

PERFORMANCE PERSPECTIVES

with David Spaulding



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MAY 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

ANNUALIZED STANDARD DEVIATION...WHAT DOES IT MEAN?

The Global Investment Performance Standards (GIPS®) require compliant firms to report a 36-month, *ex post*, annualized standard deviation for each year from 2011 onward for both the composite and its benchmark. When this was proposed, we saw lots of criticism, including the appropriateness of using standard deviation when the distribution is most likely not normal, and the use of a measure of variability/volatility to represent risk. But no one, to my knowledge and recollection, challenged the idea of annualizing the values.

It recently occurred to me that this statistic can't be interpreted. That is, no one can explain *what it means*, or at least no one I've spoken with recently.

Intuitively, one might think that it's like the monthly standard deviation: that is, one standard deviation, +/- from the average of annual returns will represent approximately two-thirds of the distribution. But is this true? I think not.

I recently ran a test against 36 years' of randomly generated monthly returns and derived the standard deviations based on months, quarters, and years; here's the summary statistics:

Standard Deviation, using:		Annualized StdD	Average Return
Months	2.31	7.99	3.05
Quarters	4.14	8.28	9.44
Years	8.23	8.23	43.30

I found it quite interesting that the annualized standard deviations are relatively close.

For months and quarters, the standard deviation represents two-thirds of the distribution, for the range average +/- one standard deviation; this is traditional statistics, which we're all familiar with. When there are 36 years, as we have here, the average return (43.30%) +/- 8.23% does, in fact, capture two-thirds of our distribution.

When we use only 36 months, however, we're using only three annual periods. What does the annualized standard deviation represent in this case? While the 36 months can be ordered in any way and still produce the same standard deviation, our portfolio only has it ordered in one way, with three defined annual periods.

The rationale behind showing annualized standard deviation is that we annualize returns. However, if we cannot meaningfully explain what this statistic represents, is it worth showing? I'm inclined to think not.

Is it likely that the requirement will go away? Hardly. But, firms can show the non-annualized value, along with the average return, to provide meaningful statistics to their clients and prospects.

<http://www.SpauldingGrp.com>

The Journal of Performance Measurement®

UPCOMING ARTICLES

Operational and IT Consequences of Performance Reporting

– Bruce Russell

Measuring Performance in the Presence of Deposits and Withdrawals

– Thomas Becker

The Journal Interview

– Richard Mitchell

Cumulative Frongello- Equivalent Attribution

– Tim Svenson

Milestone – Risk-Adjusted Performance Attribution

– Jose Menchero

A Simplified Fixed Income Attribution Model

– Peter Simmons,
Anton Karadakov

PUZZLE TIME

April Puzzle

We have a standard chess/checker board (i.e., 8 squares across, 8 squares down, for a total of 64 squares).

A bug sits in the lower left corner and wants to reach the upper right corner, where there is some food, ready to be eaten. The bug can only move either right or up, one square at a time.

How many possible unique paths are there that lead the bug to the food?



Figure 1

I was extremely impressed with the solutions that were offered. They essentially fall into two, and I will quote from the submitters who I feel did a great job explaining them.

First, there's what might be called the "logical" approach.

Jonathan McGee, CFA, CIPM was one who used this approach:

Below I have summarized my answer of this month's puzzle. My son was not able to product a valid response, but I explained my logic to him.

The grid below represents the number of possible paths from each square. I completed the top and right rows on an Excel template (i.e. 1 possible path each), and then copied a formula into the other cells (essentially adding the number of paths from the adjacent top and right cells).

3,432 was the total from the bug's starting point. I was able to avoid using statistical permutation formula using this logical approach.

1	1	1	1	1	1	1	1
8	7	6	5	4	3	2	1
36	28	21	15	10	6	3	1
120	84	56	35	20	10	4	1
330	210	126	70	35	15	5	1
792	462	252	126	56	21	6	1
1716	924	462	210	84	28	7	1
3432	1716	792	330	120	36	8	1

Malcolm Smith, who also used this approach, offered the following:

The answer to the puzzle is 3432. For a 3 rows and 2 columns board, there would be 3 routes. For any greater number of rows and columns, r and c, the number of permutations is the same as the sum of permutations for r-1 rows and c columns, plus the number of permutations for r rows and c-1 columns. This is because the bug's first

BEHIND THE SCENES AT TSG

John D. Simpson, CIPM



I am a Senior Vice President at The Spaulding Group, and am responsible for activities in the Western Region of the United States and Canada, which we define roughly as everything west of Chicago. I have been an employee of the company for nearly nine years, and will be involved in the investment industry for thirty years by this time next year. My responsibilities include conducting GIPS verifications and non-GIPS audits for a number of clients, and I am also an instructor for our various performance measurement and attribution courses. I designed and maintain our class and study materials for the Certificate in Investment Performance Measurement (CIPM) Program as well.

