

# Use-specific performance analysis – old and new insights on how to calculate the asset allocation effect

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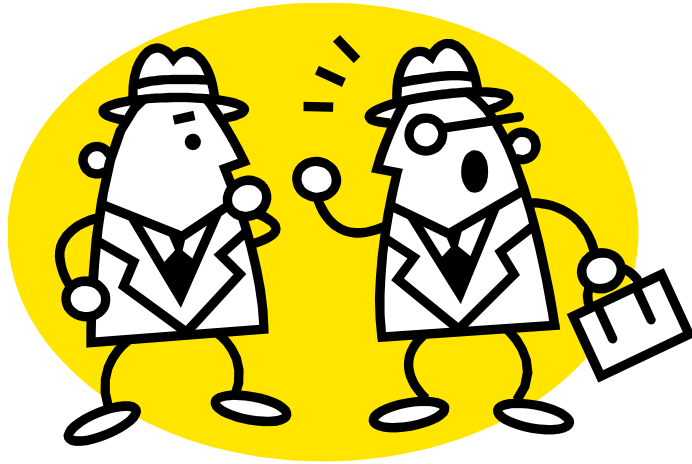
# Agenda

- Question: Why use-specific performance analysis?
- Example: Use-specific performance analysis
- Answers by standard setters and regulators
- Performance analysts between desire and reality
- Discussion
- Contact details and disclaimer

Question: Why use-specific performance analysis?

# Performance analysis an area for a lot of discussion

(1/4)



Time- versus money-weighted rate of return

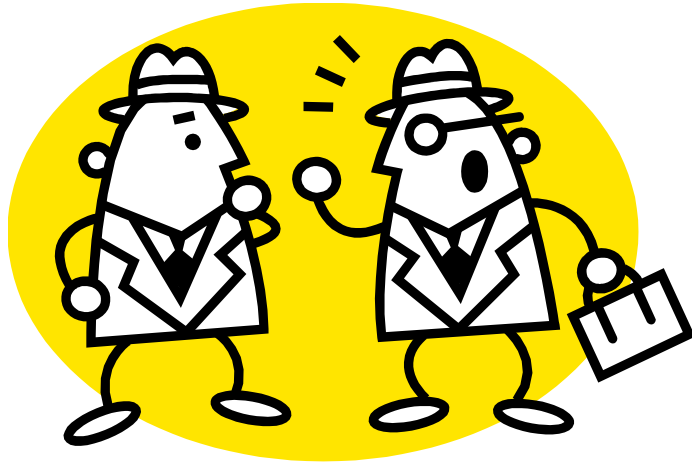
Volatility versus downside risk

Single- versus multi-factor risk attribution

Transaction- versus holdings-based return attribution

# Performance analysis an area for a lot of discussion

(2/4)



Macaulay, modified, key rate, ... duration

Net- versus gross return

CHF, EUR, USD ... versus percentage based analytics

Brinson-Hood-Beebower versus Brinson-Fachler

# Performance analysis an area for a lot of discussion

(3/4)



and ...

