White Paper
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Public pension funds rethink allocation in a higher-rate world

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- **Bonds are back:** After a decade of chasing yield in risk assets, public pension funds (PPFs) are rebalancing toward fixed income as rising rates restore its appeal.
- **Private markets plateau:** Allocations to alternatives—especially private equity—are leveling off, with liquidity risks and higher rates cooling past enthusiasm.
- **Returns diverge widely:** While average returns remain solid at 6–8%, performance dispersion has increased, spotlighting the benefits of diversification and the importance of making early strategic pivots.

This report is part of a long-running series on asset allocation among public investors—among them PPFs,[1] sovereign wealth funds and central banks. In past reports, we highlighted nascent, later significant, trends such as the shift towards risk assets, driven by a combination of near-zero interest rates and structural diversification trends among global PPFs. In our latest update, we see the beginnings of a pivot in response to a new macro regime as interest rates normalize and risk asset allocations peak.

Asset allocation trends

With assets under management of $7 trillion[2] at the end of 2023, PPFs accounted for about 5% of the global market portfolio, i.e. the market value of all publicly traded assets.[3]

Figure 1 shows the changing contours of the industry's investment portfolio since 2010. There's a clear shift away from cash and fixed income towards riskier assets, with particularly strong growth in alternatives. This shift began after the 2008 global financial crisis and reflected the opportunity cost of low-yielding money market funds and generally low, or even negative, yields on government bonds. And, in certain geographies, it was facilitated by regulatory changes that allowed PPFs greater flexibility in allocating assets.

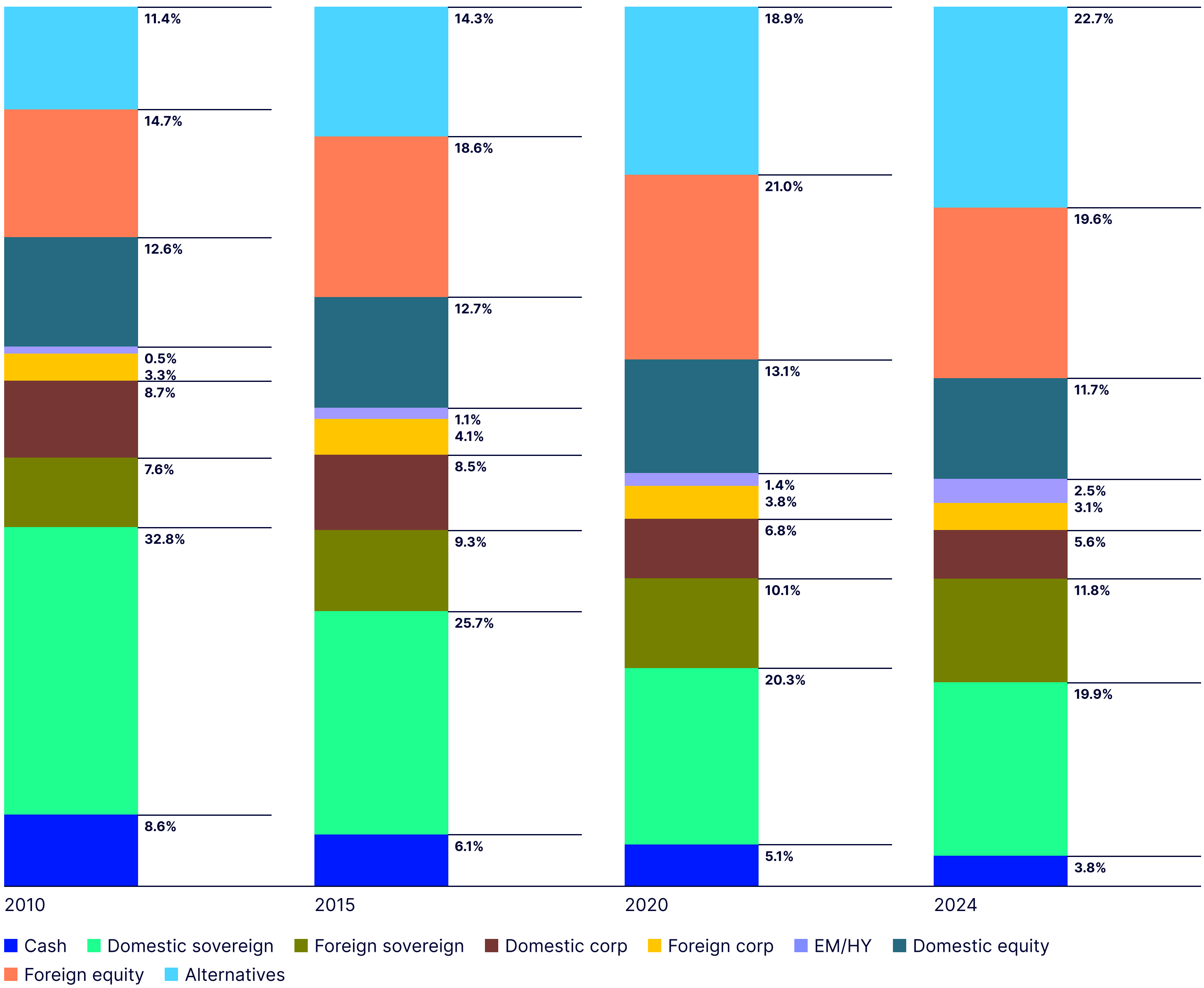
As we look at the post-pandemic period, the global portfolio is beginning to pivot in a new direction. One notable trend is the increasing allocation to fixed income, largely at the expense of public equities. Sovereign bond allocations have grown particularly strongly; from a nadir of 29% in 2021, sovereign fixed income increased to 32% by 2024, the highest level since 2016. Meanwhile, the share of allocations to alternatives is stabilizing around 23% after a long period of growth, a reflection of diverging approaches to private markets, with an increasing number of funds holding their alternatives allocation steady or even letting it drift down.

