PERFORMANCE PERSPECTIVES

with David Spaulding

VOLUME 10 – ISSUE 6 FEBRUARY 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

http://www.SpauldingGrp.com

This month's Spaulding Group webinar was a presentation on the challenges of "nested attribution," which Tricia Nelson, CIPM, of Waddell & Reed, and I conducted. We had quite a number of individuals join us, so it's clear that this is a topic of interest to many.

I won't repeat the entire presentation here, but will (a) point out two of the big challenges that firms face when trying to do nested attribution and (b) touch on an approach that works! A forthcoming article will go into much more detail.

Before we begin, let's explain what "nested attribution" means. It refers to doing attribution at three or more levels. You're now doubt familiar with doing attribution at two levels; e.g., portfolio and sector, or portfolio and asset class. BUT, if you want to drop down to lower levels (e.g., portfolio, sector, and subsector), you've moved into the "nested attribution" category, which requires some additional work. Some refer to this level as "multi level," though this term can have other meanings. While we might want to call this "balanced attribution," that term is usually reserved for occasions involving two or more asset classes, which would suggest that it's a special case of "nested attribution."

Let's touch on the challenges. There are two that many firms experience when trying to go beyond two levels.

If we employ a "bottom up" approach, where we first derive the attribution effects at the subsector level, and add them to arrive at the sector, we can experience what we see in Figure 1.

Sector Level Report

Class\Security	Portfolio Weight	Benchmark Weight	Portfolio Return	Benchmark Return	Allocation	Selection + Interaction
Portfolio	100.00%	100.00%	3.94%	1.55%	0.75%	1.65%
Energy	12.81%	4.65%	4.13%	4.90%	0.27%	-0.10%
Materials	[illegible]	[illegible]	4.49%	-0.47%	-0.07%	0.43%
Industrials	[illegible]	[illegible]	[illegible]	1.11%	0.03%	-0.20%

We see differences in the results, at both the total and sector levels

Subsector Report

Class\Security	Portfolio Weight	Benchmark Weight	Portfolio Return	Benchmark Return	Allocation	Selection + Interaction
Total Portfolio	100.00%	100.00%	3.94%	1.55%	-0.25%	2.65%
Energy	12.81%	4.65%	4.13%	4.90%	0.02%	0.16%
Energy Equipment & Services	1.86%	2.04%	3.01%	8.70%	-0.01%	-0.11%
Oil & Gas	10.95%	2.62%	4.32%	1.94%	0.03%	0.26%
Materials	8.76%	5.25%	4.49%	-0.47%	0.09%	0.27%

Figure 1

The Journal of Performance Measurement®

UPCOMING ARTICLES

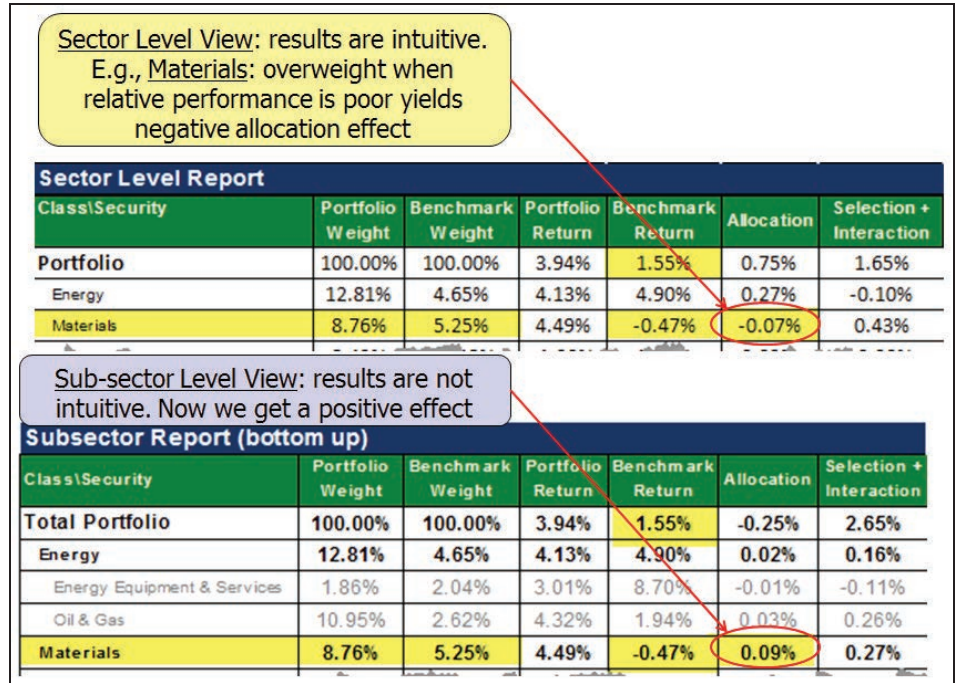
High Frequency Equity risk Attribution and Forecasting
– Ricky Cooper and Ting Ting Li