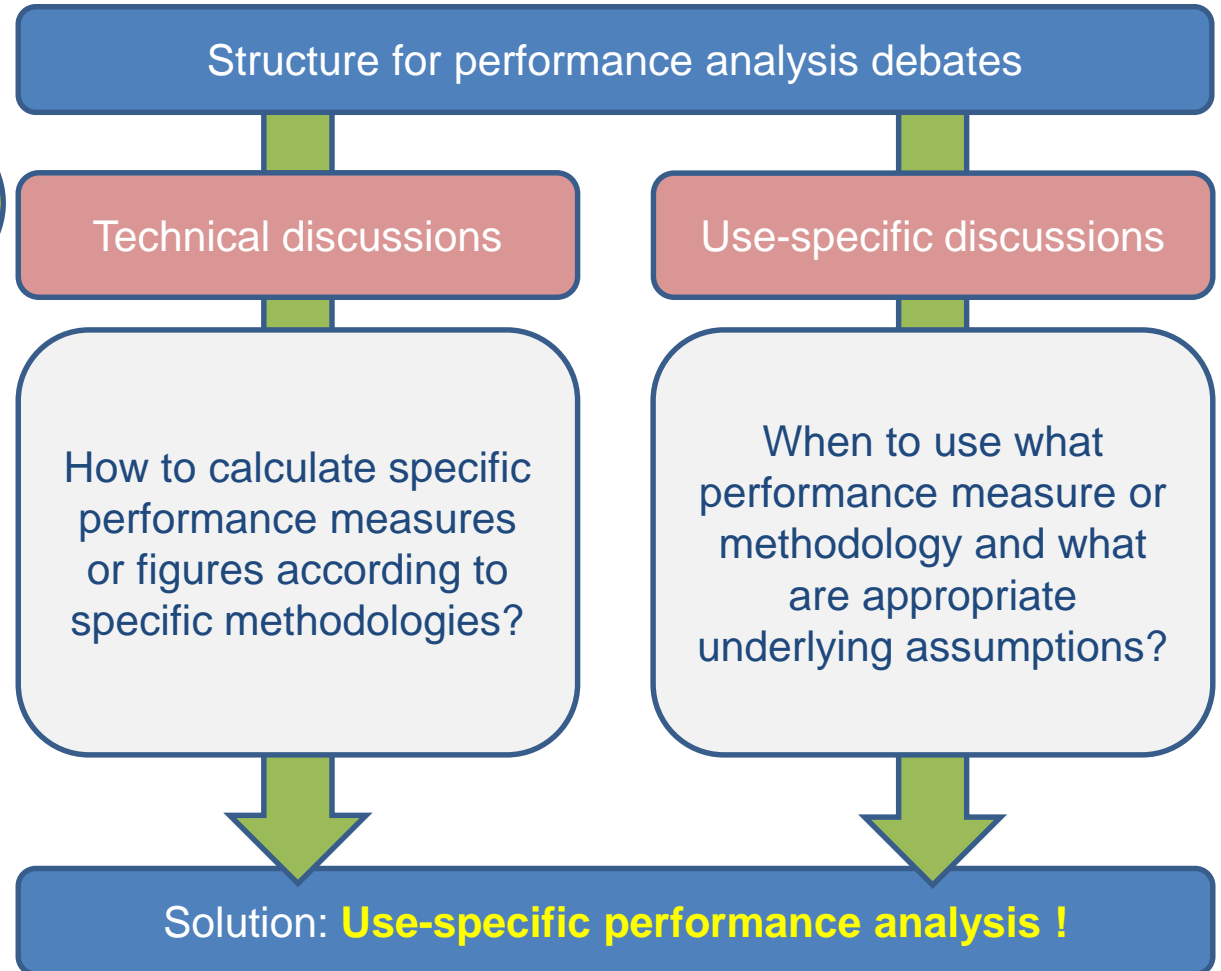
Log- versus simple returns

Actual days, 360 days, 365 days, ...

BHB-based versus multi-factor fixed income attribution

# Performance analysis an area for a lot of discussion

(4/4)



# Example: Use-specific performance analysis



A stage set featuring a large, draped red curtain with a scalloped top edge. The curtain is pulled back on both sides, revealing a dark, vertically pleated curtain behind it. The floor is a dark, solid color. The text "The scene" is centered in the middle of the image.

The scene

# The scene



Mr. Smith

	Portfolio			Benchmark			Total
	Weight	Return	Contribution	Weight	Return	Contribution	
Cash	24.00%	1.00%	0.24%	20.00%	1.00%	0.20%	0.04%
Equities	46.00%	11.50%	5.29%	40.00%	11.00%	4.40%	0.89%
Fixed income	30.00%	0.30%	0.09%	40.00%	0.40%	0.16%	-0.07%
Total	100.00%	5.62%	5.62%	100.00%	4.76%	4.76%	0.86%



Mr. Thomas

Investment committee members discussing the past return of a pension plan ...  
and especially who added what to the overall return.

A stage set featuring a vibrant red color scheme. The top is dominated by a large, draped valance of red velvet curtains with deep, cascading folds. Below this, a red pleated curtain hangs vertically, serving as a backdrop. The lower portion of the stage is framed by two side curtains of the same red velvet, which are gathered and tied back with matching red fabric bands. The floor of the stage is a dark, muted blue-grey color. The overall lighting is warm and focused on the central area.

