AQR Alternative Thinking 2026 Issue 1

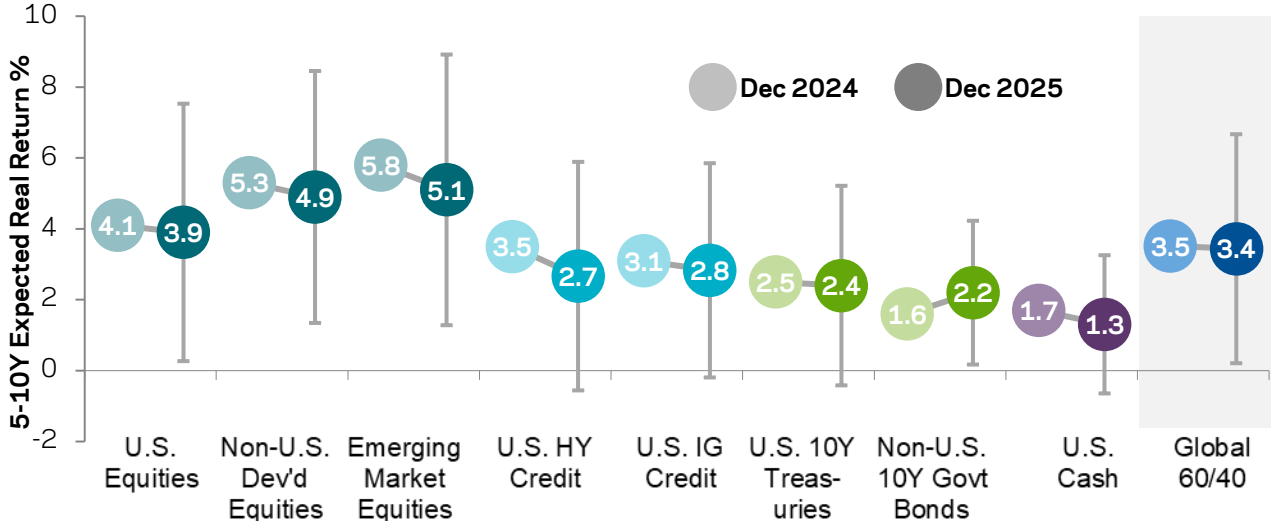
Capital Market Assumptions

for Major Asset Classes

Portfolio Solutions Group

This article updates our estimates of medium-term expected returns for major asset classes. Selected estimates are summarized in **Exhibit 1**. In 2025, equity markets rallied for a third consecutive year but our 5- to 10-year expected returns – based on current valuations – continue to imply risk premia are compressed. The expected real return of a global 60/40 portfolio is 3.4%, around 1.5% higher than the all-time low reached in 2021, but still well below the long-term U.S. average of nearly 5% since 1900. The article also includes a discussion on incorporating currency risk and currency hedging into capital market assumptions.

Exhibit 1: Medium-Term Expected Real Returns Summary as of December 31, 2025



Source: Bloomberg, Consensus Economics and AQR; see Exhibits 3-7 for details. Estimates as of December 31, 2025. "Non-U.S. dev'd equities" is cap-weighted average of Euro-5, Japan, U.K., Australia, Canada. "Non-U.S. 10Y govt. bonds" is GDP-weighted average of Germany, Japan, U.K., Australia, Canada. Global 60/40 is 60% global developed equities, 40% global developed government bonds. Previous year's estimates are calculated using current methodology. Error bars cover 50% confidence range, based on historical analysis (see Appendix), and are intended to emphasize uncertainty around point estimates. Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any portfolio that AQR currently manages.

Contents

About the Portfolio Solutions Group

The Portfolio Solutions Group (PSG) provides thought leadership to the broader investment community and custom analyses to help AQR clients achieve better portfolio outcomes.

Author Thomas Maloney thanks Alfie Brixton, Jeff Cao, Antti Ilmanen, and Nick McQuinn for research assistance and helpful comments.

