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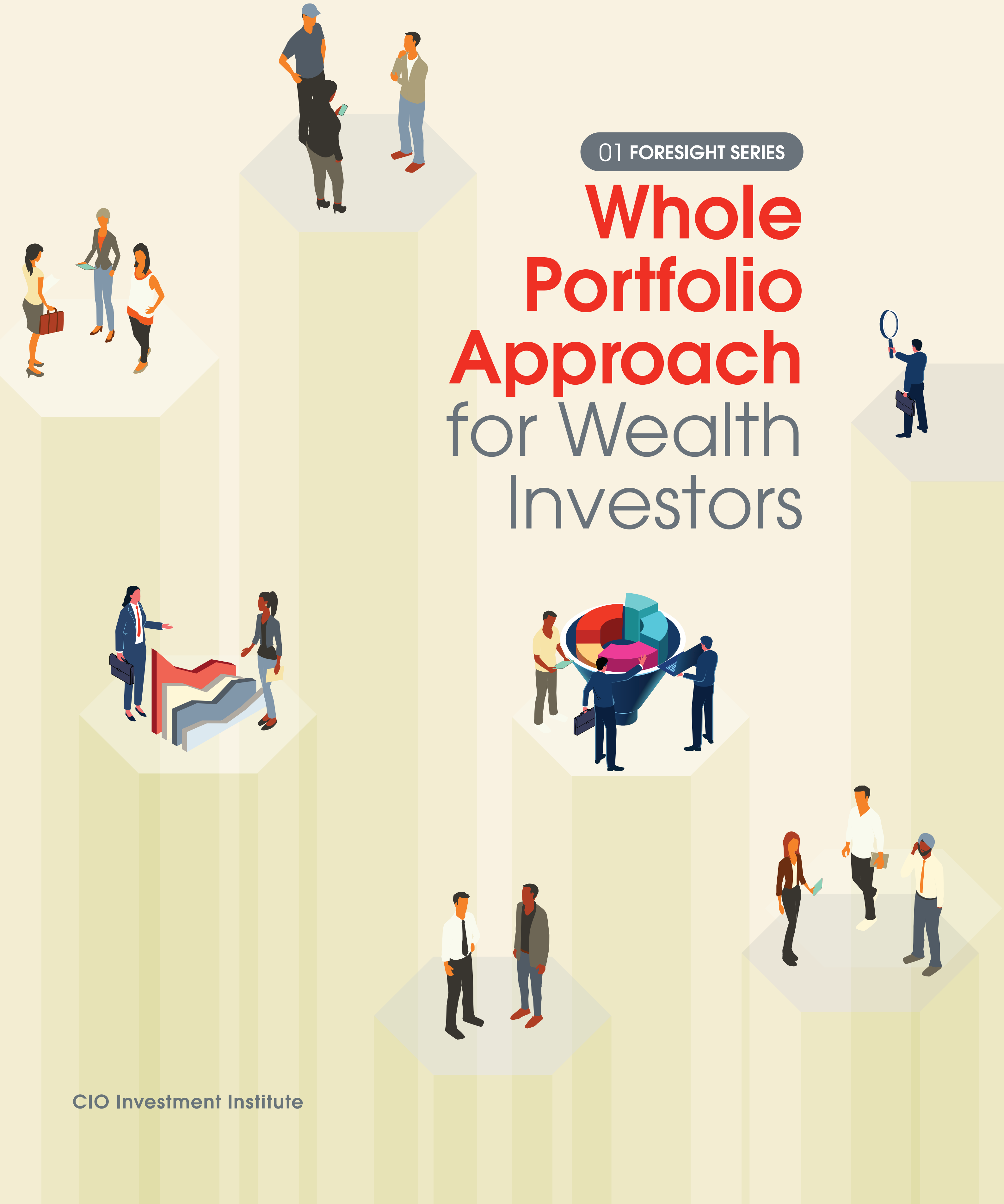
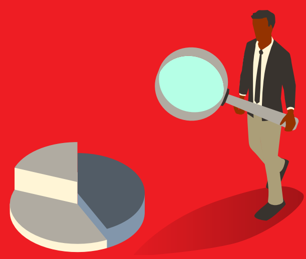
01 FORESIGHT SERIES

Whole Portfolio Approach for Wealth Investors



CIO Investment Institute

CONTENTS



CIO Investment Institute
perspectives with contributions from
CAIA Association, Qblue Balanced
and **WTW.**

A **Whole Portfolio Approach** re-architects portfolios to withstand shifting market regimes by looking beyond conventional asset class labels and risk-return drivers to achieve **holistic investment outcomes.**

Bridging institutional investment and long-term wealth portfolios

Bank of Singapore

Jean Chia
Global Chief Investment Officer

Drawing inspiration from the Total Portfolio Approach (TPA) adopted by leading institutional investors, the CIO Investment Institute (CIO II) embarked on a journey to glean the best of TPA principles and practices for the wealth management domain.

As many first-generation wealth owners prepare for wealth transfer, there is a greater urgency for a structured approach towards managing wealth for multi-generations. The "Great Wealth Transfer" is estimated by industry participants to involve USD74 trillion moving between generations by 2050.

Sovereign wealth and pension funds with long-term investment horizons share common objectives as wealthy individuals and families who seek to invest and grow capital for multi-generations. Combining tangible outcomes with long-term investment principles are key priorities for capital allocators for wealth.

Wealth investors can construct portfolios using a wide range of investment opportunities across asset classes (equities, fixed income, currencies, commodities, alternatives); across public and private markets; and utilising complex instruments including derivatives and digital assets. Yet, this range and complexity can be a boon or burden for the asset allocators involved – whether the CIO of family offices, financial intermediaries, wealth advisors or ultra-high-net-worth (UHNW) individual investors.

Uncertainty brought about by the convergence of public and private markets, geo-economic and macro changes, the multi-disciplinary confluence of structural trends such as artificial intelligence (AI) and demographic shifts are challenging traditional investment tenets.

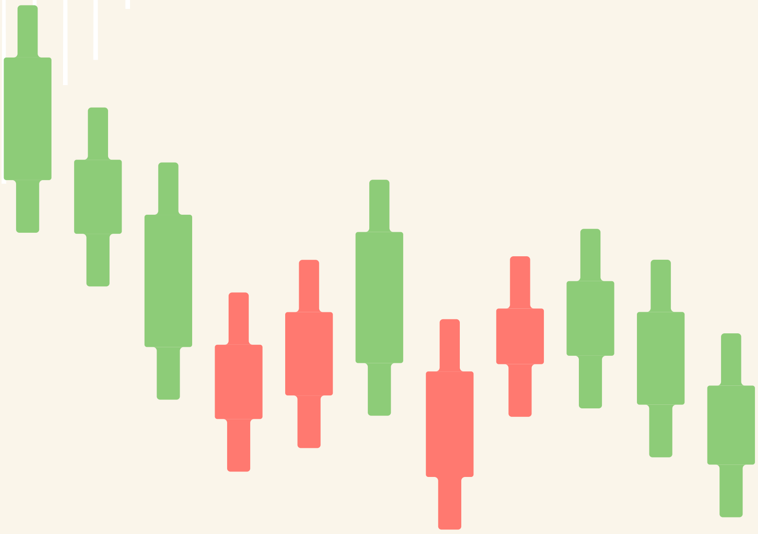
The **Whole Portfolio Approach (WPA)** is Bank of Singapore's response to bring long-term holistic portfolio perspectives into practice for private clients: a single, coherent framework linking objectives, design, and decisions at the level that matters most – the total portfolio.

This first-of-its-kind collaboration between Bank of Singapore's CIO II and CAIA Association bridges the best practices of institutional investors (such as pension funds and sovereign wealth funds) for application by long-term outcome-oriented wealth investors.