These trends are consistent with the new macro environment. Higher interest rates have rekindled interest in fixed income while creating headwinds for private market investments, as these typically depend heavily on leverage. Public equities, meanwhile, remained highly dependent on the US market which continued to outperform throughout the period under review. Given these conditions, we expect future portfolio re-allocation to shift to fixed income at the expense of equities, while alternatives stay steady.

Spotlight: The continued importance of external management

Against the backdrop of a shifting industry portfolio, it is worth noting that external management continues to play an important role. Roughly half of the funds in our sample use external managers for at least one-third of their portfolio, and two funds allocate more than 80% to external providers. External managers are used both for common exposures, such as index funds, as well as for more complex asset classes, such as private equity.

Figure 1: Average asset allocation among PPFs (unweighted), 2010–2024 (%)



Source: Fund annual reports, State Street Investment Management Macro Research.

Fixed Income: A changing mix

Figure 2 shows changes in allocations within the cash and fixed income portfolios. The most significant long-term trend has been a reduction in cash and a shift away from domestic bonds. The fall in domestic *sovereign* bonds is particularly acute. Their share of the portfolio fell from over 30% late 2000s/early 2010s to 20% in 2024. Allocation to domestic investment-grade corporate bonds decreased from near 10% to 6% over the same period. While sovereign bonds have turned a corner in 2023 and are looking to increase share, corporate bonds have yet to do so, partly on account of historically tight credit spreads, which narrow upside potential.

