Inside the**market**

EMEA Investment & Portfolio Solutions

Investment Directions for Institutions

2026 – Pension edition

BlackRock®

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Executive summary

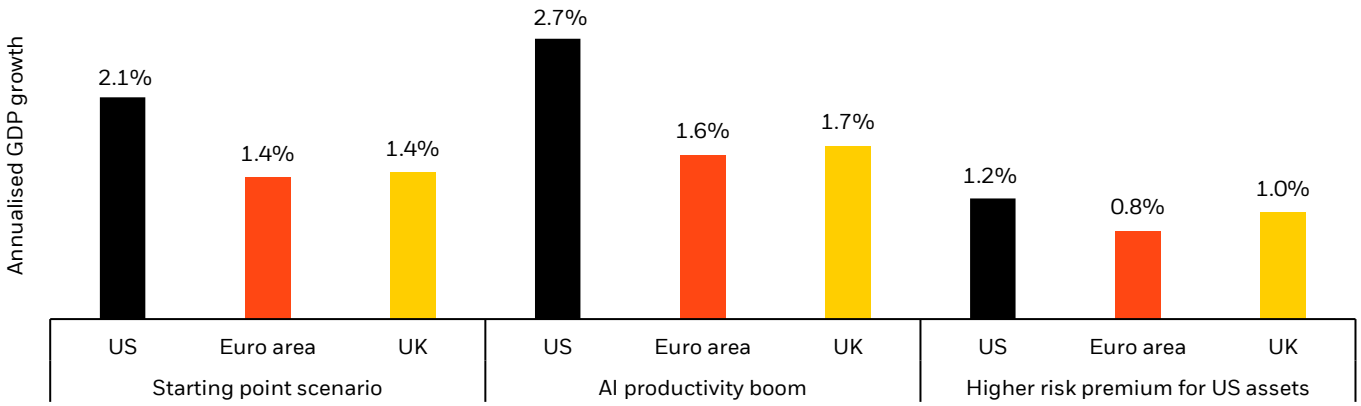
The market developments of 2025 – shaped by structural trends (or 'mega forces') such as artificial intelligence (AI) and geopolitical fragmentation – have underscored a profound rise in uncertainty. As a result, it's become far more challenging to anchor strategic asset allocation (SAA) decisions and liability estimates around a single, long-term starting point scenario.

- **AI** drove US equity performance and economic growth last year, but the outlook is highly uncertain. If AI adoption exceeds expectations, the US stands to benefit more than other markets (Fig 1).
- **Geopolitical fragmentation** led to volatility in 2025. There's a scenario in which the US could become a source of geopolitical instability over a strategic horizon, which may lead to a larger drop in US GDP versus other markets (Fig. 1) and a sharp rise in risk premia across US assets.

US equities remain the largest allocation in BlackRock Investment Institute's (BII) strategic portfolios. However, according to BII's new Q4 Capital Market Assumptions (CMAs), expected returns for US equities and broader portfolios (and liability streams, when present) have become far more uncertain over a strategic horizon, depending on how the two mega forces above unfold (Fig. 4). The nature of this uncertainty has shifted – it's no longer just about uncertainty around a central long-run trend, but also around which scenario is materialising. The rates outlook has become more uncertain as well, given the unclear trajectory of the mega forces. For example, BII's yield curve projections vary significantly across scenarios: in the 'AI productivity boom' scenario, 10-year US Treasury yields are below 4%, while in the 'Higher risk premium for US assets' scenario, they are closer to 6%.

Meanwhile, macro and market volatility will likely be structurally higher. Central banks will be less able to cushion shocks than in the past, due to structurally higher inflation driven by ageing demographics pushing up DM wages, geopolitical fragmentation spurring supply chain rewiring costs and the AI buildout potentially leading to power supply-demand imbalances. **In short, we expect more uncertain returns and higher volatility.**

Figure 1: The US faces a wider range of potential economic growth outcomes than other developed economies
Five-year GDP growth estimates, Q4 2025



Forward-looking estimates may not come to pass. Source: BII, January 2026. Note: The chart shows our assumptions for five-year real GDP growth under the three scenarios that underpin our capital market assumptions (CMAs).

Adapting pension portfolios for an uncertain future: a three-pronged approach

Scenario testing (pg. 3) – we advocate assessing how SAA may perform across a range of scenarios and identifying which assets are most vulnerable to regime shifts or could provide resilience. We demonstrate how sample institutional portfolios may perform across the potential scenarios shown in Fig. 1. We find that equity allocations – particularly US equities (and, by extension, global equities, given their high exposure to the US) – exhibit the widest dispersion of outcomes. This underscores the need for a more dynamic approach to portfolio construction spanning asset allocation and portfolio implementation enhancements to help boost portfolio outcomes, including expected returns and stability.

Asset allocation enhancements (pg. 4-7) – private markets can help lift portfolio returns by offering higher alpha potential than public markets and providing access to opportunities aligned with mega forces. Within the public market sleeve, a strategic allocation to macro hedge funds, EUR high-yield credit and EUR AAA CLOs can further enhance returns, while delivering relatively stable performance across the scenarios outlined above.

Portfolio implementation enhancements (pg. 8-9) – shifting part of the portfolio core from index exposures to systematic alpha strategies can increase expected returns while helping to neutralise macro factor risks. Optimising instrument selection – for example, replacing futures with ETFs in US equity exposures – can improve cost efficiency. Finally, partially hedging USD exposure can provide protection against potential further dollar downside, while still preserving the benefits of the USD's safe-haven characteristics.

Putting theory into practice – we bring this all together through a **portfolio case study (pg. 10)**.

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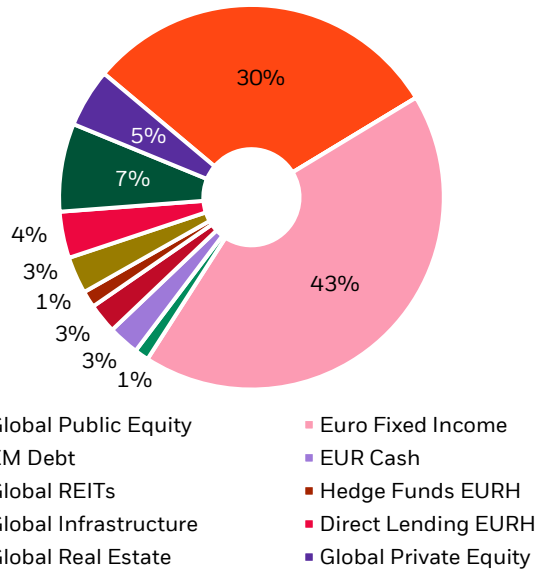
1. Scenario analysis for pension portfolios

In the analysis below, we use BII's 10-year capital market assumptions (CMAs) to show how the expected returns of an illustrative pension portfolio (Fig. 2) may change under three hypothetical scenarios:

- **Starting point scenario:** US equity valuations remain broadly stable on a strategic horizon, with returns driven by AI-enabled earnings growth, rather than multiple expansion. Yet it's unclear whether AI-related revenues will accrue within technology or across other sectors, making AI an increasingly active investment theme. In this scenario, US equities remain the largest allocation in BII's strategic portfolio.
- **AI productivity boom:** in this upside scenario, AI adoption exceeds expectations and the US benefits disproportionately from productivity gains. Allocations to US equities increase, reflecting the potential for double-digit - possibly mid-teens – earnings growth. While rare, such growth is plausible during transformative innovation phases based on historical data.
- **US risk premia worsen:** a more negative scenario of US-driven geopolitical decoupling, leading to lower growth, higher inflation and repricing of risk premia across US assets. This would warrant a lower US equity allocation.

Figure 2: Illustrative pension portfolio
Asset allocation



Source: BlackRock, as of 3 February 2026.