We are privileged to co-author this publication with investment management thought leaders: **Aaron Filbeck** from CAIA Association, **Bjarne Graven Larsen** from Qblue Balanced and **Jayne Bok** from WTW who share their prescient insights into TPA and its application to wealth. They introduce the concepts of a single portfolio culture, governance frameworks, factor-based lenses, compensated and uncompensated risks, and using risk rather than capital as the currency for allocation. We believe these approaches will resonate with thoughtful wealth investors focused on optimising their portfolios, growing wealth responsibly and embarking on a portfolio allocation journey that is fit for purpose in this uncertain world.

Answering the 'Why' before the 'How': A total portfolio mindset starts with defining a clear purpose for capital to be deployed and anchors subsequent asset allocation, style, risk management and investment choices.

The WPA framework then becomes foundational for a common language, investment process and discipline for all stakeholders. When the whole portfolio



becomes the singular focus, all relevant discourse and investment decisions by everyone in the value chain (asset allocators, domain or asset class experts, risk managers) can be evaluated based on the impact on the objectives, risk, liquidity, and resilience of the portfolio.

A portfolio expressed as a whole rather than merely the sum-of-its-parts starts with objective setting, is anchored in strategic asset allocation, and is thoughtfully calibrated through risk lenses to achieve resilient returns. The process can marry idealism with pragmatism, utilise data and risk analytics for unbiased assessments, be open-minded to opportunities in both public and private markets, and use alternatives and derivatives to achieve the expected outcomes aligned with return, risk and liquidity considerations.

While the diverse perspectives in this publication are drawn from different authors and experiences, they share a common foundation in TPA.

At Bank of Singapore CIO Investment Institute, these principles are expressed through our WPA, which adapts them to the specific needs of wealth clients. Together, the sections that follow explore how these ideas can be understood, implemented, and applied in practice across wealth portfolios.

How to read this paper

This publication brings together perspectives from across the investment ecosystem on how Total Portfolio thinking can be applied in wealth management and is organised into four complementary sections:

- **Total Portfolio Approach and its Wealth Management Applications: What are we solving for?**

  CAIA Association | Aaron Filbeck

  An overview of the core dimensions of TPA – including governance, competition for capital, and factor-based investing – and how these ideas translate into wealth management.

- **The Whole Portfolio Approach: From principles to practice**

  Bank of Singapore | Owi S. Ruivivar, Joseph Ng

  Introduces WPA as a practical framework for wealth portfolios, integrating objectives, asset allocation, risk, and implementation within a unified portfolio structure.

- **From pension CIO playbook to practical toolkit: Implementing the Total Portfolio Approach for Family Offices and Wealth Managers**

  Qblue Balanced | Bjarne Graven Larsen

  Explores how institutional TPA concepts can be adapted for wealth portfolios through explicit objectives, risk budgeting, and factor-based portfolio construction.

- **What "Total Portfolio" thinking means for wealth**

  WTW | Jayne Bok

  Examines how portfolio-level thinking is reshaping wealth management, with a focus on governance, decision-making, and portfolio evolution over time.

Rather than standalone essays, the sections are best read as connected perspectives on a common shift: as portfolios become more complex and less anchored to traditional approaches, there is a growing need to rethink how they are constructed, governed and managed as a whole.

Total Portfolio Approach and its Wealth Management Applications

What are we solving for?

CAIA Association

Aaron Filbeck
CAIA, CFA, CFP®, CIPM, FDP
Managing Director, Content & Community Strategy
CAIA Association

The market regime that gave rise to strategic asset allocation (SAA) looks increasingly different from the one wealth managers navigate today.

Public and private markets are converging, and sophisticated clients now hold complex, multi-asset and multi-goal portfolios that stretch well beyond traditional benchmarks. Inflation and interest rate regimes have shifted in ways that challenge long-held assumptions about diversification. In other words: the benchmarks that wealth managers have anchored to for decades were never really designed to reflect what clients need. You might say that convenience does not deliver outcomes.

While many investors have acknowledged the need for more dynamic, outcome-oriented approaches, the question remains: how do I make one work in practice?

Exhibit 1: An increasingly popular framework: The TPA

SAA	TPA
Challenging Governance	Empowering Governance Structure
Siloed Culture	Single Portfolio Culture
Prescriptive Allocations And "Buckets"	Competition For Capital
Asset Class Lens	Factor-Based Lens

At its core, the Total Portfolio Approach (TPA) is a holistic portfolio strategy that breaks down siloed thinking, aligns all assets to a unified purpose, and empowers investors to dynamically allocate capital across market environments.

TPA emerged from the institutional world, pioneered in the early 2000s by four sovereign wealth funds and large pension plans across Canada, Australia, New Zealand, and Singapore. While these institutions are sophisticated investors, the underlying logic is not exclusive to them alone.

TPA is built on four dimensions: an **empowering governance structure**, a **single portfolio culture, a competition for capital mindset**, and a **factor-based lens**.[1] Together, these dimensions shift the frame of portfolio management decision-making from a rules-based process toward judgment-based mindset, anchored to a clear objective. To underscore this difference, TPA is less a policy or process and more a "state of mind." That framing travels through all four of its dimensions.

Translating TPA to Wealth Management

The institutional world has a governing body: a board that sets the mandate, approves a risk budget, and delegates authority to the investment team. In wealth management, that governing body is the client. And the financial planning process is where the mandate gets written.

This is the **governance** dimension in practice. A thorough upfront conversation about a client's return objectives, time horizon, and both their willingness and ability to take risk replaces a prescriptive investment policy statement. Get this right, and you earn the trust and authority to make portfolio decisions dynamically, without convening a committee every time market conditions change.

The **single portfolio culture** dimension does not mean every client has one portfolio. It means the wealth management team, advisors, investment committee, relationship managers, is aligned around delivering client outcomes rather than beating arbitrary benchmarks. When the investment team stops defending asset class buckets and starts asking "what does this portfolio need to do?", the culture becomes focused on finding the best opportunities to deliver.

Competition for capital is where TPA gets operationally interesting for wealth managers. Most firms today build model portfolios based on SAA, a long-term target allocation that becomes the default. Today, most wealth management firms adopt some form of model portfolios. While this provides scalability across the organisation, adopting TPA either repositions them or makes them a "best thinking" model as opposed to a rule-based target. Individual client portfolios are allowed, even encouraged, to deviate from it when the market environment warrants, within risk guardrails established in the planning (governance) process.

Rebalancing takes on a new form here as well. Rather than automatically rebalancing back to a target weight, the TPA-influenced wealth manager asks a harder question: if I were building this portfolio from scratch today, what would it look like? The difference between this and tactical asset allocation (TAA) is important. In TAA, you are always gravitating back toward the SAA (e.g. you are either overweight or underweight) where the center of gravity remains the benchmark. In a "competition for capital framework," the center of gravity is the client's objective. There is no SAA to return to. Think of this as the difference between playing chess, where you must deploy all your pieces within strict rules, and Monopoly, where the only goal is to maximise return and every move is a judgment call.[2]

The **factor-based lens** is perhaps the most practical and underutilised dimension for wealth managers. Most allocation models focus on asset class weights, but two portfolios with identical weights can carry very different exposures to interest rates, economic growth, or inflation. Looking through the labels to the underlying economic sensitivities, using either in-house factor models or those provided by asset managers, gives a more honest picture of what a portfolio actually owns.

[1] Innovation Unleashed: The Rise of the Total Portfolio Approach. 2024. CAIA Association.
[2] https://caia.org/blog/2025/10/08/rules-game-tactical-asset-allocation-vs-competition-capital

What institutional adoption tells us

Institutional experience provides a useful proof of concept for TPA, namely that the governance and cultural dimensions are the most important.[3]

When a large US public plan formally adopted TPA, it simplified its policy portfolio from multiple benchmarks down to a reference portfolio of only two, while simultaneously expanding its tolerance for tracking error. The simplification was about removing the bureaucratic weight of managing to arbitrary weights, and freeing the investment team to focus on what actually mattered: the total portfolio.

