# PERFORMANCE PERSPECTIVES
with David Spaulding

HOLDING ON FOR DEAR LIFE...

I came across this photo on social media; can't recall where. The anonymous quotation struck me, because I frequently encounter performance measurement professionals who refuse to cave in on certain items.

For example, those who have a "death grip" on the notion of "time-weighting only!" It's kind of like a bumper sticker I saw several decades ago

that went something like "I'll give up my gun when they tear the cold, dead fingers away from it." Likewise, too many refuse to even consider that perhaps, just perhaps, they might be wrong about the merits of money-weighting.

On occasion it's suggested that I do not like time-weighting: I do, very much. My performance measurement career has been built partly around it. Why would I not like it? It's just that I see money-weighting as a valuable alternative/supplement. Everyone in performance should. Don't you agree?
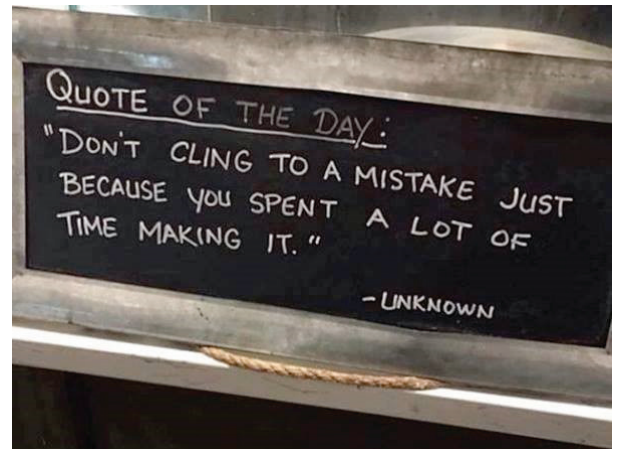
TALKING ABOUT QUOTATIONS, WHAT MATTERS TO YOU?

I likewise saw this on social media:

IS THERE A QUOTE THAT GUIDES YOUR LIFE?
"It's a belief: **Life is always happening *for* us, not *to* us.** It's our job to find out where the benefit is. If we do, life is magnificent."

I believe it was spoken by the motivational speaker, Tony Robbins.

What a great question, yes?

One for me comes from the movie "The Confession," and is spoken by the character Ben Kingsley portrays. I like it so much that it appears on my office wall:

It isn't hard to do the right thing; what's hard is knowing what the right thing is. But once you know what the right thing is; it's hard not to do the right thing.

BEST PRACTICES FOR ASSESSING A PENSION FUND'S PERFORMANCE

I recently blogged about this topic,[1] and thought it appropriate to expand upon it here.

Pension funds typically report their returns annually. I have come to learn that these returns are more often than not calculated using a time-weighted method.

Is this appropriate? Or, perhaps, is more needed?

I believe pension funds, as well as other asset owners, should have two targets, not one. And each target should carry with it a different return.

What's the typical investment process for a pension fund?

I've engaged in discussions with members of the Asset Owner Roundtable,[2] as well as in other venues on this topic. And while I've attempted in spoken words to convey my ideas, writing them here, and having the accompanying graphic, will hopefully make my thoughts clearer.

I believe the appropriate starting point is the process used to make investment decisions. And the graphic is as a way to explain my vision as to how the process typically works, albeit in a more than simplified/summarized fashion. Hopefully, it's not too far off target.

01 Obtain Actuarial Defined Objective
The projected year's absolute target return to meet the plan's needs

02 Establish / Define Tactical Allocation
The allocation that should result in meeting the plan's absolute target return

03 Implement Plan's Tactical Allocation
Allocate across asset classes, sectors, etc., and select the managers for each

04 Evaluate results
Assess how managers performed against market indexes; how allocation performed against target

The starting point is the objective as defined by the organization's actuary(ies). Pension funds have projected external in- and outflows. The outflows include anticipated payments to pensioners. The actuaries take this information and project a required return. This is, in my view, the plan's target objective. For our example it's 1 percent.