Performance Evaluation and Prediction
– Larry Harris

Combining Attribution Effects Over Time
– David Cariño

A Case for Arithmetic Attribution
– Mark David

The results are quite different than they would be, if we were to calculate the effects at the sector level. And so, while they add up nicely (i.e., we can tie our subsector results back to the sector), they aren't the same as what we'd get if we calculate the sector results directly. Also note that we get different results at the portfolio level! These can be problems, yes?



Sector Level Report

Class\Security	Portfolio Weight	Benchmark Weight	Portfolio Return	Benchmark Return	Allocation	Selection + Interaction
Portfolio	100.00%	100.00%	3.94%	1.55%	0.75%	1.65%
Energy	12.81%	4.65%	4.13%	4.90%	0.27%	-0.10%
Materials	8.76%	5.25%	4.49%	-0.47%	-0.07%	0.43%

Subsector Report (bottom up)

Class\Security	Portfolio Weight	Benchmark Weight	Portfolio Return	Benchmark Return	Allocation	Selection + Interaction
Total Portfolio	100.00%	100.00%	3.94%	1.55%	-0.25%	2.65%
Energy	12.81%	4.65%	4.13%	4.90%	0.02%	0.16%
Energy Equipment & Services	1.86%	2.04%	3.01%	8.70%	-0.01%	-0.11%
Oil & Gas	10.95%	2.62%	4.32%	1.94%	0.03%	0.26%
Materials	8.76%	5.25%	4.49%	-0.47%	0.09%	0.27%

Figure 2

In addition, we run the risk of having non intuitive results. Figure 2 shows an example. We overweight the Materials sector; and since its return (−0.47%) is below the overall benchmark's (1.55%), the sector level results show a negative allocation effect. However, with the second view, where the sector effects are the sum of the subsector effects, we now show a positive effect, which is counter intuitive.

And so, you have two choices:

- derive the sector results from the subsector, meaning you reconcile to between the levels, but get different results than what you get if you do sector level attribution only, and run the risk of having counter intuitive effects
- don't derive the sector results from the subsector, meaning that they don't tie out.

Steve Campisi developed a different approach, which he refers to as a "hierarchical view."[1]

In Steve's approach, he starts by calculating the attribution effects at the highest level (in his article, asset class; in our example, sector) and works his way down. Figure 3 shows this. Here, we see the weights and returns, as well as the attribution effects. Note that we're showing two: allocation and active. We're using the Brinson-Fachler model, and "active" is derived in the same manner as selection, with interaction.

1 "Balanced Portfolio Attribution," Journal of Performance Measurement, Winter 2008/2009

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.

PERFORMANCE MEASUREMENT HALL OF FAME

The Summer issue of *The Journal of Performance Measurement*® announced that we are seeking nominations for the Performance Measurement Hall of Fame. We credit our friend and colleague, Tim Ryan, for this suggestion.