Similarly, one of the pioneering Sovereign Wealth Fund's adoption of TPA empowered them to avoid entire asset classes when they were out of favour, leaning into a competition for capital mindset. At times, asset classes such as fixed income or real estate were completely absent from the portfolio. Under SAA, this becomes nearly impossible or incredibly uncomfortable. Under TPA, it is a logical outcome of asking every investment to earn its place.

The implication for wealth management is straightforward: when clients are no longer anchored to a prescribed allocation, the opportunity set expands, and so does the quality of decision-making.

An important caveat: Implementation is a journey and not instantaneous

TPA is not a plug-and-play change overnight. Institutions that have adopted it most successfully will tell you they are never "done". Instead, they are in a constant effort to resist the gravitational pull back towards SAA. Wealth management faces its own version of this challenge, with a few additional wrinkles.

Model portfolios built at scale for efficiency can work against TPA thinking if they become the destination rather than the starting point. The infrastructure of most wealth management firms, trading systems, compliance frameworks, client reporting, is built around static allocations, and changing that takes a big, but important shift in terms of investment and culture.

Behavioural guardrails exist for good reason, and not every client has the emotional tolerance to hold an unusual portfolio when markets get difficult (in fact, down markets are the biggest test of all). Tax and liquidity constraints can also further limit how purely TPA principles can be applied at the individual client level.

None of this means TPA is incompatible with wealth management. It means that the transition, much like the institutional version, is best understood as a spectrum, not a binary decision.

Bank of Singapore's take

TPA and its Wealth Management Applications explores how the TPA shifts investing away from siloed asset class thinking toward portfolio-level decision-making anchored on client objectives. Its emphasis on competition for capital, dynamic allocation and integrated portfolio construction aligns closely with Bank of Singapore's WPA, where allocations are evaluated based on their contribution to overall portfolio resilience and long-term outcomes. The paper also reinforces an important investment principle at the Bank of Singapore: that diversification should be assessed not only through capital allocation, but through the interaction of risks, liquidity and underlying economic exposures across the whole portfolio.

[3] From Vision to Execution: How Investors Are Operationalizing the Total Portfolio Approach. 2025. CAIA Association.

The Whole Portfolio Approach: From principles to practice

Bank of Singapore

Owi S. Ruivivar
Chief Portfolio Strategist

Joseph Ng, CFA
Senior Investment Strategist

Portfolio strategy begins with a simple observation: That traditional portfolio design is being tested by a world that no longer behaves as it once did. Measures of diversification and correlation that guided investors for decades now feel less dependable, as policy makers and markets adjust to new macroeconomic and geopolitical regimes and to the disruptive impact of artificial intelligence (AI).

Today's investors need a refreshed framework that is structured enough to anchor risk, yet flexible enough to adapt to complex and evolving geo-economic and market conditions.

Asset owners and institutional investors developed the Total Portfolio Approach (TPA) to address this need. TPA moves beyond asset classes to view the portfolio as a single system and judges every decision by its marginal impact on total return, total risk, and the interaction of exposures.

Exhibit 2: Dimensions of the TPA

1. Empowering governance structure
2. Single portfolio culture
3. Competition for capital mindset
4. Factor-based lens

Source: CAIA Association

Like asset owners and long-term institutional investors, high-net-worth (HNW) and ultra-high-net-worth (UHNW) individuals, as well as family offices, focus on long-term investment outcomes that complement near-term income needs and risk-adjusted returns. Both institutional and wealth managers allocate capital with an active risk management approach to avoid drawdowns and position investments to weather cyclical and secular shifts.

Bank of Singapore's CIO II introduces the Whole Portfolio Approach (WPA) – a framework that applies these principles in the wealth management domain. In applying TPA portfolio principles to private wealth, the discipline of institutional portfolio design can address the realities of individual and family wealth objectives.

In private wealth, we see the investment motivations as preserving, growing, and distributing wealth across generations while meeting near term income and liquidity needs.

This essay demonstrates how we embed this approach in Bank of Singapore's portfolio construction and day-to-day investment decision process; and explains why managing the portfolio as a whole matters more than the sum of its parts.

What is Whole Portfolio Approach at Bank of Singapore?

How does it interact with strategic and tactical asset allocation frameworks?

1 Totally and Wholly: From TPA for institutions to WPA for wealth

The TPA framework arose among asset owners to solve a familiar problem: portfolios are often managed as collections of parts rather than as a coherent whole. Asset classes are allocated, mandates set, and risks monitored in silos by the respective portfolio management teams. The result is a portfolio that may look diversified on paper, but offers limited insight into how and where risk is truly taken, or how returns are truly generated.

TPA starts from a straightforward premise: ultimately, the only portfolio that matters is in its totality. Every allocation, risk, and implementation decision is assessed in terms of its marginal contribution to total return, total risk, and the interaction of exposures. This reframes portfolio management around outcomes, allocating capital based on how each exposure contributes to the behaviour of the whole rather than to a standalone bucket.

At the Bank of Singapore, we apply these principles through the WPA. This reflects the realities of private clients: as portfolios aim to preserve and grow capital across generations, generate income, and maintain sufficient liquidity to meet commitments and opportunities.

2 Why WPA principles matter for private wealth

Most wealth portfolios do not begin life as structured allocations. They evolve over time through individual ideas, legacy holdings, and personal preferences. What emerges often looks like an organically assembled collection of investments rather than a system built around a single, clearly-defined purpose.

Apparent diversification by asset class can also mask concentration in a limited set of underlying drivers such as growth, credit, or liquidity. When those drivers move together – particularly in periods of market stress – sensitivity to a small range of outcomes can rise sharply, often in ways that may surprise investors.[1] A whole portfolio lens helps make these relationships visible.

Instead of stopping at asset labels, WPA looks through to the factors that drive returns – growth, rates, and financial conditions – and to the risk premia earned for bearing them.[2] Seen this way, equities, credit, and parts of private markets share a common dependence on economic expansion, while duration provides balance when sized appropriately relative to those risks.

Private wealth portfolios also face a further challenge: they aim to serve several objectives simultaneously – capital preservation, growth, income, and liquidity. Treating these objectives in isolation fragments the portfolio construct and obscures the trade-offs between them. WPA frames these as a single set of portfolio level parameters – risk, return, and liquidity – so that those trade-offs are explicit and can be managed within one coherent structure.

For HNW families, investing success is defined not just by short-term returns but the portfolio's capacity to preserve and compound wealth across multiple generations. With this in mind, the application of Strategic Asset Allocation (SAA) fosters portfolio stability amid uncertainty, supporting both capital preservation and sustained growth. This long-term approach positions investors to practice disciplined decision-making and empowers investors to remain steadfast in their investment strategies in the face of market volatility.

3 Linking WPA to the SAA framework

The WPA principles are built upon Bank of Singapore's SAA foundational framework. The SAA sets the expected return of the portfolio over time, the plausible range of outcomes, and the long term balance between growth and defence.

Our framework differs from previous iterations in how these expectations are derived. Rather than relying on a single set of point estimates or stabilising portfolios through rigid constraints, uncertainty is treated as an explicit input. The process of robust optimisation evaluates expected returns, risks, and correlations across a range of plausible scenarios, and judges each portfolio by how it behaves across that range rather than under one central case.[3]

[1] See The Power of Risk Decomposition (Bank of Singapore, Dec 2025)
[2] See Factor Risk: The Building Blocks of Portfolio Risk (Bank of Singapore, Dec 2025) and Risk Premia: The Building Blocks of Portfolio Risk and Allocation (Bank of Singapore, March 2026)
[3] See Introducing the new Bank of Singapore SAA (Bank of Singapore, June 2025)

The aim is to build a structure that remains coherent as regimes and assumptions evolve, instead of one that is finely tuned to a narrow view of the future. This process tends to produce an allocation that reduces the need for disruptive changes when market assumptions are updated, because the core structure is designed to accommodate parameter uncertainty from the outset.