I like several things about working for The Spaulding Group, but probably at the top of the list is being involved in so many diverse activities related to performance measurement: consulting, verification, system reviews, training, conferences, etc. It helps to give us a broad perspective, which benefits our clients tremendously, I believe. I also enjoy helping individuals increase their knowledge when I teach our classes.

My educational background includes a BS in Applied Mathematics from the University of California at Los Angeles (UCLA), and I am a CIPM certificant. On a personal note, I enjoy sports, listening to music, travel, and good food. I am married with one daughter (10 years old). I am a southern California native, born in Long Beach, and have lived in the city of Malibu for the last 20 years.

move can be up or right, which puts it at the starting point of a grid that is either one column narrower or one row shorter than the grid the bug began with.

The number of permutations builds up as the number of rows and columns increases.

We next look at the “statistical” approach. Hans Braker gave a great explanation for it:

Regarding the April 2014 puzzle: the answer is that there are 3432 possible unique paths.

The essential thing to note is that each path from the lower left to the upper right consists of going up (U) seven times and going right (R) seven times. So the bug will make 14 steps in total, containing - in arbitrary order - 7 times a U and 7 times an R. Such a path may be UUUUUURRRRRRR or RUUUUUURURUUUR.

The solution is found in Pascal’s triangle. In fact, the 3432 shows up when you want to write out the formula $(x+y)^{14}$. This reads something like $x^{14} + 14xy^{13} + \dots + 3432x^7y^7 + \dots + 14x^{13}y + y^{14}$. The x^7y^7 is like the combination of 7 times U and 7 times R, and the 3432 shows in how many ways this combination can be achieved.

There are two ways to find the number:

- *fill in Pascal’s triangle, where the sum of the numbers in two squares determine the number in the subsequent square; after having filled in 63 of the 64 squares you will finally find $1716 + 1716 = 3432$;*
- *calculate $(14!) / (7! * 7!) = 3432$ (fourteen steps, but the U’s and R’s may be interchanged since they are identical; if the 14 letters would all have been different, there would have been $14!$ = more than 87 billion possibilities).*

May Puzzle

This month’s puzzle comes from, of all places, Facebook! If you’re a member (or even if you’re a member of LinkedIn) you’ll see these puzzles once-in-awhile, where the poster claims that only a few folks are able to solve it, and if you are, you must be a genius. Well, I think solving them hardly makes one a genius (some nice stroking, I guess), but this one is one that seems to have two possible solutions, but only one that’s correct.

WHAT IS THE ANSWER?

$$7 + 7 \div 7 + 7 \times 7 - 7$$

unfortunately most will get this WRONG!

Jed Schneider
Andrew Peakman
Malcolm Smith
Jonathan McGee
Hans Braker
Gerard van Breukelen

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.

FROM OUR READERS

Mike Savage offered the following comment in response to last month's **GIPS ALERT: Something you need to be aware of!!!**, where I wrote about the draft proposal for GIPS compliant firms to essentially register annually with the CFA Institute.

"Always enjoy the insights from this publication! I would love to be able to provide my comments to the CFA on the link provided, but it seems I need to be affiliated with an asset manager. Just wanted to let you guys know I totally agree with your opinions about the worthiness (or lack of) of such a requirement from the CFA and appreciate the value you bring in publishing this monthly."

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@cfainstitute.org) (732-873-5700) with your suggestions.

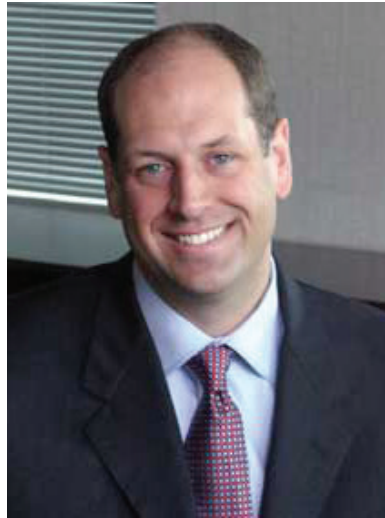


Mark Elliott

Director of Performance
& Attribution Solutions
at SS&C Technologies

Bio:

Mr. Elliott's responsibilities include global product strategy for the Sylvan and Pages product suites as well as management of the North American implementation and support groups. Mr. Elliott has been working for SS&C since 2000 in the performance measurement and attribution product division. Prior to joining SS&C, he held various positions in the finance field. Mr. Elliott worked as an Equity Research Analyst at Loewen Ondaatje McCutcheon Limited, a boutique research-based institutional equity firm and as a Senior Financial Analyst at BCE Inc. Mr. Elliott holds an MBA from the Rotman School of Management (University of Toronto) and a Bachelor of Commerce (Honors) from Carleton University.



