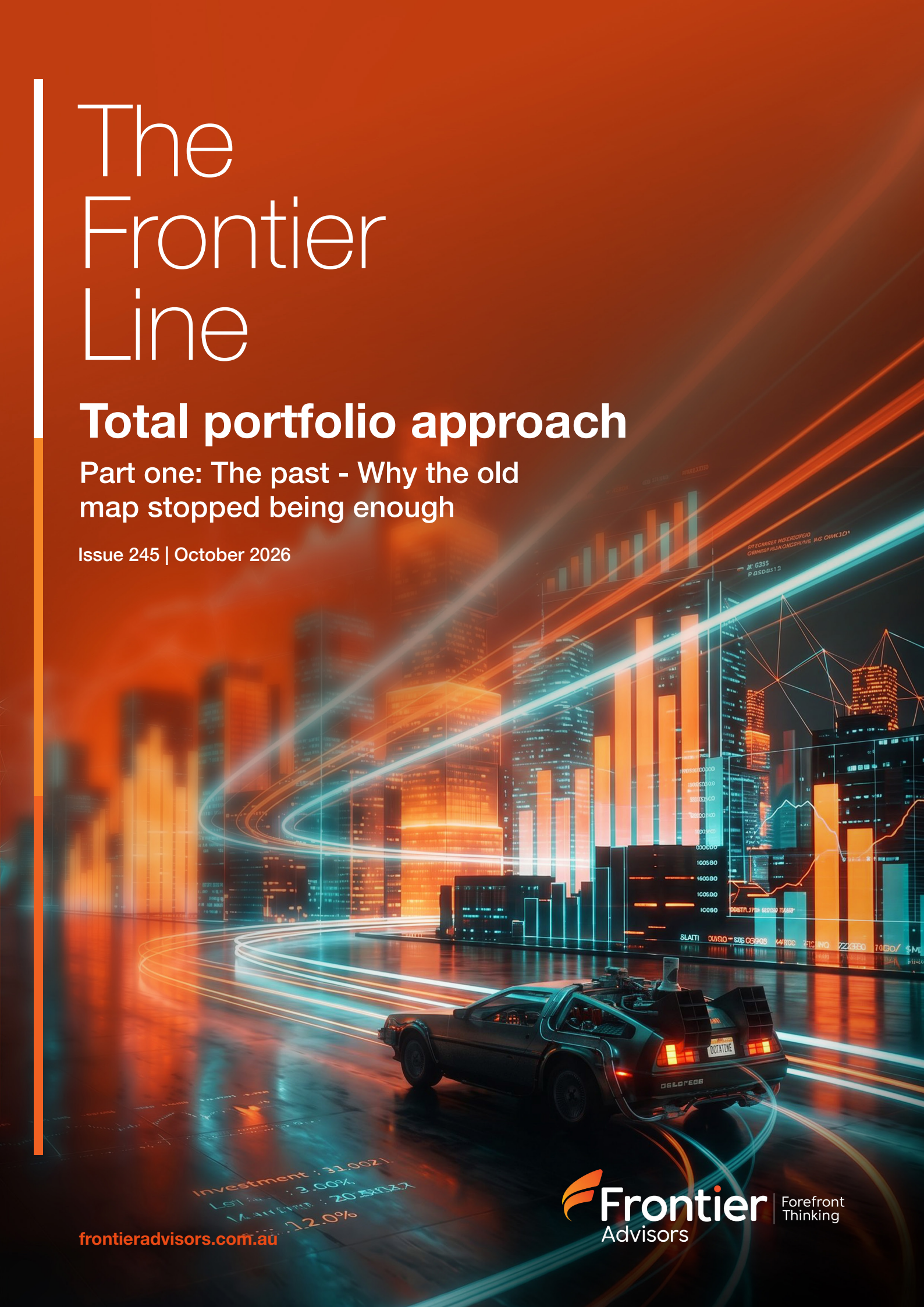
The Frontier Line

Total portfolio approach

Part one: The past - Why the old map stopped being enough

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About us

Frontier Advisors has been at the forefront of institutional investment advice in Australia for over thirty years and provides advice on $920 billion of assets across the superannuation, charity, public sector, insurance and university sectors.

Our purpose is to empower our clients to advance prosperity for their beneficiaries through knowledge sharing; customisation; technology; and an alignment and focus that is unconstrained by any product conflicts.



Paul Newfield
Director of Specialist Services
and Co-Director of Consulting

Paul is Director of Specialist Services and Co-Director of Consulting. Paul joined Frontier in 2019 and during this time has also held the role of Director of Research. Paul has a strong focus on investment governance matters.

Paul joined Frontier from Willis Towers Watson where he held the role of Senior Consultant for over eight years and was involved in several governance and strategy areas, including liability driven clients and retirement incomes. Prior to that, Paul spent twelve years at Mercer where he held a variety of senior roles in both Australia and New Zealand, including leading Mercer's retirement business in New Zealand and was Board Chair of their trustee company.

Paul is a Fellow of the Institute of Actuaries and holds a CIMA certification as well as a Bachelor of Economic Science.



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Back to the Future of portfolio governance

The invitation to the reader

This paper is not an invitation to join the TPA fan club. It is an invitation to understand a simple governance question: When does a whole-of-portfolio lens genuinely improve risk use, accountability, liquidity, implementation and long-term outcomes – and when is it merely a fashionable label placed over familiar behaviours?

Why this paper exists

The attraction of a total portfolio approach (TPA) is obvious. Asset owners increasingly need to balance a broad range of competing objectives, including long-term return, peer pressure, regulatory benchmarks, liquidity, costs, ESG and sustainability settings, tail resilience, governance capacity and stakeholder communication. No single asset class bucket can solve that puzzle, nor can a beautiful diagram remove the trade-offs. The real value of a good TPA framework lies in making those trade-offs visible, comparable and governable.

This exploration of TPA is spread across three parts and multiple chapters, this paper being the first part. In Part one, we move beyond the headline debate of TPA versus strategic asset allocation (SAA) and into the more useful territory of design, evidence and action. It asks where TPA came from; why it feels so compelling, what the Australian market is really wrestling with; how reference portfolios preserve accountability; whether TPA can be measured; how asset owners can test if it has value for them; and what incentive structures are needed if teams are to behave as stewards of total-fund capital rather than defenders of local sleeves.

The movie analogy: The DeLorean, not the crystal ball

Back to the Future is the right metaphor because TPA is fundamentally about cause and effect. Portfolio decisions are path dependent. Funding sources, illiquid commitments, currency exposures and incentive structures all matter. Change one decision and the whole future timeline of the portfolio can change. The task is not to predict the future with theatrical confidence; it is to understand how today's choices create tomorrow's portfolio.

Back to the Future metaphor

Marty McFly's DeLorean resonates because TPA is about cause and effect. A funding decision, benchmark constraint, liquidity choice or incentive setting changes the future timeline of the portfolio. The task is not to predict the future with theatrical confidence; it is to understand how today's choices create tomorrow's portfolio.

This analysis covers the past, present and future application of TPA. In the spirit of *Back to the Future* and TPA, this paper is structured as a trilogy.

- Part one goes back to the past and asks why the old map worked, and why it became less complete.
- Part two examines the alternative timelines: What changes when one decision affects return, risk, liquidity, complexity and accountability at the same time?
- Part three brings the DeLorean back to the present and asks what an asset owner should actually do next.

The trilogy at a glance

Part	Back to the Future role	Summary	Key thoughts	Why important
Part one – The past: Why the old map stopped being enough	Back to the origins. The reader returns to SAA's strengths, the emergence of TPA, psychological appeal, Australian context and reference portfolio thinking.	TPA did not arrive as a novelty. It emerged because large asset owners needed better governance for portfolios that outgrew simple sleeve-by-sleeve thinking.	Governance beats labels; complexity needs an anchor; objective overload requires prioritisation; Australia's constraints make hybrids likely.	The reader needs this foundation to avoid treating TPA as either magic or marketing. Part one explains the problem before offering tools.
Part two – The timelines: Measuring trade-offs and unintended consequences	Alternative timelines appear: Dashboards, measurement claims, utility scores, spectrum tests and SAA/TPA coexistence.	This is the credibility engine of the paper. It shows that TPA is not a clean return factor; it is an operating model that must improve decisions.	Measure more than return; use dashboards; make trade-offs explicit; test behaviour not slogans; retain SAA where it provides clarity.	Readers need Part two because it turns the concept into evidence, governance tests and decision tools. It stops the analysis becoming evangelism.
Part three – The future: Building the operating model deliberately	The journey returns to the present: What should an asset owner actually do next?	This part translates the research into a market proposition, diagnostic and behavioural model for collaboration and incentives.	Not every asset owner needs pure TPA; Frontier can help choose the right ambition; incentives must reward total-fund value, not local capital defence.	Readers need Part three to turn the paper into practical conversations with boards, CIOs and teams. It is where the research becomes usable.



