



Christopher Hamilton
Head of Client Solutions,
Asia Pacific

Macro backdrop

As we continue the discussion on private markets for Asian investors, for this analysis we focus specifically on real return investments. Although we discussed real return investments in an earlier piece, this series is geared toward Asian investors with specific local currency return considerations. We continue to analyze the global interest rate regime and consider how this adds an additional layer of complexity to Asian investor portfolios.

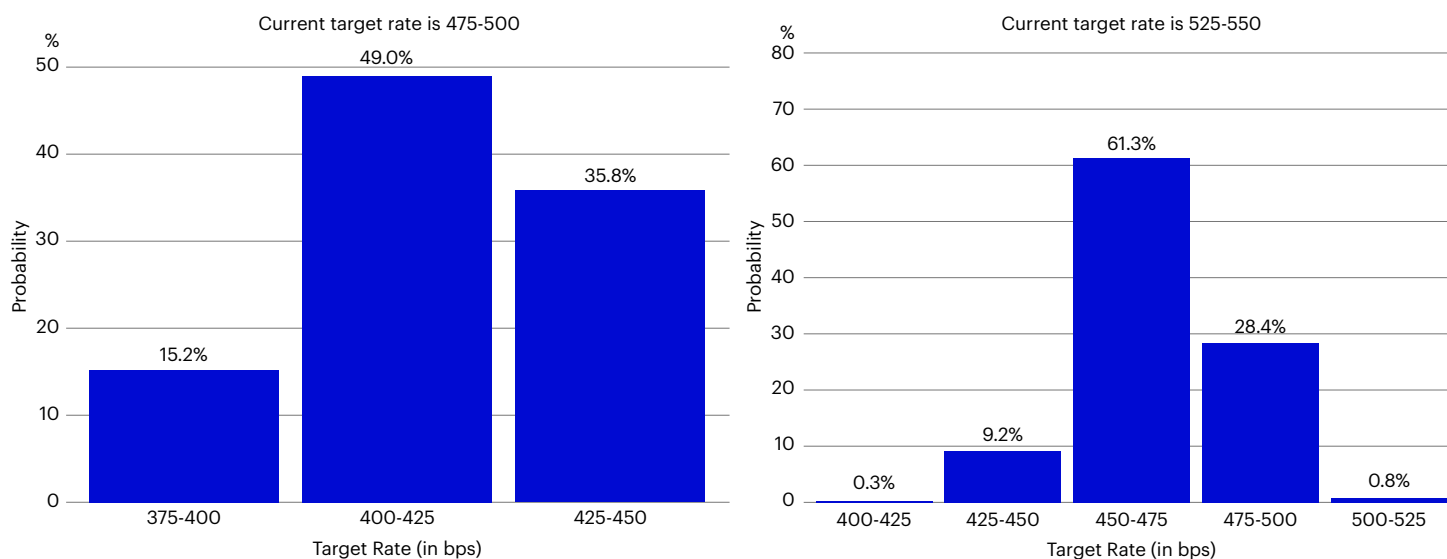
Looking ahead, structural concerns exist around inflation given the uncertainty in global supply chains exposed during the Covid-19 pandemic as well as global decarbonization initiatives potentially causing a decrease in the production of traditional brownfield energy sources. These factors are driving upside inflation risk and causing investors to integrate strategic exposure to real return assets.

Ultimately, we expect that investors will need to deploy a wider investment opportunity set to meet these challenges, which will involve greater usage of private markets investments. However, as with any new investment, careful analysis is needed not only to select new ideas but also to implement this exposure. As we discovered in August, short-term volatility spikes can pop up in markets unexpectedly. Albeit in retrospect this volatility was mostly driven by the unwinding of the yen carry trade, as opposed to more dire economic conditions, which led to a reversal in market sentiment as of the time of writing, with the S&P 500 closing at its all-time high on 19 September.

Another large-scale shift that occurred since our July piece was the 50 basis point rate cut by the Federal Reserve (Fed) on September 18. This was first time the Fed cut rates in almost four years and the rate is now at 4.75%-5.5%. The larger than expected cut has likely been driven by US economic deceleration which has pulled the global macroeconomy into a contractionary risk-off phase.