Highlights from our analysis

- **The dispersion of portfolio outcomes is wide across the three scenarios,** ranging from 2 to 10% expected returns (Fig. 3), with the weakest occurring in the 'US risk premium worsens' scenario and the strongest in the 'AI productivity boom' scenario. This is driven primarily by equity allocations, especially US equities, and emphasises the importance of monitoring scenario evolution and adopting a more dynamic approach to portfolio construction by leveraging **other asset classes and more efficient implementation vehicles** to enhance expected risk-adjusted returns.
- **Private markets play a key role in boosting portfolio expected returns,** thanks to their higher alpha potential and early access to structural opportunities, along with lower return variability than global equities across the scenarios (Fig. 4). In **growth-focused private markets**, most of the valuation repricing driven by higher rates is now largely complete, we believe, and we see the strongest expected returns in private equity and infrastructure (pg. 4-5), supported by mega forces, as well as attractive entry points in real estate (pg. 4-5). In **income-oriented private markets**, direct lending offers higher expected returns than public fixed income, while helping to maintain portfolio stability across all three scenarios (pg. 5-6).
- **In public markets, hedge funds and high yield (HY) can enhance returns** while adding stability across the scenarios. **Hedge funds** benefit from alpha opportunities amid greater market dispersion and offer diversification without sacrificing liquidity, at a time when fixed income is a less effective diversifier (pg. 6). A strategic **HY** allocation can lift returns: despite tight spreads, long-term returns are driven mainly by coupon income (pg. 7).

Figure 3: Portfolio outcomes are widely dispersed across the three scenarios
Expected returns of the illustrative portfolio over 10 years

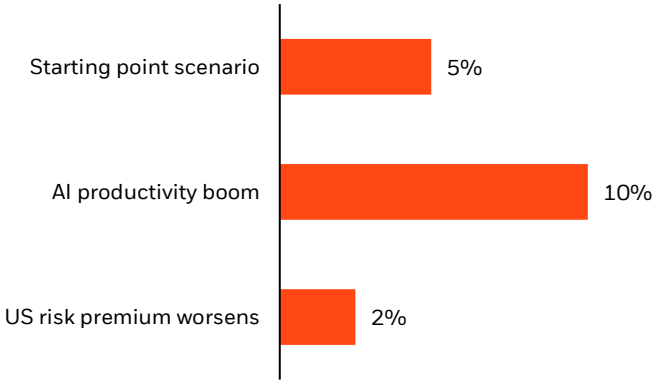
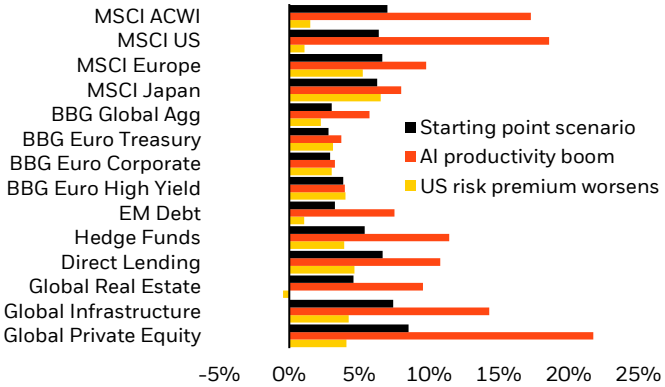


Figure 4: Private markets, hedge funds and HY can help enhance portfolio returns across scenarios
Expected returns of the asset classes over 10 years



This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise – or even estimate – of future performance. Forecasts are not a reliable indicator of future performance.
Source: BlackRock, as of 10 February 2026; CMA data as of 31 December 2025; currency: EUR; time period: 10 Years. Return assumptions are total nominal returns. Asset return expectations are net of assumed fees. Fees and alpha are estimates for illustrative purposes only and do not represent any actual fund performance. Indices are unmanaged and one cannot invest directly in an index. These portfolios represent a sample of just various possible solutions. BlackRock has not considered the specific needs of the client and is not making any recommendation of any particular option. You should consider the most appropriate allocation for your needs.

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2. Asset allocation enhancements

Below, we outline a way to adopt a more dynamic approach to portfolio construction by tapping into the most attractive private market opportunities linked to mega forces and adding to macro hedge funds, EUR HY and EUR AAA CLOs.

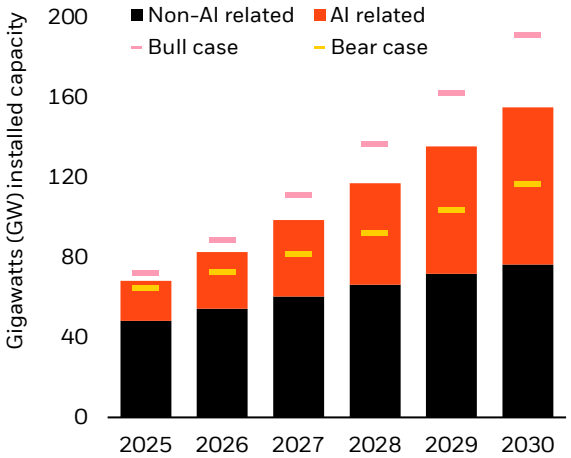
Private markets: tapping into structural opportunities

Infrastructure

As highlighted in BII's The infrastructure opportunity in portfolios, infrastructure's return potential is supported by a generational investment need – about $84T through 2040[1] – at a time when traditional sources such as governments and banks are increasingly constrained by high levels of public debt and increased regulation. This, coupled with resilience stemming from high barriers to entry, stable demand and recurring, often inflation-linked cash flows, is making infrastructure a core part of institutional portfolios: global infrastructure AUM has more than doubled since 2018 and now represents roughly 12% of private market AUM.[2] Valuations have become more attractive after recent adjustments, bolstering our positive view. Global Infrastructure Partners (GIP), part of BlackRock, sees the most attractive opportunities in:

- **Hyperscale data centres,** which are benefiting from the rapid global expansion of cloud computing and AI adoption (Fig.5). GIP targets high-quality, well-performing developers and operators that deliver facilities to the top hyperscalers. Preferred platforms combine revenue-generating assets with strong operational and contracted capabilities and substantial future development pipeline through land banks that are power secured. GIP also looks at opportunities across strategic joint ventures, partnerships with hyperscalers, and regional platforms, where our infrastructure expertise can add significant value.
- **Transition assets enabling or accelerating decarbonisation** in areas such as electrification (beyond utility-scale renewables), clean fuels, circular economy and decarbonisation partnerships, investing through an 'infrastructure lens' to focus on hard assets with proven technologies, high barriers to entry, cash flow certainty and downside protection. GIP's Business Improvement Team and deep industry partnerships can offer access to sizeable, differentiated and de-risked opportunities while driving operational value. GIP continues to originate proprietary opportunities driven by energy demand growth, electrification, energy security and the trend of pragmatic decarbonisation, supported by strong interest from corporate partners to invest together with GIP to capitalise on these key themes.

Figure 5: Data centre buildout is accelerating
Estimated global data centre capacity



Forward-looking estimates may not come to pass. Source: BII, November 2025. Notes: Bars show estimated global data centre capacity split between non-AI (black) and AI-related (orange) categories. Pink markers denote the bull case, while yellow markers show the bear case for total data centre capacity.

- **Mid-market infrastructure,** which offers one of the deepest opportunity sets, with over 90% of global deals under $2.5B,[3] enabling better entry points, strong proprietary origination, value creation potential and broad exit options. GIP focuses on essential, contracted platforms where it can drive operational value and deliver steady cash yields, while avoiding merchant or subsidy-dependent models. Key opportunities include supply-chain reconfiguration (ports, logistics), digital infrastructure (power-proximate data centres, fibre, wireless) and energy solutions (energy storage, natural gas infrastructure, renewables power and flexible generation).
- **Secondaries,** which offer compelling access to infrastructure assets, many of which – such as regulated utilities, contracted power and digital networks – outlast traditional fund lifecycles. Investors can buy into funds or assets midway through a fund's life, accelerating deployment and shortening the path to distributions while gaining diversified exposure without a full lock-up. Transaction volumes hit record levels in early 2025, underscoring the growing use of secondaries as an active portfolio-management tool.