WPA is an investment approach to portfolio construction that allows us to look across asset classes, return and risk drivers to achieve holistic investment outcomes. Within WPA, the SAA defines a portfolio's core architecture – establishing the long term balance of exposures and anchoring where risk is taken. Tactical Asset Allocation (TAA) then operates as a funded overlay within a defined tracking error budget. Adjustments are made within this framework to refine exposures, express shorter term views, and manage directional risk, while maintaining coherence with the underlying strategic structure.

4 Putting WPA to work in portfolios

Most wealth portfolios are built up over time across different market conditions and mandates. Reviewing position by position, individual exposures often appear reasonable. When viewed together, however, they commonly resolve into a much narrower set of underlying risks than intended. In our experience, this often takes the form of substantial effective exposure to equities, fixed income that is not explicitly sized to offset growth and credit risk, and alternatives added opportunistically based on product narratives rather than their role in the overall structure.

Applying WPA, we first re-express the portfolio in terms of economic roles and factor sensitivities. Each holding is mapped to its key exposures – growth, rates, credit, and liquidity – and evaluated by how it interacts with the rest of the portfolio. Traditional holdings are then resized and diversifiers introduced so that the total portfolio is supported by a broader mix of risk premia and regime behaviours, rather than by a single dominant macro path.

This does not change the client's long-term objectives; but how those objectives are expressed. Growth and credit risks are calibrated so they are not unknowingly reinforced, duration is set to play a proportional defensive role, and diversifying exposures – including alternatives – are selected for how they behave across environments, not simply for how they are labelled. The result is a portfolio that pursues familiar goals through a more balanced distribution of outcomes, to better withstand uncertainty without relying on constant, reactive repositioning.

Some long-term investment goals being pursued can also mutually reinforce the WPA framework. For instance, a desire to advance specific sustainability aspirations through portfolios often reflects a progressive understanding that responsible stewardship of capital contributes to enduring value creation and risk mitigation.

5 How WPA reshapes the investment process

The WPA changes how investment decisions are framed. It shifts the focus **from selecting individual assets to designing a system** – examining how each exposure contributes to the behaviour of the whole portfolio. Under WPA, every decision is judged by its marginal effect on portfolio outcomes: how it alters return potential, risk balance, liquidity, and the interaction of exposures. **The question is no longer whether an idea is attractive on its own, but whether it improves the portfolio's overall balance and resilience. Similarly, concentrated exposures should be trimmed to improve a portfolio's overall resilience**.

This shift also changes the decision architecture. **Discussions move from asset categories to economic roles:** growth versus defence, income versus protection, liquidity held versus liquidity used. That creates a shared vocabulary between strategists, advisers, and clients, grounding each decision in how exposures interact rather than in preferences for individual securities or asset labels.

The analytical toolkit evolves accordingly. **Portfolios are decomposed into underlying factors** – growth, rates, credit, and liquidity – so each proposed change can be assessed for its marginal impact on total risk and return. **Scenario analysis replaces single point forecasts**, testing whether a position

[3] See Introducing the new Bank of Singapore SAA (Bank of Singapore, June 2025)

strengthens portfolio behaviour across different regimes instead of only under a base case. The emphasis moves away from predicting specific outcomes toward increasing the portfolio's capacity to absorb them.

Decision governance adapts in parallel. Rather than debating isolated positions, portfolio conversations concentrate on how incremental changes affect the whole. This supports the deliberate use of risk budgets and reduces the need for reactive shifts when markets turn. The process becomes iterative: a series of small, coherent adjustments that keep the portfolio aligned with long term objectives as conditions evolve.

For investors, this approach is meant to bring clarity. **By linking every change to the total portfolio, it clarifies why a position exists, what role it plays, and how it connects to other exposures**. It can also ease behavioural strain during volatility: when portfolios are understood as systems designed to operate across a range of conditions, rather than collections of holdings, decisions tend to be steadier and intent remains clearer. In practical terms, **WPA embeds a continuous link between design, decision, and experience**. It replaces the language of trades with the discipline of impact assessment, aiming to ensure that each adjustment advances the whole, not just the part.

6 Our call to action

The principles of WPA translate directly into how portfolios are managed day-to-day. **Portfolios are experienced as a whole, and they should be actively managed in that way**.

I **Define objectives clearly**: horizon, income needs, growth goals, and tolerance for drawdowns. Express these in portfolio level risk and liquidity parameters so that trade-offs are explicit rather than implicit.

II **Anchor the portfolio in SAA**. Use a robust SAA to establish the core structure and balance exposures across different regimes, consistent with the agreed risk appetite. This becomes the reference point for how and where risk is taken.

III **Deploy TAA deliberately**. Markets are generally efficient, but mis-valuations frequently emerge and investment outperformance can be harvested through comprehensive analysis and expertise. A funded TAA overlay is used to take advantage of short term dislocations and to manage overall directional risk, with adjustments made within a defined risk budget. Tactical views should refine the portfolio around its strategic core, not redefine it. This approach enables timely and purposeful adjustments without compromising the portfolio's overarching objectives.

IV **Conduct a regular whole portfolio review**. Assess whether structure, exposures, and positioning remain aligned with long term objectives, and whether the portfolio still behaves as intended across a range of scenarios. The aim is not constant change, but recurring confirmation that the design, implementation, and lived experience of the portfolio remain in sync.

Wrapping up the whole portfolio

Beyond a collection of holdings, a portfolio represents a network of interacting exposures that ultimately determines how wealth behaves under different conditions.

Managing a portfolio as a collection of parts confines outcomes to a constricted set of assumptions and leaves blind spots in how risks combine. Managing it as a whole widens the range of shocks the portfolio can absorb and increases the odds that wealth can be sustained through cycles and across generations.

Importantly, such a framework is a practical and actionable one, premised on rigorous analysis, focused stewardship and adaptive execution. Our philosophy offers a disciplined yet flexible approach – one that gives investors the confidence to navigate uncertainty while staying true to their long-term objectives.

The **WPA** is our way of bringing that perspective into practice for private clients: **a single, coherent framework that links objectives, design, and decisions at the level that matters most – the total portfolio**.

From pension CIO playbook to practical toolkit: Implementing the Total Portfolio Approach for Family Offices and Wealth Managers

Qblue Balanced

Bjarne Graven Larsen
CEO & Founder Qblue Balanced
(Former Pension Fund CIO
Denmark & Canada)

The Total Portfolio Approach (TPA) has often been discussed in the context of very large asset owners with deep teams, strong governance and the ability to rebuild their investment model from a blank sheet of paper. Yet the core idea is disarmingly simple: manage the whole balance sheet as one portfolio against a clear objective, with one measure of risk and one risk tolerance, and make every decision based on its marginal contribution to that objective. For family offices and wealth management platforms, this is less about copying institutional complexity and more about borrowing a disciplined recipe that has been tested in real life and scaling it to their governance reality.

In the early 2000s, Danish pension funds faced new mark-to-market accounting and solvency rules and concluded that the prevailing strategic asset allocation (SAA) and benchmark-driven model could not cope with the true risks on the balance sheet. The response was to define a single, explicit objective – maximising the present value of all future pension payments in real terms – and to measure risk as the probability of being underfunded over a long horizon, operationalised via an expected shortfall framework. That philosophy, further refined at other leading pension institutions, is directly relevant to multi-asset wealth portfolios even if their legal form and constraints differ — and it is the lived experience informing the principles set out in this paper.

