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## **Strengthening the Superannuation Performance Test**

Response to the Treasury Consultation Paper (May 2026)

### **About Us**

Since 2016, the EDHEC Infrastructure & Private Assets Research Institute (EIPA) has been developing ground-breaking research to document the risks and financial performance of investments in unlisted infrastructure equity and debt and private equity. The data produced by the institute is grounded in modern financial theory and the principles of fair value accounting, which are key pillars of sound financial risk management.

Through its work, the institute has shown that it is possible to measure market dynamics in private and illiquid markets and produce credible measures of the risk-adjusted performance of private assets that makes them comparable to other asset classes. The same data is used by policy makers and prudential authorities including the G20, the OECD, IAIS, and more.

### **Introduction and summary**

EIPA welcomes the opportunity to respond to Treasury's consultation on strengthening the superannuation performance test. Our submission focuses on Options 1 and 2, which concern how certain emerging and alternative assets are classified and benchmarked, particularly with respect to the use of absolute benchmarks such as CPI + X. Further, we comment on some of the challenges with the proposed use of a simple reference portfolio as a benchmark at the total portfolio level. EIPA's comments take into consideration the demonstrated success of the performance test to date, while seeking to address two of the main concerns identified in the consultation paper: the performance test's potential to incentivise benchmark hugging and constrain investment choices to those asset classes well captured in benchmarks.

Our view is that the correct way to assess unlisted and emerging alternative assets<sup>1</sup> within a performance test is through asset-level, marked-to-market, asset class benchmarks. Absolute return benchmarks and simple reference portfolios will not address the concerns over benchmark hugging and limiting investment choices, and may exacerbate them. Absolute benchmarks, such as CPI + X, do not capture the risk of investing in venture capital, renewable energy, social infrastructure, or other asset classes with market exposure. Actual performance is likely to vary significantly from the benchmark due to misspecification, thus encouraging the precise behaviour that the tests are seeking to avoid.

Similarly, at the total portfolio level, using a simple reference portfolio comprised of listed equities and bonds will fail to capture the risk and return dynamics of unlisted assets such as private equity, private infrastructure, and private credit, leading to perceived over/under

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<sup>1</sup> Here we refer to the asset classes provided as examples in the Consultation Paper (Venture Capital, Renewable Energy, Social Housing). This is to distinguish from the alternative asset classes in APRA 550.0 that include various hedge fund strategies, commodities, and insurance linked credit.

performance when listed and unlisted markets diverge, a scenario that has played out over the last three years in private equity.

In the next section, we discuss the specific challenges of using an absolute benchmark such as CPI + X, and why it is unlikely to address these concerns. Instead, EIPA proposes benchmarking these assets against the most appropriate private asset class index, marked to market, to capture the risk and return dynamics of the relevant asset class. This would help address the tracking error that arises when invested asset classes are not well represented in the strategic asset allocation benchmark portfolio. By expanding the benchmark portfolio to include additional private asset class indices, EIPA believes the incentives around benchmark hugging would also be reduced.

## **Option 1: Adjusting for emerging and alternative asset classes**

### ***On existing limitations of performance test and proposal for CPI + X benchmark***

We agree that the current performance test may discourage allocation to asset classes that are poorly represented by the existing strategic asset allocation benchmark portfolio because such holdings introduce tracking error against benchmarks that do not reflect their underlying risk and return characteristics. This is most apparent in unlisted asset classes. The consultation lists venture capital, renewable energy, and social housing as examples of emerging or alternative assets. In our view, however, these are not new or emerging asset classes in their own right — they are established sub-asset classes or sectors within private equity and infrastructure.

Under APRA's reporting standard SRS 550.0, private equity sits within the Equity asset class, with sub-categories including Venture Capital, Growth Equity, Leveraged Buyout, Development/Early Stage, and Special Situations. Private equity faces a listed equities benchmark, which introduces significant tracking error.

Renewable energy resides within Infrastructure, under the Energy Assets sub-segment. While infrastructure is benchmarked against an unlisted index, the broad index would not capture the dynamics of a sector specific strategy such as renewable energy and may not be flexible enough to allow variants with different weightings.

The Alternatives category under SRS 550.0 comprises various hedge fund strategies, commodities, and other products or strategies that generally have low correlation with listed equities. These strategies have very different risk/return characteristics than venture capital and renewable energy, and thus we do not support expanding the category to include these asset classes. Moreover, the benchmarking approach in that category, listed proxies with Growth/Defensive tilts, would not be suitable.