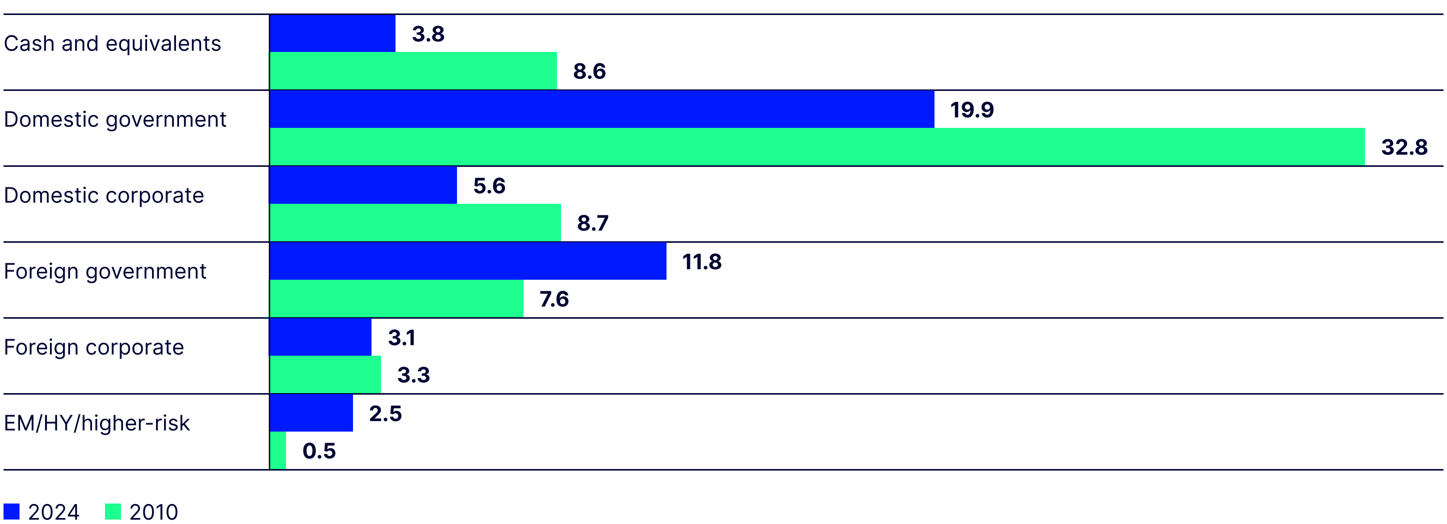
Regionally, we see distinct trends: Asian PPFs trended mainly towards foreign *government* bonds, as home governments sought to diversify their bondholder base and liberate their PPFs from the constraints of being forced buyers of domestic government debt. Elsewhere, the trend was towards assets with higher risk/return profiles. For example, we find that European PPFs have moved with conviction towards high-yield and emerging market debt (HY/EMD).

Spotlight: HY and EMD's quiet rise

Indeed, HY/EM Debt deserves a special mention. The category has benefitted from a tailwind in the last decade as investors searched for yield. Set against a backdrop of economic resilience, which reduces default risk, these types of higher-risk credit can offer a meaningful return for those investors that prefer, or are obligated to stay within, fixed income.

Since the pandemic, the tailwind has picked up noticeably. The share of investment portfolios allocated to HY/EMD has increased from 1.4% of the portfolio to 2.5% between 2020 and 2023. With the gap in expected returns between HY/EMD and public equities narrowing, the two asset classes are competing for capital, although the relatively small size of the HY/EMD market sets a natural limit to this competition.[4]

Figure 2: Average share of fixed income in PPFs' assets, %
Share of assets (%)



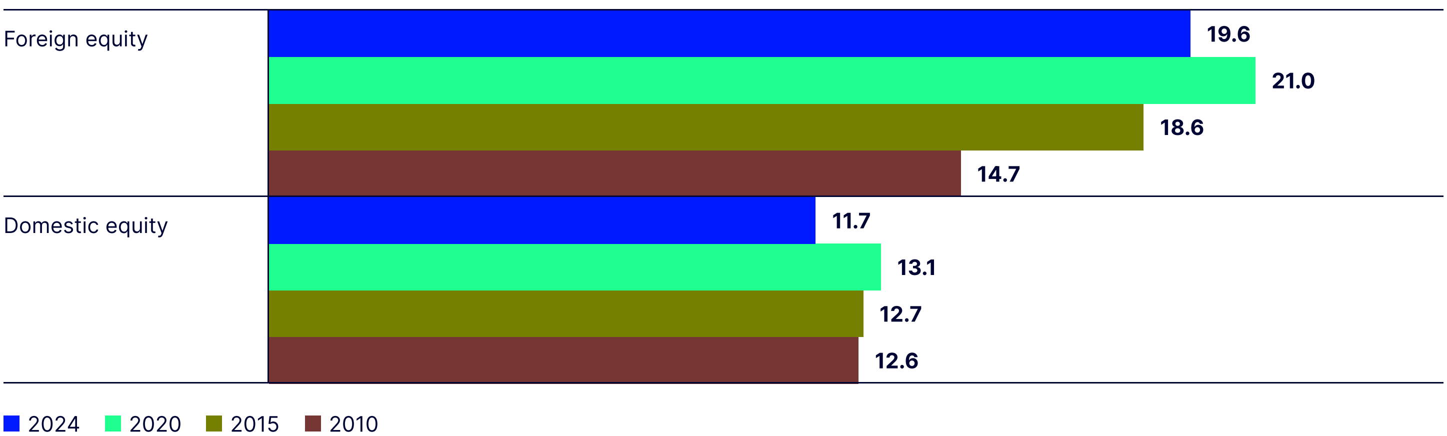
Source: Fund annual reports, State Street Investment Management Macro Research.