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The 14-chapter roadmap – Key outcomes and why they matter

Part	Chapter	Chapter title	Key outcome	Why read it
One	1	TPA history – where did it come from?	TPA emerges as a governance architecture, not abstract theory.	Shows TPA was a response to complexity in larger, more private, more global portfolios.
	2	Why TPA feels attractive	TPA offers a way out of objective overload by making trade-offs explicit.	Important because asset owners face many valid lenses that cannot all win at once.
	3	Australian lay of the land	The Australian market is interested but uncertain; governance fit and prioritisation matter.	Important because Australian funds face YFYS, peer risk, member communication and board accountability realities.
	4	Reference portfolios	A board-owned anchor, hurdle and scorecard can separate risk appetite from active complexity.	Important because it explains how total-fund thinking can retain accountability rather than blur it.
	5	Expanded TPA / whole-of-portfolio reading list	A curated evidence base across recent TPA and whole-of-portfolio resources.	Important because it demonstrates the market conversation is broad, current and not only a Frontier thesis.
Two	1	Portfolio dashboard framework	Multiple objectives become a practical dashboard with thresholds, traffic lights, priorities and actions.	Important because TPA only works if trade-offs are visible at the point where decisions are made.
	2	Measurement and historical outcomes	TPA claims are interesting but noisy; the SAA counter-case remains legitimate.	Important because credibility requires caveats: TPA is a governance model, not a clean listed factor.
	3	Measuring TPA value	Value is assessed through outcomes, risk targeting, exposure design, liquidity, decision quality and accountability.	Important because it gives a practical answer to the objection that TPA cannot be measured cleanly.
	4	TPA spectrum test	Policies, delegations, incentives, reporting and real decisions reveal where an organisation sits on the TPA spectrum.	Important because the test is behaviour under trade-off, not the words used on a slide.
	5	Can SAA and TPA co-exist?	Yes: SAA can remain the anchor while TPA becomes the operating discipline for better marginal decisions.	Important because many asset owners need an SAA for regulation, retail products, communication, governance and accountability.
Three	1	Frontier market thought piece	Packages the Frontier proposition: beyond the label, better portfolio decisions.	Important because it translates research into a clear client-facing message and Frontier's service offering.
	2	Testing if TPA could have value for you	A practical diagnostic for whether TPA is worth pursuing and what level of framework is proportionate.	Important because not every asset owner needs a wholesale TPA program; the response should fit the problem.
	3	Captive capital, incentives and collaboration	TPA fails if capital remains psychologically owned by teams rather than allocated for total-fund benefit.	Important because governance tools will not work if incentives reward local wins that weaken the total portfolio.
	4	Unified field theory of portfolio management	Different measures can be translated into a common scoring language and weighted by utility preferences.	Important because it offers a way to compare unlike but interconnected aspects of total portfolio things - return, liquidity, peer risk, climate, tax and complexity.

Conclusion

This research paper is not an argument that every asset owner should adopt TPA. It is an argument that every serious asset owner should understand the questions TPA asks, because even if the destination is a hybrid model, the questions are too important to ignore. Ultimately this is about governance.

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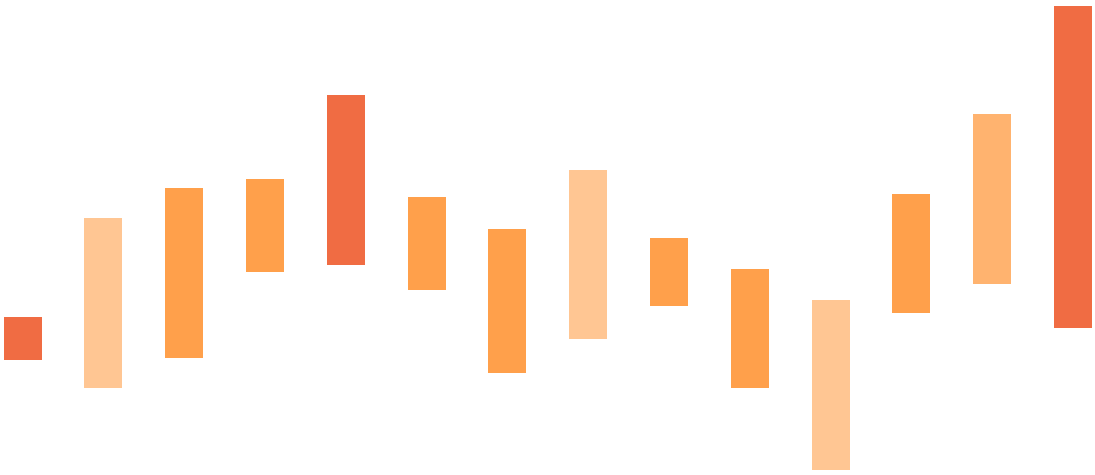
Chapter 1: TPA: A short history

Why it emerged, who shaped it, what it tries to solve, and why adoption is harder than the slogan.

TPA emerged less as a new asset allocation theory than as a governance response to complexity. Its best form preserves a board-owned risk anchor while forcing every active decision to answer a harder question: Does this improve the total fund after risk, liquidity, cost, complexity and accountability are considered?

Key points

- A Board has ultimate accountability for total portfolio outcomes (return and risk). A key question is how much authority and related accountability is delegated to management. Relative to a historical SAA, TPA may delegate and demand more of management with respect to total portfolio outcomes.
- TPA is best understood as a decision and governance lens, not a new asset allocation formula. The core question becomes: Does this improve outcomes for the whole fund, given objectives, risks, liquidity needs and constraints?
- TPA was designed to solve the limits of sleeve-by-sleeve SAA when portfolios became bigger, more private, more global and more dependent on overlays, liquidity management and total-fund risk budgeting. TPA can sit alongside SAA (and this is discussed within Frontier's research).
- The early Canada Pension Plan Investment Board (CPPIB) model made the reference portfolio central: A simple, scalable passive alternative owned by the Board, against which management's active decisions could be judged after costs and risk.
- Don Raymond is repeatedly identified in public material as a key architect of CPPIB's total portfolio approach, with both David Denison and Raymond associated with the strategic review and reference portfolio genesis, as early as 2006.
- Adoption is a spectrum. This spectrum applies to insurance entities, endowments, superannuation funds or many other kinds of asset owning bodies. Many Australian superannuation funds may rationally adopt a hybrid model because by regulation in Australia - Your Future Your Super (YFYS), stakeholder reporting, peer risk and benchmark mapping still matter.



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Why TPA emerged: The problem was not asset allocation, it was governance

For decades, SAA gave boards a clean governance tool by allowing them to decide the long-term weights, then hold each sleeve to account. That model works best when exposures are mostly public, liquid and easy to benchmark. It becomes less complete when the opportunity set expands into private equity, infrastructure, real estate, credit, overlays, derivatives and liquidity management.

The practical problem was simple but profound. Asset class buckets show where capital is allocated, but they do not always show what economic risks the total fund is taking, whether risks are duplicated across sleeves (or there is unintentional compounding of exposures across sleeves), where liquidity would come from in a stress event, or how to compare public market and private market opportunities on a consistent basis.

TPA grew as a response to that governance gap. Its promise is not that it abolishes benchmarks, nor that it automatically improves returns. Its promise is that it changes the unit of decision from the sleeve to the whole fund, and therefore allows a better conversation about risk budget, opportunity cost, liquidity, fees and the true source of value added.

Figure 1: TPA is less a portfolio label than a governance mechanism for preserving accountability amid complexity



The early engine: CPPIB and the reference portfolio

The most important early story is Canada Pension Plan Investment Board, now CPP Investments. Total portfolio design principles were visible at CPPIB in the early 2000s. One practical challenge was the Foreign Property Rule, which constrained offshore holdings and created a concentration issue for a Canadian equity heavy portfolio. CPPIB's response was to manage sector and economic exposures more deliberately across Canadian and non-Canadian equities, rather than treating the legal location of the exposure as the full investment answer.

In 2004, CPPIB's investment framework combined investment beliefs, liabilities and funding, total fund risk and return, a minimum risk portfolio, capital at risk and risk-adjusted value-added measures. The critical step came in 2006, when the Board and management formally adopted the TPA and reference portfolio. A key reference was in the CPPIB Annual Report 2006.