For similar reasons, a CPI + X benchmark is not appropriate for any long only strategy with exposure to market risk. Moreover, it would not address concerns around benchmark hugging or related investment constraints. It shifts from one inappropriate benchmark (listed proxies) to another (absolute return), without addressing the root cause of the tracking error. There are several issues with absolute return benchmarks:



- CPI + X links benchmark volatility (risk) to inflation volatility whereas venture capital, renewable energy, and social infrastructure have significant market risk exposure to their respective sectors. All three have more return volatility than implied by an absolute return benchmark. Table 1 sets out historical volatility data for each of the relevant asset classes. As shown, the riskiness of these asset classes, as measured by volatility, increases progressively — from 9–10% for social infrastructure and renewable energy, to approximately 15% for listed equities, and 16.5% for private equity, 18% for small cap listed equities, and greater than 20% for venture capital.
- Absolute benchmarks with fixed spreads imply stable risk premia throughout time which is not reflective of market conditions. The renewable energy and social infrastructure sectors within infraMetrics® show equity risk premiums moving considerably over the last 10 years, reflecting changing market dynamics. This is true in private equity and other private asset classes. Absolute benchmarks ignore volatility outside of inflation volatility.
- Risk premia or spreads would differ across asset classes, requiring estimates for each emerging asset class. For example, venture capital and renewable energy would face very different risk premia. However, even if the initial risk premium (spread) was accurate, the differing volatilities between the benchmark and the underlying asset class would lead to material differences in performance and large spreads between returns and benchmark over time.
- In Table 2, we illustrate this using a hypothetical VC market benchmark over a ten-year period, compared against an absolute return benchmark. We assume a geometric expected return of 15% with 25% annualised volatility, reflecting the riskiness of the asset class. The absolute return benchmark is set at CPI + 12.5% (approximately 15%). Because the benchmark is anchored to inflation rather than to VC market dynamics, its 10-year return range is narrow (14–16%), while the VC index return varies widely across the same period. This leads to material apparent under- or over-performance that has nothing to do with underlying skill. An institution can fail the test simply because VC markets had weak returns, or pass because the market was strong. This problem cannot be solved by recalibrating the spread: regardless of where X is set, significant deviations will persist because the benchmark's path — anchored to inflation volatility — does not move with the VC market, whose volatility is meaningfully higher.

Table 1: Asset Class 10 Year Volatility

| <b>Asset Class</b>        | <b>Reference</b> | <b>10 Yr Volatility</b> |
|---------------------------|------------------|-------------------------|
| Social Infrastructure     | infraMetrics     | 9.6%                    |
| Renewable Energy          | infraMetrics     | 9.3%                    |
| Listed Equities           | MSCI World       | 15.0%                   |
| Private Equities          | privateMetrics   | 16.5%                   |
| Small Cap Listed Equities | MSCI Small Cap   | 18.0%                   |
| Venture Capital           | Estimate         | ~25%                    |
| Absolute Return Benchmark | CPI + X          | ~2%                     |

Source: SIPA 2026 Capital Market assumptions ([here](#)), privateMetrics, infraMetrics, Bloomberg, FRED

Table 2: Venture Capital Benchmark vs Absolute Return Benchmark

|           | Expected Return | Volatility | P10   | P50   | P90    |
|-----------|-----------------|------------|-------|-------|--------|
| Benchmark | CPI + 12.5%     | 2%         | 14.0% | 15.0% | 15.9%  |
| VC Index  | 15.0%           | 25%        | 4.1%  | 15.0% | 27.3%  |
| Relative  |                 |            | -9.9% | --    | +11.4% |

Note: Calculations by EIPA. VC index returns assume lognormal distribution. However, returns are likely to have fatter tails – larger upside and downside – making relative performance even more pronounced than presented here.

### ***On design and considerations for emerging asset classes***

In our view, the creation of a new emerging or alternative asset class should not be the starting point. The examples provided – venture capital, renewable energy, and social infrastructure – can all be mapped to established private asset classes where appropriate benchmarks are available. Thorough taxonomies<sup>2</sup> exist for private assets that can classify companies along a myriad of dimensions including sector, business model, maturity, and growth, among others. These mappings would be preferable to using a separate category with poorly matched CPI + X benchmarks. The determination of what constitutes an emerging or alternative asset class should not be done based on the limitations of the existing strategic asset portfolio benchmarks, but rather, what exists in the market.

The infrastructure asset class within the current performance test already demonstrates the right conceptual approach. Infrastructure is benchmarked against an unlisted infrastructure index. Though we disagree on the use of peer-group benchmarks, favouring asset level marked to market indices like the infra300 index, the principle of benchmarking unlisted assets against unlisted indices is already established in the test. It has simply not been extended to private equity, including venture capital, where it is equally warranted.