Real estate

Following an interest-rate-driven correction, real estate valuations have stabilised, with uplift being reported across most sectors, indicating that the cyclical inflexion point has been reached. Today, there continues to be an attractive entry point, with sentiment improving and buyer and seller expectations converging. Fundraising levels demonstrate the recovery in the asset class, with $127B raised in the first three quarters of 2025, matching the 2024 total and suggesting an end to three years of decline.[4] Amid ongoing macroeconomic and geopolitical uncertainty, the BlackRock Real Estate team is aligning investments with structural trends to enhance liquidity, support potential outperformance and reduce cyclical risk. This includes allocations to:

- **Residential,** where persistent housing undersupply in key cities, alongside rising household formation, and a culturally driven societal shift towards renting over ownership, continues to drive demand for co-living, flexible apartments, and the private rented sector.
- **Logistics,** where structural drivers such as rising e-commerce penetration, nearshoring, and reshoring continue to support underlying demand. We see geopolitical fragmentation driving continued supply chain evolution. In Europe, increased fiscal and defence spending is further supporting demand.

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- **Data centres,** where real estate investors are integral to the value chain, securing power-ready land and developing powered shells or fully fitted facilities before often selling to specialised infrastructure operators. In Europe, the most attractive markets, Frankfurt, London, Amsterdam, Paris, and Dublin, benefit from record levels of demand alongside high barriers to entry, including grid connectivity and on-site power availability.
- **Hospitality,** supported by a consumer preference shift towards experiences over goods. This sector enables investors to capture inflation-linked income streams, while its operational nature provides clear scope for value-add returns.

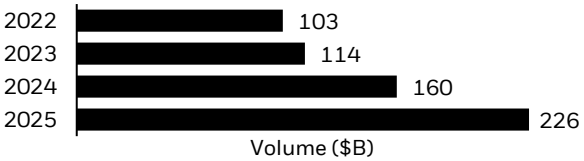
Private equity (PE)

Deal activity is showing early signs of recovery. Global deal value doubled QoQ to $209B in Q3 2025,[5] driven primarily by large transactions in North America and Europe. This pickup reflects improving market confidence, as much of the rate-driven repricing appears to be behind us, creating more attractive entry multiples for new investments. Exit activity, however, remains subdued. Total global exit volume and value declined 7% and 2%, respectively, from Q2 to Q3 2025,[6] continuing to constrain primary private equity fundraising. Longer holding periods and selective buyer demand have limited near-term exit momentum, despite improving transaction activity. We expect exits to follow deal activity with a lag. As developed market rate cuts support financing conditions and sustain deal recovery, exit markets should gradually reopen. In this environment, upcoming vintages appear increasingly attractive, with improving entry points today setting the stage for stronger realisations over the medium term.

- **Secondaries** can provide liquidity and portfolio management benefits through instant diversification and shorter holding periods. GP-led deals allow GPs to return capital and retain high-conviction assets via continuation vehicles. Secondaries funds have become a significant part of the PE market, raising $130B in Q1-Q3 2025, including three of the 10 largest PE funds raised over the period.[7] Deal activity also ramped up last year (Fig. 6). With many sellers but a concentrated buyer base, opportunities remain compelling - especially in small/mid-cap single-asset continuation vehicles, with most dry powder being focused on larger deals above $250m.

Figure 6: Secondaries' transaction volume has been on the rise since 2022

Global transaction volumes since 2022 ($B)



Source: Evercore 2025 Secondary Market Highlights, January 2026.

- **Growth equity** benefits from mega forces that should continue to support investment activity. Opportunities include healthcare (driven by ageing demographics and digital health), technology (AI core model developers and adopters, cybersecurity and cloud infrastructure) and the energy transition (through renewables, storage and decarbonisation infrastructure). The asset class offers access to innovative, high-growth businesses in which value creation is driven primarily by revenue expansion and operating leverage rather than financial engineering. Such companies are increasingly staying private for longer – which illustrates the critical role private capital is playing in financing these trends. Growth equity can complement buyouts by capturing innovation-driven upside, while buyouts focus on operational value creation in mature companies.
- **Direct co-investments,** which can also provide exposure to mega forces, let LPs participate in deals without waiting for blind-pool deployment. Direct co-investment funds have raised more than $200B globally since 2005,[8] driven by smaller investment sizes, demand for diversification, higher IRRs than traditional single-manager buyout funds (based on 2025 Preqin data comparing the performance of 2020, 2021 and 2022 vintages)[9] and fee sensitivity.

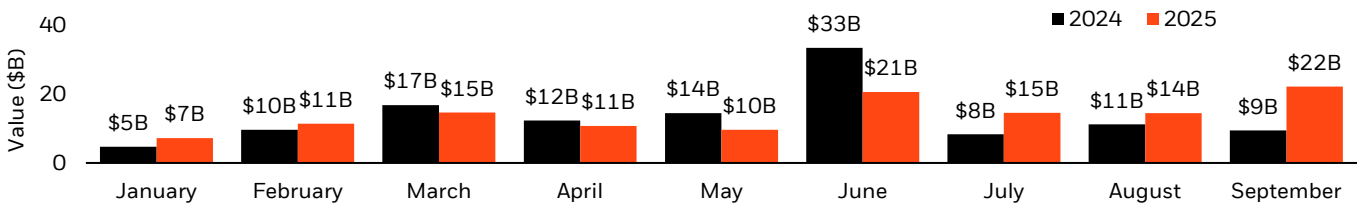
Private credit

Private credit offers a persistent spread premium over syndicated markets, supported by a growing opportunity set as companies stay private for longer and increasing fluidity between public and private markets, with recent trends showing private credit attracting larger borrowers from public markets. Structural protections in many private credit strategies can further enhance diversification. Fundraising held steady at $131.4B in Q1-Q3 2025 and AUM looks set to double by 2030.[10] Monitoring fundamentals remains essential: Q3 2025 data showed incremental improvement in covenant defaults and interest coverage, with stable 'bad PIK', but dispersion persists across borrower size, sector and vintage. This reinforces the importance of manager selection - reflected in capital increasingly flowing to experienced private credit managers. HPS, part of BlackRock, sees the most attractive opportunities in the following areas:

- **Private high-grade credit** is growing rapidly, with 2025 issuance set to exceed $150B,[11] surpassing 2024's record (Fig. 7). The market has broadened beyond unsecured corporate debt to include a wider range of industries and more asset-backed finance opportunities, which have proven particularly attractive to rating sensitive issuers (e.g. insurance companies). New entrants have increased competition somewhat and tightened pricing, but the asset class still offers excess spread over comparable public credit. Directly originated deals remain the most attractive, we believe, providing higher yields and tailored protections.

Figure 7: Volume in the syndicated private high-grade market has picked up in recent months

Global private placement supply, 2024 & 2025



Source: HPS analysis, Private Placement Monitor – Annual Issuance Volume, as of 30 September 2025.