The reference portfolio was deliberately simple – a passive, scalable strategic alternative that could reasonably be expected to meet the plan's long-term return need while reflecting the plan's liability profile. This is not just history. It foreshadows the measurement problem addressed in *Part two, chapter 3: How do we know whether added complexity earned its place versus the simple counterfactual?*

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This is the feature that makes the CPPIB model so important. The reference portfolio was not the target portfolio. It was the default portfolio – the low-complexity, low-cost portfolio the organisation could hold if it did not build an active, complex, value-adding investment organisation. That distinction allowed the board to own systematic market risk and the asset-liability mismatch, while allowing management to depart from the reference portfolio within an active risk budget. This raises the practical question of whether a Board-owned anchor can survive a more dynamic total portfolio model. That question is developed in *Part one, chapter four, Reference Portfolios*, and then revisited in *Part two, chapter 5, Can SAA and TPA co-exist?*

Part one, chapter four turns this origin story into a practical question: How can a simple reference portfolio act as the hurdle against which complex active decisions are judged?

Who developed it? Internal leadership, not merely external invention

The public record most clearly points to CPPIB internal leadership as the genesis for TPA. Don Raymond is repeatedly identified in public material as the principal architect of CPPIB's innovative total portfolio approach and the strategic review is associated with David Denison and Don Raymond. This matters because TPA was not simply a consulting framework imported into a fund. It was shaped around the real governance problem of how to give skilled management flexibility without losing Board accountability.

CPPIB centralised TPA functions in a Total Portfolio Management department in 2010, with risk modelling designed to map alternative assets and strategies into common factors alongside traditional assets and a team focused on asset allocation and portfolio construction. That institutional step is important. TPA is not just a decision slogan; it needs people, systems, analytics and authority to operate.

That said, CPPIB is not a perfect analogue for many Australian investors. Like many early TPA adopters, it is a large defined benefit style fund with a long-term horizon and fewer external reporting constraints than, for example, Australian superannuation funds. It does not face the same peer competition, YFYS test, fee disclosure regime or member choice environment. This difference matters. Australian superannuation funds, insurers and wealth businesses often operate within regulatory and disclosure frameworks that still rely on asset class construction and SAA-style reporting. Those requirements can make a pure version of TPA harder to execute, because funds still need to explain portfolios through SAA, benchmarks, member disclosures, capital requirements or product-level reporting. The implication is not that TPA is impossible in Australia. It is that adoption is more likely to be hybrid. Australian investors may retain an SAA anchor for governance, regulation and communication, while using a total-portfolio lens to improve decision making, risk budgeting, liquidity management and trade-off analysis.

From Canadian innovation to a global language

NZ Super's reference portfolio, introduced in 2010, joined CPPIB as another fund with one of the clearest public explanations of the governance logic. NZ Super also describes it as a board-set, passive, low-cost portfolio used to benchmark the actual portfolio and the value added through active strategies. The model reinforces a clean split, where the Board defines risk appetite and the benchmark and management is accountable for adding value above that benchmark after all costs.

The language broadened through the Thinking Ahead Institute / WTW peer study, which described TPA as a spectrum and identified a group of leading organisations associated with the approach. These included ATP Group (Arbejdsmarkedets Tillægspension), Denmark's statutory labour market pension fund, CPPIB, Future Fund, Government of Singapore Investment Corporation (now generally known simply as GIC), NZ Super, QSuper and NSW Treasury Corporation. The Chartered Alternative Investment Analyst Association (CAIA, a global professional body focused on alternative investments and portfolio construction) published a report in 2024 which then gave the topic a major global 'brand moment', framing TPA around governance, factor lenses, competition for capital and single portfolio culture. In November 2025, CalPERS publicly voted to adopt TPA, stating it would replace SAA from 1 July 2026 (although the series does discuss the co-existence of SAA alongside TPA, and TPA as a governance framework and a spectrum).

All of these papers referred to above are accessible in Part one, chapter 5 of this paper.

What TPA is trying to solve today

TPA's modern appeal is easy to understand. It turns the portfolio from a collection of defended sleeves into a single competition for capital. Each material proposal should be assessed for its contribution to the total fund – expected return, downside risk, liquidity, fee burden, implementation complexity and alignment to objectives. That sounds obvious, but it changes the practical operating model, including who meets, what gets escalated, what information is shown and how decisions are attributed afterwards.

The aim is not to abolish asset classes or benchmarks. The aim is to stop asset class labels doing work they are not designed to do. Infrastructure can contain equity, inflation, credit, duration, development, regulatory and liquidity risks. Private equity may be better understood as equity selection, implementation and illiquidity risk rather than simply a separate bucket. Public markets often become the liquid rebalancing engine that allows illiquid assets to be held without drifting away from the total fund risk profile.

The most useful summary is this: TPA tries to preserve simplicity at the Board level while allowing sophistication beneath it. It can reduce silo errors, improve relative value choices, speed decisions and make liquidity/risk management more integrated. But it raises the governance bar. If delegation of authority, escalation triggers, attribution, liquidity limits and incentive design do not change, TPA becomes a label… and labels do not add value.

This is also why TPA feels useful today. The investment environment is changing quickly, with more uncertainty, more data, more themes, new ideas such as AI, and more interconnected geopolitical risks. In that setting, TPA can appeal because it encourages investors to step back from individual sleeves and think about the portfolio from the top down. It can also create a sense of simplicity, even though the practical work of implementation may be more complex.

That does not mean TPA will add value for every asset owner. For some, it may improve decision quality, risk budgeting and accountability. For others, the existing governance model and organisational design may already be fit-for-purpose.

Five key messages for a Board / IC

1. TPA is a governance architecture, not a religion.
2. The reference portfolio is not old-fashioned – it is the accountability device.
3. 'Competition for capital' is only useful if proposals use a common risk, return, liquidity and cost language.
4. Adoption is a spectrum; hybrid models are often rational, especially in Australia.
5. The danger is not SAA versus TPA. The danger is complexity without accountability.

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Why Australia may land in hybrid territory

Australia is a well and highly regulated, mature and sizeable financial services market. Disclosure and regulatory requirements encumber in some instances the removal of any SAA construct. But a hybrid model in many instances may be precisely where Australian asset owners land.

For example, Australian superannuation funds face a very particular constraint set. Many are trying to improve whole-of-fund decision making while still operating with public benchmarks, peer comparisons, YFYS considerations, liquidity requirements, fee scrutiny and stakeholder communication needs. That combination makes a pure TPA implementation harder, and often makes a fit-for-purpose hybrid approach the more sensible destination.

In practice, that hybrid can still be powerful. The Board or investment committee can retain a strategic anchor, while management uses a total portfolio lens to compare opportunities, manage liquidity, shift risk exposures and explain trade-offs. The practical test is not whether the label is pure. The practical test is whether decision quality improves without weakening accountability.

Sample TPA adopters regularly cited in the past two years in the Australian market – press or conferences

Item	Name of fund	Started / public marker	Key motivator as articulated	Link reference
1.	NZ Super	2010 — official page states the reference portfolio was introduced in 2010.	Governance clarity and accountability: Benchmark value-add net of costs, clearer hurdle for active decisions, economic drivers lens, cleaner board/management delegation.	NZ Super Reference Portfolio
2.	HESTA	2017	Better alignment to objectives and ability to handle horizontal/systemic issues alongside traditional strategies; stronger cross-portfolio risk and decision making.	Investment Magazine HESTA TPA
3.	ATP	By 2020	Referenced as an organisation associated with total portfolio approaches in the draft report; public motivator not fully specified in the cited table.	ATP investment approach 2021
4.	Australian Retirement Trust	2 September 2025 – transition underway.	Prepare for greater scale; improve joined up thinking and team alignment; strengthen liquidity awareness/management as the fund scales and invests more offshore.	Investment Magazine ART TPA
5.	CalPERS	17 November 2025 Board adoption; TPA to replace SAA from 1 July 2026.	Increase transparency and give staff more flexibility to capitalise on opportunities; shift focus to whole-portfolio contribution rather than asset class targets.	CalPERS TPA adoption
6.	Aware Super	20 February 2026 – revamped investment structure to support TPA.	Strengthen whole-of-fund decision making; enhance resilience; integrate data, liquidity management and public/private markets; leverage technology uplift and whole-of-fund data platform.	Aware Super investment structure

This is by no means an exhaustive list, merely a small sample.

Chapter 2: Why TPA feels attractive

A governance lens on objectives, trade-offs and finite decision-making capacity

TPA is psychologically powerful because it offers a way out of objective overload. It does not remove trade-offs; it makes them explicit, comparable and governable and forces the discussions into the open. The goal is not a portfolio that wins on every lens at every measurement date, but a portfolio whose most important lenses are consciously prioritised, resourced and monitored.