Equities trend international

Public equities also benefitted from growing risk tolerance in PPFs' allocation decisions. Allocations increased from about 25% after the global financial crisis to a peak of 34% in 2021, before moderating to 31% in 2024. As in fixed income, we also saw a trend towards internationalization and a reduction in home bias (see Figure 3).

Given that there are no US funds in our sample, since they do not meet our PPF definition,[5] the internationalization trend is clearly linked to the outsized performance of US equities in recent years. In other words, even without new investment, the value of the foreign equity share would grow because US equities (classified as foreign in this context) performed so well. Still, it is notable that PPFs allowed the US share of the equity portfolio to grow. This reflected the common belief that the US was the logical place to be within the public equity space.

Figure 3: Average share of foreign and domestic equity in PPFs' assets, %
Percent share of portfolio



Source: Fund annual reports, State Street Investment Management Macro Research.

Growth of alternatives

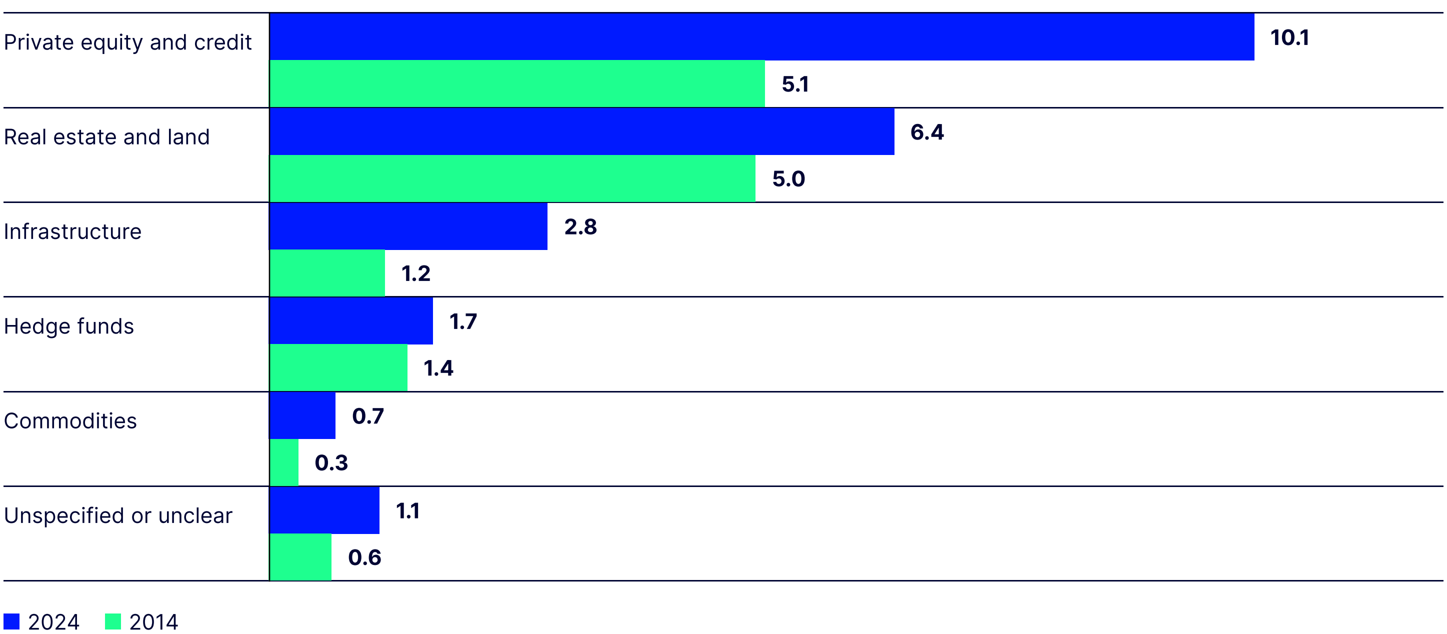
A rapidly growing allocation to alternatives has been another evergreen item among all long-term investors, PPFs among them. In 2008, on average only 11% of assets were allocated to alternatives. By 2024, it stood at 23%. The pace of change at the fund level depended on the regulatory framework that governed the fund.

Figure 4 shows the average share of alternatives in PPFs' asset allocation compared to 10 years prior. These figures represent the lower bounds of actual allocations.[6] That all categories show growth regardless clearly reflects the growing interest in private markets as an asset class.