Introduction and Framework

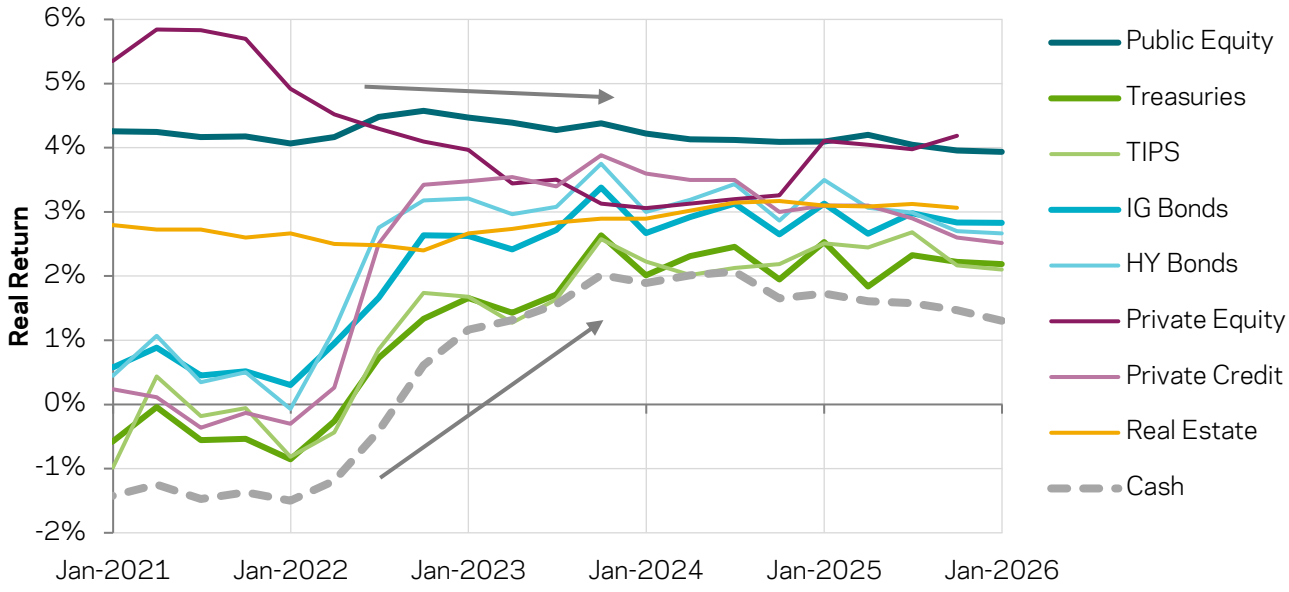
For the past 12 years, we have published capital market assumptions for major asset classes with a focus on medium-term expected returns (all past reports are available here). Each year, besides updated estimates, we provide additional analysis or other new material. This year's article includes a discussion on currency risk and currency hedging. Also, this year we present our estimates in chart format to better illustrate the key drivers – the usual tables are provided in the Appendix.

We present local real (inflation-adjusted) and nominal annual compound rates of return for a horizon of 5 to 10 years. Over such intermediate horizons, starting valuations tend to be useful inputs. For multi-decade forecast horizons their impact is diluted, so theory and long-term historical averages may matter more in judging expected returns. At shorter horizons, returns are largely unpredictable and any predictability has tended to mainly reflect momentum and the macro environment.

Our estimates are intended to assist investors with setting medium-term expectations. The frameworks we present are backed by empirical evidence, but the estimates are highly uncertain, and not intended for market timing. As one cautionary example, the error ranges shown in Exhibit 1, based on long-term historical analysis, suggest there is a 50% chance that realized equity market returns over the next 10 years will under- or overshoot our estimate by more than 3% per annum.

Expected real returns for bonds and cash rose sharply in 2022 and 2023 from all-time lows in 2021 (see **Exhibit 2**). By contrast, expected returns for equities remained fairly constant, implying a world of continued compressed risk premia at the start of 2026. These compressed premia have not yet materialized as lower excess returns for equity markets. Our central expectation is that they will.

Exhibit 2: Expected Real Returns for U.S. Asset Classes December 31, 2020 – December 31, 2025



Source: AQR; see Exhibits 3-7 for details. Last observation for private equity and real estate is September 30, 2025 due to data availability. Estimates are based on current methodologies, are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any portfolio that AQR currently manages.