The problem: Objective overload may create permanent dissatisfaction

Asset owners increasingly assess the likelihood of future portfolio success through multiple lenses, for example:

- **An insurance entity.** Portfolios may be judged through solvency and capital adequacy requirements, asset-liability matching, liquidity and credit quality, as well as return on capital and policyholder outcomes. These lenses can pull in different directions. A portfolio that improves resilience or reduces regulatory capital usage may also lower expected returns.
- **A university or endowment.** The portfolio may need to preserve intergenerational purchasing power while supporting dependable annual distributions, maintaining liquidity and reflecting institutional values. Success may therefore be assessed against CPI-plus returns, spending stability, downside resilience, liquidity and responsible investment commitments. In terms of these trade-offs, Frontier has previously written a paper on spending rules worth reading (Frontier Line 216 - Spending policies and investment strategy)
- **A charity.** Assets may be viewed through the lenses of mission delivery, capital preservation (often in real terms), reliable grant-making capacity, liquidity and donor or community expectations. Ethical restrictions and impact objectives can add further constraints, sometimes narrowing the investable universe or changing the balance between financial return and mission alignment.
- **A superannuation fund.** Portfolios may be assessed against member retirement outcomes, CPI-plus objectives, YFYS benchmarks, peers, risk and liquidity tolerances, fees and climate-related measures. Different stakeholders and time horizons can elevate different lenses, so a sound long-term portfolio may still appear deficient on a shorter-term regulatory, peer or cost measure.

Each lens is valid, but each is measured in different units, over different timeframes and by different stakeholders. Treating every lens as an independent pass/fail test converts governance into a permanent search for whichever metric is currently red.

This is the psychological appeal of TPA. It gives boards and investment teams a single organising frame by asking what portfolio outcome they are really trying to maximise, what constraints they must work within, and which compromises are acceptable. Some may argue that each fund can only focus on one primary objective, although later we consider whether multiple concurrent objectives can be brought together through a weighted-average construct. That frame can be calming because it shifts the conversation away from blame for individual red lights and towards the deliberate allocation of scarce governance resources, including time, people, agenda space, modelling budget and implementation capacity.

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Figure 2: Illustrative probability under the simplifying assumption each lens has an independent 50% chance of success



In simple terms, many asset owners slowly move to a framework of comfortable dissatisfaction.

Figure 3: From objective overload to comfortable dissatisfaction



As an example, thinking about a superannuation fund in Australia today, there could be many lenses applied to the portfolio (some by self-selection and some by regulatory requirements) and these could include:

- Return objectives against a margin above CPI.
- Returns relative to market benchmarks (or alpha).
- Returns relative to peers.
- Margin above YFYS or ability to satisfy LAGIC imposts for regulated insurers.
- Extent of liquidity or amount in private/public markets.
- Fees relative to peers.
- Standard risk measures or satisfying risk objectives in an asset owners investment policy.
- Expected tail loss in a worst-case scenario (or bottom 5% or 10% of worst cases).
- Carbon measurement (or measures relevant to climate change).

The more lenses that apply at the same time, and the more each lens is treated as an independent pass/fail test, the more likely dissatisfaction becomes. To illustrate the point, the table on the next page uses a deliberately simple assumption that each lens has a 50% chance of success.

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Number of lenses	Combinations	All-success probability	Interpretation
3	8	12.5%	Mostly achievable, but still prone to disappointment
5	32	3.1%	‘All green’ already becomes rare
7	128	0.8%	Governance energy shifts to exception management
10	1,024	0.10%	Only one combination is complete success

The dashboard discipline needed to turn these competing lenses into a decision process is developed in Part two, chapter 1, where objectives are translated into thresholds, priorities and action reflexes.

The key insight: Every portfolio decision is a trade-off

The hardest governance issue is not measurement. It is priority. This same challenge applies to all asset owners (the list of items for consideration may differ though).

For example, a superannuation fund may seek to reduce fees, increase liquidity, improve YFYS alignment, lower carbon intensity, increase peer-relative differentiation and strengthen downside resilience. It is unlikely to maximise all of these objectives at the same time. Similarly, an ESG-focused asset owner may seek to reduce emissions quickly, add alpha, remain reasonably close to benchmark, reduce fees and avoid looking too different from peers. Again, not every objective can be maximised simultaneously. Some decisions that improve one lens mechanically worsen another. For example, more unlisted assets can aid long-term return and diversification but may consume liquidity. More defensive positioning may improve downside resilience, but lower expected returns relative to peers. More passive exposure may reduce fees but narrow the alpha opportunity set.

A TPA mindset reframes these tensions as a utility problem, i.e. one where the asset owner, regardless of type, can allocate a weighting to each objective and assess the collective weighted outcome at a total portfolio decision or TPA lens (this is considered in far more detail in later chapters). The fund must define the relative value of each lens, the minimum acceptable tolerance, and the circumstances in which lower priority objectives may be consciously traded away to improve higher priority outcomes. This does not make the choices easy, but it makes them transparent and capable of being governed.



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Lens	Common governance owner / stakeholder	What 'good' can look like	Possible trade-off
Member return objective	Members, Board, investment committee	High probability of meeting CPI-linked objective over intended horizon	May require risk exposure that worsens short-term drawdown or peer optics
YFYS / regulatory benchmark	Regulator, executives, Board	Comfortable buffer to the test over relevant horizon	May constrain differentiated portfolio construction
Peer-relative return	Executives, consultants, public market stakeholders	Competitive net return and defensible market narrative	Can conflict with long-term absolute risk appetite or fee minimisation
Resilience / tail risk	Board, risk committee, members	Known downside tolerance under stress scenarios	Insurance, hedging or diversification may reduce expected return
Liquidity	Board, risk committee, operations	Liquidity available under plausible stress	Higher liquidity can reduce illiquidity premia
Fees / carbon / other lenses	Members, regulators, community stakeholders	Targeted position relative to peers or stated commitments	Can restrict manager, asset class or implementation choices

Notably, all the majority of items in the table above are assessed on an ex-ante basis (with the exception of the last row).

The governance failure mode is to ask every measure to be a primary objective. In practice, a fund needs a hierarchy – primary objectives, hard constraints, soft preferences and monitoring indicators. TPA helps because it puts all lenses on one decision surface rather than leaving each lens to prosecute its own case separately.

Why TPA helps… and why it does not magically solve the problem

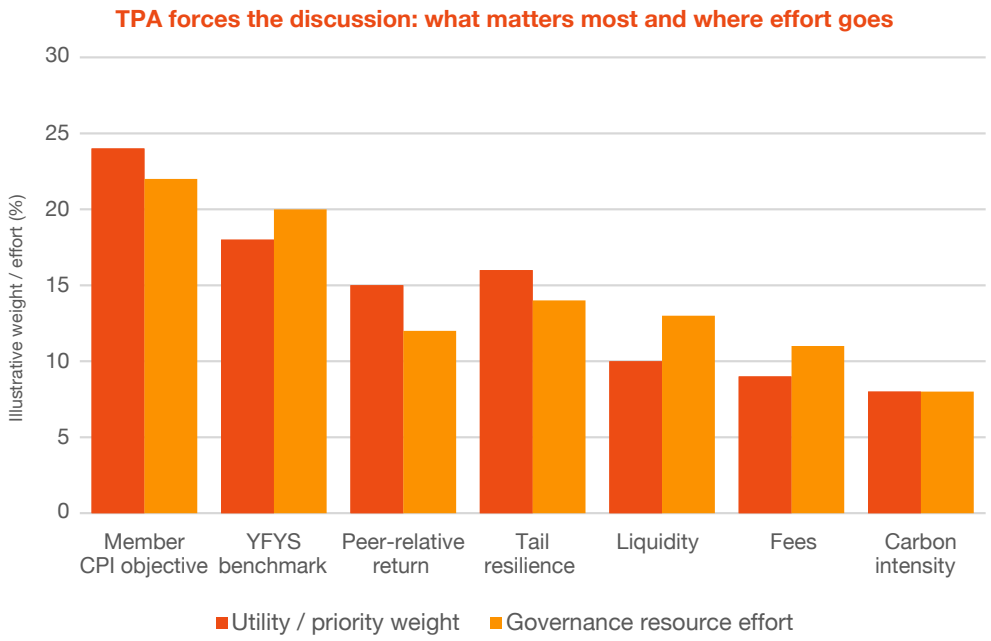
TPA is often appealing because it promises integration. It links objectives, investment strategy, risk budget, limits and action plans. Effective investment risk frameworks need measurable forward-looking measures, a known risk appetite, sensible review frequency, a vertical connection between higher and lower-level risks and action reflexivity. This point comes up across the whole discussion of TPA in this paper. Those disciplines are precisely what prevent a dashboard from becoming a collection of unconnected warning lights.

However, TPA can disappoint if it is treated as a slogan rather than a governance mechanism.

It does not remove politics, stakeholder pressure or model uncertainty. It requires the Board and Executive Team to make explicit choices about utility, weights and tolerances – and to revisit them as conditions change. Without that prioritisation, TPA can simply become a more sophisticated way to describe the same unhappiness.