Stage 1

# Who added what? – Stage 1

(1/5)

	Portfolio			Benchmark			Total
	Weight	Return	Contribution	Weight	Return	Contribution	
Cash	24.00%	1.00%	0.24%	20.00%	1.00%	0.20%	0.04%
Equities	46.00%	11.50%	5.29%	40.00%	11.00%	4.40%	0.89%
Fixed income	30.00%	0.30%	0.09%	40.00%	0.40%	0.16%	-0.07%
Total	100.00%	5.62%	5.62%	100.00%	4.76%	4.76%	0.86%

Mr. Smith: “Shall we pay the portfolio manager a bonus?”

Mr. Thomas: “Yes, but only if the portfolio manager did good stock picking, as we are doing the asset allocation.”

Mr. Smith: “Especially as we heavily over weighted equities in this fantastic bull market.”

# Who added what? – Stage 1

(2/5)

## Use-specific return attribution – BHB on stock level

	Asset allocation effect	Stock picking effect	Interaction effect	Total
Cash	0.04%	0.00%	0.00%	0.04%
Equities	0.66%	0.20%	0.03%	0.89%
Fixed income	-0.04%	-0.04%	0.01%	-0.07%
Total	0.66%	0.16%	0.04%	0.86%

Mr. Smith: “It seems that we should pay the portfolio manager a bonus – due to the positive stock picking effect.”

Mr. Thomas: “Sure?”

Mr. Smith: “But wait a minute ... we over weighted equities by 20%?!”

Mr. Thomas: “Something is curious! The asset allocation effect should be much bigger! And why do we only have 46% equities – whereas in the investment reporting it is 55%.”

# Who added what? – Stage 1

(3/5)

	Asset allocation effect	Stock picking effect	Interaction effect	Total
Cash	0.04%	0.00%	0.00%	0.04%
Equities	0.66%	0.20%	0.03%	0.89%
Fixed income	-0.04%	-0.04%	0.01%	-0.07%
Total	0.66%	0.16%	0.04%	0.86%

Mr. Smith: “And ... what about the fixed income investments? The portfolio manager is following a barbell strategy.”

Mr. Thomas: “Managing the duration with a mix of short and long term investments?!”

Mr. Smith: “Mmm?”

# Who added what? – Stage 1

(4/5)

## Use-specific return attribution – Solution 1 (add asset class)

	Portfolio			Benchmark			Total
	Weight	Return	Contribution	Weight	Return	Contribution	
Cash	15.00%	1.00%	0.15%	20.00%	1.00%	0.20%	-0.05%
Cash in equities	9.00%	1.00%	0.09%	0.00%	1.00%	0.00%	0.09%
Equities	46.00%	11.50%	5.29%	40.00%	11.00%	4.40%	0.89%
Fixed income	30.00%	0.30%	0.09%	40.00%	0.40%	0.16%	-0.07%
Total	100.00%	5.62%	5.62%	100.00%	4.76%	4.76%	0.86%

	Asset allocation effect	Stock picking effect	Interaction effect	Total
Cash	-0.05%	0.00%	0.00%	-0.05%
Cash in equities	0.09%	0.00%	0.00%	0.09%
Equities	0.66%	0.20%	0.03%	0.89%
Fixed income	-0.04%	-0.04%	0.01%	-0.07%
Total	0.66%	0.16%	0.04%	0.86%



# Who added what? – Stage 1

(5/5)

## Use-specific return attribution – Solution 2 (portfolio view)

	Portfolio			Benchmark			Total
	Weight	Return	Contribution	Weight	Return	Contribution	
Portfolio Cash	15.00%	1.00%	0.15%	20.00%	1.00%	0.20%	-0.05%
Portfolio Equities	55.00%	9.78%	5.38%	40.00%	11.00%	4.40%	0.98%
Portfolio Fixed I.	30.00%	0.30%	0.09%	40.00%	0.40%	0.16%	-0.07%
Total	100.00%	5.62%	5.62%	100.00%	4.76%	4.76%	0.86%

	Asset allocation effect	Stock picking effect	Interaction effect	Total
Portfolio Cash	-0.05%	0.00%	0.00%	-0.05%
Portfolio Equities	1.65%	-0.49%	-0.18%	0.98%
Portfolio Fixed I.	-0.04%	-0.04%	0.01%	-0.07%
Total	1.56%	-0.53%	-0.17%	0.86%



A stage with red curtains and a dark floor. The curtains are drawn back, revealing a dark stage floor. The text "Stage 2" is centered on the stage.