CLIENT'S CORNER

1. How long have you been involved in performance?

I have been involved with performance for the last 14 years. I started with SS&C after completing an MBA and spending 5 years in corporate finance and equity research.

2. What do you enjoy most about it?

There are so many things that I enjoy in my job. Every day brings new challenges and new interesting problems to solve. I am lucky that I get to work with over 100 firms and get to work with them to help improve the level of service that they provide to both their internal and external clients. What I enjoy most is developing innovative solutions that help our clients meet their challenges.

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

The Spaulding Group plays an important role at our firm. We participate in the Performance Forum where we get a chance to interact with many other firms and learn what challenges others are facing. This helps us chart our product road map in an effort to provide solutions to meet the industry's need. We also participate at other Spaulding conferences as exhibitors, delegates and speakers. The conferences allow us to meet many prospects and learn more about the challenges facing the industry.

MSCI Performance Analytics Seminar - June 19, New York

Please join us for a seminar demonstrating the ways in which the MSCI BarraOne Performance Analytics platform can provide clients with the tools for powerful objective investment insight.

[Register Today!](#)

MSCI Portfolio Management Research Seminar Series - Spring 2014 - San Francisco, Chicago, Boston & New York

Staying ahead of the challenges—and strengthening your portfolio—has never been more critical. Join MSCI at one of our upcoming seminars to gain insight into the latest innovations and developments.

[Register Today!](#)

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

DATE	EVENT	LOCATION
June 10-11	PMAR V Europe America Square Conference Centre	London, England
June 17-18	Fundamentals of Performance Measurement	Chicago, IL (USA)
June 19-20	Performance Measurement Attribution	Chicago, IL (USA)
June 19-20	Performance Measurement Forum – EMEA Forum	Berlin, Germany
July 15-16	Fundamentals of Performance Measurement	San Francisco, CA (USA)
July 15-16	Fundamentals of Performance Measurement	Sydney, Australia
July 17-18	Performance Measurement Attribution	San Francisco, CA (USA)
July 17-18	Performance Measurement Attribution	Sydney, Australia
July 22-23	Fundamentals of Performance Measurement	New York, NY (USA)
July 22-23	Fundamentals of Performance Measurement	Hong Kong
July 24-25	Performance Measurement Attribution	New York, NY (USA)
July 24-25	Performance Measurement Attribution	Hong Kong
August 18-19	CIPM Principles Prep Class	Chicago, IL (USA)
August 20-22	CIPM Expert Prep Class	Chicago, IL (USA)
September 17	Portfolio Risk Class	Boston, MA (USA)
September 23-24	Fundamentals of Performance Measurement	Los Angeles, CA (USA)
September 25-26	Performance Measurement Attribution	Los Angeles, CA (USA)
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:

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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:

June 17-18, 2014 – Chicago, IL
 July 15-16, 2014 – San Francisco, CA
 July 15-16, 2014 – Sydney, Australia
 July 22-23, 2014 – New York, NY
 July 22-23, 2014 – Hong Kong

September 23-24, 2014 – Los Angeles, CA
 October 14-15, 2014 – Chicago, IL
 November 11-12, 2014 – Dallas, TX
 December 9-10, 2014 – 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:

June 19-20, 2014 – Chicago, IL
 July 17-18, 2014 – San Francisco, CA
 July 17-18, 2014 – Sydney, Australia
 July 24-25, 2014 – New York, NY
 July 24-25, 2014 – Hong Kong

September 25-26, 2014 – Los Angeles, CA
 October 16-17, 2014 – Chicago, IL
 November 13-14, 2014 – Dallas, TX
 December 11-12, 2014 – 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 CIPM program. To date, close to 3,000 individuals have participated in our training programs, with numbers increasing monthly.

CIPM PREP TRAINING: August 18-19, 2014 – Principles Level–Chicago, IL
 August 20-22, 2014 – Expert Level–Chicago, IL

UPDATED CIPM Principles and Expert Flash cards are now available on our web store. Please visit 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.