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Figure 4: Illustrative weights and governance effort should be made explicit, debated and revisited



A practical governance construct: Utility, tolerance and action

A useful TPA governance artefact can be deliberately simple. A single page that records the lens, metric, priority weight, tolerance band and action reflex. Its purpose is not false precision, but a transparent basis for deciding where scarce governance resources should go next.

Lens / objective	Metric example	Priority weight	Tolerance stance	Governance action reflex
Absolute member objective	Probability of achieving CPI + target margin	High	Green / amber / red thresholds set ex-ante	If amber or red, review strategic risk level and source of expected shortfall
Regulatory benchmark	Probability / buffer relative to YFYS test	High	Minimum buffer and trigger points	If amber, identify whether beta exposure, implementation or attribution is driving risk
Peer-relative outcome	Expected net performance versus peer group	Medium-high	Defined underperformance tolerance	Use only if consistent with member objective and acceptable risk budget
Tail resilience	Scenario loss, CVaR or peak-to-trough drawdown	High constraint	Hard red line for unacceptable loss	If red, consider hedging, diversification or lower equity beta
Liquidity	Stress liquidity coverage and cashflow sufficiency	Hard constraint	Minimum coverage threshold	If amber, slow illiquid commitments or lift liquid reserves
Fees / carbon / other lenses	Relative fee and carbon intensity measures	Preference / constraint	Target range not always primary objective	Trade off consciously when higher priority member outcomes dominate

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Part two, chapter 1 operationalises this into a portfolio dashboard; Part three, chapter 4 then asks whether the dashboard can become a weighted scoring language, where different measures are translated into a common language and weighted by the asset owner's utility preferences.

The conclusion: From a mire of unhappiness to comfortable dissatisfaction

The psychological problem for many funds is not that they lack objectives. It is that they have too many objectives (sometimes competing with one another), each with a legitimate constituency, and no clear agreement on how to rank them when they conflict. In that environment, dissatisfaction is almost guaranteed, and at any point one or more lenses will be amber or red, and each can be interpreted as a failure if assessed independently.

A well-governed TPA does not promise perpetual happiness. At a minimum, it promises comfortable dissatisfaction. The Board can understand which lenses matter most, what it is prepared to trade off, when conditions require priorities to change, and where the next hour of governance attention should be spent. That is the real psychological appeal of TPA, not optimisation without compromise, but a clearer language for compromise in pursuit of total portfolio success.

> TPA assists when it is implemented as a prioritisation and resource allocation discipline. It is not easy, because the hard work is agreeing utility preferences, weights and tolerances, and then having the courage to accept that lower priority measures will sometimes be sacrificed for higher priority portfolio success.



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Chapter 3: The Australian lay of the land on TPA

Why is the label less important than governance, prioritisation and honest gap analysis

The Australian market is not short of interest in TPA. It is short of clarity on what problem a variant of TPA is meant to solve, which governance gaps must be closed first and how Boards and ICs should prioritise trade-offs across risk, return, liquidity, cost, complexity, regulation and stakeholder expectations.

Frontier's 2026 client conference showed both attraction and unease. Around 150 institutional asset owners and related investors attended (this included many large superannuation funds, insurers, universities, wealth managers, endowments and charities from Australia, Japan and New Zealand) and audience polling suggested a market somewhat interested in TPA but still divided on what the label means and how it would operate in the Australian context.

- In one poll, 43% associated TPA with a pure competition-for-capital model, 27% saw risk as the key anchor, and 30% were not sure what the term means.
- In another, 40% thought anyone can do TPA, but 28% thought it may add value while being hard to apply in their own context.

The Australian lay of the land is therefore not 'TPA has arrived'. It is 'the idea is interesting, but the operating model remains contested'. This concern becomes central in Part two, chapter 5, which argues many Australian asset owners may rationally retain an SAA anchor while adopting TPA decision disciplines.

What the voting says: Attractive concept, unclear definition, governance anxiety

The polls provide a useful lay of the land. They show asset owners are engaged, but also that a significant part of the audience either defines TPA differently or sees risks in applying it. This is exactly why a clear and honest gap analysis should come before any operating model change.

When I think of TPA, I believe	Response	%
A	Pure competition for capital model focused solely on total portfolio outcomes	43%
B	A process where risk is the key anchor for any portfolio	27%
C	Not sure; term is bantered around and not sure anyone knows what it is	30%
When I think of TPA, I think this is	**Response**	**%**
A	Something only large investors (by assets) can do	10%
B	Something anyone can do	40%
C	A fad used for marketing purposes, but no one really knows what it is	11%
D	Something which may add value, but hard to know how it applies in my context	28%
E	A waste of time; traditional SAA-based approach is working reasonably well, so why change	11%

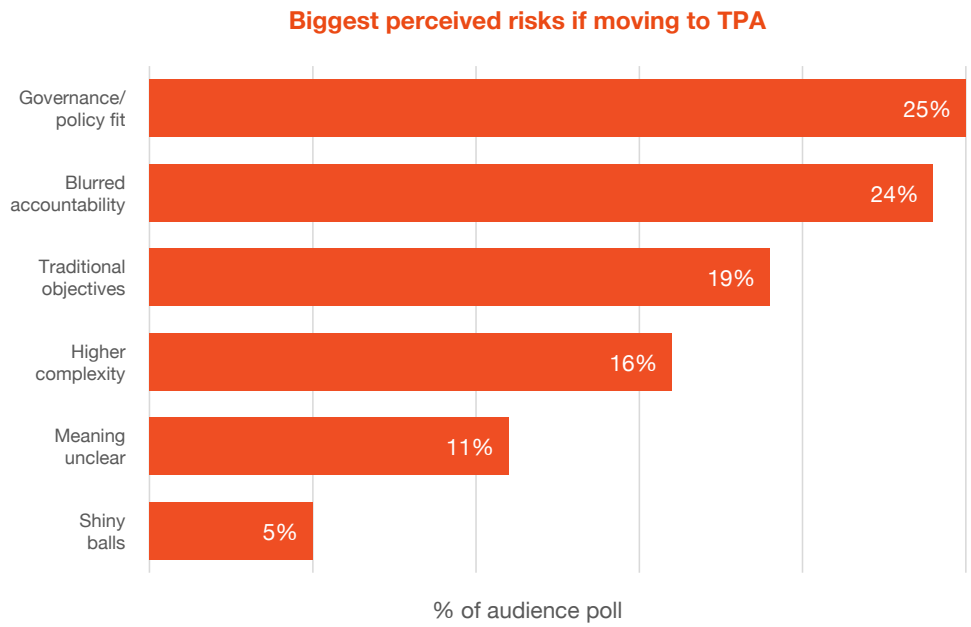
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The confusion in these responses is why Part two, chapter 4 proposes a behavioural spectrum test. The issue is not whether an investor uses TPA language, but whether its policies and decisions require a total portfolio lens. The governance and accountability concerns raised by the poll become the practical tests in Part two, chapter 4 and the behavioural/incentive issues in Part three, chapter 3 of this series.

Risks and execution: The problem is not 'TPA versus SAA', it is weak design versus strong design

The risk poll points to the two issues that matter most – governance fit and accountability. If an asset owner cannot explain who owns decisions, how active risk is spent, how liquidity is protected and how decisions are attributed, the TPA label increases opacity rather than improving outcomes.

Figure 5: Audience voting suggests governance fit and accountability are the first-order risks



If we moved to TPA, the biggest risk is	Response	%
A	Does not fit within governance, policy or delegation structure — all need recalibration	25%
B	Portfolio could become too diversified: many shiny balls, no clear strategy articulation	5%
C	Accountability, attribution and decision rights become blurred	24%
D	Inconsistency with objectives structured around traditional models (peers, ESG, YFYS)	19%
E	Could significantly increase complexity of the portfolio or decision-making process	16%
F	No one clearly knows what it means	11%

The honest gap analysis: Why consider a TPA variant?

An asset owner should not ask “should we adopt TPA?”. They should ask: Where is the current model failing to prioritise, where are trade-offs hidden, and where is governance too slow or too siloed for the risks now being taken? If there is no gap, and trade-offs are clear and decision making is well integrated, then either TPA is somewhat embedded (perhaps by another name) or there is less value in TPA for that asset owner. Part two, chapter 4 will explore testing where an asset owner is on the TPA spectrum today and Part three, chapter 2 will look at assessing whether adding some dimensions of TPA can add value for an asset owner in the future.

A variant of TPA is worth considering where the current model cannot answer these questions clearly. Dimensions to contemplate, which are considered in more detail later in the series, are outlined below.