Markets continue to maintain dovish expectations with analysts pricing in a 70% probability of a 25 basis point cut in the upcoming November meeting and a 30% probability of a 50 basis point cut. Looking out to the December meeting, analysts are predicting an 85% probability of 50-75 basis points of total cuts from the current level (Figure 1).

Figure 1 – Target rate probabilities for Federal Reserve meeting on 18 December 2024 (comparing current expectations versus those from July end)



Source: CME Group, data as of 19 September 2024.

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Private markets for Asian investors: Real return

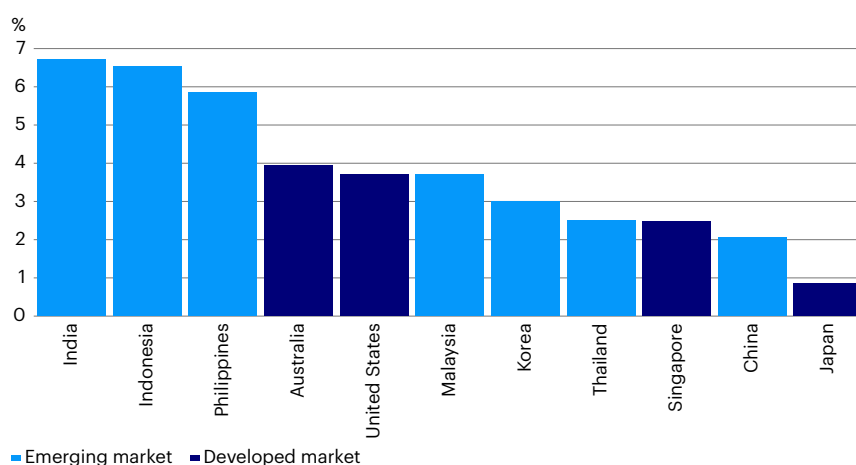
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Central banks in some Asian markets have already cut rates on the back of the Fed decision, namely Hong Kong and Indonesia, while others remain unclear as their economies aim to balance inflation and financial stability. It is important to note that the U.S. Dollar Index (DXY), is down year-to-date (-0.7%) given the onset of the Fed easing cycle and unwinding of levered USD positions.¹

Integrating private markets

Since August, we've seen a downward shift in rates globally, in-line with the previously mentioned selloff in DXY, as Asia fixed income has had strong performance driving down yields (Figure 2). However, there is still a significant rate premium when comparing the US to many other Asian currencies. Thus, Asian investors need to consider a wider opportunity set and look at adding private markets to meet desired investment outcomes.

Figure 2 – Asia Pacific and US 10-year bond yields



Source: Bloomberg, data as of 19 September 2024.

Past performance does not guarantee future results.

In earlier blogs we looked at the integration of growth and income private markets. This piece will cover real return assets, specifically real estate and infrastructure. What is unique about real return assets is that they span the equity and debt spectrum, allowing for a "multi-asset"-type approach, so that investors can target specific outcomes for return, risk, and income. Additionally, these assets have a level of inflation sensitivity, protecting the real returns of portfolios in the event of upside inflation moves, which as discussed as the outset are likely to be elevated given the structural environment going forward.

Adding diversified real assets to a hypothetical portfolio

To illustrate the benefits of private real return investments on local currency returns, we consider the addition of diversified real assets to a public equity and fixed income portfolio and observe the potential trade-offs. For this exercise, we'll assume the investor has a base currency of Malaysian Ringgit (in our previous analyses we chose Korean won, Thai baht, and Singapore dollar but as discussed we'll explore multiple currencies in this series to demonstrate the efficacy of this analysis across geographies. It goes without saying that the author's love for Nasi Lemak continues to influence the currency choices for this analysis).

