

# PERFORMANCE PERSPECTIVES

with David Spaulding



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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>

## TREYNOR RATIO MYSTERY, SOLVED

Recall that last month we discussed the Treynor ratio and how Jack Treynor essentially disavows how it's typically presented, with beta, as the risk measure, in the denominator. When trying to uncover how the change was made, at Jack's suggestion I reached out to Will Gottesman from Yale. Will acknowledged awareness of Jack's issues with the measure but didn't know the source of the introduction of beta and suggested that I ask Bill Sharpe. As of last month I hadn't yet heard from Bill, but since then I have. His response:

*I don't have my 1966 paper at hand so will have to guess about this.*

*I certainly always thought that Jack advocated using beta as the denominator and the mean excess return as the numerator. My ratio (that I called the Reward-to-variability ratio) used the same numerator but standard deviation as the denominator. My original paper provided the motivation for my ratio and I covered it as well in my later JPM paper. I have certainly called the version with beta in the denominator the Treynor Ratio for years, as have others. As you know, others started calling my ratio the Sharpe Ratio which was nice, although it doesn't convey any information about its content.*

*At this stage of life I am willing to concede that every discovery of consequence can be traced to some Cistercian monk in the middle ages.*

Bill Sharpe didn't use the word "beta" in his article, but did use the letter "B" and called the denominator volatility (and the measure risk-to-volatility ratio, as opposed to his risk-to-variability ratio, which became known as the Sharpe ratio). In reading his article I assumed that Bill meant this to be beta, but until I got his confirmation couldn't be sure. Now we know.

I can see how Bill would have concluded that Jack meant the risk measure to be beta and so can't fault him for this conclusion. Why this wasn't addressed 40 years ago is a mystery as well, but at least now we know.

## WHAT ABOUT NEGATIVE SHARPE RATIOS?

One topic that's gotten a fair amount of attention is the notion of what to do when the Sharpe ratio is negative. Recall that there are multiple ways to express the ratio with the two most common appearing to be:

$$SR_1 = \frac{\bar{r}_p - \bar{r}_f}{\sigma r_p}$$

$$SR_2 = \frac{\bar{r}_p - \bar{r}_f}{\sigma(r_p - r_f)}$$

where:

$r_p$  = portfolio return  
 $r_f$  = risk free return.

# The Journal of Performance Measurement®:

## UPCOMING ARTICLES

### A Geometric Attribution Model and a Symmetry Principle

– Yuri Shestopaloff, Ph.D.

### Long-Short Portfolio Analytics

– David Asermely

### Risk Attribution and Portfolio Optimizations under Tracking-Error Constraints

– Philippe Bertrand

### Daily Time-weighted Return

– Trevor Davies

### The Hazards of using IRR to Measure Performance: The Case of Private Equity

– Ludovic Phalippou

### Time Calculations for Annualizing Returns: the Need for Standardization

– Damien Laker, CIPM

### The Blob Attacks Investment Manager Due Diligence: Invasion of the Perilous Peer Group Bias

– Ronald J. Surz

The difference is obviously how we define risk: in one case it's strictly the standard deviation of the portfolio return; in the other case it's the standard deviation of the equity risk premium (portfolio return minus risk free rate).

We are conducting a “mini survey” to find out how vendors are calculating this ratio.

But now let's address the subject of negative Sharpe ratios. Let's begin with the details as shown in Table 1.

	Excess Return	Risk	Sharpe Ratio
Fund A	9%	5%	1.80
Fund B	9%	10%	0.90

Table 1

The goal with Sharpe ratios is to have a high number, yes? So, when we compare these two funds we conclude that Fund A did a better job in managing risk, as it achieved the same return as Fund B but took on less risk.

Now, let's look at Table 2.

	Excess Return	Risk	Sharpe Ratio
Fund A	-9%	5%	-1.80
Fund B	-9%	10%	-0.90

Table 2

In this case Fund B again took on more risk; however, we get what some might argue are counterintuitive results, as the Sharpe ratio for Fund B is higher than Fund A's.

As with much of what we deal with in performance measurement, there are differing views as to whether this actually is a problem or not. Much has been written on this subject and I plan to offer a piece at a later date that will go into much greater detail on this topic. But for now I'll simply provide one of the suggested alternatives should you feel that the results are incorrect.