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- **Junior capital solutions**, which are benefiting from three key tailwinds. Firstly, persistently higher interest rates have created opportunities for junior capital solutions to refinance debt and help optimise balance sheets of performing companies, by improving their cash coverage ratios through PIK flexibility and/or opco debt de-leveraging. Secondly, muted M&A and exits have increased investment hold periods; junior capital, such as preferred equity, can provide non-dilutive capital to support partial and full monetisations and growth initiatives. Thirdly, with global PE buyout dry powder reaching $1.1T in 2025,[12] and higher purchase multiples requiring larger equity investments, junior capital managers can help bridge financing gaps through highly structured solutions with strong downside protection.
- **European direct lending,** which remains supported by US tariff-related dislocation and bank disintermediation. Spreads tightened from 564bps to 529bps in 2025 but still offer a roughly 150bps premium over syndicated loans.[13] Given continued dispersion, the BlackRock European Core Middle Market team is highly selective, focusing on defensive subsectors, such as specialty pharmaceuticals, healthcare IT and regulatory or financial-services software, while avoiding more cyclical areas like cosmetics, travel, hospitality and generic IT services.
- **Growth debt,** financing high-growth companies, which is seeing rising institutional demand as investors seek higher yield and differentiated exposure beyond traditional direct lending. Amid heightened dispersion, the BlackRock Growth Debt team focuses on less cyclical growth sectors with strong unit economics, such as B2B software, cybersecurity, financial services and healthcare. In deep tech and AI, the team avoids early product development risk and targets more mature companies with proven models and revenue.
- **Infrastructure debt**, which can generate resilient income and align with long-dated liabilities. At c.$160B, the market remains under-scaled relative to the substantial financing demands driven by AI-enabled digital infrastructure, alongside energy, renewables and essential utilities such as water and waste.[14] Issuance is predominantly investment grade (IG), appealing to pension funds given its capital efficiency, stable spreads and partial inflation linkage. Select opportunities also exist in the smaller, less crowded HY segment, where disciplined underwriting of structural complexity and illiquidity can unlock enhanced pricing power and attractive entry points, while maintaining an infrastructure-led focus on asset quality, cash-flow visibility and downside protection.

Public markets: enhancing portfolio efficiency with hedge funds, HY credit and CLOs

Hedge funds

Investor interest in hedge funds has grown in recent years, with total global industry capital rising for a 13th consecutive quarter in Q4 2025 to reach a record $5.16T.[15] Q4 2025 saw the highest quarterly net asset inflows into hedge funds since Q3 2007.[16] This uptick in interest has been driven by:

- **Improved alpha opportunities –** after a decade of muted alpha amid low rates and high liquidity, elevated volatility and dispersion are now creating more opportunity for hedge funds to exploit inefficiencies. They've delivered robust and uncorrelated alpha since 2020, with more broad-based contributions across factors and asset selection in 2025.
- **Demand for diversification without sacrificing liquidity –** with bonds providing less reliable diversification and some investors constrained in taking on more illiquidity, demand has shifted to liquid sources of diversification. Through dynamic risk management and largely idiosyncratic exposures, hedge funds offer low correlation to other assets, with shallower and less frequent drawdowns than broad equities and fixed income over the past decade.

Macro strategies are especially well positioned today, we believe, given diverging macro fundamentals and cross-country dispersion. Their returns, however, tend to be highly dispersed due to their often fundamentally driven, high-conviction nature. **Blending complementary discretionary and systematic approaches within the same strategy** can therefore be attractive. The discretionary component may focus on a smaller number of high-conviction trades, while a systematic approach can bring breadth, continuity and a focus on relative-value opportunities. This combination can **preserve the alpha potential of high-conviction views while providing a systematic framework to dampen volatility**.

The case study below shows how a 10% allocation, funded from fixed income, can lower portfolio risk amid volatility and **improves the portfolio's position on the efficient frontier**. Private market investors may also allocate cash to such strategies for liquidity, enhanced return potential and lower correlation with public markets while awaiting capital calls.

Figure 8: A 10% allocation to a hedge fund blending discretionary and systematic approaches can help reduce risk…

Historical risk to date (%)

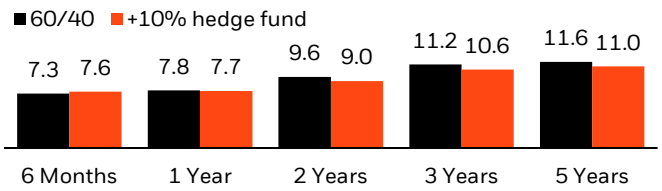
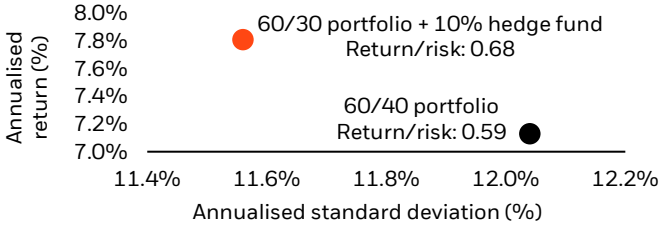


Figure 9: …and could shift the portfolio towards a more efficient frontier

Historical return and risk, September 2019 to August 2025



While proprietary technology platforms may help manage risk, risk cannot be eliminated. Risk management cannot fully eliminate the risk of investment loss. This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise – or even estimate – of future performance. Forecasts are not a reliable indicator of future performance. Source: Morningstar, as of August 2025 for historical performance, risk and correlation data, with quarterly rebalancing. Currency: USD. Global Fixed Income Proxy: BBG Global Aggregate Index USD, Global Equity Proxy: MSCI All Country World USD. Indices are unmanaged and one cannot invest directly in an index. Hedge Fund Proxy: illustrative macro hedge fund blending discretionary and systematic approaches. Time period: September 2019 to August 2025.

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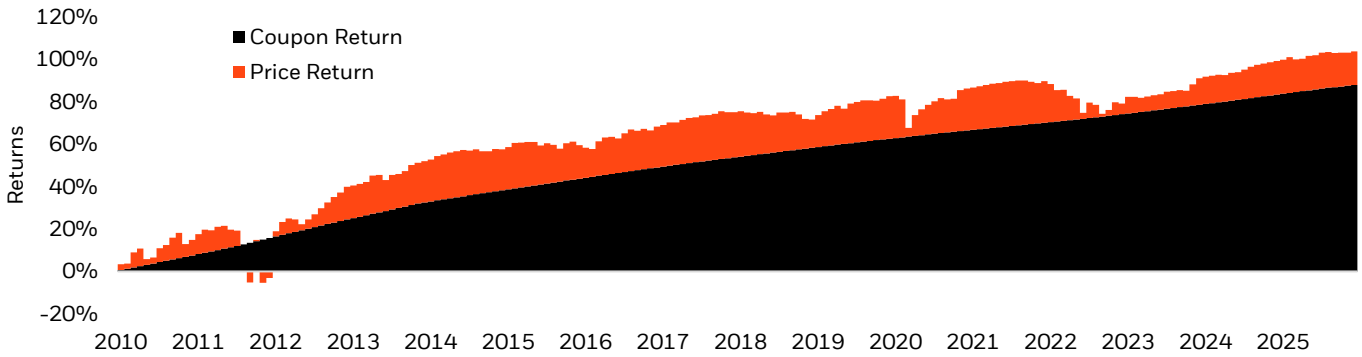
High yield credit

Many investors believe that high yield should only be considered when spreads are wide, providing an attractive entry point for higher potential returns. While timing can certainly enhance outcomes, we believe that **HY credit should be viewed as a core component of strategic asset allocation,** rather than merely a tactical allocation.

Historically, coupon income – rather than price appreciation – has driven the majority of HY returns (Fig. 10). With all-in yields of around 5%,[17] a strategic allocation to EUR HY allows investors to compound income over time and better absorb short-term price dislocations, even as spreads remain near historical tights (below 300bps).[18] Over a three-year horizon, European HY has generated positive returns more than 95% of the time, outperforming IG and emerging market debt (EMD) over similar periods.[19] An active approach in EUR HY can help navigate elevated macro volatility on a strategic horizon, while capitalising on growing dispersion across sectors and issuers.

The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results. See page 12 for historical performance figures.

Figure 10: Compounding income in HY credit helps build returns and cushion price volatility
Composition of returns, 2010-2025



The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results. Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index. Source: Barclays, data as of 31 December 2025. Returns are shown for the BBG Barclays Pan-European High Yield Index. See page 12 for historical performance figures.