Let's consider a baseline global portfolio with the following allocation:

| Public portfolio | Proxy | Sample allocation (%) |
|------------------|---------------------------------------|-----------------------|
| Global equity | MSCI ACWI | 40 |
| Malaysia equity | MSCI Malaysia | 20 |
| Global bonds | Bloomberg Global Aggregate MYR-hedged | 30 |
| Malaysia bonds | BAML Malaysia Government Bond Index | 10 |

1. Data as of 19 September, 2024.

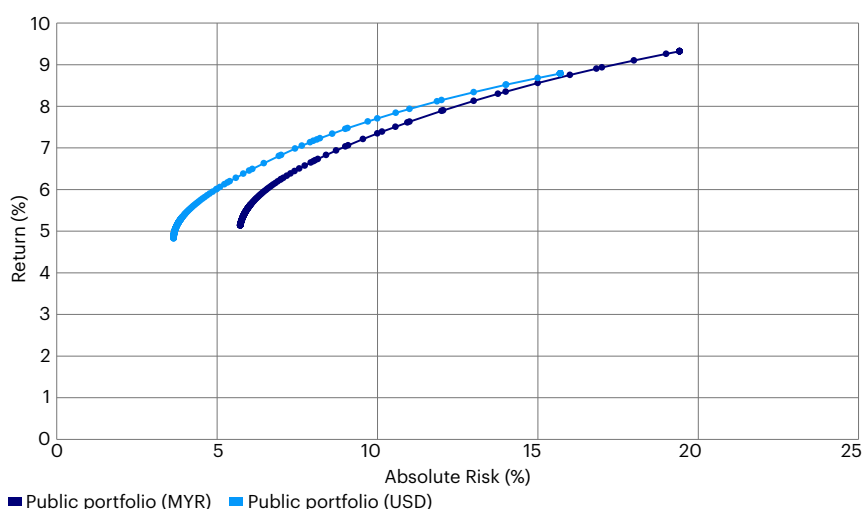
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We analyze this allocation through the Invesco Vision tool, which can help us formulate an efficient frontier analysis. We include Malaysian equities and fixed income to reflect the common practice by local investors to overweight their position in local markets relative to their global exposure, typically measured by market cap. This principle can also be applied across other Asian countries.

For comparison's sake, we contrast USD and MYR-denominated frontiers to demonstrate the impact of long-term currency shifts (assuming interest rate parity) and the associated local return reduction. Since the exercise is focused on real return assets, we'll home in on the expected returns of each portfolio, using our long-term capital market assumptions as a baseline and construct an efficient frontier accordingly.

Figure 3 – Efficient frontier of a USD portfolio versus MYR portfolio



Source: Invesco Vision, data as of 19 September 2024. Return estimates are based on the 2024 Long-Term Capital Market Assumptions. These estimates are forward-looking, are not guarantees, and they involve risks, uncertainties, and assumptions. Note: Proxies are as follows: Global Equity – MSCI ACWI, Malaysia Equity – MSCI Malaysia, Global Bonds – Bloomberg Global Aggregate MYR-hedged, Malaysia Bonds – BAML Malaysia Government Bond Index.

When we look at the portfolio return and risk assumptions leveraging Invesco Solutions long-term capital market assumptions, we see a noticeable return reduction when converting from USD to MYR, like we've seen in prior exercises.

| | Public portfolio (USD) (%) | Public portfolio (MYR) (%) |
|-----------------|----------------------------|----------------------------|
| Expected return | 6.8 | 6.0 |
| Expected risk | 10.6 | 8.1 |

For illustrative purposes only. There can be no assurance that any estimated returns or projections can be realized.

In this case, the difference in return when looking at a USD portfolio is roughly 80 basis points, with a reduction in expected risk of over 200 basis points. We can assume that if local investors are open to taking risk commensurate with or slightly higher than what would be expected from a USD-lens, there is significant scope for them to expand their opportunity set through the implementation of private real return assets.

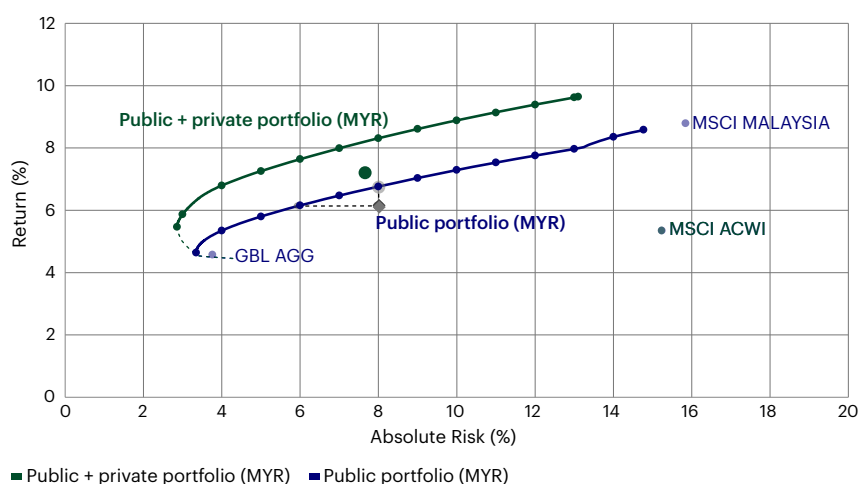
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In this example, for simplicity's sake, we target an allocation with similar risk in MYR-terms when integrating private real return assets.

