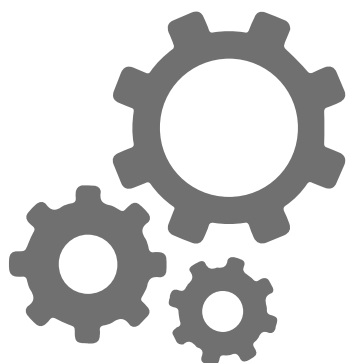# RETURN ATTRIBUTION

OCTOBER 2025

Charlie Nash
Head of QRA

Alan Cubbon
Head of Research

RETURN CONTRIBUTION ANALYSIS

Known as absolute return attribution analysis as it is not calculated relative to a benchmark

Portfolio Return = $\sum w_i R_i$

Where: w_i = Weight of the Sector / Security
             R_i = Return of the Sector / Security

Example:

	Weight %	Return %	Contribution %
Security A	25	4.80	1.20
Security B	50	2.50	1.25
Security C	25	-1.20	-0.30
Portfolio Total	**100**	**2.15**	**2.15**

Source: CAIM, October 2025

ATTRIBUTION ANALYSIS

Quantify the portfolio managers active decision to explain the difference between the portfolio and benchmark return

- Allocation = Refers to the value the Portfolio Manager adds by having different sector weights
- Selection = Refers to the value the Portfolio Manager adds by holding individual securities within the sector

Sector	Portfolio weight %	Portfolio return %	Benchmark weight %	Benchmark return %	Allocation %	Selection %
Government	50	18	50	10	0.0	4.0
Financial	30	-3	20	-2	-1.02	-0.3
Cash	20	10	30	12	0.38	-0.4
Portfolio Total	**100**	**10.1**	**100**	**8.2**	**-1.40**	**3.3**

What does this tell us?

Overall the fund outperformed the benchmark by 1.9%

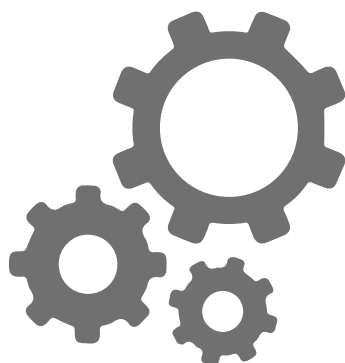*The portfolio is overweight financials and underweight cash (10%)*

Being overweight financials cost 1%, and selection within financials also had a negative effect.

Being neutral government had no effect, but the selection within this sector had a strongly positive effect

Source: CAIM, October 2025

ATTRIBUTION ANALYSIS

Allocation Calculation

$$\text{Allocation Return} = \sum (w_p - w_b)\,(R_b - B)$$

Where:
w_p = Weight of the Sector in the Portfolio
w_b = Weight of the Sector in the Benchmark
R_b = Return of the Sector within the Benchmark
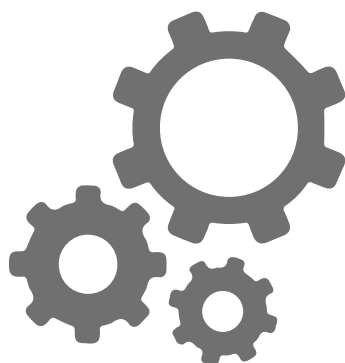B = Total Return of the Benchmark

Calculation:

Sector	Portfolio weight %	Portfolio return %	Benchmark weight %	Benchmark return %	Allocation %
Government	50	18	50	10	(50 – 50) x (10 – 8.2) = 0.0
Financial	30	-3	20	-2	(30 – 20) x (-2 – 8.2) = -1.0
Cash	20	10	30	12	(20 – 30) x (12 – 8.2) = -0.4
Portfolio Total	**100**	**10.1**	**100**	**8.2**	**0.0 + -1.0 + -0.4 = -1.4**

Source: CAIM, October 2025

Selection Calculation

Selection Return = $\sum w_p (R_p - R_b)$

Where: w_p = Weight of the Sector in the Portfolio
R_p = Return of the Sector within the Portfolio
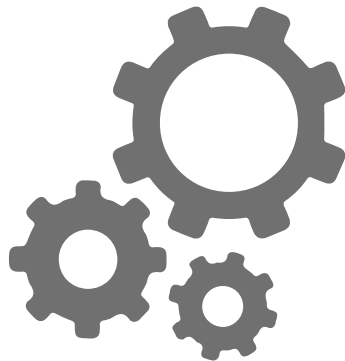R_b = Return of the Sector within the Benchmark

Calculation:

Sector	Portfolio weight %	Portfolio return %	Benchmark weight %	Benchmark return %	Selection %
Government	50	18	50	10	50 x (18 − 10) = 4.0
Financial	30	-3	20	-2	30 x (-3 − -2) = -0.3
Cash	20	10	30	12	20 x (10 − 12) = -0.4
Portfolio Total	**100**	**10.1**	**100**	**8.2**	**4.0 + -0.3 + -0.4 = 3.3**