Israelsen<sup>1</sup> proposed a modification to the Sharpe ratio when excess returns are negative: we simply raise the denominator to the negative one power, which is equivalent to multiplying it by the numerator. This adjusts our earlier formulas as follows:

$$SR_{1'} = (\bar{r}_p - \bar{r}_f) \times \sigma_r \qquad SR_{2'} = (\bar{r}_p - \bar{r}_f) \times \sigma(r_p - r_f)$$

Table 3 provides the results if we employ this variation. Here we find that Fund A gets a higher ratio.

<sup>1</sup> See Israelsen, Craig. “Sharpening the Sharpe Ratio.” *Financial Planning*. January 2003. Also, Israelsen, Craig. “A refinement to the Sharpe ratio and information ratio.” *Journal of Asset Management*. November 2004.

## Performance Measurement is our Passion™

The Spaulding Group can address any issue that you may come across in the field of investment performance measurement

### OUR PRODUCTS AND SERVICES

We help clients address performance measurement in a variety of ways, for example:

#### Consulting

TSG helps firms evaluate the broader areas of performance to include calculations (which to use and when), reporting (for internal use, for prospects, and for clients), system issues, data issues, GIPS® Compliance (the why and how), as well as other areas.

#### Verification/Certification

We offer GIPS verification. And, if you are not claiming GIPS compliance but need your numbers certified, we can do that, too!

#### Training

We offer a variety of training classes including, Introduction to Performance Measurement, Performance Measurement Attribution, Advanced Performance Measurement, Performance Measurement for Plan Sponsors and Consultants, and our Performance Measurement Boot Camp. We also offer prep courses for the CIPM certification. Our classes are also available in-house at a significant discount.

#### Research

We survey the industry annually on a variety of topics including Performance Technology, Attribution, GIPS, and The Performance Measurement Professional. Our research services are also available on a proprietary basis.

#### Publishing

We publish *The Journal of Performance Measurement*® as well as the Spaulding Series of books, our *Formula Reference Guide*, among other publications.

#### Conferences/Forum

TSG hosts the annual Performance Measurement, Attribution and Risk (PMAR™) Conference each May. PMAR IV drew 160 attendees. We also host the Trends In Attribution (TIA) Symposium. The Performance Measurement Forum is a membership group which meets twice a year in the United States and twice a year in Europe.

	Excess Return	Risk	Sharpe Ratio
Fund A	-9%	5%	-0.0045
Fund B	-9%	10%	-0.0090

Table 3

Note that the same challenges to the Sharpe ratio apply to the Information ratio, so if you modify one you may want to modify the other. We are also investigating how the various software vendors handle this.

### ANNUALIZING STANDARD DEVIATIONS

While reviewing a client's new performance system I found that they, like many firms, annualize standard deviation. And why might one do this? To put the results on the same plane as other statistics that may be shown. However, does this make sense?

Consider the monthly returns shown in Table 4. The average return is 0.62 percent. If we calculate the standard deviation (using the form of the equation where the denominator equals the number of elements in our distribution or "n") we get 1.90%, which means that roughly two-thirds of the distribution falls within the average, plus-or-minus the standard deviation.

If we annualize the return we get 4.68 percent. And if we annualize the standard deviation (by multiplying by the square root of 12) we get 6.57 percent. Does our usual interpretation (that the average plus-or-minus the standard deviation holds two thirds of the distribution) hold? How would we know? We don't have 30 years worth of numbers, we only have 29 months. And yet, we've projected these values out to a full year.

I would suggest that we are unable to use the same interpretation with standard deviation when we annualize it; to do so would have the same challenges as annualizing the return for a period less than a year.

In a discussion with Steve Campisi on this topic he mentioned that Andrew Lo wrote an article<sup>2</sup> that addresses this subject from the standpoint of annualizing the Sharpe ratio. I plan to address this topic in greater detail in a forthcoming article. In the mean time your thoughts are welcome.

0.84%
3.30%
-1.29%
-1.24%
-4.99%
0.10%
-2.49%
1.74%
2.95%
0.50%
-2.48%
-0.91%
2.46%
2.52%
0.92%
-0.21%
0.53%
0.82%
1.89%
2.16%
0.87%
1.73%
0.00%
-0.01%
-2.57%
1.05%
1.02%
-0.55%
2.95%

Table 4

<sup>2</sup> Lo, Andrew W. 2002. "The Statistics of Sharpe Ratios." *Financial Analysts Journal*. (July/August)

## 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.*

## VERIFIER INDEPENDENCE

We've addressed the subject of verifier independence in the past, most recently in November 2007. And while the standards and verification have been around for 15 years, we still have issues, in spite of the delivery of guidance on this very topic.<sup>3</sup>

Karyn Vincent made me aware of a situation she recently encountered involving a verifier who has established a joint venture in South Korea.<sup>4</sup> As I understand it, this relationship promotes "one-stop shopping," which includes consulting, IT solutions, and performance calculations, along with verification.