The Journal's advisory board will vote on membership. We expect the "inaugural class" to consist of five to ten names.
The inductees will be announced in our Winter issue.

We thank Tim for thinking of this idea and for suggesting that we create the Hall.

Your suggestions and ideas are also invited.

Sector	Portfolio Weight	Portfolio Return	Benchmark Weight	Benchmark Return	Allocation	Active	Total
Energy	12.81%	4.13%	4.65%	4.90%	0.27%	-0.10%	0.18%
Materials	8.76%	4.49%	5.25%	-0.47%	-0.07%	0.43%	0.36%
Industrials	8.43%	-1.20%	15.28%	1.11%	0.03%	-0.20%	-0.17%
Consumer Discretionary	23.33%	5.65%	11.93%	5.55%	0.46%	0.02%	0.48%
Consumer Staples	3.38%	10.84%	2.90%	3.06%	0.01%	0.26%	0.27%
Health Care	3.53%	16.95%	5.05%	1.61%	0.00%	0.54%	0.54%
Financials	19.34%	2.35%	36.68%	1.02%	0.09%	0.26%	0.35%
Information Technology	6.48%	6.25%	11.07%	-0.02%	0.07%	0.41%	0.48%
Telecommunication Services	0.00%	0.00%	0.61%	6.25%	-0.03%	0.00%	-0.03%
Utilities	3.41%	-0.66%	6.58%	-0.96%	0.08%	0.01%	0.09%
Cash	10.53%	0.01%	0.00%	0.00%	-0.16%	0.00%	-0.16%
Total	100.00%	3.94%	100.00%	1.55%	0.75%	1.65%	2.39%

Figure 3

We now calculate the attribution effects at the subportfolio level. The first half of Figure 4 shows the ingredients (i.e., the weights and returns. Note that the weights are relative to the sector, not the portfolio; that is, we see the subsector weights relative to their respective sector. This is why the weights total 100 percent.

You'll notice that this is an abbreviated view of the full list of subsectors. This doesn't take away from the explanation.

Since each sector's weights total 100%, we can view them as individual portfolios. The attribution effects appear in gray portion of Figure 4. We see that for each sector, the sum of the subsectors' effects reconciles to its excess return. This reinforces the idea that we're dealing with the equivalent of individual portfolios

These effects, as they stand right now, have no real value. We need them adjusted, so that they fit within our portfolio. We adjust each sector's effects based on its weight in the portfolio. If you think about it you'll probably agree that this makes sense. Having ten individual sector level series of effects, as well as the effects for cash, has no relevance, unless it can be mapped back to the portfolio. And the logical mapping is to adjust them based on their respective weights.

Sector/Subsector	Portfolio Weight	Portfolio Return	Benchmark Weight	Benchmark Return	Allocation Effect	Selection Effect	Total
Energy Equipment & Services	14.49%	3.01%	43.76%	8.70%	-1.11%	-0.83%	-1.94%
Oil & Gas	85.51%	4.32%	56.24%	1.94%	-0.87%	2.04%	1.18%
Total Energy	**100.00%**	**4.13%**	**100.00%**	**4.90%**	-1.98%	1.22%	-0.76%
Excess Return (Energy Sector) =	***-0.76%***						
Chemicals	57.08%	5.49%	40.51%	-0.64%	-0.03%	3.50%	3.47%
Construction Materials	0.00%	0.00%	4.33%	7.67%	-0.35%	0.00%	-0.35%
Containers & Packaging	26.96%	7.72%	3.88%	5.11%	1.29%	0.71%	1.99%
Metals & Mining	0.00%	0.00%	30.67%	-3.99%	1.08%	0.00%	1.08%
Paper & Forest Products	15.97%	-4.55%	20.62%	2.34%	-0.13%	-1.10%	-1.23%
Total Materials	**100.00%**	**4.49%**	**100.00%**	**-0.47%**	**1.86%**	**3.10%**	**4.96%**
[illegible]	4.96[illegible]						
Indepen[illegible] Pow[illegible] Pr[illegible] Energ[illegible]	0.00%	[illegible]	5.12[illegible]	[illegible]	[illegible].02%	[illegible]	[illegible]
Total Utilities	**100.00%**	**-0.66%**	**100.00%**	**-0.96%**	**-0.82%**	**1.12%**	**0.30%**
Excess Return (Utilities Services Sector) =	***0.30%***						
Cash	100.00%	0.01%	0.00%	0.00%	0.00%	0.01%	0.01%
Excess Return (Cash Sector) =	***0.01%***						