Public Equity

Our starting point for equity markets is the dividend discount model, under which expected real return is approximately the sum of dividend yield (DY), expected growth (g) in real dividends or earnings per share (EPS), and expected change in valuation (Δv), that is: **$E(r) \approx DY + g + \Delta v$**. We assume no mean reversion in valuations, i.e., $\Delta v=0$ even if a market looks cheap or expensive. At the start of 2026, the U.S. CAPE ratio of nearly 40 is at the 96th percentile since 1980, whereas non-U.S. global developed CAPE is near the historical median.[1]

As in previous years, we effectively take the average of two approaches. However, this year we present our real returns as a single "yield plus growth" decomposition in **Exhibit 3A**, with our combined growth estimates further decomposed in **Exhibit 3B**. The two underlying approaches are as follows:

Payout-based estimate: We have made small adjustments to our methodology for this estimate this year. It is the sum of current dividend yield and a country-specific estimate of next-10-year real EPS growth, g_{EPS}. The g_{EPS} estimate starts from the country's past 25-year historical real EPS growth rate $g_{EPS\text{-}25}$ (with additional 15-year smoothing), then makes several adjustments: **$E(r)_P \approx DY + g_{EPS\text{-}25} + BBA + CSA + GGA$**, where:

- Buyback adjustment (**BBA**) is 10-year net buyback yield (NBY) minus 25-year NBY, and accounts for how recent changes in buyback activity may impact future EPS growth. For example, if net buyback yield has been higher in the past decade than during the 25-year EPS growth history, we assume that continued higher buyback activity will increase future EPS growth.[2] BBA is not available for emerging markets.
- Cross-sectional adjustment (**CSA**) shrinks 50% towards the cap-weighted global developed estimate of $g_{EPS\text{-}25}$ + BBA. Effectively we assume that half of the historical cross-country growth patterns reflect sustainable differences, and half reflect one-off sample-specific effects. CSA is negative (positive) for countries with historical EPS growth above (below) the global average.
- GDP growth adjustment (**GGA**) shifts the adjusted $g_{EPS\text{-}25}$ + BBA + CSA one third of the way towards forecast GDP growth, based on survey data. This introduces a forward-looking measure and reflects the idea that a country's GDP growth may provide a loose anchor for earnings growth over the longer term.[3]

Earnings-based anchor: The inverse of the Shiller CAPE ratio (cyclically-adjusted P/E), CAEP, is 10-year average inflation-adjusted earnings divided by today's price. We multiply this by $1+(g_{EPS\text{-}Eqil} * 5)$ to account for earnings growth during the 10-year window, and then by 0.5 (roughly the U.S. long-run dividend payout ratio). We add equilibrium real EPS growth, $g_{EPS\text{-}Eqil}$ of 1.8% for developed large cap markets and 2.2% for small caps and emerging markets (see 2025 edition). **So, $E(r)_E \approx CAEP * (1+(g_{EPS\text{-}Eqil} * 5)) * 0.5 + g_{EPS\text{-}Eqil}$**

Real return estimates fell in 2025 as valuations increased (see **Exhibit 3**), with U.K. and EM ex China richening the most. U.S. large caps continue to offer the lowest expected return among major markets according to our

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[1] For emerging markets, we have a shorter history; the YE 2025 CAPE of 23 for MSCI Emerging Markets is at the 98th percentile since 2001.

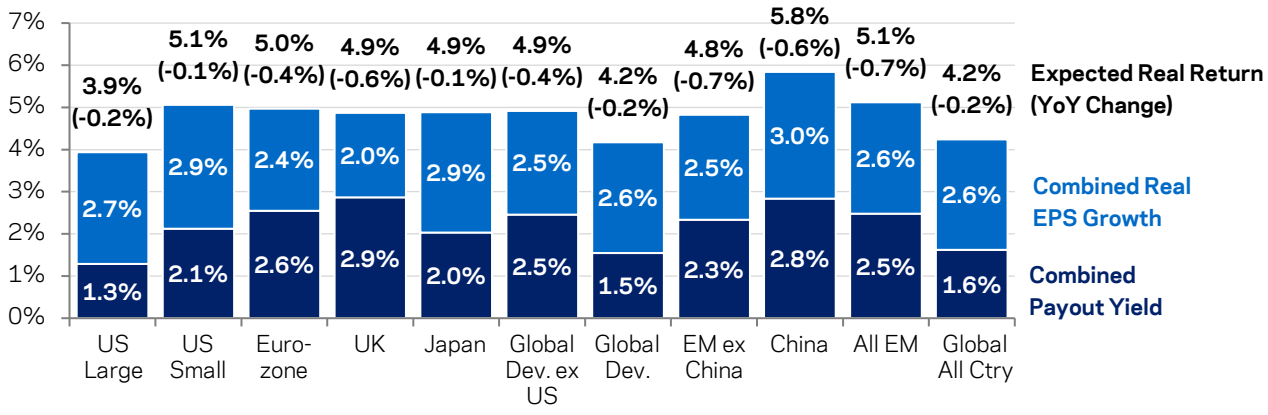
[2] Firms' increasing use of buybacks instead of dividends since the 1980s complicates equity expected return estimation. Buybacks can be added either through a higher payout yield or faster EPS growth. In the payout-based approach, we now do the latter — we assume 25-year EPS growth already reflects buyback use, but make a further adjustment for higher past-decade use. In the earnings-based anchor, we assume that in the long run, payout yield through both dividends and buybacks amounts to half of smoothed earnings, while EPS growth is anchored to a very long historical average.