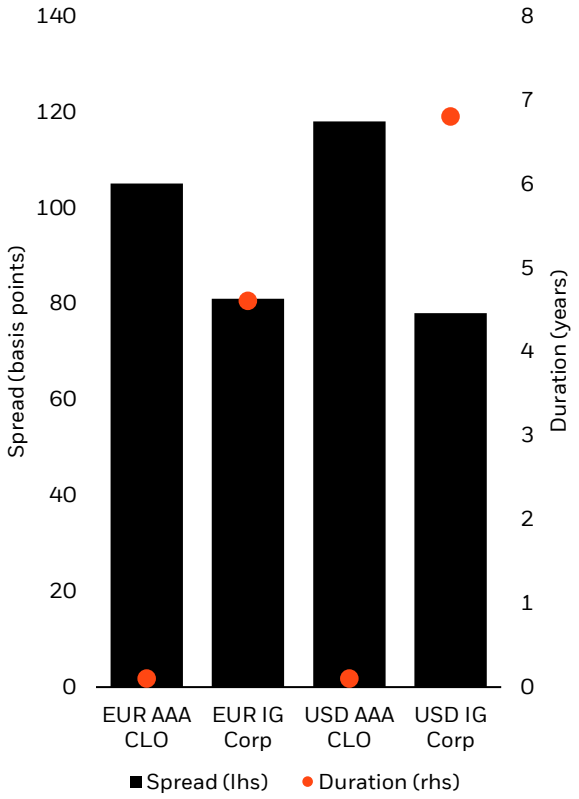
CLOs

Collateralised loan obligations (CLOs) are becoming an increasingly mainstream asset class – including in institutional portfolios – maturing to a $1.2T global market (versus $1.8T for HY bonds).[20] They can offer high-quality income and low duration risk (Fig. 11). In terms of specific CLO exposure, we prefer EUR AAA CLOs on a strategic horizon due to:

1. **Higher yield versus EUR IG** and with potentially lower risk. Although CLOs and collateralised debt obligations (CDOs) may sound similar, they differ significantly in several key aspects such as their underlying assets, the diversification of their loan pools, structural features designed to help protect investors, and the active management of the loan pools. Moreover, CLOs have a distinct history compared to CDOs, particularly in the context of the Global Financial Crisis, when CLOs experienced only minimal losses. Notably, no AAA-rated CLO has ever defaulted.
2. **Lower duration versus EUR IG,** paying a floating rate coupon that resets quarterly with risk-free rates. This provides protection against interest rate volatility.
3. **Low correlation with other asset classes,** with CLOs not being part of traditional indices such as the Global Aggregate Bond Index.

Institutional investors can buy CLOs directly, but doing so typically requires dedicated systems to analyse underlying loan pools, the ability to meet high minimum tranche sizes (€100k/$100k) and capacity to perform issuer-level risk-retention analysis under European regulations. These hurdles help explain **the rising popularity of CLO ETFs.** In 2025 alone, $15.8B was added globally to AAA CLO ETFs,[21] which offer easier access, real-time pricing, transparent holdings and secondary market liquidity.

Figure 11: CLO AAAs offer higher spreads and lower duration than IG corporates
Spread and duration of CLO versus IG Corp



Source: Barclays, J.P. Morgan CLOIE Index, as of 31 December 2025.

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3. Portfolio implementation enhancements

We now turn to ways to improve the efficiency of the implementation vehicles themselves – specifically: (1) allocating part of the portfolio core to systematic active strategies; (2) replacing futures with ETFs for US equity exposures; and (3) partially hedging USD exposure.

1. Allocating part of the portfolio core to systematic active strategies

Higher dispersion – driven by elevated capital costs, the AI buildout and geopolitical fragmentation – is likely to persist, creating more alpha opportunities. Since 2020, skilled active managers have already generated more alpha than in the prior decade.[22] **Low-cost, low-tracking-error systematic strategies can help to capture this opportunity,** delivering consistent, repeatable alpha. The long-term impact can be meaningful: just 1% annual alpha over MSCI World, compounded for 10 years, leads to 28% cumulative outperformance.[23]

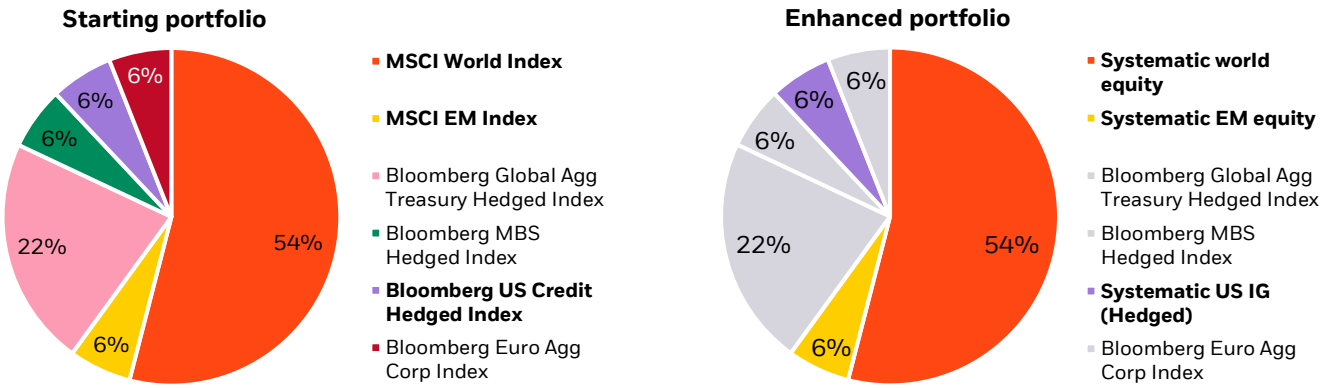
The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results. See page 12 for historical performance figures.

When assessing managers for these strategies, we believe investors should look for:

1. **Consistently high Information Ratios (IR)** across market cycles – for example, in both rising and falling markets, and in value- and growth-driven regimes.
2. **Effective management or neutralisation of macro risk,** which is particularly key in periods of high macro volatility.
3. **A proven ability to generate repeatable insights using traditional and alternative data, supported by AI.** These signals should be backed by rigorous scientific validation and show continual refinement, innovation and breadth.

The case study below shows how replacing core index exposures with systematic strategies meeting the above criteria can enhance risk-adjusted returns. In a 60/40 portfolio, substituting global equity, EM equity and US IG with illustrative systematic strategies results in **higher annualised returns, a similar risk profile, reduced macro risk** (with active risk driven mainly by equity-specific, rather than style factors), **a higher Sharpe ratio and improved maximum drawdown.**

Figure 12: Substituting certain index exposures with systematic strategies
Asset allocation of an illustrative portfolio



Source: BlackRock Aladdin, as of 28 February 2025. Currency: EUR.

Figure 13: Equity-specific risk dominates active risk
Risk contribution breakdown, %

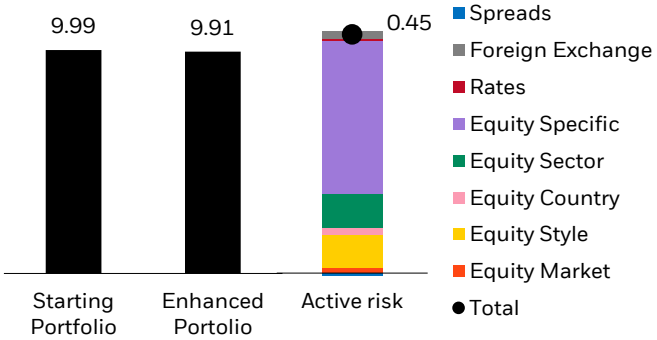


Figure 14: Systematic strategies can enhance portfolio outcomes
Risk-return metrics

Risk-return metrics	Starting Portfolio	Enhanced Portfolio
Annualised Return, %	7.33	**8.10**
Annualised StdDev, %	9.56	**9.64**
Sharpe Ratio	0.79	**0.86**
Max Drawdown Return, %	-13.83	**-13.36**

Source: BlackRock Aladdin, as of 28 February 2025. Currency: EUR.