Stage 2

# Who added what? – Stage 2

(1/4)

	Asset allocation effect	Stock picking effect	Interaction effect	Total
Portfolio Cash	-0.05%	0.00%	0.00%	-0.05%
Portfolio Equities	1.65%	-0.49%	-0.18%	0.98%
Portfolio Fixed I.	-0.04%	-0.04%	0.01%	-0.07%
Total	1.56%	-0.53%	-0.17%	0.86%

Mr. Smith: “Why is the asset allocation effect for fixed income negative? Was it not a good decision to underweight fixed income.”

Mr. Thomas: “Especially because we generated with equities and also cash a much higher return.”

# Who added what? – Stage 2

(2/4)

## Use-specific return attribution – Solution 3 (change model)

	Asset allocation effect	Stock picking effect	Interaction effect	Total
Cash	0.19%	0.00%	0.00%	0.19%
Equities	0.94%	-0.49%	-0.18%	0.27%
Fixed income	0.44%	-0.04%	0.01%	0.41%
Total	1.56%	-0.53%	-0.17%	0.86%

Mr. Smith: “Here we go. We changed the return attribution methodology from Brinson-Hood-Beebower to Brinson-Fachler.”

Mr. Thomas: “Now it looks better.”

Mr. Smith: “But wait a minute. The total effects changed. There must be an error?!”

# Who added what? – Stage 2

(3/4)

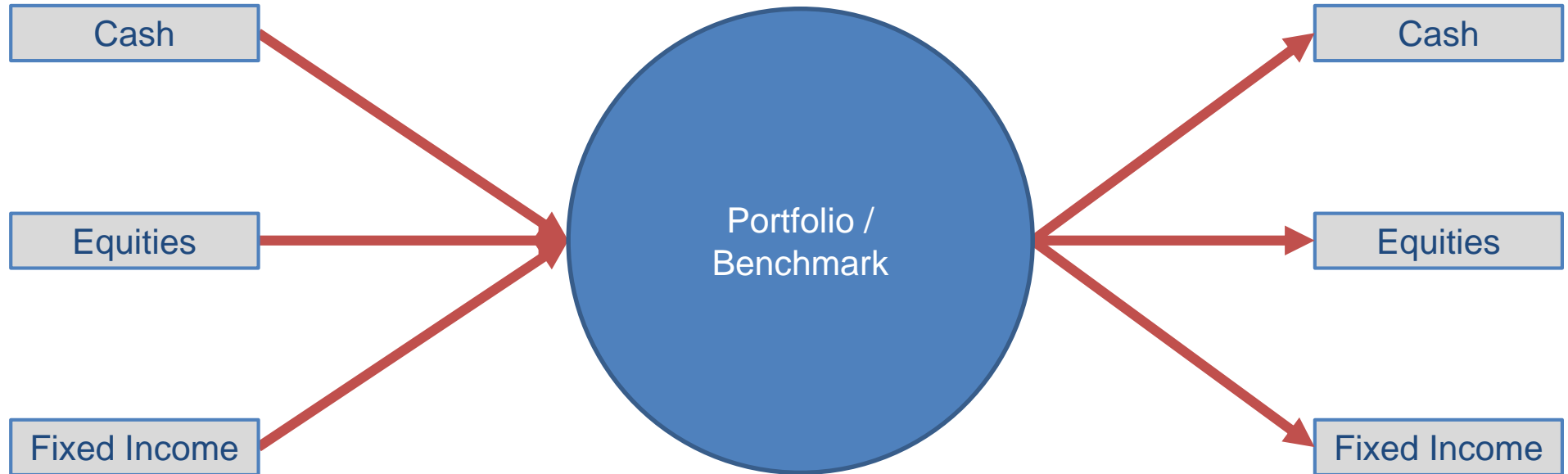
	Asset allocation effect	Stock picking effect	Interaction effect	Opportunity effect	Total
Cash	0.19%	0.00%	0.00%	-0.24%	-0.05%
Equities	0.94%	-0.49%	-0.18%	0.71%	0.98%
Fixed income	0.44%	-0.04%	0.01%	-0.48%	-0.07%
Total	1.56%	-0.53%	-0.17%	0.00%	0.86%

Mr. Smith: “Aah. Now it is ok.”

Mr. Thomas: “But what is the meaning of the opportunity effect?”

# Who added what? – Stage 2

(4/4)



Mr. Smith: "Cost of capital equals the total benchmark return."