The CIO (Chief Investment Officer), along with other members of his/her team, take this objective and develop allocation decisions that they believe will meet this objective. By assessing the various markets, the economy, and other information, as well as the organization's appetite for risk, they come up with their tactical allocation.

They next implement the allocation, by adjusting how much is being invested across the various asset classes, sectors, sub-sectors, etc. They also decide what managers to use.

After the year closes, it's time to assess how well everything worked. That's really the point of this post.

Two or more targets for the pension fund to evaluate

What is frequently done is to report the overall plan's time-weighted rate of return.

Does this have return any value? Well, yes, it does.[3]

If we compare it against the appropriate market index, which presumably is a blending of the underlying indexes that align with the various sectors, sub-sectors of the allocation, it will tell us how well the managers performed, overall. This is a reasonable target to evaluate; that is, the plan's return vs. the blended benchmark's.

This idea can be extended further, by looking at each manager and their benchmark, to see how they performed individually.

And how did the plan do in meeting the actuarial objective?

Even more important than assessing how managers did relative to the blended benchmark is the evaluation of the plan's results relative to its objective. We want to know if the allocation did, in fact, meet the objective or the target return, as established by the actuaries.

Recall that this was our starting point; and so, does it not make sense to "circle back" and see if that objective was met?

And how best to do that? With a money-weighted return, of course! Specifically, by using the internal rate of return (IRR).

Comparing the pension fund's time- and money-weighted rates of return

In our example the overall target was established as 1 percent. Well, how did we do?

To demonstrate this idea, I created a very simple portfolio, which began with $50 million in assets. I have two cash flows per month: inflows, of $500,000, on the 15th, and outflows, of $200,000, on the last day of each month. I intentionally structured the portfolio that for each month we'd have a positive return but lose a bit of money. My point, of course, was to end up with a portfolio with a satisfactory positive return, but that lost money: something that most performance measurement professionals (and perhaps many investment professionals, in general) are familiar with.

The fund's overall time-weighted return was 1.02 percent, meaning we beat our target of 1.00 percent.

However, this is the time-weighted return. We should be using it to compare our results against the overall blended benchmark, which is defined[4] as 0.98 percent, meaning that we beat it.

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3   Well, actually, if you read last month's newsletter you saw how I would prefer to blend time- and money-weighted returns, since not all managers are assessed using time-weighting (e.g., private equity managers). See http://www.spauldinggrp. com/wp-content/uploads/2014/05/NLJUN172.pdf

4   This is a totally contrived, hypothetical example, simply here to make a point. We could, of course, extend it to actual plan portfolios, which could be an interesting research project. If any pension funds are interested in this exercise, please let me know.

	July				August				September				October		
V_B	6/30/16	50,000,000			7/31/16	50,295,000			8/31/16	50,589,000			9/30/16	50,888,000	
V	7/14/16	60,000,000			8/14/16	55,000,000			9/14/16	54,000,000			10/14/16	55,000,000	
R_1	7/14/16		20.0%		8/14/16		9.4%		9/14/16		6.7%		10/14/16		8.1%
CF	7/15/16	500,000			8/15/16	500,000			9/15/16	500,000			10/15/16	500,000	
V	7/15/16	60,500,000			8/15/16	55,500,000			9/15/16	54,500,000			10/15/16	55,500,000	
V_E	7/31/16	50,495,000			8/31/16	50,789,000			9/30/16	51,088,000			10/31/16	51,387,000	
R_2			-16.5%				-8.5%				-6.3%				-7.4%
CF	7/31/16	(200,000)			8/31/16	(200,000)			9/30/16	(200,000)			10/31/16	(200,000)	
R_M			0.2%				0.1%				0.1%				0.1%
G/L		(5,000)				(6,000)				(1,000)				(1,000)	