The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy. Source: BlackRock, MPI, Morningstar. Time Period: 02/01/18 - 31/12/24. Figures for the all active ETFs returns are based on composites of illustrative systematic strategies. Data Frequency: month. Currency: EUR. Composite performance is gross of fee. Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index. This information demonstrates, in part, the firm's Risk/Return analysis. This material is provided for informational purposes only and is not intended to be investment advice or a recommendation to take any particular investment action.

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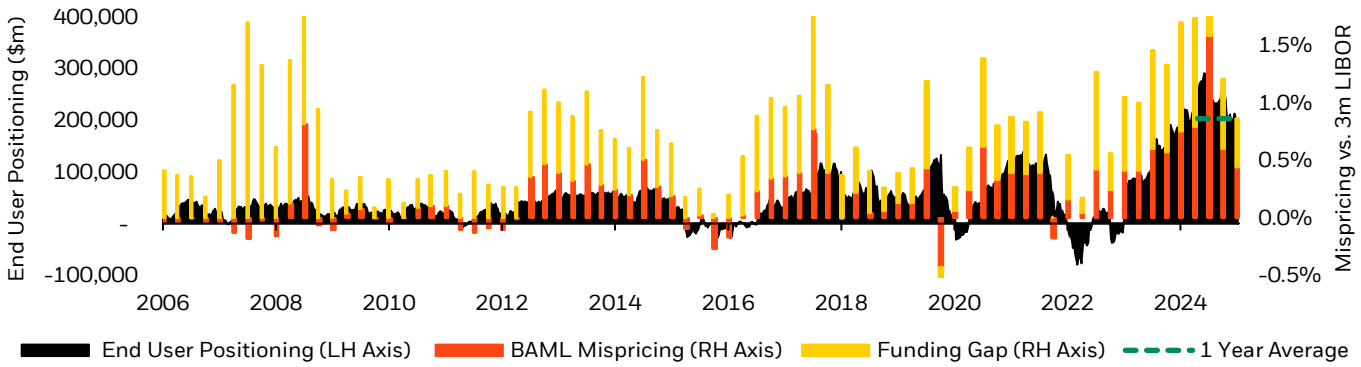
2. Replacing futures with ETFs for select exposures

Many institutional investors have historically used futures to access delta one exposures. However, we see a case for replacing fully funded futures with ETFs for certain exposures, such as the S&P 500. Here, managing a funded futures position requires **handling both the futures roll and the associated cash balance to offset the inherent leverage of the future –** introducing operational complexity and potential additional costs. Specifically:

1. **Roll pricing can deviate from fair value as expected dividends, funding rates, index levels and end-user positioning influence theoretical futures pricing.** During contract rolls, concentrated demand to extend exposure can cause futures to trade rich relative to fair value, increasing roll costs; conversely, when futures trade cheap, long rollers benefit. For example, S&P 500 e-mini futures have consistently rolled above fair value – most notably by about +90bps annualised in Q4 2025 – driven partly by seasonal factors and strong demand for levered US equity exposure (Fig. 15).[24] As a result, maintaining S&P 500 exposure via futures carries meaningful roll costs, estimated at roughly 90bps for Q4 2025.[25] We expect these elevated costs to persist, absent a major shift in investor demand or positioning in US equities.
2. **Cash collateral can underperform without extending duration or credit risk,** as the rate received on leverage off-setting cash may be lower than the implied rate in the futures price.

While certain exposures consistently roll cheap and therefore favour futures**, in markets such as the US and Europe** – where ETF efficiency has improved significantly, with single-digit-basis-point swap ETF pricing in the US and tight benchmark tracking for MSCI Europe ETFs – **ETFs may now be the more effective vehicle for implementing fully-funded, delta-one index exposure.**

Figure 15: S&P 500 e-mini futures have consistently rolled above fair value
Historical end user positioning and mispricing of S&P 500 futures



Source: CFTC Commitment of Traders Report & BlackRock, as of 30 September 2025. Figures shown are in USD.

3. Partially USD-hedging portfolios

Over the past 5-7 years, USD exposure has largely been a natural hedge for investors in US equities: unhedged exposure showed lower risk than fully hedged positions, particularly when evaluated over a multi-year horizon (Fig. 16). One-year tactical risk views have historically told a similar story. However, they now suggest that **leaving US equity exposure unhedged *increases* risk**, reflecting recent USD volatility and its less reliable behaviour during risk-off periods (Fig. 17).

We expect the USD to weaken further, driven by Uncovered Interest Rate Parity and rising term premia – both historically associated with a softer dollar. However, we don't expect the USD to lose its safe-haven status in our starting point scenario outlined in section 1. Therefore, **partial USD hedging** – around 60-65% for bond-heavy portfolios and c.30% for equity-heavy portfolios – can help **protect against further USD downside while preserving the benefits of its safe-haven characteristics amid significant risk-off events.**

Figure 16: Fully hedging USD exposure historically resulted in higher overall risk
Total risk delta: unhedged vs. EUR hedged S&P 500

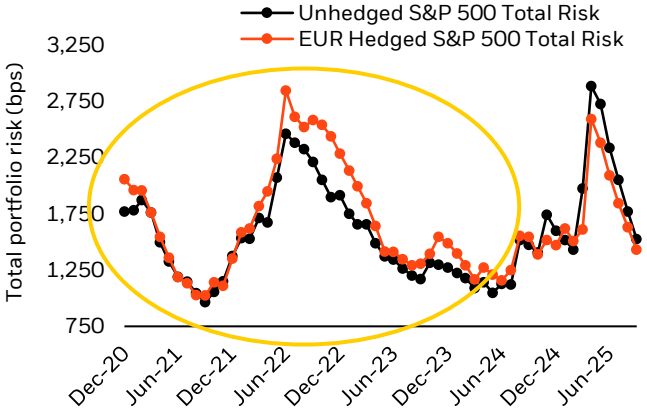
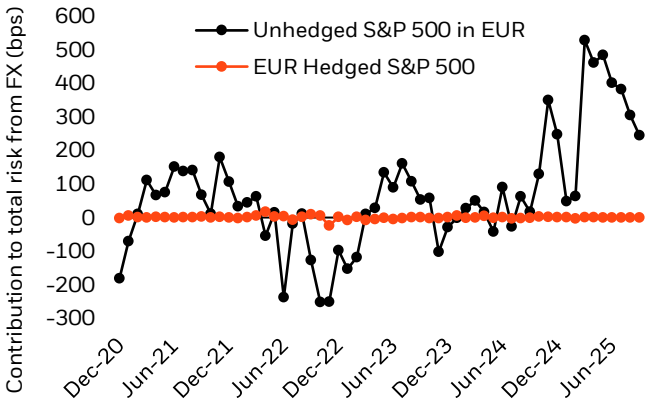


Figure 17: An unhedged US exposure now results in positive FX contribution to portfolio risk
FX contribution to total risk



Source: BlackRock, Aladdin, as of 30 September 2025. Currency EUR.

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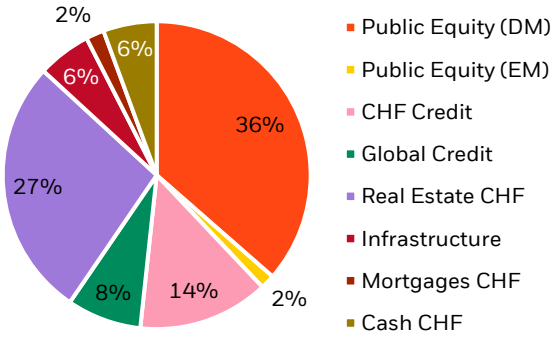
Pension case study: enhancing yield with private debt

Institutional allocations to private debt continue to rise: a sample of public pension plans shows weighted average allocations increasing from 2.9% of AUM in 2020 to roughly 4% in 2024,[26] with some large plans targeting even higher levels.

This reflects strong institutional demand to enhance yields after recent central bank rate cuts. Looking ahead, Preqin forecasts that private credit AUM will double by the end of 2030, with the potential for even further upside through wider investor access and ongoing bank disintermediation.