Mr. Smith: "Mmm?! But is this really how we made the decision?"

Mr. Thomas: "We underweighted fixed income and parked the money in cash – and not in the overall benchmark."

Mr. Smith: "Yes, and we overweighted equities by underweighting cash."

A stage set featuring a vibrant red color scheme. The top is dominated by heavy, draped red curtains with a scalloped edge. Below these, a red pleated curtain hangs vertically, serving as a backdrop. The bottom of the stage is a dark, solid color. The text "Stage 3" is centered in the middle of the image.

Stage 3

# Who added what? – Stage 3

(1/3)

## Use-specific return attribution – Solution 4 ( $\Delta$ cost of capital)

	Asset allocation effect	Stock picking effect	Interaction effect	Opportunity effect	Total
Cash	0.00%	0.00%	0.00%	-0.05%	-0.05%
Equities	1.50%	-0.49%	-0.18%	0.15%	0.98%
Fixed income	0.06%	-0.04%	0.01%	-0.10%	-0.07%
Total	1.56%	-0.53%	-0.17%	0.00%	0.86%

Mr. Smith: “Here we go. We changed the return attribution methodology to **Modified Brinson-Fachler** using the cash benchmark return as the cost of capital.”

Mr. Thomas: “Now it looks better.”

Mr. Smith: “But wait a minute. Was it not a bit more complicated? We overweighted equities by moving money from cash to equities but also from fixed income to equities.”



# Who added what? – Stage 3

(2/3)

## Use-specific return attribution – Solution 5 ( $\Delta$ cost of capital)

	Asset allocation effect	Stock picking effect	Interaction effect	Opportunity effect	Total
Cash	0.00%	0.00%	0.00%	-0.05%	-0.05%
Equities	1.56%	-0.49%	-0.18%	0.09%	0.98%
Fixed income	0.00%	-0.04%	0.01%	-0.04%	-0.07%
Total	1.56%	-0.53%	-0.17%	0.00%	0.86%

Mr. Smith: “Here we go. We changed the cost of capital for the money coming from cash to the cash benchmark return and for the money coming from fixed income to the fixed income benchmark return.”

Mr. Thomas: “Now it looks better.”

Mr. Smith: “But wait a minute. Didn’t we underweight cash and fixed income? Does this have a consequence on the figures?”



# Who added what? – Stage 3

(3/3)

## Use-specific return attribution – Solution 6 ( $\Delta$ cost of capital)

	Asset allocation effect	Stock picking effect	Interaction effect	Opportunity effect	Total
Cash	0.50%	0.00%	0.00%	-0.55%	-0.05%
Equities	0.00%	-0.49%	-0.18%	1.65%	0.98%
Fixed income	1.06%	-0.04%	0.01%	-1.10%	-0.07%
Total	1.56%	-0.53%	-0.17%	0.00%	0.86%

Mr. Smith: “Cost of capital equals the equities benchmark return.”

Mr. Smith: “Interesting! I did not expect that the figures will change again.”

Mr. Thomas: “Now it looks better.”

Mr. Smith: “This was quite exhausting? How can others get the –correct– decomposition?”

A stage with red curtains and a dark floor. The curtains are drawn back, revealing a dark, possibly black, stage floor. The curtains are a deep red color and have a scalloped top edge. The text "The finale" is centered on the stage.