1 Define your objective

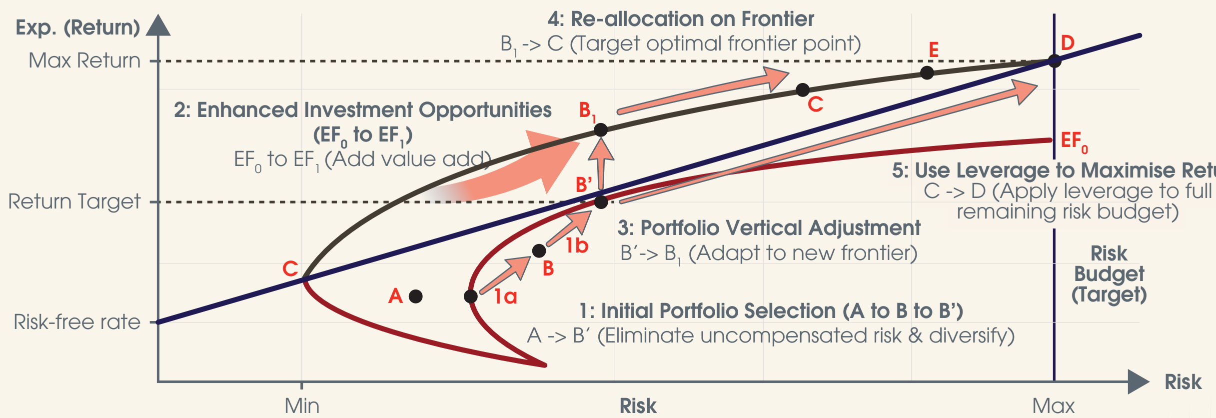
For a family office, the objective will not be "solvency" or funding status in the pension sense, but the logic is identical. You cannot optimise what you have not defined, whether the purpose is preserving real wealth over generations, funding a series of philanthropic commitments, or supporting a concentrated entrepreneurial risk elsewhere in the family balance sheet. Making that objective explicit – including time horizon and tolerance for interim drawdowns – is the first step toward a total portfolio mindset and provides the anchor for all subsequent risk and allocation decisions. In practice, this means elevating the discussion of "How much in equities, how much in private markets?" to "What is the maximum drawdown or tail loss we are willing to accept, in service of what mission?"

2 Determine your risk measure

Once the objective is clear, the next step is choosing how to measure risk. In the pension context, this means defining risk as the probability of being underfunded over a long horizon and operationalising it via an expected shortfall (ES) measure: in the worst outcomes, how bad could it get? The same logic applies directly to wealth. For a family office, the parallel might be: "We are willing to accept, on average, no more than a 10–15% loss in the 5% worst annual outcomes." or "We do not want to be forced to reduce philanthropic grants by more than max 20% annually over any three year period due to bad investment outcomes". That threshold becomes the foundation of the risk budget — the governing constraint from which every allocation decision flows.

Exhibit 3: RDI: Risk budget and return target drives trade-offs

Optimising portfolio performance and strategy



Key Trade-offs and Steps:

1: **Efficient Portfolio Selection:** Optimise intial portfolio (A) by eliminating uncompensated risk and diversifying, moving to frontier point (B').
2: **Frontier Shift:** A value-add opportunity creates an enhanced efficient frontier (EF_0 to EF_1), lifting potential returns.
3: **Portfolio Vertical Adjustment:** Shift portfolio vertically (B" to B_1) to capture the initial gain on the new frontier.
4: **Re-allocation on New Frontier:** Adjust portfolio mix along the enhanced frontier (B_1 to C) to reach a target allocation.
5: **Leverage Application:** From point (C), apply leverage along the Capital Allocation Line to utilise the full remaining Risk Budget (Max Risk) for maximising expected return at (D).

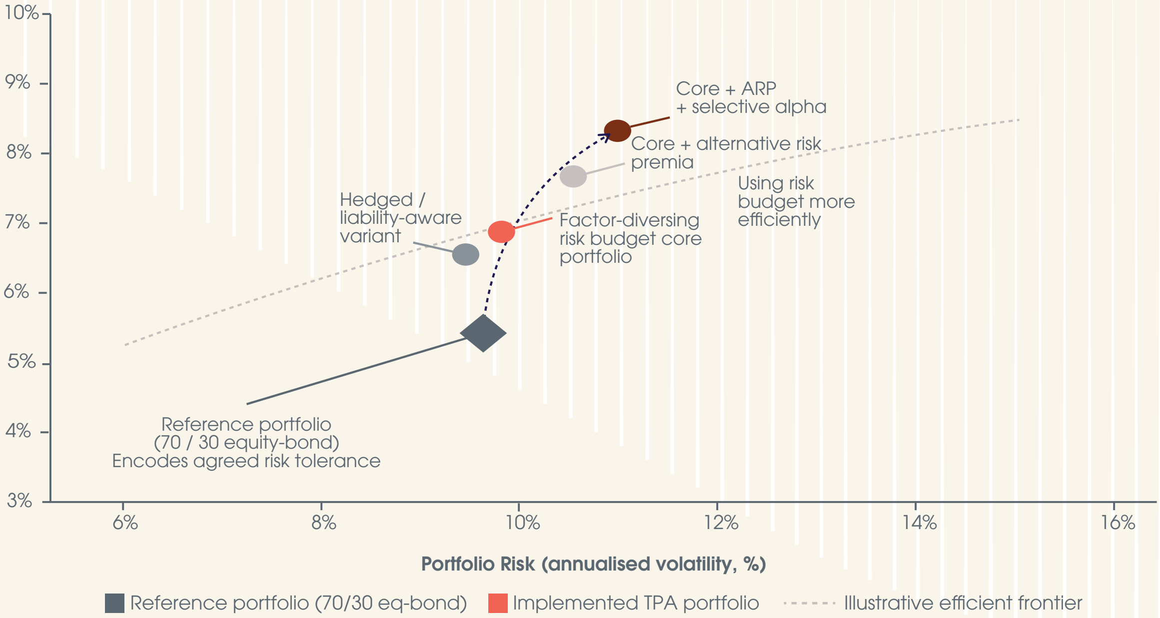
RDI Portfolio Strategy Analysis - Professional Edition

Source: QBlue Balanced

3 Determine your risk tolerance

With a risk measure defined, TPA expresses risk tolerance through a simple reference portfolio – for example, a 70/30 mix of global equities and high-quality bonds. This is not the portfolio you intend to hold; it is the starting point from which you deliberately deviate. The reference mix becomes the primary tool for communicating changes in risk appetite: a shift from 50/50 to 48/52 when the wealth position deteriorates signals a tighter risk budget to every team in the organisation. The message is clear: "The reference portfolio defines your risk budget; we expect you to invest more wisely and broadly and to deliver a higher return than this over the cycle."

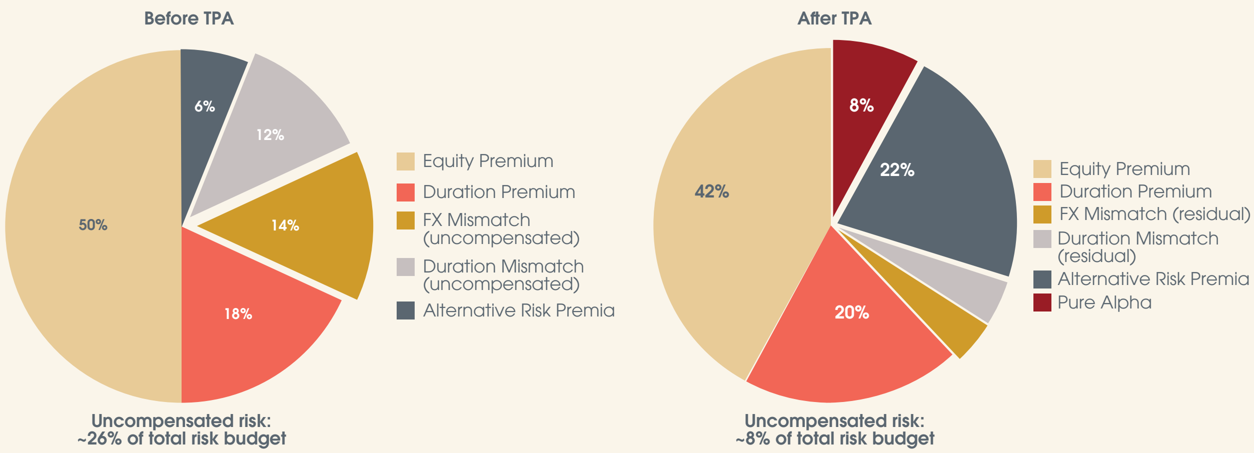
Exhibit 4: Reference portfolio as Risk Anchor, Not Benchmark



Source: QBlue Balanced

A critical discipline within TPA is the rigorous distinction between compensated and uncompensated risks. Compensated risks – equity and duration premia, and well-researched alternative risk premia – carry a robust expectation of reward. Uncompensated risks, such as unhedged duration mismatch or incidental foreign exchange exposure unrelated to the investment thesis, consume risk budget without paying for it. In well-constructed TPA portfolios, hedging these unwanted exposures is not an afterthought but part of the core operating model, freeing capacity for return-seeking assets.