The case study below illustrates how **allocating to private debt – specifically, middle-market direct lending and IG infrastructure debt – can enhance returns and improve the efficiency** of an illustrative Swiss pension portfolio (Fig. 18). The portfolio is heavily exposed to CHF fixed income, where yields have historically been low, presenting challenges to meet annual targets for plan members – but the conclusions hold for other regions where rates have decreased.

Figure 18: An illustrative pension portfolio
Asset allocation



Source: BlackRock, September 2025.

We modelled three allocation sizes within the fixed income sleeve to direct lending and infrastructure debt (10%, 20%, 30%), funded proportionally from CHF bonds and international IG fixed income. This is shown as 'private debt' in the charts below – for example, '10% private debt' consists of allocating 5% of the fixed income sleeve to direct lending and 5% to infrastructure debt.

Highlights from our analysis

- **The stronger return potential of private debt:** expected annualised returns for CHF-hedged infrastructure IG debt (2%) and direct lending (7%) significantly exceed those of CHF credit (1%), based on BII's 10-year CMAs.[27]
- **An improved risk-return profile within the fixed income sleeve:** increasing allocations to these exposures raises expected returns with only a modest uptick in risk (Fig. 19). For instance, a 30% allocation to private debt lifts the fixed income sleeve's expected return from 1% to 2%, while risk rises from 4.0% to just 4.6%, improving the return-risk ratio from 0.28 to 0.47.
- **Enhanced overall portfolio efficiency:** at the whole portfolio level, the allocation in the example above increases expected returns from 4.5% to 4.7%, with risk rising from 8.8% to 9.0% (Fig. 20). The return-risk ratio improves from 0.51 to 0.52, underscoring private credit's ability to strengthen long-term portfolio efficiency.

Figure 19: Allocating to private debt can improve the risk-return profile of the fixed income sleeve…
Expected risk and return (10%, 20% & 30% allocations)

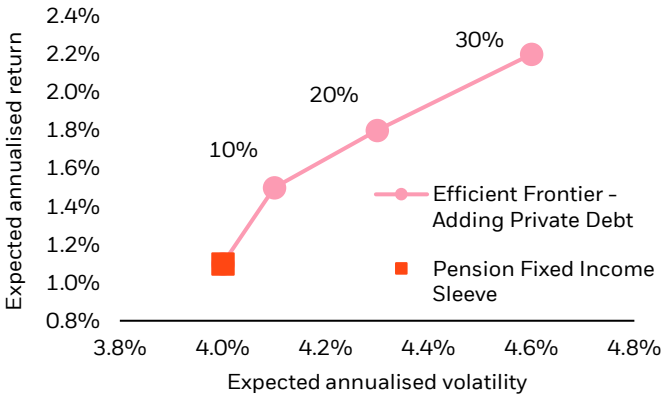
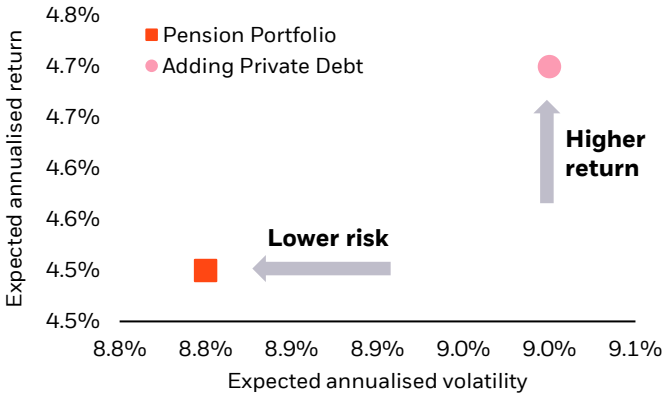


Figure 20: …and strengthen long-term portfolio efficiency
Expected risk and return (30% of fixed income sleeve)



	Impact on the fixed income sleeve				Impact on the whole portfolio	
	Original	10% Private Debt	20% Private Debt	30% Private Debt	Original	Adding Private Debt (30% of fixed income sleeve)
Geometric return	1.1%	1.5%	1.8%	2.2%	4.5%	4.7%
Path volatility	4.0%	4.1%	4.3%	4.6%	8.8%	9.0%
Return/Risk	**0.28**	**0.36**	**0.42**	**0.47**	**0.51**	**0.52**

This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise – or even estimate – of future performance. Forecasts are not a reliable indicator of future performance.
Source: BlackRock, as of 10 February 2026; CMA data as of 31 December 2025; currency: CHF; time period: 10 years. Return assumptions are total nominal returns. Asset return expectations are net of assumed fees. Fees and alpha are estimates for illustrative purposes only and do not represent any actual fund performance. Indices are unmanaged and one cannot invest directly in an index. These portfolios represent a sample of just some of the various possible solutions on the efficiency frontier. BlackRock has not considered the specific needs of the client and is not making any recommendation of any particular option. You should consider the most appropriate allocation for your needs.

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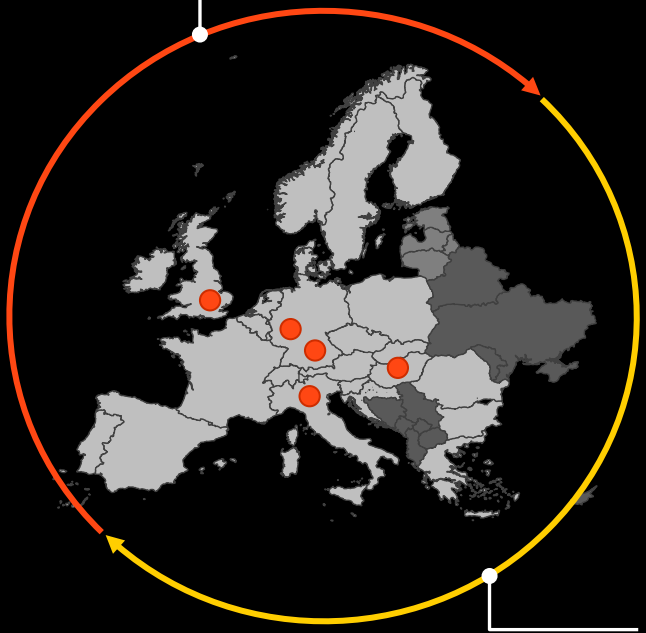

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Across **35** countries

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A global platform offering unparalleled access and insights into portfolio construction and market access.

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Designing liquidity solutions using ETFs & cash instruments

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Maximising portfolio yields and income through tactical and strategic asset allocation

Net-zero transition
Using transition analytics to help achieve portfolio decarbonisation

Simplify portfolios
Consolidating portfolio to achieve the targeted risk profile

Peer comparison
Peer insights across the institutional investment landscape

Contact your BlackRock representative to find out more, or to request a portfolio consultation.

Source: BlackRock, February 2026.