Each SRS 550.0 private equity sub-category — buyout, growth equity, VC, and development/early stage — should be mapped to an asset-level private equity index appropriate to that strategy, just as infrastructure sub-types are mapped to infrastructure indices. Asset-level private equity indices exist that distinguish buyout from growth equity with sufficient history to support a ten-year history. Similarly, renewable energy can be included as part of the broad infrastructure benchmark if weights are similar, or with a customized infrastructure benchmark that reflects different exposures. These asset class benchmarks represent a far better solution than moving several to a catch-all absolute benchmark that is poorly matched.

One justification put forth in the consultation paper - the j-curve effect - is not limited to venture capital. This applies to any private asset fund where fees are paid on committed capital initially, and invested capital subsequently, weighing down early fund life returns. Using the j-curve as a justification could open the door to allow for other private assets to be put in this new category. In most cases, if there is a mature portfolio with fund investments spread across maturities, there is no need to make an adjustment for the impacts of the j-curve.

<sup>2</sup> See private equities taxonomy [here](#) and infrastructure taxonomy [here](#).

Finally, one should distinguish between an emerging asset class and the building up of a new program. If a fund was developing its first exposure to venture capital via drawdown funds, there may be a case to exclude from the benchmark until it has reached some maturation (eg year 3 or 4). This could be combined with a cap. Introducing a CPI + X benchmark would not solve the incentive problem in this case, nor would it represent a suitable benchmark – two of the key objectives set out for this option in the consultation paper. Limiting inclusion to the establishment of new investment programs may also serve to limit the number of assets that would be eligible for inclusion, reducing the risk of gaming.

### ***On existing alternatives covered asset class***

Improving or extending the existing Alternatives covered asset class is unlikely to resolve the issue. Alternatives under SRS 550.0 comprise investment strategies<sup>3</sup> with little or low correlation to listed equities, justifying a separate categorisation and benchmarking choice. However, the Alternatives category is less suitable to accommodate private asset strategies that have market risk and would be better represented by private asset class benchmarks. Those assets already have defined homes in unlisted equity and infrastructure respectively under SRS 550.0, and routing them through Alternatives would misclassify them, reduce comparability across products, and apply an inappropriate benchmark concept to assets that carry genuine market risk. The benchmarking problems for VC and renewable energy should be addressed within their existing asset classes.

## **Option 2: Introducing an assessment of risk-adjusted returns**

### ***On suitability of reference portfolios - volatility, and comparability of returns and risk***

EIPA suggests expanding the strategic asset allocation benchmark portfolio to include more private assets, rather than proxying them with listed assets indices. This is already being done with unlisted infrastructure and should be expanded to private equity (including venture capital), private credit, and other private asset classes. Various benchmark portfolios can be constructed to account for the differing weights across asset classes by institutions.

A simple reference portfolio is a viable solution when the actual portfolio is comprised entirely of listed assets. In that case, all assets are marked to market and thus volatility and asset class correlations can be reliably calculated. One can then be reasonably confident they are making an apples to apples comparison with risk and return. Once private assets enter the portfolio, volatility and correlations are likely understated, diversification benefits overstated, with the result being that total portfolio risk is understated relative to a listed-equity-equivalent reference portfolio.

We can look at a simple example below to highlight the problem. We will use a simple reference portfolio and a second portfolio that shifts a portion of the listed equities holdings to private equities. Key assumptions follow:

- Reference portfolio: 70%/30% listed equities/bonds
- Actual portfolio: 50%/20%/30% listed equities/private equities/bonds

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<sup>3</sup> Hedge fund strategies such as global macro, merger arbitrage, long/short, market neutral, commodities, distressed credit, or insurance linked credit, among others.

- New benchmark: Same as Actual portfolio but using marked to market private equities

Table 3: Reference vs Actual Portfolio with Private Assets

|                     | Listed Equities | Bonds | Private Equities | Volatility | Equivalent equity/bond |
|---------------------|-----------------|-------|------------------|------------|------------------------|
| Reference Portfolio | 70%             | 30%   | 0%               | 11.17%     | 70.0%/30.0%            |
| Actual Portfolio    | 50%             | 30%   | 20%              | 9.61%      | 56.7%/43.3%            |
| New Benchmark       | 50%             | 30%   | 20%              | 11.14%     | 69.7%/30.3%            |

Source: privateMetrics, Bloomberg. Equities/bonds correlation = 0.3. Listed Equities/private equities correlation is 0.85. Private equities reported annualised volatility of 9% vs privateMetrics market to market volatility of 16.5%.

The reference portfolio, comprised of listed equities and bonds, has a trailing ten year volatility of 11.17% based on equities and bond volatility of 15% and 6%, respectively. This mix can be adjusted to arrive at the matching risk exposure of a particular investor.