It appears that this is a problem because the verifier would be verifying its own work; that is, some of what the firm will be reviewing will have resulted from work done by other parts of their joint venture. This is a problem. When firms violate the rules and/or spirit of the standards, they not only impact their own reputation, but tarnish the image of the standards themselves. Since there is no "watch dog" or "verifier police," the standards rely on individual firms to perform in an appropriate manner.

***"It's the greatest game there is. It's the only game I know where you can call a penalty on yourself, if you're honest, which most people are."***

Hardy Greaves (J. Michael Moncrief)  
*The Legend of Bagger Vance*

But once again it appears that we have a case where a verifier is a bit more aggressive than they should be and may be creating a problem. To me the litmus test is "will the verifier verify his/her own work?" If yes, then they have a conflict.

And while I can see the appeal to the client to have a "one stop shopping" relationship, the conflict is such that they should avoid it.

## A "WHITE PAPER"

Advent approached me several months ago to write a paper on attribution. We're pleased to announce that it's now available. To get a copy visit:

[http://www.advent.com/about/resources/white\\_papers/performance-attribution](http://www.advent.com/about/resources/white_papers/performance-attribution)

## PERFORMANCEJOBS.COM WEBSITE

***If you have two to five years experience and are looking for career advancing opportunities submit your resumes to PerformanceJobs.com.***

We're pleased to announce that our new website is now available for PerformanceJobs.com. Take a visit and you'll also see that we already have jobs posted. We're very excited with the initial interest this new venture has caused and look forward to it becoming the major resource for individuals seeking employment as well as firms looking to hire. If you know of someone who is looking for a career in investment performance, please direct them to our site and encourage them to submit their resume today.

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<sup>3</sup> "Guidance Statement on Verifier Independence." *GIPS Handbook*. (2nd Edition, 2006).

<sup>4</sup> [http://www.vincentperformance.com/files/VPS\\_Views\\_7\\_08.pdf](http://www.vincentperformance.com/files/VPS_Views_7_08.pdf)

## THE SPAULDING GROUP'S 2008 INVESTMENT PERFORMANCE MEASUREMENT CALENDAR OF EVENTS

DATE	EVENT	LOCATION
September 22-23	Introduction to Performance Measurement Training	Boston, MA (USA)
October 7-8	Introduction to Performance Measurement Training	New York, NY (USA)
October 9-10	Performance Measurement Attribution Training	New York, NY (USA)
October 7-8	Introduction to Performance Measurement Training	San Francisco, CA (USA)
October 9-10	Performance Measurement Attribution Training	San Francisco, CA (USA)
October 21-22	Introduction to Performance Measurement Training	Chicago, IL (USA)
October 23-44	Performance Measurement Attribution Training	Chicago, IL (USA)
November 13-14	Performance Measurement Forum (Europe)	Amsterdam, The Netherlands
November 19	Trends in Attribution Symposium (TIA)	Philadelphia, PA (USA)
December 4-5	Performance Measurement Forum (North America)	Orlando, FL (USA)
December 8-9	Introduction to Performance Measurement Training	New Brunswick, NJ (USA)
December 10-11	Performance Measurement Attribution Training	New Brunswick, NJ (USA)

*For additional information on any of our 2008 events,  
please contact Christopher Spaulding at 732-873-5700*

# Save the Date!

*The Journal of Performance Measurement®  
Second Annual International*

# TIA

Trends In Attribution

## SYMPOSIUM

*November 19, 2008*

## TRAINING...

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

#### TO REGISTER:

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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:

September 22-23, 2008 – Boston, MA

October 7-8, 2008 – New York, NY

October 7-8, 2008 – San Francisco, CA

October 21-22, 2008 – Chicago, IL

December 8-9, 2008 – New Brunswick, NJ

**15 CPE & 12 PD Credits upon course completion**

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#### 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 9-10, 2008 – New York, NY

October 9-10, 2008 – San Francisco, CA

October 23-24, 2008 – Chicago, IL

December 10-11, 2008 – 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, over 2,000 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 transporting 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 David's second book Investment Performance Attribution (McGraw-Hill, 2003). The two-day Advanced Performance Measurement Class combines elements from both classes and expands on them.