Figure 4

Figure 5 shows how we do this. The subsector effects we just derived are each adjusted, based on their respective sector's weights. And so, for Energy, we multiply its relative weight (12.81%) times its effects, to derive the adjusted subsector effects.

UPCOMING INDUSTRY EVENTS:

DST Webinar:

"The Transparency Challenge: Balancing growth with compliance & client demand"

Join DST Global Solutions and CEB TowerGroup on March 20th, 2013 at 11:00 am EST. In addition to addressing top technology drivers in wealth management, the webinar will:

- Discuss various technology implications to consider when pursuing a mobile strategy
- Describe how to align a growth strategy with operational processes
- Provide perspective on the importance of tying data aggregation and reconciliation with client reporting

Attend and receive a complimentary reprint of the recent CEB TowerGroup report "*Best Practices in Client Reporting for Wealth Management*".

Click **here** to register. Please email anova@dstglobalsolutions.com for any questions.

Now, we're able to report our results. First, at the sector level, which is shown in Figure 6. Here we see the two allocation effects for each sector, as well as the selection plus interaction effects. A brief explanation is in order. The first allocation effect ("Sector Allocation") shows the results of the sector allocations, where the weights are relative to the overall portfolio. The second ("Subsector Allocation") is the sum of each sector's subsectors; i.e., it shows the results of the subsector allocations, which are relative to their weights in the sector.

Figure 7 shows the rest of our report, which is the subsector view. Here, we see the adjusted effects we calculated and showed in Figure 5. The sum of these effects equals the "Active" effect in Figure 3. And the sums also, as we'd expect, tie back to the sums in Figure 6, save for the sector allocation values, which only apply for the sectors.

The benefits of this model are several:

1. The subsector effects sum to the sector level.
2. The subsector effects produce the same values as we get if we calculate the sector effects directly, with the only exception being that at the sector level we show the values as a single effect ("Active") while at the subsector level, we break it up.
3. We get results that are intuitive.
4. We report two allocation effects, that tie back to two different sets of allocation decisions.

You may not be able to follow along completely. You're invited to obtain a copy of the webinar, if you'd like, by emailing Patrick Fowler (PFowler@SpauldingGrp.com), reviewing Steve's article, and/or await our forthcoming article on this topic.

Sector	Portfolio Weight	Portfolio Return	Benchmark Weight	Benchmark Return
Energy	12.81%	4.13%	4.65%	4.90%
Materials	8.76%	4.49%	5.25%	-0.47%

Sector/Subsector	Allocation Effect	Selection Effect	Total	Allocation Effect	Selection Effect	Total
Energy Equipment & Services	-1.11%	-0.83%	1.94%	-0.14%	-0.11%	-0.25%
Oil & Gas	-0.87%	2.04%	1.18%	-0.11%	0.26%	0.15%
Total Energy	-1.98%	1.22%	-0.76%	**-0.25%**	**0.16%**	**-0.10%**
Excess Return (Energy Sector) =						
Chemicals	-0.03%	3.50%	3.47%	-0.002%	0.31%	0.30%
Construction Materials	-0.35%	0.00%	-0.35%	-0.03%	0.00%	-0.03%
Containers & Packaging	1.29%	0.71%	1.99%	0.11%	0.06%	0.17%
Metals & Mining	1.08%	0.00%	1.08%	0.09%	0.00%	0.09%
Paper & Forest Products	-0.13%	-1.10%	-1.23%	-0.01%	-0.10%	-0.11%
Total Materials	**1.86%**	**3.10%**	**4.96%**	**0.16%**	**0.27%**	**0.43%**

Figure 5

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.