The growth of private equity allocations has been particularly prominent, with PPFs turning to private equity for higher returns, aiming to capture premiums not found in public markets.[7] They are attractive to PPFs that have the ability to take a long-term investment view and can tolerate cyclical downturns. Additionally, the relative lack of active mark-to-market valuations makes reporting on this asset class easier.

Active strategies are typical for this asset class. Given their size, most PPFs have access to the full selection of specialist asset managers, and some even have the capacity to invest as general partners. However, passive options are growing in availability, with a flurry of private market ETFs arriving on the market.

Figure 4: Average share of alternative in PPFs' asset allocation, %
Percent share of assets



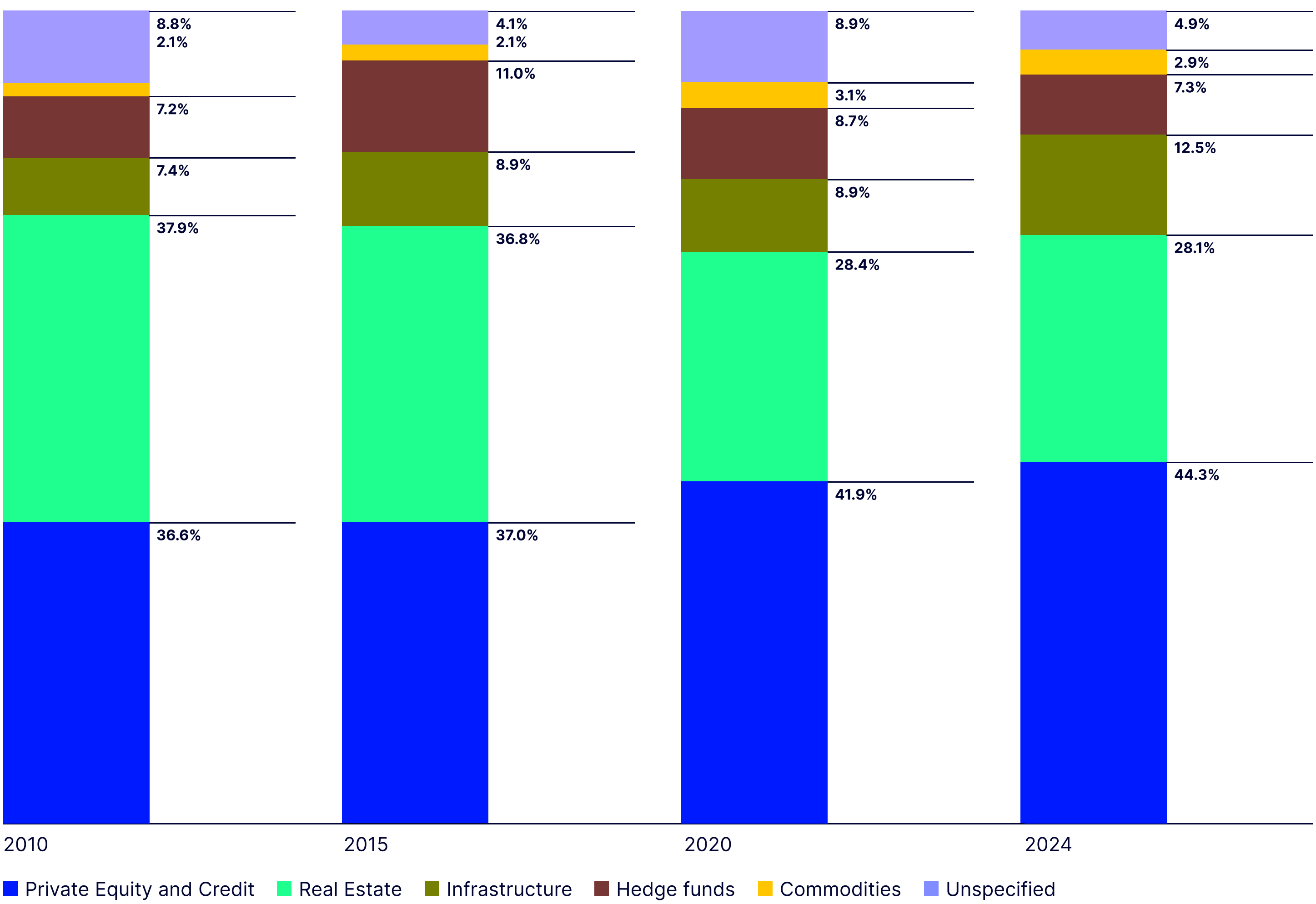
Source: Fund annual reports, State Street Investment Management Macro Research.