The finale

# Summary – Decision-oriented cost of capital

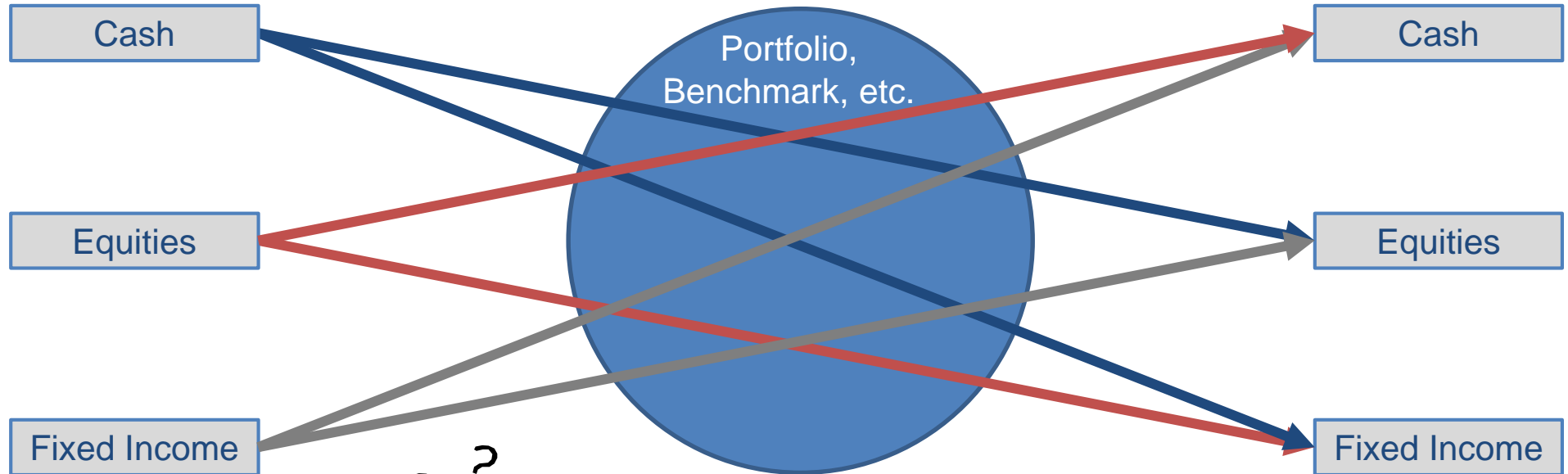
(1/3)

	Asset allocation effect	Stock picking effect	Interaction effect	Opportunity effect	Total
Equities - SP	0.66%	0.20%	0.03%	n/a	0.89%
Equities - S1	0.75%	0.20%	0.03%	n/a	0.98%
Equities - S2	1.65%	-0.49%	-0.18%	n/a	0.98%
Equities - S3	0.94%	-0.49%	-0.18%	0.71%	0.98%
Equities - S4	1.50%	-0.49%	-0.18%	0.15%	0.98%
Equities - S5	1.56%	-0.49%	-0.18%	0.09%	0.98%
Equities - S6	0.00%	-0.49%	-0.18%	1.65%	0.98%



# Summary – Decision-oriented cost of capital

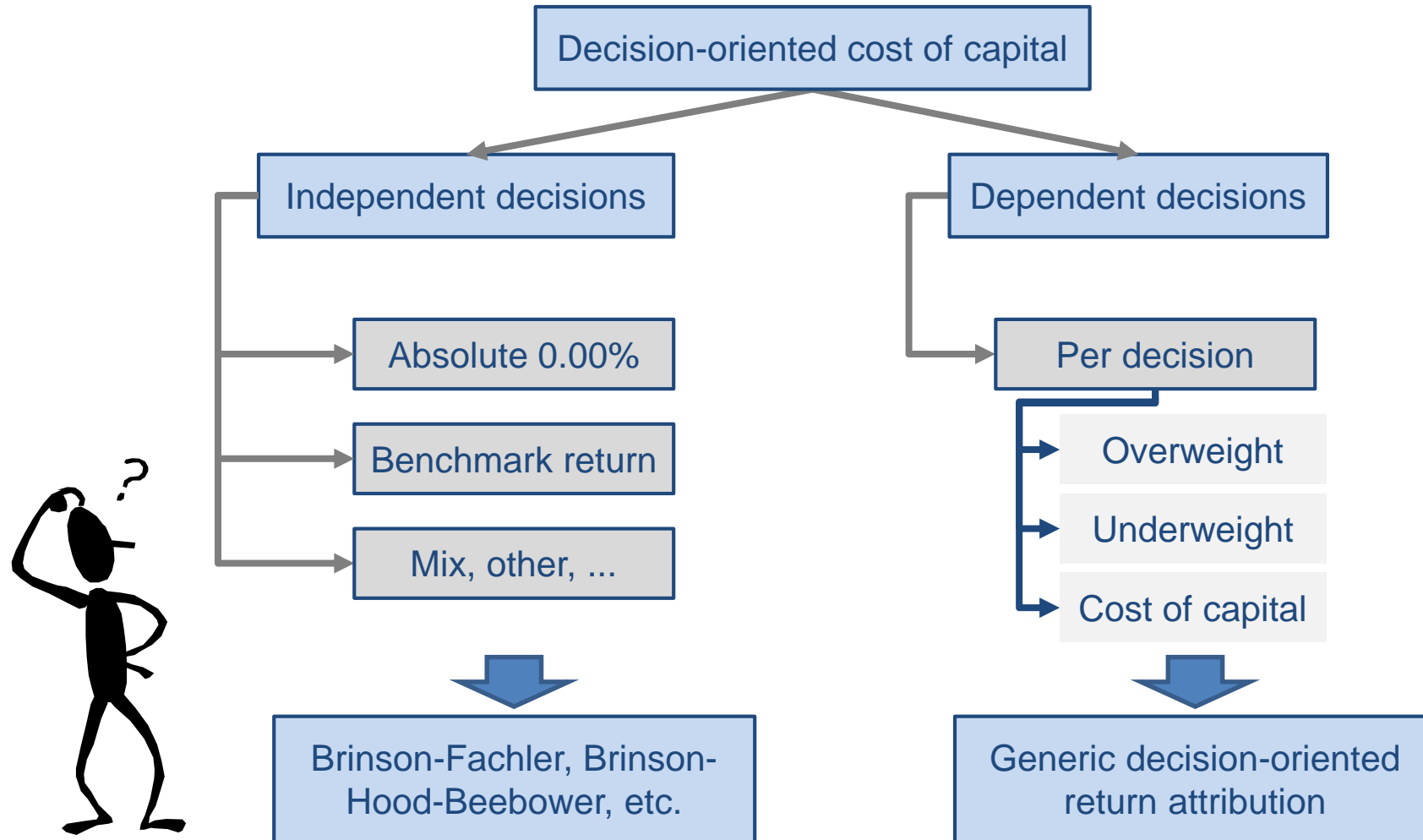
(2/3)