Gap to test	Warning signal	TPA / hybrid response	Frontier help
Prioritisation gap	Too many objectives are treated as equal: CPI, YFYS, peers, fees, liquidity, ESG/carbon, downside resilience.	Define utility preferences and explicit order of priority; accept some lower priority lenses may be consciously traded off.	Board/IC prioritisation workshops; objective hierarchy; risk appetite and dashboard design.
Governance gap	Policy, delegations or committee cadence do not match the speed/ complexity of decisions being made.	Recalibrate decision rights, escalation triggers and governance forums before changing portfolio construction.	Governance review; delegated authority map; IC/Board papers and decision protocols.
Accountability gap	Attribution and decision rights blur; ‘everyone helped’ but no one owns outcomes.	Define who owns beta, alpha, overlays, liquidity, fees and active risk; require post-decision attribution.	Accountability framework; attribution template; decision log and learning loops.
Common-language gap	Asset teams speak in cap rates, IRRs, spread, beta, duration or carbon metrics without a common translation layer.	Translate opportunities into building blocks: return, risk factor, liquidity, cost, complexity and constraints.	Portfolio dashboard; common proposal template; risk budget and liquidity toolkit.
Capability gap	The asset owner wants whole-of-fund agility but lacks data, systems, people or confidence.	Adopt a staged hybrid rather than pure TPA; strengthen analytics before expanding discretion.	Roadmap from current state to fit-for-purpose TPA variant; implementation support.

Bottom line
TPA is not pixie dust. The portfolio still has to earn returns in the old-fashioned way. The Australian opportunity is to use TPA thinking pragmatically by sharpening priorities, making trade-offs explicit, creating a common risk language and strengthening governance. This is exactly where Boards, ICs and asset owners need help, and where Frontier can help.

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Chapter 4: Reference portfolios: The anchor, the hurdle and the scorecard

A reference portfolio is the accountability bridge between a simple Board-owned risk appetite and a more complex actual portfolio. It asks whether complexity, illiquidity, active risk and the governance burden have earned their place against a simple, scalable counterfactual. It helps answer one of the hardest TPA questions: Did added complexity, cost, illiquidity and governance burden earn their place relative to a simple, scalable portfolio with the same risk intent?

The concept separates risk ownership from active complexity. The Board can own a simple, understandable risk benchmark; management can then spend risk budget on alternatives, active management, overlays, private markets and implementation choices, but only where those choices are expected to improve the total portfolio and can later be assessed against the counterfactual.

Figure 6: A reference portfolio turns complexity into an explicit hurdle rather than an unexamined feature



Question	Reference portfolio answer	Why it matters
What core risk are we willing to own?	A low-cost, simple portfolio that expresses the total risk level or policy risk baseline.	Risk appetite becomes discussable and governable.
Where should risk be spent?	Only where complexity is expected to add return, resilience or diversification after costs and risks.	Risk is a scarce governance resource, not a free input.
How do we know if complexity worked?	Compare expected and realised outcomes against the simple counterfactual and feasible alternatives.	Performance assessment becomes both ex-ante and ex-post.

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Where the idea came from: CPPIB and the risk accountability split

The clearest early history in the TPA folder is the CPPIB / CPP Investments example. The total portfolio design principles appeared in the early 2000s, with the decisive step coming in 2006 when the Board and management formally adopted TPA and a reference portfolio as the passive strategic counterfactual and principal accountability benchmark.

The initial CPPIB reference portfolio was 40% foreign equities, 25% Canadian equities, 25% Canadian nominal fixed income and 10% Canadian real return bonds. It was designed to reflect CPP-specific liabilities and risk assumptions, and was described as understandable, low-cost and demanding. It was not the target portfolio, but the passive alternative management had to beat after costs and risk.

That framing is the essential insight. The Board selected the systematic risk baseline. Management could depart from it via private equity, real estate, infrastructure, credit and active public strategies, but the resulting complexity had to demonstrate value relative to the passive counterfactual. The reference portfolio therefore separates two questions – firstly is the Board's long-term market risk policy appropriate? And secondly, did management add value beyond that policy?

What a reference portfolio is	What it is not	Practical example
A Board-owned risk anchor and passive counterfactual.	Not an instruction to hold only listed assets or only the benchmark asset classes.	Private equity can be funded by reducing public equity exposure with similar systematic risk.
A way to spend risk deliberately.	Not proof that all deviations are good.	Infrastructure can be decomposed into equity-like, rates, inflation and development risks.
A scorecard for added complexity.	Not the only measure of success, nor a replacement for liquidity and resilience reporting.	Public markets can provide the liquid balancing mechanism for private assets.

Worked example: From an NZ Super like reference portfolio to an actual portfolio

Important caveat
The following numbers are deliberately contrived to explain the mechanics. They are not estimates for NZ Super, CPPIB, Future Fund or any client. The numbers are illustrative, not estimates for any named fund.

Step one is to define a simple risk anchor. In this example, the Board chooses a $100 reference portfolio with 80% listed global equities and 20% bonds. The point is not that every actual asset must literally be mapped to one of two buckets. The point is the Board has defined the scale of market risk it is willing to own and management can then explain every active or complex decision as a use of that risk budget.

As an aside, while volatility is used as the risk anchor in this example, the risk anchor can be any risk measure which is at the very forefront of importance for the specific asset owner constructing a TPA reference portfolio. In fact, for many sovereign wealth funds and insurance or liability driven entities it is far more common to utilise expected tail loss (or some measure of CVaR) as the risk anchor for the reference portfolio.

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Asset / building block	Weight in RP	Expected return	Volatility	Role in risk model
Listed global equities	80%	7.0%	16.0%	Growth / equity risk
Domestic/global bonds	20%	3.0%	5.0%	Defensive rates risk

Metric	Reference portfolio result	How calculated
Expected return	6.20% p.a.	80% × 7.0% + 20% × 3.0%
Expected volatility	12.64% p.a.	sqrt(w′Σw), using -0.20 equity/bond correlation
Risk contribution	Equities ≈ 101.0%; bonds ≈ -1.0%	Bonds diversify equity risk; risk contribution can be negative when correlation is negative

Part two, chapter 3 broadens this from a return versus reference portfolio question to a multi-lens assessment of decision quality, liquidity and governance.

Moving to the actual portfolio: Complexity must earn its place

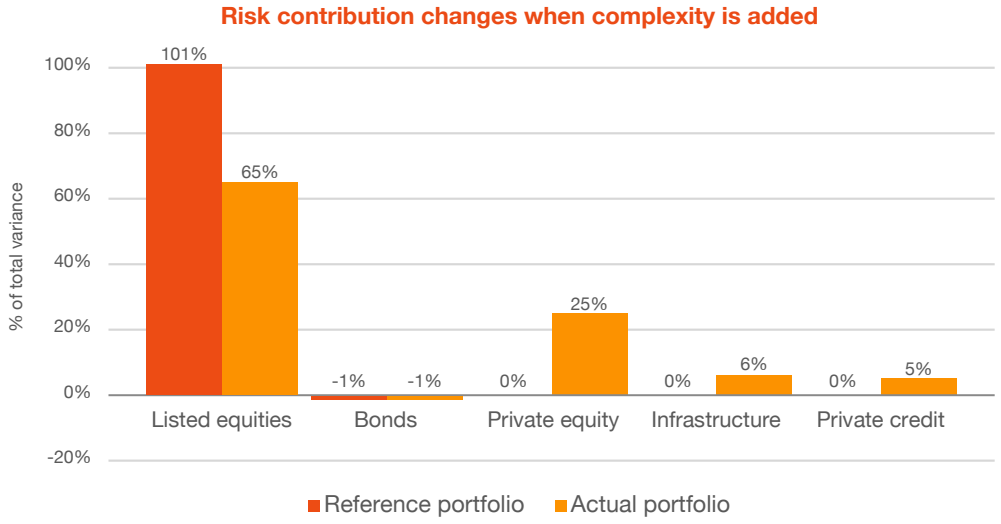
Now assume management proposes an actual portfolio that keeps broadly similar total risk but introduces private equity, infrastructure and private credit. The modelling question is not: "Which asset-class bucket does each holding belong to?" It is: "What are the expected return, systematic risk, liquidity, complexity and implementation costs, and how do these replace the risks in the reference portfolio?"

Asset	Actual weight	Expected return	Volatility	Key modelling interpretation	Funding logic
Listed global equities	50%	7.0%	16.0%	Liquid global growth risk	Reduced to fund private assets
Bonds / cash	15%	3.0%	5.0%	Rates, liquidity and collateral	Reduced modestly but retained for liquidity
Private equity	15%	8.8%	22.0%	Equity-selection risk plus illiquidity	Funded mainly from listed equity risk budget
Infrastructure	10%	6.8%	11.0%	Mix of equity, inflation and asset-specific risks	Not treated as a generic bucket; decomposed by drivers
Private credit	10%	6.0%	9.0%	Credit spread, defaults and liquidity	Must clear a spread/illiquidity hurdle after fees

Metric	Reference portfolio	Actual portfolio	Interpretation
Expected return	6.20% p.a.	6.55% p.a.	+0.35% p.a. expected excess return from complexity
Expected volatility	12.64% p.a.	11.99% p.a.	-0.65% p.a. lower modelled volatility, but with more liquidity/model risk
Simple risk-adjusted hurdle	—	Expected extra return ÷ similar total risk	Management must explain why extra complexity is worth the governance and liquidity burden

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Figure 7: In the illustration, risk is deliberately moved away from listed equity beta into private equity, infrastructure and credit, while keeping total risk in the same broad zone



The same funding source logic should sit inside every major investment paper. Part two, chapter 1 turns this discipline into a dashboard and trade-off framework.

