	Performance Measurement Attribution Training	New Brunswick, NJ (USA)

*For additional information on any of our 2013 events, please contact Christopher Spaulding at 732-873-5700*

*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](mailto:doug.spaulding@spauldinggroup.com) (732-873-5700) with your suggestions.



## 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:

November 19-20, 2013 – Boston, MA

December 10-11, 2013 – New Brunswick, NJ

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.



#### 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:

November 21-22, 2013 – Boston, MA

December 12-13, 2013 – New Brunswick, NJ

November 21-22, 2013 – Melbourne, Australia

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.



#### 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.

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