[3] GDP growth forecasts are a tenuous proxy for earnings forecasts, but the more direct alternatives are badly flawed: Ilmanen-Maloney (2025) show that equity analysts' long-term EPS forecasts have been negatively correlated with next-decade EPS growth due to various biases. It is debatable whether forecast aggregate GDP growth or GDP per capita growth is the more relevant anchor; we take the average.

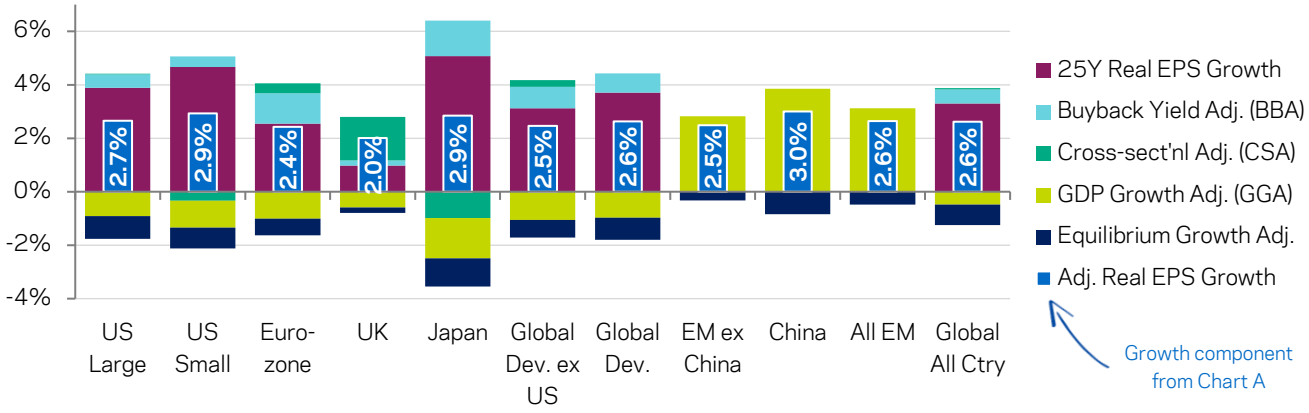
framework, and the narrowest risk premium, even with no mean reversion term. This is because the U.S. growth advantage that we assume – with our various shrinking adjustments – remains substantially lower than the more directly extrapolated growth advantage being priced by markets (see 2025 special topic and Ilmanen and Maloney (2025)). We acknowledge some U.S. growth advantages but caution against over-extrapolation.