How the example should be read

The numerical example shows three governance disciplines. First, the reference portfolio makes the risk appetite explicit – roughly 12.6% volatility in the simple 80/20 portfolio under the assumptions used. Secondly, the actual portfolio must be expressed in the same risk model, not as a list of attractive asset class labels. Thirdly, the added complexity has to clear a hurdle. In the illustration, management claims approximately 35 basis points of additional expected return and slightly lower modelled volatility, but that claim must be tested against fees, valuation uncertainty, illiquidity, implementation risk and governance capacity.

The strongest version of the test is both ex-ante and ex-post. Ex-ante, the Board or IC should ask: what risk is being sold to fund this investment, what expected return is being bought, and what is the confidence the trade-off improves the total portfolio? Ex-post, the Board or IC should ask: Did the total portfolio do better than the reference portfolio and other feasible alternatives, after all costs and risks, and did the original decision process make sense at the time?

Part two, chapter 2 returns to this measurement issue and explains why TPA outcome claims should be read carefully rather than treated as clean proof of a return premium.

Pitfalls: What the example should not imply

Pitfall	Implication
Not an exact forecast	The numbers are illustrative assumptions, not predictions. The framework matters more than the precise point estimate.
Not a simple asset-class mapping	The actual portfolio is not 15% private equity therefore 15% alternatives; the relevant question is what systematic risks and liquidity risks are introduced.
Not a free lunch	Lower modelled volatility can be illusory if private market smoothing, valuation lag, stress liquidity or correlation shifts are ignored.
Not a single verdict	Benchmark relative performance is useful, but TPA requires multiple lenses: risk, resilience, liquidity, cost, implementation skill and objective delivery.

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Who uses the idea and the Australian relevance

Fund / investor	Public marker	Reference portfolio / risk anchor	Objective / timeframe in sources	Comment
CPP Investments / CPPIB	2006 TPA + reference portfolio	Initial RP 40% foreign equities, 25% Canadian equities, 25% Canadian nominal fixed income, 10% Canadian real-return bonds; recent CPP material discusses 85/15 risk equivalence for base CPP.	Long-horizon CPP sustainability; CPP Insights refers to a 75-year actuarial horizon.	Origin story for risk anchor plus management accountability.
NZ Super Fund	Reference portfolio introduced in 2010	Public page describes an 80:20 growth/fixed-income RP and 100% FX hedge to NZD.	Long-term horizon and risk profile; used to benchmark active value-add net of costs.	Clean public explanation of why a reference portfolio supports Board/management delegation.
CalPERS	Board adoption of TPA in November 2025	Board materials describe a Board-adopted reference portfolio benchmark and active risk limit.	Four-year ALM cycle; goal to improve funded status and reduce contributions.	Useful contemporary example of shifting from SAA to TPA language.
Future Fund / Australia	TPA-style "one team, one portfolio" orientation	No CPPIB-style public RP composition found in reviewed sources.	Department of Finance states CPI +4.0% to +5.0% p.a. over the long term, with acceptable but not excessive risk.	Strong TPA relevance, but public reference portfolio composition not located.
Regulated Australian super funds	Generally hybrid / total-portfolio thinking rather than full TPA	No clear public CPPIB/NZ Super-style RP located in reviewed sources.	Fund specific objectives generally include member return objectives, YFYS and peer constraints.	Reference portfolio thinking can still be used internally as a risk and opportunity-cost anchor.

Frontier take-away
A reference portfolio is most valuable when it is used as a governance tool. A clear expression of risk appetite, a way to decide where to spend risk and a demanding test for whether added complexity has earned its place. Frontier can help asset owners define the risk anchor, translate complex assets into risk equivalent building blocks, formulate the complexity hurdle and build the ex-ante / ex-post scorecard.

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Chapter 5: Expanded TPA / whole-of-portfolio reading list

This chapter is not a detour from the argument. It is the evidence shelf for the trilogy, allowing readers to trace the public and practitioner foundations behind the history, measurement and implementation claims. Selected papers are highlighted ( ) and, in the view of the author, are a must read either because of recency, their application to the Australian context or superior intellectual capital. Again, this list is not exhaustive and all papers included are useful but some are more useful than others. The CPPIB 2006 annual report, a key moment in TPA history, is highlighted separately ( ).

Selected TPA / whole-portfolio papers and resources

No.	Year	Published by	Author / organisation	Key, unique TPA / whole-portfolio lens	Hyperlink
1	2026	CFA Institute Research and Policy Center	CFA Institute Research and Policy Center Roger Urwin, FSIP and Genevieve Hayman, PhD	Identifies the governance, culture, technology, and leadership capabilities required for TPA adoption. Shares lessons from leading asset owners and investment organisations implementing TPA. Provides guidance to boards, chief investment officers, and investment leaders through practical steps for transitioning to TPA.	Total Portfolio Approach (TPA) | RPC
2	2026	Bank of Singapore CIO Investment Institute / CAIA / Qblue Balanced / WTW	Jean Chia, Owi S. Ruivivar, Joseph Ng, Aaron Filbeck, Bjarne Graven Larsen, Jayne Bok	Bjarne Graven Larsen / Qblue contribution: adapts institutional TPA to family offices and wealth portfolios through explicit objectives, risk budgeting, factor lenses, compensated versus uncompensated risks, and risk rather than capital as the allocation currency.	Whole Portfolio Approach for Wealth Investors
3	2026	CPP Investments Insights Institute - Investing in Uncertain Times: Achieving Disciplined Flexibility in the Total Portfolio Approach	CPP Investments	Implementation lens: disciplined flexibility under a total-fund framework, with exposure design, leverage, liquidity, currency and relative-value decisions governed centrally and linked to total-fund outcomes.	Investing in Uncertain Times: Achieving Disciplined Flexibility in the Total Portfolio Approach
4	2026	CPP Investments Insights Institute - Measuring What Matters: Evaluating the Total Portfolio Approach	CPP Investments	Performance assessment lens: benchmarks remain necessary but insufficient; adds resilience, liquidity, concentration, implementation and long-horizon alignment as complementary measures.	Measuring What Matters: Evaluating the Total Portfolio Approach
5	2026	KKR Global Macro & Asset Allocation	Henry H. McVey, Dave McNellis, Christian Olinger	Private-markets implementation lens: minimum viable TPA, liquidity/ commitment planning, relative value and opportunity assessment by whole-portfolio contribution.	The Total Portfolio Approach: A Practical Framework
6	2026	AQR Alternative Thinking	Pete Hecht, Daniel Heffernan, Antti Ilmanen, Thomas Maloney, Nick McQuinn, Mehul Sachdev	Quant lens: appraisal ratio, portable alpha, factor diversification and convexity; constructive but sceptical check on “buzzy but fuzzy” TPA.	Total Portfolio Approach: A Quant Lens

Must-read papers, highlighted because of their recency, application to the Australian context or superior intellectual capital.

The CPPIB 2006 annual report, highlighted separately as a key moment in TPA history.