Portfolio Return	3.94%			
Benchmark Return	1.55%			
Excess Return	2.39%			
Sector View	**Sector Allocation**	**Subsector Allocation**	**Selection & Interaction**	**Total**
Energy	0.27%	-0.25%	0.16%	0.18%
Materials	-0.07%	0.16%	0.27%	0.36%
Industrials	0.03%	0.10%	-0.29%	-0.17%
Consumer Discretionary	0.46%	-1.09%	1.11%	0.48%
Consumer Staples	0.01%	0.09%	0.17%	0.27%
Health Care	0.00%	0.04%	0.50%	0.54%
Financials	0.09%	-0.01%	0.26%	0.35%
Information Technology	0.07%	-0.02%	0.43%	0.48%
Telecommunication Services	-0.03%	0.00%	0.00%	-0.03%
Utilities	0.08%	-0.03%	0.04%	0.09%
Cash	-0.16%	0.00%	0.00%	-0.16%
Total	**0.75%**	**-1.00%**	**2.65%**	**2.39%**

Figure 6

Subsector View	**Sector Allocation**	**Subsector Allocation**	**Selection & Interaction**	**Total**
Energy Equipment & Services		-0.14%	-0.11%	-0.25%
Oil & Gas		-0.11%	0.26%	0.15%
Chemicals		0.00%	0.31%	0.30%
Construction Materials		-0.03%	0.00%	-0.03%
[illegible]		[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]	[illegible]
Muti-Utilities & Unregulated Power		-0.01%	0.00%	-0.01%
Water Utilties		-0.01%	0.00%	-0.01%
Independent Power Producers & Energy Traders		0.00%	0.00%	0.00%
Cash		0.00%	0.00%	0.00%
Totals		**-1.00%**	**2.65%**	**1.65%**

Figure 7

Register today to take advantage of our Early Bird discount!

Call: 732-873-5700 to save $250 now!

The Journal of Performance Measurement®
Eleventh Annual International
PMAR
Performance Measurement, Attribution & Risk
Conference
May 16th - 17th, 2013

The Journal of Performance Measurement®
In Association with RIMES Technologies
PMAR IV
Performance Measurement, Attribution & Risk Conference
EUROPE
11 - 12 June 2013 – London

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

DATE	EVENT	LOCATION
March 11-12, 2013	Fundamentals of Performance Measurement Training	Boston, MA (USA)
March 13, 2013	Portfolio Risk	Boston, MA (USA)
March 14-15, 2013	Performance Measurement Attribution Training	Boston, MA (USA)
March 18-19, 2013	CIPM Principles Exam Preparation	New Brunswick, NJ (USA)
March 20-22, 2013	CIPM Expert Exam Preparation	New Brunswick, NJ (USA)
April 15, 2013	Fundamentals of GIPS Workshop	Toronto, ON, Canada
April 16-17, 2013	Fundamentals of Performance Measurement Training	Toronto, ON, Canada
April 18-19, 2013	Performance Measurement Attribution Training	Toronto, ON, Canada
May 14-15, 2013	Fundamentals of Performance Measurement Training	Philadelphia, PA
May 15, 2013	Fundamentals of GIPS Workshop	Philadelphia, PA
May 16-17, 2013	PMAR XI	Philadelphia, PA
May 25, 2013	Performance Measurement For Non-Performance Professionals	San Francisco, CA (USA)
June 10, 2013	Fundamentals of GIPS Workshop	London, England
June 11-12, 2013	PMAR Europe IV	London, England
June 13-14, 2013	Fundamentals of Performance Measurement Training	London, England
July 16-17, 2013	Fundamentals of Performance Measurement Training	San Francisco, CA (USA)
July 18-19, 2013	Performance Measurement Attribution Training	San Francisco, CA (USA)
July 22, 2013	Fundamentals of GIPS Workshop	Sydney, Australia
July 23-24, 2013	Fundamentals of Performance Measurement Training	Sydney, Australia
July 25-26, 2013	Performance Measurement Attribution Training	Sydney, Australia
August 19-20, 2013	CIPM Principles Exam Preparation	Chicago, IL (USA)
August 21-23, 2013	CIPM Expert Exam Preparation	Chicago, IL (USA)
September 18, 2013	Portfolio Risk	Boston, MA (USA)
September 23, 2013	Fundamentals of GIPS Workshop	Vancouver, BC, Canada
September 24-25, 2013	Fundamentals of Performance Measurement Training	Vancouver, BC, Canada
September 26-27, 2013	Performance Measurement Attribution Training	Vancouver, BC, Canada
October 21, 2013	Fundamentals of GIPS Workshop	London, England
October 22-23, 2013	Fundamentals of Performance Measurement Training	Chicago, IL (USA)
October 24-25, 2013	Performance Measurement Attribution Training	Chicago, IL (USA)
November 18, 2013	Fundamentals of GIPS Workshop	Boston, MA (USA)
November 19-20, 2013	Fundamentals of Performance Measurement Training	Boston, MA (USA)
November 21-22, 2013	Performance Measurement Attribution Training	Boston, MA (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