| Public + private portfolio | Sample allocation (%) |
|-----------------------------|-----------------------|
| Global equity | 30 |
| Malaysia equity | 20 |
| Global bonds | 20 |
| Malaysia bonds | 10 |
| Private markets real return | 20 |

Figure 4 - Efficient frontier with private markets (MYR)



Source: Invesco Vision, data as of 19 September 2024. Return estimates are based on the 2024 Long-Term Capital Market Assumptions. These estimates are forward-looking, are not guarantees, and they involve risks, uncertainties, and assumptions. Note: Proxies are as follows: Global Equity – MSCI ACWI, Malaysia Equity – MSCI Malaysia, Global Bonds – Bloomberg Global Aggregate MYR-hedged, Malaysia Bonds – BAML Malaysia Government Bond Index.

Implementing a 20% allocation to private markets real return assets generates the following output:

| | Public portfolio (MYR) (%) | Public + private portfolio (MYR) (%) |
|-----------------|----------------------------|--------------------------------------|
| Expected return | 6.0 | 7.3 |
| Expected risk | 8.1 | 7.7 |

For illustrative purposes only. There can be no assurance that any estimated returns or projections can be realized.

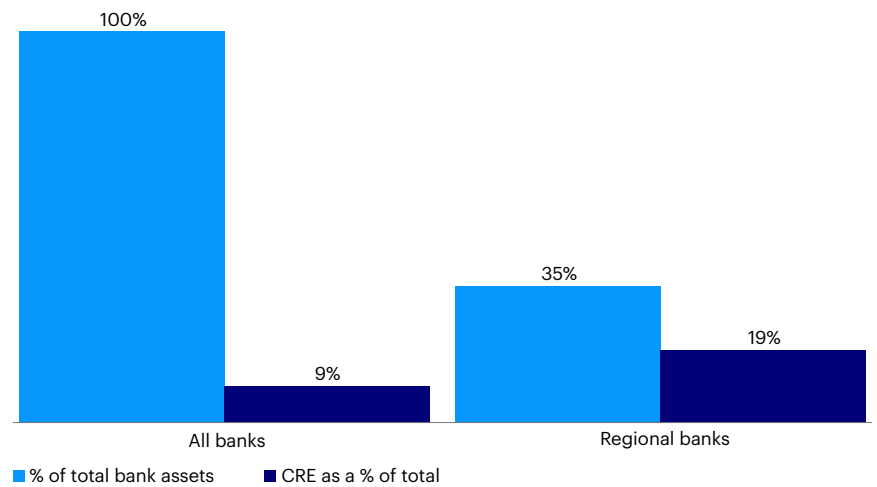
In this scenario, adding private real return investments drives the expansion of the efficient frontier and increases expected returns by over 100 basis points (whilst maintaining the same allocation to local equities and fixed income and ensuring there is adequate portfolio liquidity). We believe this is an attractive return-risk tradeoff and given the structural opportunities in this space.

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When looking at real return investments, it is integral to consider diversification across debt and equity exposure, as well as across the risk spectrum within asset classes such as core, value-add, and opportunistic within real estate equity and first lien and mezzanine structures within real estate debt. It is also worth analyzing the structural opportunity that exists due to reduced lending capacity from traditional banks. Regional banks have historically been a large capital base for real estate financing providing up to 19% of lending capital (Figure 5). With banks facing increasing regulatory pressure, we believe more high-quality real estate projects will need to be financed by private capital. We anticipate this will lead to long-term tailwinds for real estate debt strategies.