- Where did we take the money from and what was our decision – exactly?
- ... and what are the relevant costs of capital?

# Summary – Decision-oriented cost of capital

(3/3)

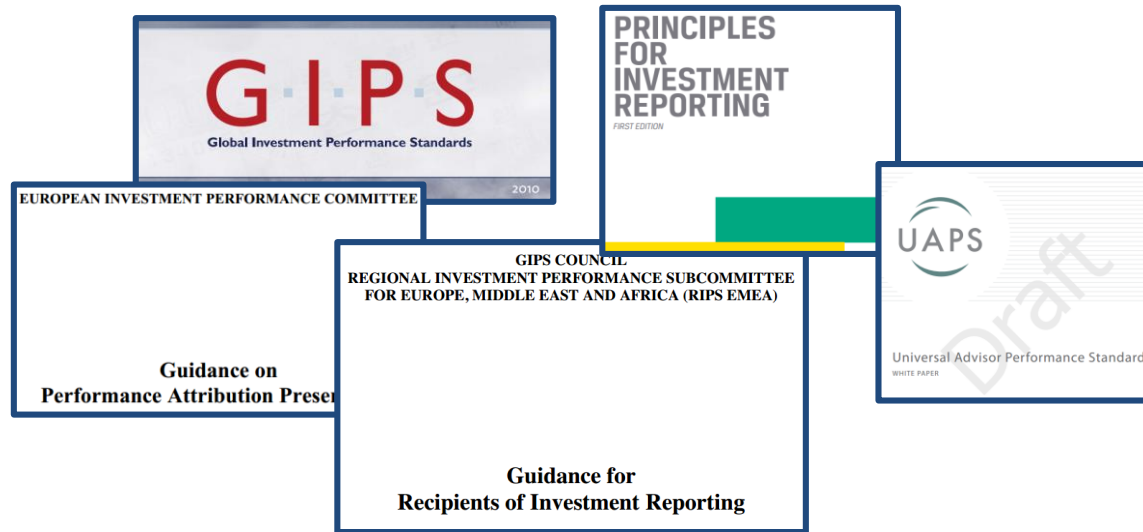


The end

# Answers by standard setters and regulators



# Answers by standard setters and regulators



- ▼ Asset Management Regulation
  - ▶ EU Asset Management Regulation
  - ▶ US Hedge Fund Adviser Regulations
  - ▶ Asia Pacific Asset Management regulation
  - ▶ Other Jurisdictions' Asset Management Regulation
- ▼ Asset Management Regulation
  - ▼ EU Asset Management Regulation
    - ▶ AIFMD
    - ▶ European Capital Markets Regulation
    - ▶ MiFID / MiFIR
    - ▶ UCITS
    - ▶ Venture Capital
    - ▶ US Hedge Fund Adviser
  - ▶ SIFIS