No.	Year	Published by	Author / organisation	Key, unique TPA / whole-portfolio lens	Hyperlink
7	2026	AllianceBernstein	Inigo Fraser Jenkins and Alla Harmsworth	Fund-manager strategy lens: rejects asset-class primacy, frames the allocator as curator of return streams, and highlights liquidity constraints, governance hurdles and partial-adoption pathways.	Portfolio Design as Gesamtkunstwerk: The Total Portfolio Approach
8	2026	SIPA / EDHEC Infrastructure & Private Assets Research Institute	Evan Clarke / Frederic Blanc-Brude	Private-assets measurement lens: high-frequency data, dynamic correlations, co-tail dependency and hurdle rates to avoid stale-valuation risk understatement.	TPA & Private Assets Part I: Measuring exposures with private markets data
9	2026	SIPA / EDHEC Infrastructure & Private Assets Research Institute	Evan Clarke / Frederic Blanc-Brude	Governance/reference-portfolio lens: risk budget, Board versus management roles, and translating private assets back to public market equivalent risk.	TPA & Private Assets Part II: Reference Portfolio as a Governance Mechanism
10	2026	BlackRock Investment Institute	BlackRock	FAQ/presentation lens: client-specific whole-portfolio objectives, factor-based risk, dynamic allocation and portfolio-contribution assessment.	Our take on total portfolio approach
11	2026	TSG / Ortec Finance performance forum	TSG Performance	Performance analytics deck: governance, implementation and navigation pillars; reference portfolio versus actual portfolio versus decisions feedback loop.	Total Portfolio Approach: What really matters and how can performance analytics support TPA
12	2026	MSCI	Dominik Zvara, Dhruv Sharma, Laszlo Hollo	Modern wealth lens: integrates public/private assets with factor models, multi-horizon needs and illiquidity tolerance in a total portfolio allocation framework.	Total Portfolio Allocation for Modern Wealth
13	2026	Bank of Singapore	Bank of Singapore CIO Office	WPA supertrend: maps holdings to true risk premia/factor exposures and combines SAA anchor with TAA overlay for private wealth portfolios.	2026 Supertrends: A Whole Portfolio Approach
14	2025	CAIA Association / Thinking Ahead Institute	Aaron Filbeck and Jayne Bok	Operationalisation lens: global asset-owner lessons on governance, culture, decision rights, implementation messiness and adaptability beyond size.	From Vision to Execution: How Investors Are Operationalizing TPA
15	2025	CalPERS Investment Office	Stephen Gilmore	Public-pension transition deck: Board risk appetite, reference portfolio, active risk, active decisions and change management.	Total Portfolio Approach and Transition Considerations
16	2025	Thinking Ahead Institute	Roger Urwin	Discussion deck: TPA spectrum/maturity, “stretchy governance”, wider/softer/longer risk and dashboards/scorecards.	Total Portfolio Approach (TPA) discussion deck
17	2025	SSRN / Top1000funds version	Jacky S.H. Lee and Redouane Elkamhi	Practitioner definition: TPA as integration, adaptability and total-fund accountability; explains what it is and is not.	What is Total Portfolio Approach? A Practitioner Summary
18	2025	PGIM Multi-Asset Solutions	Stuart Jarvis	Empirical diversification lens: dynamic strategic allocation, portfolio resilience and claims on incremental risk-adjusted return from more active allocation.	Rethinking Diversification: Learnings from a total portfolio approach

Must-read papers, highlighted because of their recency, application to the Australian context or superior intellectual capital.

The CPPIB 2006 annual report, highlighted separately as a key moment in TPA history.

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No.	Year	Published by	Author / organisation	Key, unique TPA / whole-portfolio lens	Hyperlink
19	2025	Alpha FMC	Bruce Russell	Total portfolio view lens: data/IBOR, cross-asset exposure visibility, liquidity, performance and governance required to make TPA operational.	Total Portfolio View for Asset Owners
20	2025	Brandes Center / UC San Diego Rady	Navya Khurana; Mary Beth Lato and Don Pierce	Roundtable lens: pros/cons, competition for capital, income versus price volatility, cash option value and guardrails against unconstrained TPA.	Total Portfolio Approach: A Roundtable Discussion
21	2025	Apollo	Chris McIntyre, Eric Hanno, Akila Grewal, Vikrant Tyagi	Private-markets total-portfolio role: positions resilient private markets as core portfolio building blocks rather than peripheral alternatives.	The Next Institutional Revolution: Private Markets for a More Resilient Total Portfolio
22	2025	Cutter Associates	Rein van Rooyen / Cutter Associates	Total portfolio view lens: data, process and technology barriers to holistic exposure/risk/liquidity management across public and private markets.	Unpacking the Complexities of Asset Allocation and a Total Portfolio View
23	2024	CAIA Association	John Bowman, Aaron Filbeck et al.; Future Fund, CPP Investments, NZ Super, GIC, WTW	Seminal dimensions: empowering governance, factor lens, competition for capital and single-portfolio culture.	Innovation Unleashed: The Rise of Total Portfolio Approach
24	2024	KPA Advisory Services / Top1000funds	Keith Ambachtsheer	Challenge lens: tests whether TPA is genuinely new or repackaged SAA; useful guardrail against terminology-led reform.	The Total Portfolio Approach to Institutional Investing: Fact or Fiction?
25	2024	Chief Investment Officer	Matt Toledo	Conference/reporting context: summarises CAIA's TPA release at AltsLA and distils principles for governance, factor diversification and total outcomes.	Total Portfolio Approach: A New Way to Construct Asset Allocations
26	2023	Discipline Funds	Cullen O. Roche and Erica A. Fries	Wealth planning lens: 'total portfolio' as holistic household balance sheet / savings and investment framework; conceptually adjacent to institutional TPA.	The Total Portfolio
27	2020	Thinking Ahead Institute / WTW with TCorp	WTW and NSW Treasury Corporation	Peer-study foundation: TPA edges in dynamism, decision framing and integrated decision-making across leading asset owners.	Total Portfolio Approach: A global asset owner study
28	2020	NZ Super Fund	Guardians of New Zealand Superannuation	Reference portfolio case: separates governance from value-add and emphasises economic drivers over asset-class labels.	Reference Portfolio
29	2006	CPP Investments	Canada Pension Plan Investment Board	Early precursor: independent governance, long-horizon diversification and portfolio-wide accountability before TPA became the market term.	CPP Investment Board Annual Report 2006
30	2026	HedgeNordic / Qblue Balanced	Eugeniu Guzun; comments from Bjarne Graven Larsen and Lars Hougaard Nielsen	Companion source, not a formal paper: explains how Graven Larsen's ATP TPA experience shaped Qblue's focus on alternative risk premia, stress diversification and risk-off complementarity.	When Diversification Fails: Qblue's Case for Alternative Risk Premia

Must-read papers, highlighted because of their recency, application to the Australian context or superior intellectual capital.

The CPPIB 2006 annual report, highlighted separately as a key moment in TPA history.

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The final word: what comes next



In Part one we have travelled back to the origins of TPA to establish what matters before any asset owner changes their portfolio architecture.

Five conclusions stand out:

- **TPA is first and foremost a governance architecture.** Its value does not come from the label, but from making whole-of-portfolio trade-offs explicit, comparable and accountable.
- **Complexity must earn its place.** A Board-owned anchor, whether an SAA, reference portfolio or another clear risk baseline, creates the hurdle against which active risk, illiquidity, cost and organisational burden should be judged.
- **The real challenge is prioritisation, not measurement alone.** Return, peer risk, regulation, liquidity, fees, resilience and sustainability cannot all be maximised at once; good governance determines what matters most when objectives conflict.
- **Adoption is a spectrum, and hybrids are often rational.** Particularly in Australia, an SAA anchor can coexist with stronger total portfolio decision disciplines without weakening disclosure, oversight or accountability.
- **Behaviour is the ultimate test.** If delegations, investment papers, funding decisions, liquidity management, attribution and incentives remain siloed, an organisation has not changed simply because it uses TPA language.

Part one conclusion

Part one lands on a simple test. The important question is not whether an asset owner is “TPA” or “SAA”. It is whether its governance model exposes opportunity cost, directs scarce risk and liquidity to their most valuable uses, and preserves clear accountability for the total portfolio. TPA is neither magic nor marketing when it improves those disciplines. Equally, a well-designed SAA or hybrid model remains entirely credible when it does the same. The destination should fit the problem and the standard should always be better decisions.

Part two: The timelines change.

In Part one of this three-part series we established the origins, attractions and accountability foundations of TPA. Part two moves into the harder, and more consequential, territory of how to measure what matters, compare unlike trade-offs, test where an organisation truly sits on the TPA spectrum, and understand the unintended consequences when one decision changes return, risk, liquidity, complexity and governance at the same time.

This is where the debate shifts from architecture/design to evidence. It is also where simplistic claims are most likely to fail. Readers who want to distinguish genuine total portfolio discipline from repackaged convention should stay close to the series. The next part provides the dashboards, tests and decision tools needed to challenge assumptions before they harden into portfolios.

For any asset owner considering TPA, testing a hybrid model, strengthening an existing framework or simply asking whether current decision-making is good enough, Frontier is already operating at the centre of the practical conversation. The most useful engagement may begin well before a formal project with a difficult question, an independent challenge or a candid discussion about what the portfolio’s operating model is truly designed to achieve.

The future of portfolio governance will not be decided by the label an asset owner chooses. It will be decided by the quality of the decisions it is prepared to make.

Learn more

Get in touch with us at busdev@frontieradvisors.com.au to learn more or understand how we can help with your portfolio approach.

Frontier Advisors



Frontier Advisors

Melbourne office
Level 17, 130 Lonsdale Street, Melbourne, Victoria 3000
Tel +61 3 8648 4300

Sydney office
Level 21, 83 Clarence Street, Sydney, NSW 2000

Tokyo office (Frontier Advisors Japan GK)
Room 204 Fingate Terrace 8-1 Nihonbashi Kabutocho Chuo-Ku Tokyo 103-0026, Japan

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