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Appendix

Notes

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1 Source: BlackRock Investment Institute, "Investment perspectives: The infrastructure opportunity in portfolios, January 2026".
2 Source: BlackRock Investment Institute, with data from Preqin, November 2025.
3 Source: Preqin, January 2025.
4 Source: 'Real Estate Q3 2025: Preqin Quarterly Update', 2025.
5, 6 Source: 'Private Equity Q3 2025: Preqin Quarterly Update', 2025.
7 Source: Preqin, as of July 2025. Buyout, venture, growth, and secondaries. Estimates are provided for illustrative purposes only.
8, 9 Source: 'BlackRock Private Markets Outlook 2026 - A New Continuum', 2025.
10, 26 Source: 'Private Credit Q3 2025: Preqin Quarterly Update', 2025.
11 Source: HPS analysis, Private Placement Monitor – Annual Issuance Volume from January 1, 2009 through September 30, 2025.
12 Source: Preqin Global Dry Powder for All Buyout, as of 31 December 2025.
13 Source: AFME Q3 2025 European High Yield, Leveraged Loan, and Private Credit Report, October 2025.
14 Source: BlackRock Investment Institute, with data from Preqin, November 2025.
15, 16 Source: 2025.Q4 HFR Global HF Industry Report (source data)
17, 18 Source: Barclays, as of 31 December 2025, based on BBG Barclays Pan Euro High Yield index.
19 Source: BlackRock, ICE BofAML as of 31 December 2025. European High Yield = ICE BAML Euro High Yield Constrained Index (HEC0), European Investment Grade = ICE BAML Euro Corporate Index (ER00), Emerging Market Debt = ICE BAML Emerging Market Corporate Plus Index (EMCB) 100% hedged.
20 Source: 'Demystifying Collateralised Loan Obligations (CLOs)', BlackRock, March 2025.
21 Source: BlackRock Global Business Intelligence and EPFR, as of 31 December 2025.
22 Source: '2025 Midyear Global Outlook', BlackRock Investment Institute, July 2025.
23 Source: BlackRock, as of 31 September 2025.
24 Source: BlackRock and BAML, December 2025.
25 Source: BlackRock and BAML, December 2025.
27 Source: BlackRock, as of 10 February 2026; CMA data as of 31 December 2025; currency: CHF; time period: 10 years. Return assumptions are total nominal returns. Asset return expectations are net of assumed fees. Fees and alpha are estimates for illustrative purposes only and do not represent any actual fund performance. Indices are unmanaged and one cannot invest directly in an index. These portfolios represent a sample of just some of the various possible solutions on the efficiency frontier. BlackRock has not considered the specific needs of the client and is not making any recommendation of any particular option. You should consider the most appropriate allocation for your needs.

Historical performance figures

	2021	2022	2023	2024	2025
EUR HY (ICE BAML Euro High Yield Constrained Index (HEC0))	3.35	-11.48	12.01	8.61	5.15
EUR IG (ICE BAML Euro Corporate Index (ER00))	-1.02	-13.94	8.02	4.66	3.03
EMD (ICE BAML Emerging Market Corporate Plus Index (EMCB) 100% hedged)	-2.21	-16.45	5.32	4.86	6.42

The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results. Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index. Source: ICE BofAML, as of 31 December, 2025.

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CMA Methodology

Interest Rates: Our model provides a way to chart the yield curve at multiple time horizons in the future. We base this on our estimates of: (1) the short rate and (2) model implied term premia. We base our estimates of short rates on market data in the near term and on macro-informed data in the long term. We assume investors' views about long run inflation and real growth, coupled with changing preferences as to savings and risk aversion, will ultimately determine their expectations for short rates (the "long run short rate"). We use an affine term structure model -a type of model that assumes bond yields as a linear function of a small set of parameters (Piazzesi, 2010) –to compute model-implied term premia. In our implementation, we represent the yield curve using the first five principal components of yield, as laid out by Adrian et al. (2013). We then blend the model implied term premia from the affine term structure model with market implied term premia, with the relative weights dependent on the relevant time horizon.

Equities: Expectations of cash flows and discount rates can help explain the variability in equity returns as shown by Campbell (1990). We have used this insight to develop a discounted cash flow (DCF) model, with a few key innovative features. Most academic research focuses on the question of whether stock returns are predictable at all. We are concerned with making the best estimates that we can. We make two additional contributions. First, the baseline DCF model estimates earnings by leveraging analyst earnings estimates in the near term as discussed by Li et al (2013) to derive the implied cost of capital. The common assumption in implied cost of capital (ICC) studies is that earnings growth implied by analyst earnings estimates in the near term should trend towards GDP growth in the long term. This can introduce an unintended assumption of continued expansion of profit margins. We have introduced a modification to account for late economic cycle dynamics. We allow for corporate profit margins to revert to trend (the median over a rolling 10-year history) as margins typically peak late-cycle. The standard ICC approach typically tests for equity returns using linear regression tests. For our DCF model, we take the desired time horizon as an input (number of years) and we estimate the appropriate discount rate for the specific time horizon using our aggregate implied cost of capital. This way, we account for both key sources of variability in equity returns, namely changes in cash flows and changes in the discount rate.

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Credit: Our model for credit asset (excess) returns is anchored on two key elements: 1) our estimate of credit spread at a given horizon and 2) our estimated loss due to defaults and downgrades over the horizon. The first component is projected in a consistent manner with our view of real GDP growth and the link between credit spreads and equity volatility. Our approach helps explain the behaviour of credit spreads using a limited number of predictive variables. Yet, as validated by tests against more complex methods, it retains the ability to help explain a high proportion of the variance in credit spreads. The second component is estimated based on our outlook for spreads, the duration of the asset and an assumed transition matrix which captures migrations and defaults across multiple credit cycles. We currently base our transition matrix on Moody's long-run transition data. We aim to further develop our model by directly modelling transitions based on macroeconomic conditions in order to better capture cycle dynamics and the respective variation in losses due to credit events. In addition to making our estimates of credit spreads consistent with our macroeconomic views, our new credit (excess) return model allows greater flexibility of calibrating our expected returns to different credit rating compositions which may prevail over the entire time horizon.

Uncertainty and optimisation: Expected returns and asset price volatility are difficult to predict. We believe any technique that builds portfolios should incorporate this inherent uncertainty (Ceria et al. 2006). We consider both long- and short-term drivers of return. In the long run, we expect a relatively small number of macroeconomic drivers — economic growth, rates, inflation, credit and currencies —to determine an asset's returns. In the short-run, other factors can overpower the structural drivers causing wider fluctuations from an asset's fair value. Valuations can be helpful in estimating short-term returns. We combine contributions from the long-and short-term return drivers to produce a final set of return expectations with a range of uncertainty around each.

The next step is to use this set of return expectations in an optimisation engine that seeks out the best return without breaching an investors' risk limit. Mean variance optimisation would produce a portfolio that maximises expected return under one base scenario with a given level of risk. In contrast, we look to build a "least-worst" portfolio –one that maximises returns for an investors' target risk levels across the worst outcomes, say for the bottom 50% of the distribution, from a set of stochastically generated scenarios (cf. Tütüncü et al. 2004 and Garlappi et al. 2006). This helps ensure the portfolio is not overly reliant on just the median return. This process seeks to produce a portfolio that is robust to small changes in the central return estimates (Scherer, 2006).

Stochastic engine: We use Monte Carlo simulation to create random distributions informed by historical return distributions and centred on our expected returns. The engine simulates thousands of return pathways for each asset, representing the range of possible outcomes over a five-to 20-year time horizon. We leverage BlackRock's risk models to help ensure that assets generate similar returns, to the extent that they have common drivers . The range of scenarios incorporate our work on incorporating uncertainty in return expectations. We use an extension of the Black-Litterman model (1990) –a well-known model for portfolio allocation that combines equilibrium returns and medium-term views in a single-period setting. Our model uses a Kalman filter (1960) –an algorithm that extracts insights about return paths by bringing together a number of uncertain inputs -to extend Black-Litterman into a multi-period setting. This allows us to capture the variation of expected returns over time under various scenarios —from economy-related to market sentiment driven. A large part of these variations is not predictable. Constructing portfolios that are robust to, or can exploit, these variations is a major challenge for investors. The ability to calibrate the engine with asset class views with uncertainty at arbitrary time horizons, and to evolve this uncertainty stochastically, drives the dispersion of return outcomes. Highlighting the uncertainty that investors face when building portfolios helps ensure ostensibly precise return expectations do not lead investors to concentrated portfolios.

Simulated return paths support a broader range of applications, such as asset-liability modelling. We believe stochastically generated return scenarios enable investors to move with ease beyond mean-variance and optimise portfolios against their individual needs. Investors can place more emphasis on the tails of the distribution or focus on the path of returns rather than just the total return. They can incorporate flows in or out of the portfolio over the course of the investor's time horizon or place more emphasis on scenarios that are challenging for the investor's business beyond their portfolio. Investors with complex asset-liability matching requirements, such as insurers, typically rely on stochastic simulations of returns to assess and construct portfolios.

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