However, suppose an investor shifts a portion of their listed equities exposure to private equities, in this case, 20%. Due to valuation smoothing and lag in private equities, the shift appears to create a large diversification benefit, with portfolio level volatility dropping to 9.61%. Despite having the same 70% (50% listed plus 20% private equity = 70%) allocated to equities, the investor now appears to have a much less risky portfolio. In equivalent equity/bond terms, this is now a 56.7%/43.3% portfolio rather than a 70%/30%. If using the reference portfolio approach for the performance test, the investor would get to compare their returns to a less risky portfolio, despite having similar equity exposure. This is a major problem when using reference portfolios if unlisted assets are a meaningful part of the portfolio.

The new benchmark in Table 3 controls for this by using a private equities index with marked to market risk metrics. In this case, portfolio level risk stays fairly consistent, coming in at 11.14%. There was some modest benefit from diversification, offset by the higher volatility of private equity<sup>4</sup>.

There are two problems with the simple reference portfolio approach, both of which can be resolved by incorporating private asset indices into the relevant benchmark — whether the existing strategic asset allocation benchmark portfolio, or a reference portfolio under Option 2. The first, as shown, is that reported risk of the investor may be understated, providing an opportunity to game the benchmarking process. The second is that private and listed assets returns may diverge over the short to mid-term, introducing significant tracking error. This may dissuade investors from allocating to unlisted assets due to fears of underperformance relative to listed asset classes.

Adding unlisted asset benchmarks to the benchmark portfolio, as has been done with private infrastructure, solves both of these problems. First, the investor's portfolio can now be benchmarked against a portfolio with the same weights across listed and private assets. Second, the tracking error problem is significantly reduced because the portfolios are benchmarked against the correct asset class. Tracking error will remain, but should be much more contained.

<sup>4</sup> private2000 index from SIPA shows 10 year annualised volatility of ~16.5% for private equity, above global listed equities of ~15.0%.



### ***On design of the reference or benchmark portfolio***

If opting to use a reference portfolio as a benchmark, it should incorporate more asset classes than a simple listed equities and bonds mix. To reflect the actual portfolios of institution investors, private asset-class indices — private equity, private infrastructure, private credit, real estate — should be included. This will serve to limit the tracking error problem and create a benchmark that reflects the risk of the portfolio. This is the same logic that already underlies the use of unlisted infrastructure indices in the current performance test. Moreover, there will be less incentive to avoid assets or asset classes that are not currently well represented in the strategic asset allocation benchmark portfolio.

Importantly, the private indices used in the reference portfolio should be marked to market rather than appraisal-based. Peer group fund-manager indices derive returns from smoothed, appraised valuations. Including such indices in the reference or benchmark portfolio would embed the smoothing problem inside the benchmark itself, understating the risk of private allocations and flattering their apparent risk-adjusted performance.

Much like a reference portfolio of listed assets can be adjusted for differing investor portfolio weights, an updated reference or benchmark portfolio with private assets can offer the same. Regardless of the weights to private infrastructure, private equity, private credit, venture capital, or other asset classes, the constituent index weights could be adjusted to accommodate various asset allocations.

The discussion on whether volatility is an appropriate risk metric depends entirely on how it is measured. As shown in Table 3, if volatility is measured from reported appraisal net asset values, it is often understated and not reflective of the risk of the asset class. Marked-to-market data provides a better estimate of risk. This is important for risk measures such as value at risk, or other measures of extreme tail risk. If volatility is understated, extreme risk measures will also be understated.

## **Conclusion**

Both the proposed CPI + X benchmark and the proposed simple reference portfolio respond to legitimate concerns about benchmark hugging and the test's treatment of private and emerging asset classes, but each does so by substituting a proxy that introduces its own significant mismatch. A risk and volatility mismatch in the case of CPI + X (Tables 1 and 2), and a smoothing-driven understatement of risk and overstatement of diversification in the case of implementing a listed-only reference portfolio benchmark (Table 3). In both cases, the result would be divergence between actual and benchmark returns that likely does not represent underlying skill, reintroducing rather than resolving the incentives the test is intended to address. We believe the more effective remedy is to extend the approach already applied to infrastructure within the current test to private equity (including venture capital), private credit, and other private assets, whether as additions to the strategic asset allocation benchmark portfolio or as components of a reference portfolio under Option 2. We would recommend, however, the use of marked to market private asset indices rather than those derived from appraisal net asset values to prevent the distortions identified above. This would reduce tracking error for products invested in these asset classes, provide a more



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accurate assessment of risk-adjusted performance, and limit some of the incentive issues raised in the Consultation Paper.

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