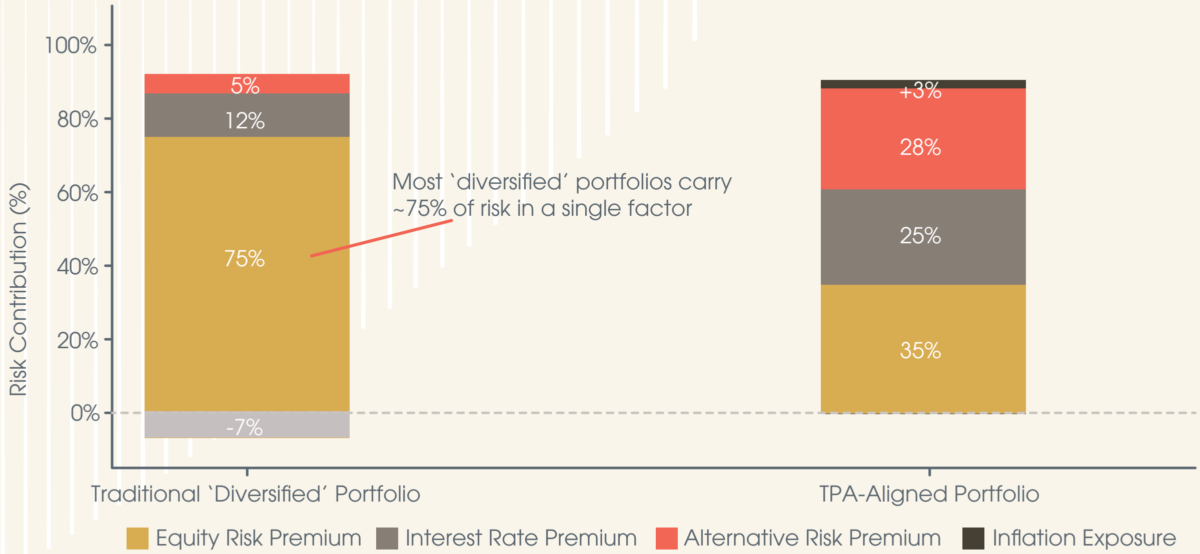
Exhibit 5: Uncompensated Risks before and after TPA



Source: QBlue Balanced

A further principle is using risk, rather than capital, as the currency of allocation. Under TPA, the key decision is how to allocate the risk budget across factor exposures – equity, interest-rate, inflation and alternative premia – and how much to reserve for pure alpha. Many supposedly diversified portfolios reveal themselves, on this x-ray view, as dominated by a single factor: equity. TPA corrects this by enabling more balanced risk allocations across factors and forcing an honest conversation about where genuine alpha can be harvested – whether through concentrated internal capabilities or carefully selected external managers.

Exhibit 6: Traditional vs TPA: Where the Risk really is



Source: QBlue Balanced

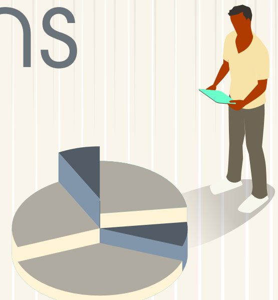
Implementing TPA is as much an organisational project as a technical one. Specialist teams – in private equity, infrastructure or liquid alternatives – remain essential: the challenge is not their existence but the lack of integration at governance level. The equivalent in a family office may be a small CIO office or investment committee that sets the objective, defines the risk budget and allocates risk across internal and external sleeves, with specialist partners supplying capabilities that do not sit naturally in-house. No two implementations are identical — which is itself an important lesson. The key is that someone is accountable for the whole.

For family offices and wealth-management platforms, the message is encouraging: you do not need a 20-person total fund team to adopt a total portfolio mindset. What you need is clarity of purpose, a defined risk measure, a stated risk tolerance, and the discipline to allocate risk — not just capital — across factors. The recipe has been tested in real life at some of the world's most demanding institutional kitchens. It scales.

Bank of Singapore's take

From Pension CIO Playbook to Practical Toolkit: Implementing the TPA for Family Offices and Wealth Managers adapts institutional Total Portfolio concepts into a practical framework for wealth portfolios, emphasising explicit objectives, coherent risk budgets and the distinction between compensated and uncompensated risks. Its focus on allocating risk across underlying factors and premia (rather than relying solely on traditional asset class weights) closely parallels Bank of Singapore's Whole Portfolio Approach (WPA), where portfolios are evaluated through both asset allocation and the underlying drivers of risk and return. The paper also reinforces the importance of treating the portfolio as a unified system, where every investment must justify its role in improving total portfolio outcomes.

What "Total Portfolio" thinking means for wealth



WTW

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Managing Director
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My formative years as an investment professional were spent in the institutional world – pension funds, sovereign investors, investment committees, policy portfolios, and more three letter acronyms than I care to admit. In that world, portfolios typically start with a policy, a benchmark, and debate about capital market assumptions, with individual investments entering the picture later.

Over the past several years, my work has sat firmly on the institutional side of a broader shift in how large asset owners think about portfolios. Through research and advisory work at WTW, and in collaboration with the CAIA Association and the Thinking Ahead Institute[1], I've spent a good deal of time writing about and discussing what has come to be known as the Total Portfolio Approach (TPA).

At its core, TPA is less a new model than a change in perspective. It starts from a simple question: what is the best decision for the portfolio as a whole? Rather than organising capital strictly through asset class silos and benchmarks, it treats the portfolio as a single system – one where investments are assessed by how they contribute to objectives, risk, liquidity, and resilience. This way of thinking has gained traction as portfolios have grown more complex and more exposed to regime change.

Given where TPA first took hold, it would be reasonable to assume it belongs squarely in the institutional world. What surprised me as I spent more time working with wealth investors, was how quickly the conversation moved to outcomes. Wealth portfolios tend to be judged less by whether they beat a benchmark and more by whether they achieve their specified goals. Drawdowns matter because they have real consequences. Risk is experienced in absolute terms, not relative to an index that no one actually consumes. Much of what Total Portfolio thinking seeks to achieve institutionally already shows up in wealth – just without the jargon.

These questions increasingly surface beyond the end investor. Private banks, advisers, and wealth platforms sit at the center of the value chain, responsible for translating individual objectives into portfolios that must hold together across market cycles, products, and client segments. As portfolios become more complex, so too does the challenge of ensuring that what is implemented in parts still makes sense as a whole.

Total Portfolio thinking sits between those two worlds. It offers a way to pair wealth's outcome orientation with the risk awareness and discipline institutional investors have had to develop, without losing what makes wealth investing distinct. That evolution, and what it means in practice for wealth and the intermediaries that serve them, is what this article is about.