Exhibit 3: Expected Local Real Returns for Equities as of December 31, 2025

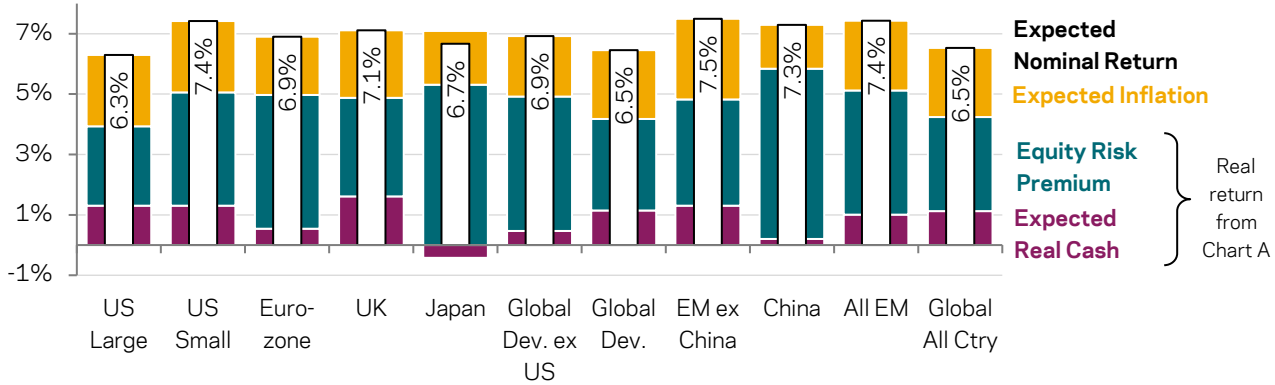
A. Real Return Estimate and Components



B. Components of the Real EPS Growth Assumption



C. Nominal Return Estimate and Equity Risk Premium



Source: AQR, Consensus Economics, Bloomberg. Estimates and methodology as of December 31, 2025. See main text for methodology. Chart A shows two main components of real return estimate. Chart B shows finer decomposition of growth estimate. Chart C shows equity risk premium (expected excess-of-cash return) and nominal return decomposition. Eurozone is cap-weighted average of MSCI large-cap indices in Germany, France, Italy, Netherlands and Spain. Global estimates are cap-weighted averages. Emerging market growth estimates are just forecast GDP growth (average of aggregate and per capita) averaged with 2.2% equilibrium growth. Excess-of-cash return subtracts real cash return estimates described later in the article. Estimates for illustrative purposes only, not a guarantee of performance and not representative of any portfolio that AQR currently manages. Please see definitions for all indices referenced herein in the disclosures.

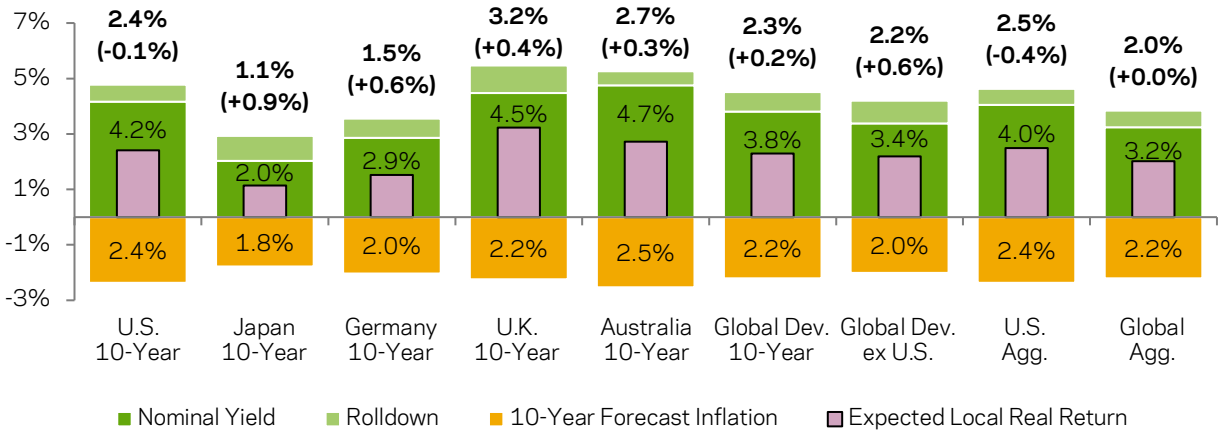
Government Bonds

Government bonds' prospective medium-term nominal total returns are strongly anchored by their yields. The rolling yield is the expected return of a constant-maturity bond allocation assuming an unchanged yield curve. For example, a strategy of holding constant-maturity 10-year U.S. Treasuries has an expected annual (nominal) return of 4.8%, given the starting yield of 4.2% and expected capital gains of 0.6% from rolldown as the bonds age. **Exhibit 4** shows local rolling yields converted to local real returns by subtracting survey-based inflation forecasts. We also include expected returns for U.S. and global aggregate bond benchmarks. Expected excess-of-cash returns are effectively the returns accessed by hedged investors irrespective of their base currency (ignoring cross currency basis), and are relevant for making international allocation decisions, and for investors with access to leverage.