Private equity and credit ascends, real estate retreats

Consequently, the rapid growth of private equity investments has replaced real estate as the go-to alternative asset (see figure 5). Private equity is followed by real estate, infrastructure, hedge funds, and commodities. PPFs have a long history of real estate exposure, as it offers investors an opportunity to generate higher returns and hedge their portfolio against market volatility.

Infrastructure is attractive for similar reasons, offering low correlations with other assets and good income streams. Both these sub-asset classes continue to enjoy tailwinds when PPFs first allocate to alternatives, as they can easily substitute for bond allocations.

Figure 5: Alternative sub-categories, % total alternative portfolio, 2010–2024



Source: Fund annual reports, State Street Investment Management Macro Research.

Rethinking alternatives: The rising rate challenge

Public pension funds continue to lean into private markets—but rising rates are testing their resolve. Alternative assets as a group are sensitive to interest rates because of long asset durations and extensive use of leverage. The sharp rise in rates has resulted in a slowdown in transaction activity. This poses a dual challenge: it hampers growth and strains liquidity. The latter risk is particularly important for pension funds, as they have a well-defined timeline of liabilities. Hence, greater liquidity risk may result in more cautious allocations going forward.

It is also worth noting that the divergence within the PPF community toward alternatives remains large. In our sample, three out of the twenty PPFs still do not invest meaningfully in alternatives (i.e. they allocate less than 0.5% of their overall AUM) while four have an allocation of above 40%. Moreover, data is noisy, particularly over the long term, as categories tend to be more fluid within alternatives than in other asset classes.[8]

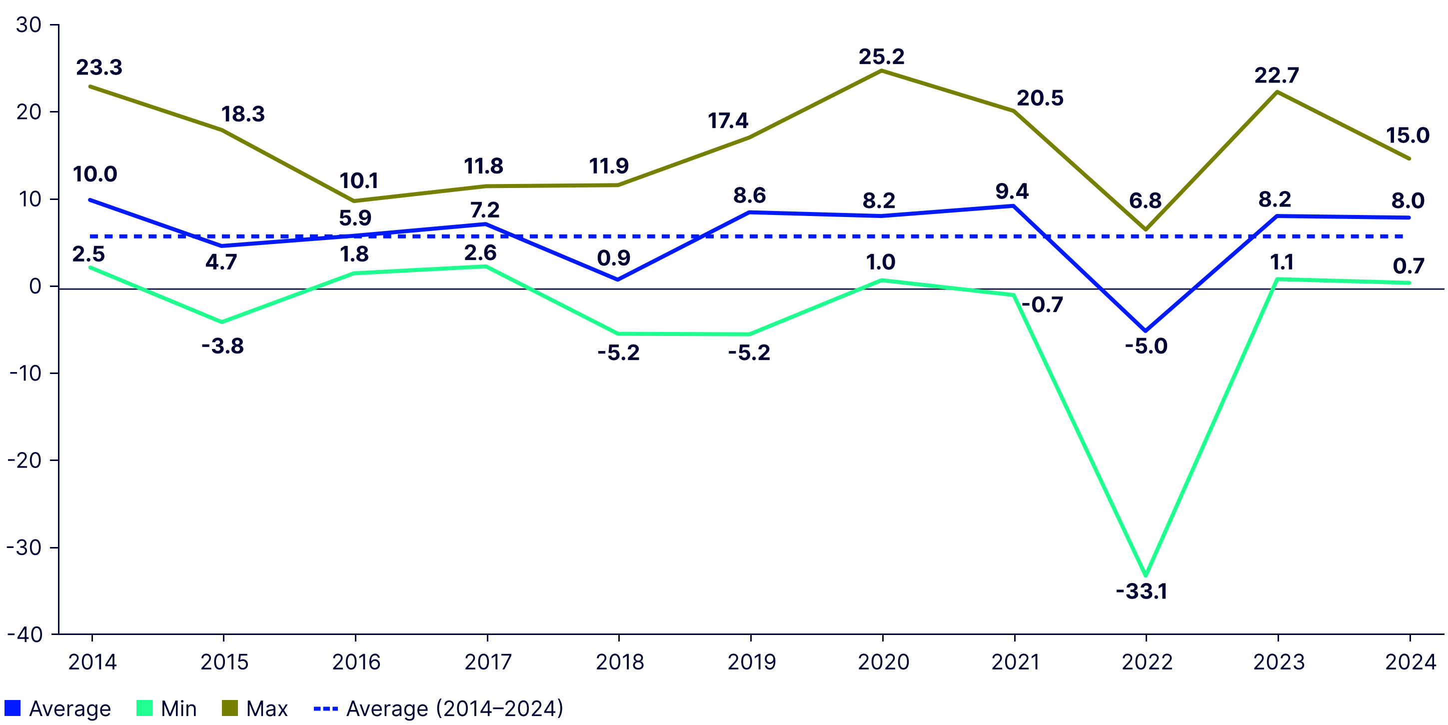
Divergent returns underscore the importance of diversification

