

Meeting the YFYS performance test while integrating climate objectives

In this note, we demonstrate how Australian superannuation funds can integrate their climate objectives in their passive equity allocation, while adhering to the stringent framework of the YFYS regulation. Robeco offers close-to-passive sustainable indices that integrate climate goals and forward-looking climate metrics, while carefully managing tracking error relative to your Strategic Asset Allocation benchmark.

Under the YFYS performance test, superannuation funds must ensure their cumulative underperformance relative to the Strategic Asset Allocation (SAA) benchmark does not exceed 0.50% per year over a rolling 8-year period (equivalent to a maximum cumulative underperformance of 4.0%). Within these constraints, funds aiming to achieve climate objectives have two main strategic options: (1) adopt an index with low tracking error relative to the SAA benchmark, or (2) allocate part of the portfolio passively to the SAA benchmark and the remainder actively, ensuring the overall portfolio returns stay within regulatory limits.

Option 1: full allocation to a low tracking error climate index

For a full portfolio allocation, the probability of meeting the YFYS regulation's performance test can directly be derived from the tracking error of the index. For example, consider a 100% allocation to a climate index that has a 50 bps annual tracking error to the SAA benchmark and no performance objective (0 bps expected outperformance). Over the regulatory measurement period of 8 years, this equates to a tracking error of 141 bps ($50 \text{ bps} \times \sqrt{8} = 141 \text{ bps}$). The probability of meeting the cumulative 8-year performance requirement can then be calculated as: $1 - \Phi((\mu - \mu_{\text{obj}})/\sigma)$ where $\Phi(\cdot)$ is the cumulative normal distribution function, μ is the expected outperformance of the index (assumed to be 0%), μ_{obj} is the minimum return needed to pass the YFYS performance test (4.0% over 8 years), and σ is the tracking error of the strategy. For the example outlined above, this leads to a probability of $1 - \Phi(-4\%/1.41\%) = 99.77\%$.

Fully allocating the portfolio to a climate index with 50 bps tracking error and no outperformance therefore yields a 99.77% probability of passing the YFYS performance test.

Option 2: partial allocation to a climate index

For a partial allocation to a climate index, assuming the rest of the allocation is invested passively, the active component of the portfolio can sustain a higher tracking error while still maintaining a high probability of passing the YFYS performance test. For instance, consider a 50% allocation to a climate index with an annual tracking error of 100 bps relative to the Strategic Asset Allocation benchmark, and no expected outperformance (0 bps). At the total portfolio level, this translates into an annual tracking error of 50 bps.¹ Aggregating this over the regulatory measurement horizon of 8 years results in an overall tracking error of approximately 141 bps, the same as in option 1. Given that all other inputs remain the same, this setup also achieves a 99.77% probability of meeting the YFYS performance test.

Partially allocating 50% of the portfolio to a climate index with 100 bps tracking error and no outperformance, while the remaining 50% of the portfolio is invested passively, therefore yields a 99.77% probability of passing the YFYS performance test.

¹ In the case where w is invested actively and $1 - w$ is invested passively, the portfolio tracking error can be calculated as $\sqrt{w^2 \sigma^2}$, with σ the tracking error of the active part. In this case $\sqrt{0.50^2 0.01^2} = 0.50\%$.

Different options for meeting the YFYS performance test

To get a better understanding of the possibilities for incorporating climate ambitions in the context of the YFYS performance test, we calculate the probability of meeting the regulation for both full and partial allocations to a climate index across a range of tracking error limits and allocation levels (assuming no outperformance). These are provided in the table below.

Table 1 – Probability of meeting the YFYS regulation for different active allocation and tracking error levels

Annual tracking error of index	Allocation to climate index				
	100% allocation	75% allocation	50% allocation	25% allocation	10% allocation
0.00%	100%	100%	100%	100%	100%
0.10%	99.99%	99.99%	99.99%	99.99%	99.99%
0.20%	99.99%	99.99%	99.99%	99.99%	99.99%
0.30%	99.99%	99.99%	99.99%	99.99%	99.99%
0.40%	99.98%	99.99%	99.99%	99.99%	99.99%
0.50%	99.77%	99.99%	99.99%	99.99%	99.99%
0.60%	99.08%	99.92%	99.99%	99.99%	99.99%
0.70%	97.83%	99.65%	99.99%	99.99%	99.99%
0.80%	96.15%	99.08%	99.98%	99.99%	99.99%
0.90%	94.19%	98.19%	99.92%	99.99%	99.99%
1.00%	92.14%	97.03%	99.77%	99.99%	99.99%
1.10%	90.07%	95.68%	99.49%	99.99%	99.99%
1.20%	88.07%	94.19%	99.08%	99.99%	99.99%
1.30%	86.17%	92.65%	98.52%	99.99%	99.99%
1.40%	84.38%	91.10%	97.83%	99.99%	99.99%
1.50%	82.71%	89.56%	97.03%	99.99%	99.99%
1.60%	81.16%	88.07%	96.15%	99.98%	99.99%
1.70%	79.73%	86.63%	95.19%	99.96%	99.99%
1.80%	78.40%	85.26%	94.19%	99.92%	99.99%
1.90%	77.17%	83.95%	93.17%	99.85%	99.99%
2.00%	76.02%	82.71%	92.14%	99.77%	99.99%

Robeco Sustainable Indices

At Robeco, we have ample experience integrating climate objectives in low tracking error indices for our clients. Our Robeco Low-Carbon Climate Leaders Tilt Index, for example, maintains a 50 bps ex-ante tracking error, has market-like return expectations, and integrates a wide variety of both backward-looking and forward-looking climate metrics. In combination with our smart index construction and low turnover approach, this index can be used as a passive alternative for Superfunds that need to adhere to the YFYS regulation.

For Superfunds that require a bespoke index, we also offer extensive customization options for integrating a wide range of sustainability preferences, such as the Robeco SDG framework, or proven return factors. A recent client case study can be found [here](#).

For more information, contact your local Robeco relationship manager or visit the Robeco Indices [website](#).

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