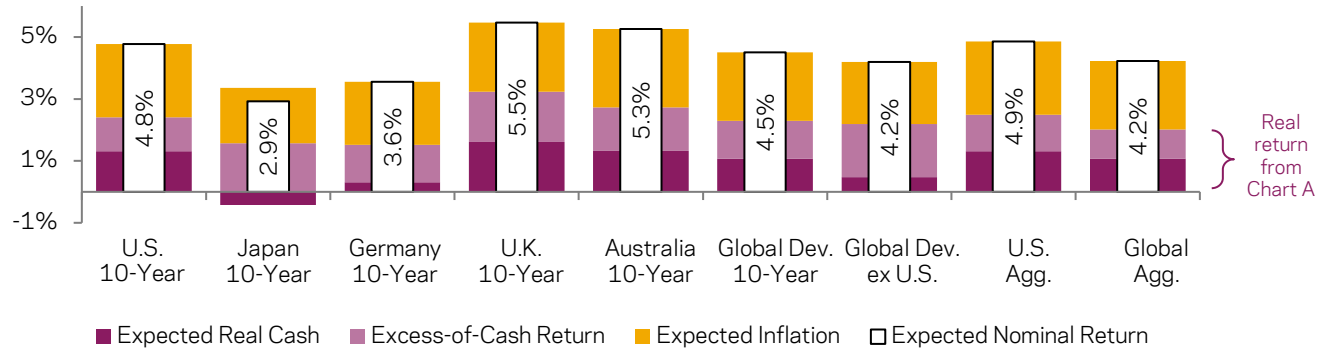
During 2025, U.S. Treasury and global aggregate estimates held steady as lower U.S. yields offset higher rolldown from steeper yield curves; most other countries' estimates increased.

Exhibit 4: Expected Local Returns for 10-Year Government Bonds as of December 31, 2025

A. Real Return Estimate and Components



B. Nominal Return Estimate and Excess-of-Cash Return



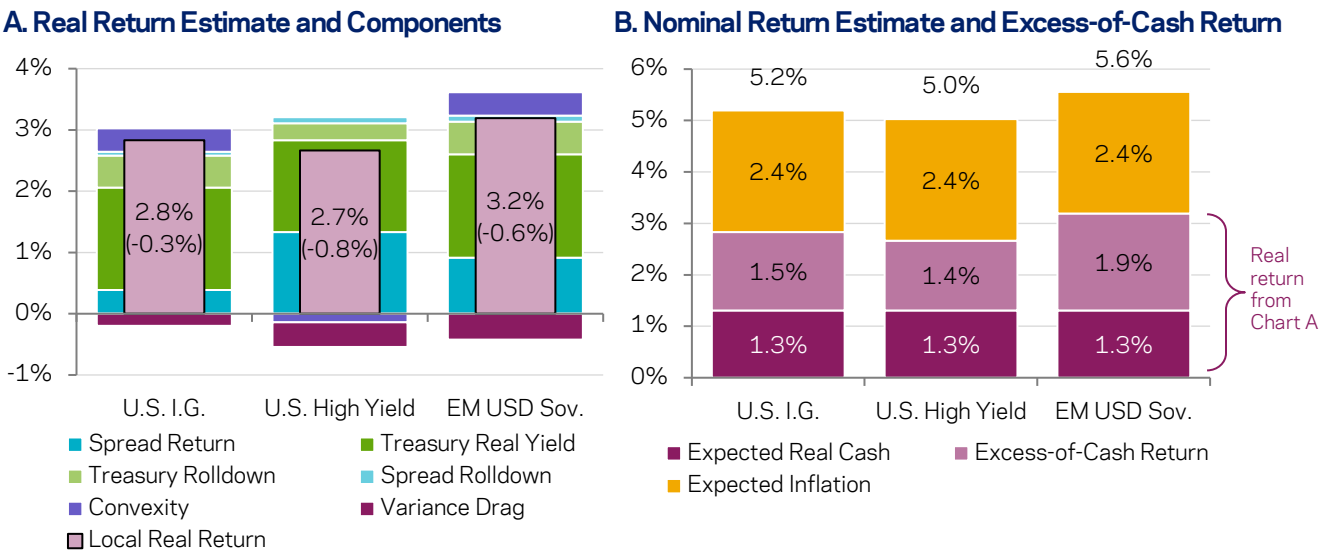
Source: Bloomberg, Consensus Economics and AQR. Estimates as of December 31, 2025. "Global Developed" and "Global Developed ex US" are GDP-weighted averages. U.S. and Global Aggregate are based on the corresponding Bloomberg indices (durations 6.0 and 6.4 years), and also include convexity and variance terms as described overleaf for credit indices. Rolldown return is estimated from fitted yield curves and based on annual rebalance. Excess-of-cash return is calculated by subtracting real cash return estimates described later in the article. Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any portfolio that AQR currently manages. Please see definitions for all indices referenced herein in the disclosures.