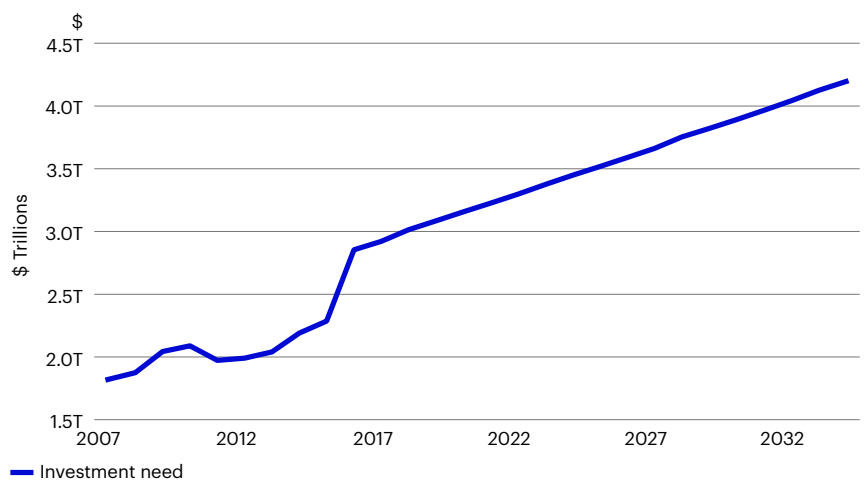
Figure 5 – Regional banks as a percentage of CRE loans



Source: Invesco Solutions; Gilberto-Levy, FDIC, Bloomberg L.P., as of June 30, 2023.
Note: CRE refers to commercial real estate.

Infrastructure can also serve as strong source of macroeconomic tailwinds, as nearly \$4T of infrastructure will need to be made available globally over the next 10 years (Figure 6). This confluence of factors across these key asset classes creates long-term opportunities for strategic investors, particularly Asian-domiciled investors with a focus on local currency returns.

Figure 6 – Investment need in infrastructure



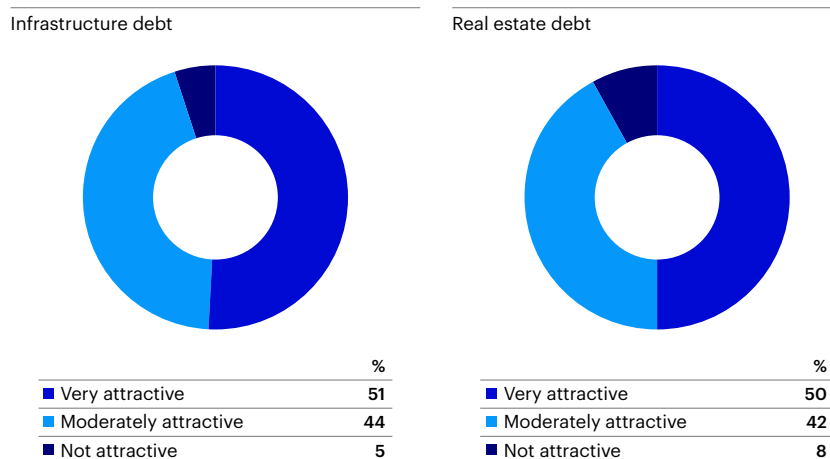
Source: Global Infrastructure Hub, as of 31 October 2023.

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In addition, our latest Global Sovereign Asset Management Study (IGSAMS)² indicates that sovereign wealth funds have a keen interest in both real estate and infrastructure debt. Over 90% of sovereign wealth funds surveyed found these asset classes attractive (the highest proportion out of the private credit sectors covered).

Figure 7 – Attractiveness of private credit sectors (% citations, SWFs only)



Source: Invesco Global Sovereign Asset Management Study 2024. Note - Question: How attractive are the following private credit sectors? ; Private credit sectors covered: Infrastructure debt, Real estate debt, Corporate direct lending, Distressed debt & special situations, Structured credit, Asset-based lending, Venture debt; Sample size: 37.

Going forward, we believe investors will face myriad challenges due to the changing interest rate environment, potentially decelerating macroeconomic headwinds, and a downward shift in growth expectations. Additionally, long-term concerns about inflation risks remain, leading investors to take a more expansive approach to asset class selection and build portfolios beyond traditional equity and fixed income allocations. Private markets real return assets can fill an important gap in this space, also capitalizing on structural trends and the increased need for private capital.