What TPA is, and is not

TPA is often misunderstood precisely because it is defined as much by what it is not as by what it is. It is not a rejection of strategic asset allocation (SAA), nor a claim that benchmarks no longer matter. It is not a benchmark replacement or a single metric, and it is certainly not a plug-and-play upgrade that can be dropped into an existing portfolio without consequence.

[1] See TPA Content Hubs at WTW (https://www.thinkingaheadinstitute.org/research-papers/total-portfolio-approach-tpa-hub/) and CAIA Association (https://caia.org/content/total-portfolio-approach-hub) for more information on Total Portfolio Approach.

As both Innovation Unleashed[2] and From Vision to Execution[3] emphasise, TPA is not a model with a single destination, and it does not improve outcomes without effort, skill, and discipline.

Just as importantly, TPA does not eliminate the need for governance, data, or measurement. It does not turn an unskilled investment team into a skilled one, nor does it close gaps in understanding by default. If anything, it tends to surface them: unclear objectives, poorly understood risks, and complexity that has never been forced to justify itself.

It is against that backdrop that what does change becomes clearer. Many of the arguments that underpin Total Portfolio thinking are not institution-specific. The need to compare opportunities and make explicit trade-offs emerges wherever portfolios become sufficiently complex. What differs between institutional and wealth contexts is less the logic of Total Portfolio thinking than the practical path by which investors arrive there.

What TPA shifts is where decisions are anchored. Instead of asking whether each asset class or strategy has met its own benchmark, the starting question becomes more fundamental: what has this decision contributed to the portfolio as a whole? Risk, return, liquidity, resilience, and sustainability are no longer assessed in isolation or in sequence but considered together.

Exhibit 7: Total Portfolio Thinking – What it is, and what it is not

What TPA is	**Goals** driven portfolio-level decision lens anchored on real objectives	**What TPA isn't**	**Not a benchmark** replacement or a single metric; but it relies on multiple comparators
Best ideas assessed at the portfolio level in a competition for capital	**Dynamic** and responsive to regime, pricing and liquidity conditions	**Not an investment strategy;** TPA portfolios can look very different	**Not a plug and play;** TPA adoption requires effort and skill
What TPA does	TPA helps **align decision-making** and incentives across the portfolio	**What TPA doesn't do**	**TPA does not transform an unskillful investment** team to a skillful one
TPA can act as a **gateway** to new ideas, better integration, and improved risk insight	TPA increases the value of **internalisation** particularly in increased engagement	TPA cannot be effective without **timely, reliable portfolio-level information**	TPA **does not remove gaps in measurement**, but it is overall a better measurement construct

Source: WTW, Thinking Ahead Institute

Much of the frustration that gave rise to TPA came from a familiar pattern: investors pursuing outcome oriented goals while still making decisions in silos. The result was portfolios that looked diversified on paper but behaved very differently in stress. TPA emerged to address that disconnect, shifting the focus from optimising individual parts to portfolio level trade-offs.

This is where the idea of competition for capital moves from theory to practice. Under TPA, new ideas do not earn a place simply because they fit a category or because a sleeve has room. They earn a place by demonstrating that, relative to alternatives, they improve the portfolio's ability to meet its objectives, net of risk, liquidity constraints, and complexity. In doing so, TPA aligns decision making and incentives around the portfolio itself, rather than around its individual components.

Seen this way, TPA is best understood not as a destination, but as a discipline. It sharpens a

[2] See CAIA Association, Innovation Unleashed: The Rise of Total Portfolio Approach (2024)
[3] See CAIA Association & Thinking Ahead Institute, From Vision to Execution: How Investors Are Operationalizing the Total Portfolio Approach (2025)

focus on outcomes rather than replacing it, while introducing the risk awareness and decision hygiene needed to make that focus durable. That balance is what the rest of this paper explores.

The wealth advantage

Wealth portfolios are often described as more fragmented, more bespoke, and less structured than those of large institutions. Viewed through a traditional SAA lens, these features can appear as limitations. Viewed through a Total Portfolio lens, they can be advantages.

The trade-off is that wealth investors can be overly focused on absolute outcomes, insufficiently attentive to underlying risk drivers, and too willing to chase what is new or fashionable. Institutional discipline exists for a reason.

Many wealth portfolios begin life with meaningful concentrations – in operating businesses, real estate, or specific sectors tied to personal conviction. Diversification is often retrospective rather than designed. In this context, adopting institutional discipline is less about importing complexity and more about explicitly addressing what concentration leaves exposed.

One of the defining characteristics of wealth portfolios is proximity to opportunity. Investment ideas often originate close to the source – through banking or asset manager relationships, specialist strategies, private markets access, or thematic convictions – rather than being filtered first through asset class buckets. Decision making is typically faster, less encumbered by formal process.

This bottom-up orientation aligns naturally with one of TPA's core principles: that the best ideas of the whole portfolio should compete for capital on equal footing. Where institutions often need to work actively to loosen rigid policy constraints in order to enable this competition, wealth portfolios frequently begin with the freedom already in place.

Exhibit 8: Different starting points for TPA in Institutional and Wealth Portfolios

Dimensions	TPA in an Institutional Context	TPA in a Wealth Context
Industry Backdrop	Pressure to move beyond rigid SAA policy and benchmarks as portfolios become larger, more complex, and harder to govern.	Deal driven culture, often built on opportunity at a time, with structure emerging only as complexity accumulates.
Starting Point	Diversified by design, but anchored tightly to policy portfolios and benchmarks.	Concentrated by intent, with diversification introduced gradually and unevenly over time.
Competition for Capital	Policy silos constrain comparison across asset classes, requiring "stretch governance" to enable joined up decisions; TPA forces all ideas to justify their place in the portfolio.	Fewer formal constraints allow ideas to flow freely, but comparison across opportunities is often implicit and unstructured; TPA makes opportunity costs more explicit.
Decision Speed	Governance cadence slows response; TPA improves agility without loss of control.	Decisions are faster but less structured; TPA brings discipline and prioritisation.
Defining Success	Success is often defined through benchmarks; TPA reframes success in total fund terms.	Success is understood through outcomes (e.g. spending, liquidity, drawdowns); TPA connects outcomes at the portfolio level.
Risk Discipline	Risk is formalised, but tracking error and volatility dominates; TPA integrates multiple risk lenses.	Risk is understood intuitively, but hard to see in aggregate; TPA makes overlaps and concentrations visible across the whole.

Source: WTW, Thinking Ahead Institute

The challenge is not idea generation. In a wealth context, outcomes are rarely constrained by a shortage of opportunities. The real constraint is the absence of a shared portfolio lens – a way to understand how complexity compounds, how risks aggregate, and how individual decisions add up at the portfolio level.

The difference between institutional and wealth portfolios, then, is not one of sophistication versus simplicity, but of starting point and discipline. Institutions typically turn to Total Portfolio thinking to loosen rigid top-down constraints. Wealth investors may see benefits from flexibility but may also approach it from a diversification lens – as portfolios grow, concentrations persist, and decisions made in parts begin to interact in unexpected ways.

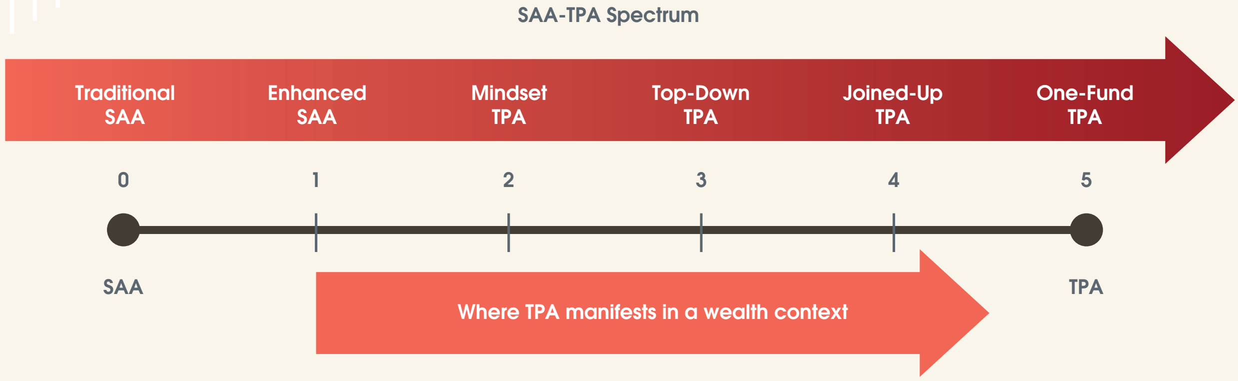
Exhibit 8 summarises how these same dimensions differ across contexts, and why Total Portfolio thinking arrives by different routes in each instance.