	November				December				January				February		
V_B	10/31/16	51,187,000			11/30/16	51,486,000			12/31/16	51,785,000			1/31/17	52,084,000	
V	11/14/16	54,000,000			12/14/16	54,500,000			1/14/17	60,000,000			2/14/17	62,000,000	
R_1	11/14/16		5.5%		12/14/16		5.9%		1/14/17		15.9%		2/14/17		19.0%
CF	11/15/16	500,000			12/15/16	500,000			1/15/17	500,000			2/15/17	500,000	
V	11/15/16	54,500,000			12/15/16	55,000,000			1/15/17	60,500,000			2/15/17	62,500,000	
V_E	11/30/16	51,686,000			12/31/16	51,985,000			1/31/17	52,284,000			2/28/17	52,583,000	
R_2			-5.2%				-5.5%				-13.6%				-15.9%
CF	11/30/16	(200,000)			12/31/16	(200,000)			1/31/17	(200,000)			2/28/17	(200,000)	
R_M			0.0%				0.1%				0.1%				0.2%
G/L		(1,000)				(1,000)				(1,000)				(1,000)	

	March				April				May				June		
V_B	2/28/17	52,383,000			3/31/17	52,682,000			4/30/17	52,981,000			5/31/17	53,280,000	
V	3/14/17	56,000,000			4/14/17	56,500,000			5/14/17	56,500,000			6/14/17	60,000,000	
R_1	3/14/17		6.9%		4/14/17		7.2%		5/14/17		6.6%		6/14/17		12.6%
CF	3/15/17	500,000			4/15/17	500,000			5/15/17	500,000			6/15/17	500,000	
V	3/15/17	56,500,000			4/15/17	57,000,000			5/15/17	57,000,000			6/15/17	60,500,000	
V_E	3/31/17	52,882,000			4/30/17	53,181,000			5/31/17	53,480,000			6/30/17	53,779,000	
R_2			-6.4%				-6.7%				-6.2%				-11.1%
CF	3/31/17	(200,000)			4/30/17	(200,000)			5/31/17	(200,000)			6/30/17	(200,000)	
R_M			0.1%				0.1%				0.1%				0.1%
G/L		(1,000)				(1,000)				(1,000)				(1,000)	
R_{Year}	1.02%	Gain/Loss	(21,000)												

We also want to know how we did against the target (1%). This is something I believe most pension funds don't do. In reality, this is the more important assessment. I.e., if you beat your market index[5] but fail to beat the target, you've not succeeded.

In the case of our plan, its internal rate of return for the year was -0.04 percent.

When we look at our gain/loss for the year, we see that we actually lost $21,000. And so, despite our +1.02 TWRR, we lost money. Our IRR does a better job reflecting our performance, does it not?

This was, of course, an extreme example. More often than not, the TWRR won't be positive and the plan lose money. But I chose this as a way to add some drama. Hopefully, it didn't diminish the point that the IRR has a role to play in the evaluation.

So, what do you think?

Please email me (DSpaulding@SpauldingGrp.com) with your thoughts, ideas, reactions.

GIPS® IS POURING IT ON!

Just when you thought things were slowing down, the GIPS Executive Committee (and its subcommittees) has been hard at work producing new guidance statements.

There's an exposure draft on risk[6] and verifier independence.[7] Please review and comment!!!

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5 Which the plan's investment team defined via their tactical allocation decisions.

6 https://www.gipsstandards.org/standards/Documents/Guidance/exposure_draft_public_comment_risk.pdf

7 https://www.gipsstandards.org/standards/Documents/Guidance/exposure_draft_public_comment_verifier_independence.pdf

July Puzzle

That was so much fun, let's try a similar problem:[8]

FIGURING OUT NUMBERS

Alan and Bob, two perfectly intelligent mathematicians, are trying to figure out two different numbers. They know that both numbers are integers between 1 and 100, but neither of the numbers are 1 or 100. Alan only knows the product of the numbers and Bob only knows the sum of the numbers:

Alan says to Bob, *"I cannot tell what the two numbers are."*
Bob replies, *"I already knew you couldn't."*
Alan then says, *"Ah, now I know the numbers!"*
Bob replies enthusiastically, *"Now I know them too!"*

What are the two numbers?

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8 Both puzzles come from Facebook's the Math: An Integral Part of Happiness group.