Source: CAIM, October 2025

ATTRIBUTION ANALYSIS – OFF BENCHMARK BETS

Allocation Calculation – for sectors not included in the benchmark

Allocation Return where the benchmark allocation is 0%
Change formula below

Allocation return = $\sum w_p (R_p - B)$

Where:
w_p = Weight of the Sector in the Portfolio
R_p = Return of the Sector within the Portfolio
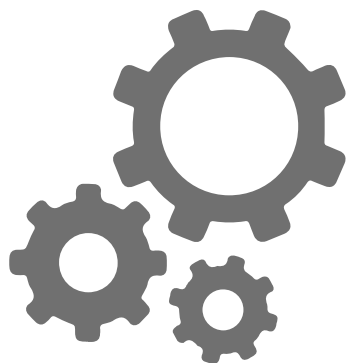B = Total Return of the Benchmark

Calculation:

Sector	Portfolio weight %	Portfolio return %	Benchmark weight %	Benchmark return %	Allocation %
Government	50	18	50	10	(50 − 50) x (10 − 8.2) = 0.0
Financial	25	-3	20	-2	(25 − 20) x (-2 − 8.2) = -0.5
Transportation	5	4	-	-	(5) X (4 − 8.2) = -0.2
Cash	20	10	30	12	(20 − 30) x (12 − 8.2) = -0.4
Portfolio Total	**100**	**10.5**	**100**	**8.2**	**0.0 + -0.5 + -0.2 + -0.4 = -1.1**

Source: CAIM, October 2025

ATTRIBUTION ANALYSIS –
OFF BENCHMARK BETS

Selection Calculation – for sectors not included in the benchmark = 0

Selection Return where the benchmark allocation is 0%
Change formula below

Selection Return = $\sum w_p (R_p - R_p) = 0$

Where:
w_p = Weight of the Sector in the Portfolio
R_p = Return of the Sector within the Portfolio
R_b = Return of the Sector within the Benchmark

Calculation:

Sector	Portfolio weight %	Portfolio return %	Benchmark weight %	Benchmark return %	Selection %
Government	50	18	50	10	50 x (18 – 10) = 4.0
Financial	25	-3	20	-2	25 x (-3 – -2) = -0.25
Transportation	5	4	-	-	5 x (4 – 4) = 0
Cash	20	10	30	12	20 x (10 – 12) = -0.4
Portfolio Total	**100**	**10.5**	**100**	**8.2**	**4.0 + -0.3 + 0 + -0.4 = 3.4**

Alpha = 10.5% - 8.2% = 2.3%
Allocation + Selection = -1.1% + 3.4% = 2.3% (correct)

Source: CAIM, October 2025

ATTRIBUTION ANALYSIS – ANOTHER EXAMPLE

Analysis by maturity bucket

Maturity	Portfolio weight %	Portfolio return %	Benchmark weight %	Benchmark return %	Allocation %	Selection %
0 – 1 Year	20	0.15	20	0.14	0.00	0.00
1 – 3 Years	50	1.65	30	1.55	-0.08	0.05
4 – 9 Years	20	2.80	30	2.75	-0.08	0.01
10+ Years	10	3.35	20	3.25	-0.13	0.01
Total	**100**	**1.75**	**100**	**1.97**	**-0.29**	**0.07**

- *Portfolio manager decisions:*
    - *Overweighting of shorter maturity segments of the yield curve.*
    - *Evident in the overweighting of the 1-3 year bucket vs 4-9 years and 10+ years.*
    - *Anticipation of interest rate rise across maturities.*
    - *Underweight longer maturities would have limit loss in the rise.*
- *Analysis suggests manager was incorrect in underweighting as allocation for buckets over 1 year are attributing to the overall loss.*
- *Allocation covers yield curve positioning, Selection covers all other decisions.*

Source: CAIM, October 2025

DISCLAIMER

This communication is intended for professional clients and eligible counterparties only. Past performance is not a reliable indicator of future results. Performance results are calculated before management fees and after trading expenses. Information contained in this publication is compiled from industry sources which we consider to be accurate and reliable.

There is no representation or warranty of any kind, whether express or implied, regarding the accuracy or completeness of the information given. The information provided does not constitute advice and it should not be relied on as such.

Any views or opinions expressed are those of Crown Agents Investment Management Ltd and are subject to change due to market and other conditions and should not be taken as statements of policy or intent.

CAIM | CROWN AGENTS INVESTMENT MANAGEMENT

www.caiml.com
CAIMLenquiries@caiml.com

3 More London Riverside
London SE1 2AQ
United Kingdom

T: +44 (0)20 7489 7223