The TPA spectrum in a wealth context

Wealth portfolios tend to reveal their structure over time rather than declare it upfront. Early decisions are often made in response to specific opportunities or constraints, with coherence emerging only as portfolios grow in scale and complexity. That sequencing matters, because it shapes which forms of Total Portfolio thinking are feasible and useful at different stages of a wealth portfolio's evolution.

In the institutional world, portfolio evolution has been studied extensively through the Thinking Ahead Institute's peer fund research[4] and is commonly depicted as an SAA–TPA spectrum running from Level 0 to Level 5. The spectrum provides a shared reference point for understanding how decision making shifts from traditional SAA toward more integrated, portfolio wide approaches. While developed with large asset owners in mind, it also provides a useful reference for wealth – with some important differences.

Exhibit 9: The SAA–TPA spectrum for wealth



Source: WTW, Thinking Ahead Institute

For wealth investors, both the starting point and the practical destination tend to differ. Most wealth portfolios do not begin at Level 0, which assumes a policy-first, benchmark-anchored design. Nor is Level 5, with its emphasis on balance-sheet integration and full organisational alignment, a natural or necessary end state. Instead, wealth portfolios typically operate across the intermediate stages, where the shift is less about formal architecture and more about how decisions are framed, compared, and governed at the portfolio level.

The direction of travel also differs. Institutions typically start from a top-down framework and work to loosen rigid policy and governance constraints to enable better bottom-up capital competition. Wealth portfolios, by contrast, often begin from either concentrated investments or accumulated cash, and face the opposite challenge: introducing sufficient top-down structure to ensure that bottom-up ideas can be evaluated consistently, and in relation to one another, across the whole portfolio.

[4] See https://www.thinkingaheadinstitute.org/research-papers/global-asset-owner-peer-study-on-best-practices/

An art metaphor offers a useful way to interpret how this transition tends to unfold in practice.

- At early stages, portfolios resemble Individual Works: investments are acquired one at a time and assessed largely on their own merits.
- As holdings accumulate, they begin to form a Private Collection, with assets grouped by type, theme, or adviser and diversification emerging as an implicit objective, even if portfolio level discipline remains informal.
- The more consequential shift occurs with Selective Curation. Bottom-up ideas are filtered through a portfolio lens – often expressed through a model portfolio – with attention turning to how risks overlap, accumulate, and propagate across holdings.
- The final stage is a Curated Collection, where portfolio coherence is clearly owned – whether through a CIO function, an investment committee, or a lead adviser acting in that role – and decisions are made with explicit reference to the whole.

One could imagine a further stage beyond this. For wealth investors, a fully articulated "Level 5" would extend Total Portfolio thinking beyond financial assets to the whole-of-life balance sheet – integrating pensions, property, future income, health, and longevity into portfolio decisions, and shifting the focus from portfolio construction to enduring legacy. In this sense, wealth is naturally oriented toward life-cycle trade-offs, even if current practice tends to manage these elements in parallel rather than as a single system.

In practice, the SAA–TPA spectrum is best understood as a positioning tool, not a maturity ladder. Where a wealth portfolio sits influences the decisions it finds hardest to make, the risks that accumulate quietly, and the forms of discipline that matter most. That context is essential, but it does not, on its own, answer whether Total Portfolio thinking is the appropriate next step.

Exhibit 10: Different starting points for TPA in Institutional and Wealth Portfolios

TPA Stage	How decisions are made in Wealth	Art Metaphor
Level 1: Enhanced SAA	Bottom-up decisions; investments assessed largely in isolation; risk viewed at the individual investment level	**Individual Works**
Level 2: Mindset TPA	Informal asset grouping by type, theme, or adviser; early portfolio awareness, but risk discipline remains light	**Private Collection**
Level 3: Top-Down TPA	Bottom-up ideas filtered through a top-down lens; explicit consideration of how risk overlaps and accumulates across holdings	**Selective Curation**
Level 4: Joined-Up TPA	Clear ownership of portfolio decisions; full integration of bottom-up opportunities and top-down objectives	**Curated Collection**
Level 5: One-Fund TPA	Portfolio decisions reflect the whole-of-life balance sheet, integrating financial assets with pensions, property, income, and longevity considerations	**N/A**

Source: WTW, Thinking Ahead Institute

Is TPA right for wealth?

When I first wrote about TPA, I framed it around a simple question: is TPA right for you? I did so intentionally, because TPA only becomes valuable when it addresses a real decision problem, not when it is adopted as an idea. Used well, it sharpens trade-offs and improves decisions. Used poorly – it can add complexity without improving outcomes.

In a wealth context, that decision point tends to arrive gradually as assets accumulate. Not when portfolios are small and manageable, but when they become harder to explain, when diversification delivers less protection than expected, when liquidity matters in practice rather than in theory, or when risks begin to surface in places no one was actively monitoring. At that stage, the question is no longer whether individual investments make sense, but whether the portfolio still holds together as a whole.

That said, the right answer is often "it depends" – and in many wealth organisations, "not yet" is a perfectly sensible conclusion. A significant number of wealth investment teams are small (sometimes only a handful of people), and the full language and machinery of TPA may be unnecessary or impractical relative to the portfolio's scale and complexity. For these firms, the most valuable step may not be adoption, but borrowing the best bits in a proportionate way: clearer objectives, a more explicit view of risk aggregation, and a better habit of comparing opportunities against portfolio constraints.

There are, however, real consequences to ignoring the underlying shift. Wealth investors often benefit from speed, flexibility, and proximity to opportunity – real strengths that allow portfolios to adapt quickly. The trade-off is that without an explicit portfolio lens, those same strengths can quietly become sources of fragility. Portfolios can appear diversified while remaining exposed to the same risk drivers. Liquidity can look ample on paper but prove unavailable when most needed. Individually attractive positions can accumulate without achieving the portfolio's true objectives.

The art metaphor introduced earlier is instructive here. The point is not to become a museum, or to admire every piece ever acquired, but to curate with discipline – to be clear about what belongs, what overlaps, and what no longer earns its place once the collection is viewed as a whole. That kind of judgment includes knowing when an expert curator is best sought externally.

In the end, TPA is not about becoming institutional. It is about being more deliberate. When bottom-up insight and top-down intent are brought together within a single decision framework, portfolios become easier to explain, more resilient under stress, and better aligned with the outcomes that matter. It is the difference between owning a collection you admire and running an exhibition you truly understand.

Bank of Singapore's take

What "Total Portfolio" Thinking Means for Wealth examines how wealth portfolios increasingly require a more integrated framework as they become more complex and less benchmark-centric. Its discussion of portfolio-level trade-offs, competition for capital and the aggregation of risks across holdings resonates strongly with Bank of Singapore's Whole Portfolio Approach (WPA), which combines strategic asset allocation, factor-aware diversification and robust risk analysis within a single portfolio framework. Particularly relevant is the paper's observation that portfolios which appear diversified in asset class terms may still remain concentrated in underlying economic risks, a theme central to how Bank of Singapore evaluates portfolio resilience.

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