PUZZLE TIME

June Puzzle

There are four brothers, One, Two, Three and Four.
Four says to One, "I have four apples more than you."
Three says to Four, "I have two apples more than Two."
Two says to Three, "I have One apples less than Four."
One says to Two, "I have three apples less than you."
There are total 40 apples.
Who has the most apples?

I found approaching this problem a bit challenging; that is, where to start?

To answer the question (Who has the most apples?) is not really difficult.
Let's review what we know:

- Four has 4 > One
- Three has 2 > Two
- Two has 1 < Four
- One has 3 < Two
- Since One has 3 < Two, and Two has 1 < Four, then it follows that One has 4 < Four. But, we already know that, since the first statement is that Four has 4 > One, which is just the inverse of this conclusion.
- Two has 1 < Four, and Three has 2 > Two, so Three has 1 > Four.

And so, we can summarize a bit:

- Three has 1 > Four
- Four has 1 > Two
- Two has 3 > One
- One has the fewest. Three has the most.

But, we should figure out how many each has, right? We can do a string of all these relationships: Three has 1 > Four, which has 1 > Two, which has 3 > One.

Let's define "X" as the amount that One has. We know the following:

- X+3 is the amount that Two has
- X+4 is the amount that Four has
- X+5 is the amount that Three has.

And, we know the sum of what they each have is 40. This is a simple algebraic equation:

$$X + (X+3) + (X+4) + (X+5) = 40$$
$$4X + 12 = 40$$
$$4X = 40 - 12 = 28$$
$$X = \frac{28}{4} = 7$$

One has 7 apples, Two has 7+3 or 10 apples; Four has 7+4 or 11 apples; and Three has 7+5 or 12 Apples:

- One = 7
- Two = 10
- Four = 11
- Three = 12

Total = 40!

I guess this is 11th grade algebra (or, what we called it 50+years ago, Algebra II).

I found Neil Riddle's notation a bit better than mine; plus, he solved it using a different approach:

I will refer to the brothers as B1 through B4. The information we are given is:
B4=B1+4
B3=B2+2
B4=B2+1
B2=B1+3

So that everything is stated in B2 terms, we can rearrange the last equation to B1=B2-3.
B1=B2-3
B2=B2
B3=B2+2
B4=B2+1

For a number we have 40=4xB2 + (1+2-3) or 4xB2 =40 or B2=10

So, Brother 3 has12 apples (10+2), Brother 4 has 11 apples (10+1), Brother 2 has 10 apples. Sadly, Brother 1 has only 7 apples (10-3).

Others who successfully solved the puzzle were Debi Rossi, Anthony Howland, Hans Braker, Prashant Sakrawar, and Daniel Kempf. Oh, and Hans Braker also solved the May puzzle! His name was left off last month's issue.

THE SPAULDING GROUP'S 2017
INVESTMENT PERFORMANCE MEASUREMENT CALENDAR OF EVENTS

DATE	EVENT	LOCATION
September 2017	Basic Risk Measures Webcast	
September 6-7, 2017	Fundamentals of Performance Measurement	Toronto, Ontario
October 16-17, 2017	Fundamentals of Performance Measurement	Los Angeles, CA
October 18, 2017	PMAR West Coast	Los Angeles, CA
October 19-20, 2017	Performance Measurement Attribution	Los Angeles, CA
November 9-10, 2017	Performance Measurement Forum	Rome, Italy
November 14, 2017	Asset Owner Roundtable	Orlando, FL
November 15-16, 2017	Performance Measurement Forum	Orlando, FL
December 2017	Performance Measurement for Non-Performance Professionals Webcast	
December 11-12, 2017	Fundamentals of Performance Measurement	New Brunswick, NJ
December 13-14, 2017	erformance Measurement Attribution	New Brunswick, NJ

For additional information on any of our 2017 events, please contact Patrick Fowler at 732-873-5700

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September 6-7, 2017 – Toronto, Ontario
October 16-17, 2017 – Los Angeles, CA
December 11-12, 2017 – New Brunswick, NJ

15 CPE & 12 PD Credits upon course completion

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October 19-20, 2017 – Los Angeles, CA
December 13-14, 2017 – 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.