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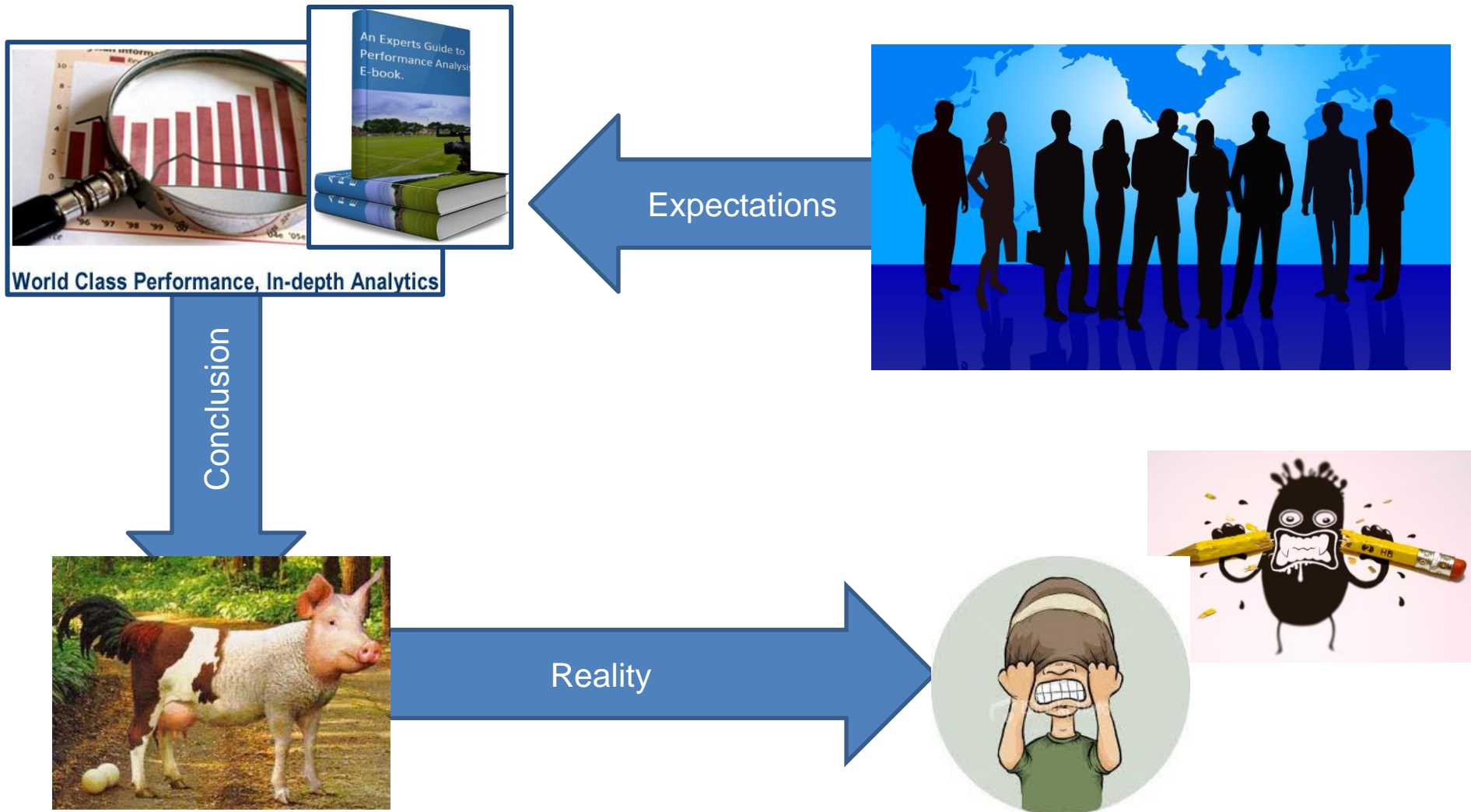
**Pensions**  
Information about the Statements G-1 & G-2 for pension accounting and financial reporting for government employees and pension plans.





# Performance analysts between desire and reality

# Performance analysts between desire and reality



# Discussion

# Discussion – What is the solution to the dilemma?



Thank you!



# Contact details and disclaimer

# Contact details

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