In sum, we believe Asian investors, many of whom have specific local currency return objectives, are well positioned to implement real return assets into their public portfolio allocations. The current US interest rate regime, which has lasted longer than anticipated, has impaired local currency expected returns. This warrants the consideration of additional approaches to portfolio construction and new asset classes, including real estate and infrastructure investments.

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Appendix **Invesco Multi-Alternative Real Return Proxy Benchmark Sub-Components**

| Asset | Weight(%) |
|--|------------------|
| Invesco Private Credit Real Estate Debt Proxy | 20 |
| Invesco Private Real Estate Equity Core Proxy | 15 |
| Invesco Private Real Estate Equity Value Add Proxy | 15 |
| Invesco Private Real Estate Equity Opportunistic Proxy | 10 |
| Invesco Private Infrastructure Equity Proxy | 20 |
| Invesco Private Infrastructure Debt Proxy | 20 |

All data pulled from Invesco Vision as of 19 September 2024. For illustrative purposes only. There can be no assurance that any estimated returns or projections can be realized.

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Investment risks

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

Invesco Investment Solutions develops CMAs that provide long-term estimates for the behavior of major asset classes globally. The team is dedicated to designing outcome-oriented, multi-asset portfolios that meet the specific goals of investors. The assumptions, which are based on 5- and 10-year investment time horizons, are intended to guide these strategic asset class allocations. For each selected asset class, we develop assumptions for estimated return, estimated standard deviation of return (volatility), and estimated correlation with other asset classes. This information is not intended as a recommendation to invest in a specific asset class or strategy, or as a promise of future performance. Estimated returns are subject to uncertainty and errors and can be conditional on economic scenarios. In the event a particular scenario comes to pass, actual returns could be significantly higher or lower than these estimates.

Across a variety of alternative investment strategies, our objective is to capture the expected behavior of each strategy as represented by a broad proxy rather than a particular manager or fund. Granular data within private markets is difficult, and often impossible, to find. As such, we use objective, observable data from public proxies wherever possible as an input into our process; where data is not available, our alternatives specialists set forward-looking assumptions informed by their own experience.

Return assumptions vary by category. For Private equity, we use a building-block approach for US leveraged buyouts that captures earnings growth, valuation multiple expansion/contraction, fund leverage (and cost of financing), and fees to derive expected net returns. For other equity strategies such as venture capital, we compare historical returns to buyouts and then apply that difference to our forward-looking estimate for buyout returns on the assumption that return differences in the future will be consistent with the past.

Real Assets. For select real assets, namely Core US Real Estate and Core US Infrastructure, we utilize a building-block approach capturing rental income, maintenance CapEx, expected real income growth, expected inflation, expected valuation changes, leverage (and cost of financing), and fees to derive expected net returns. For other real assets, we utilize historical returns from NCREIF and Burgiss. Forward-looking statements are not a guarantee of future results. They involve risks, uncertainties, and assumptions. There can be no assurance that actual results will not differ materially from expectations.

Private Credit. For most private credit proxies, we start with gross yields on underlying debt holdings and adjust for expected losses (based on historical averages), fund leverage (and cost of financing), and fees to derive expected net returns.

For a few private credit proxies, such as distressed debt, we utilize historical relationships to derive forward-looking assumptions as described above.

Approach to risk. A key principle of our risk methodology is to represent alternatives as a combination of both private and public exposures. This captures a distinct private element that is not correlated with traditional assets, while at the same time recognizing the underlying exposures themselves are often more public or traditional in nature. Taking private credit as an example, our methodology assumes exposure to a private debt factor as well as a public credit spread factor. The result is a private credit correlation with traditional assets that is greater than 0, but less than what would be suggested by public credit spread exposure alone. Because our Vision modeling platform extensively leverages the Barra framework, absolute risk for a number of alternative strategies is a byproduct of the Barra factor exposures. For alternative strategies not explicitly captured by Barra, we assume overall risk is consistent with history, with factors being mapped to the private and public factors that our alternatives specialists believe best represent the strategy.

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