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

The Spaulding Group, Inc. is registered with the National Association of State Boards of Accountancy (NASBA) as a sponsor of continuing professional education on the National Registry of CPE Sponsors. State boards of accountancy have final authority on the acceptance of individual courses for CPE credit. Complaints regarding registered sponsors may be addressed to the National Registry of CPE Sponsors, 150 Fourth Avenue North, Suite 700, Nashville, TN 37219-2417. **www.nasba.org**

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:

March 11-12, 2013 – Boston, MA
April 16-17, 2013 – Toronto, ON, Canada
May 14-15, 2013 – Philadelphia, PA
June 13-14, 2013 – London, England
July 16-17, 2013 – San Francisco, CA
July 23-24, 2013 – Sydney, Australia
Sept. 24-25, 2013 – Vancouver, BC, Canada
October 22-23, 2013 – Chicago, IL
November 19-20, 2013 – Boston, MA
December 10-11, 2013 – New Brunswick, NJ

15 CPE & 12 PD Credits upon course completion

The Spaulding Group is registered with CFA Institute as an Approved Provider of professional development programs. This program is eligible for 12 PD credit hours as granted by 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:

March 14-15, 2013 – Boston, MA
April 18-19, 2013 – Toronto, ON, Canada
July 18-19, 2013 – San Francisco, CA
July 25-26, 2013 – Sydney, Australia
Sept. 26-27, 2013 – Vancouver, BC, Canada
October 24-25, 2013 – Chicago, IL
November 21-22, 2013 – Boston, MA
December 12-13, 2013 – New Brunswick, NJ

15 CPE & 12 PD Credits upon course completion

The Spaulding Group is registered with CFA Institute as an Approved Provider of professional development programs. This program is eligible for 12 PD credit hours as granted by CFA Institute.

IN-HOUSE TRAINING

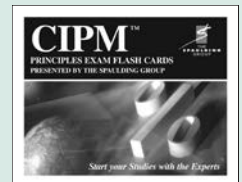
The Spaulding Group has offered in-house training to our clients since 1995. Beginning in 1998, we formalized our training, first with our Introduction to Performance Measurement class and later with our Performance Measurement Attribution class. We now also offer training for the CIPM program. To date, close to 3,000 individuals have participated in our training programs, with numbers increasing monthly.

We were quite pleased when so many firms asked us to continue to provide in-house training. This saves our clients the cost of transporting their staff to our training location and limits their time away from the office. With the discounted 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 David's second book Investment Performance Attribution (McGraw-Hill, 2003).

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.