Figure 6 shows both the average returns as well as their dispersion across the group. Overall, PPFs generated an average 6.0% annual return in local currency terms over 2014–24. This period included two years of weak returns and exceptional difficulties for one fund in 2022. Indeed, 2022 was a particularly challenging year. The large, correlated drawdowns in developed economy equity and bond markets weighed heavily on the industry.

Notably, we find that more diversified portfolios tend to generate the highest average returns. As our pool also includes relatively undiversified PPFs, an expected annual return of 7–8% is realistic for the industry.

We see a mixed level of diversification across the globe. Portfolio diversification is largely a function of when PPFs embarked on diversification. Canadian PPFs happen to have been early adopters. They began diversifying after the country's financial crisis in the 1990s and are also notable for using leverage in recent years. They have outperformed PPFs from the rest of the world on average, although that performance gap has narrowed.

Figure 6: PPF returns 2014–24 (unweighted)



Source: Fund annual reports, State Street Investment Management Macro Research.

The road ahead

Looking back at the post-global financial crisis environment, we witnessed the industry shifting its asset allocations towards riskier assets. In doing so, it managed to maintain its annual returns. As the macro environment shifts yet again, away from a long stretch of ultra-low interest rates and towards a more volatile world, investment portfolios are once more starting to change shape.

Fixed income can now once again deliver on the core portfolio functions and thus will erode the source of previously ever-growing funds flowing towards public equity and private markets. The exception remains those PPFs whose starting point is still relatively undiversified and where regulatory or supervisory bodies are likely to gradually begin to permit greater diversification in the years ahead.

Endnotes

1 See Hentov & Ale (2022) and Hentov & Petrov (2019). In a study such as this one, comparability is important. For this reason, we take a narrower definition of PPFs than is industry standard, placing a big emphasis on the government's ability to influence the asset/liability mix (in contrast to public DC-like funds). In practice, this excludes American, British, Australian, and some Canadian PPFs from the sample. From among the funds that do meet our definition, we consider the top 17. These names represent AUM of $5.9 trillion, over 80% of AUM of the group. Our sample can therefore be considered representative of group trends.

Data limitations are mainly the delayed publication of PPF reports, so fully complete data is only available for 2023. Our research covers the period 2010–24. Three (of 17) funds had not released 2024 figures by the time of publication. For these funds we assume that 2023 allocation is carried over into 2024. Our asset allocation data covers three major asset classes (Cash and Fixed income, Equities, Alternatives) and within those, 16 sub-asset classes or categories.

2 Calculated using end-2023 AUM of global pension funds. Source: OMFIF GPI 2012

3 Le and Doddard, "Global Market Portfolio 2024: Rise of the Middle East", October 2024.

4 At $8 trillion, the HY/EM bond market is about 1/10 the size of the public equity market (June 2024 data). See endnote ix.

5 See endnote 1.

6 Quite common in our sample was a situation where a fund would anecdotally report an allocation to a certain sub-category (e.g. commodities) but would not provide a specific figure. Where we were unable to make an estimate, we recorded a zero. Our aggregate figure would therefore be an under-estimate the real allocation.

7 See details of private equity returns in Lacaille, Roy, Hentov, Petrov and Le, "Boom in Private Markets is No Private Matter", Oct 2019, pp.11–12

8 For example, some funds report real estate and infrastructure together or, when portfolios are relatively small, consider private equity a loose catch-all-type category.

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* This figure is presented as of June 30, 2025 and includes ETF AUM of $1,689.83 billion USD of which approximately $116.05 billion USD in gold assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Investment Management are affiliated. Please note all AUM is unaudited.

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