Credit Indices

To estimate expected real returns for public credit indices, we first apply a haircut of 50% to both investment grade and high yield spreads to represent the combined effects of expected default losses (the main driver for HY), and downgrading bias and bad selling practices (the main drivers for IG). We assume no change in the spread curve, say, through mean reversion. We add the expected real yield of a duration-matched Treasury, and rolldown from both Treasury and spread curves. Finally, we include corrections for convexity and variance drag.

Exhibit 5 shows our updated estimates for U.S. credit indices and hard-currency emerging market sovereign debt. During 2025, tighter spreads and lower Treasury yields outweighed higher rolldown.

Exhibit 5: Expected Real Returns for Credit Indices as of December 31, 2025



Source: Bloomberg, AQR. Estimates as of December 31, 2025. OAS and duration data are for Bloomberg Barclays U.S. Corporate Investment Grade (IG), U.S. Corporate High Yield (HY) and Emerging USD Sovereign (EM USD Sov.) Indices. Index durations are 6.9 years, 3.0 years and 7.0 years respectively. For EM debt we use US HY OAS rolldown due to data limitations. Excess-of-cash return is calculated by subtracting real cash return estimates described later in the article. Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any portfolio that AQR currently manages. Please see definitions for all indices referenced herein in the disclosures.

Commodities

Commodities do not have obvious yield measures. Our estimate of 5- to 10-year expected return is simply the long-run average return of an equal-weighted portfolio of commodity futures. This portfolio has earned about 3% geometric average excess return over cash since 1877, and a similar return if measured since 1951. We add the U.S. real cash return to give an expected real return of 4.3%.

We do not have medium-term return estimates for individual commodities, but would expect them to deliver a substantially lower risk-adjusted return than a diversified basket over the long term. Gold prices soared in 2024 and 2025, and a gold investment has exhibited useful tail-hedging properties historically. However, it forgoes the considerable diversification found across the broader asset class.

Active Strategies

It is difficult to apply a yield-based approach to dynamic strategies where holdings are constantly evolving. Below we state long-term assumptions for what we believe to be sustainable long-term premia, backed by a broad range of empirical evidence.[4]

Factor-Tilted Long-Only Portfolios: We believe a hypothetical value-tilted, diversified long-only equity portfolio that is carefully implemented and reasonably priced may be assumed to have an expected return 0.5% higher than the cap-weighted index, after fees, with 2-3% tracking error. For an integrated multi-factor strategy with balanced allocations to value, momentum and defensive themes, we assume an expected net active return of around 1% at a similar tracking error. Finally, we think a defensive equity portfolio may be assumed to have an expected return similar to that of the relevant cap-weighted index over a full market cycle, but with lower volatility.[5]

Long/Short Factor Premia: An alternative risk premia strategy, implemented as a long/short market-neutral portfolio across multiple asset classes, can be scaled to different risk levels, so we focus on expected Sharpe ratio (SR). The degree of diversification is critical. One theme applied in one asset class might have an expected SR of 0.2-0.3. For a diversified combination, we believe an expected SR of 0.7, net of trading costs and fees, can be feasible when multiple factor themes are applied in multiple asset classes. At a target volatility of 10%, such a hypothetical portfolio would have an expected return of 7% over cash.[6] [7]

Long/short implementations are particularly interesting in the current environment. When market concentration is elevated and most stocks have tiny index weights, the efficiency advantage of long/short strategies over long-only tilts is probably larger than normal. **Portable alpha** combines a long/short alpha-generating strategy with passive market beta, and may be a more effective way to address low expected market returns than traditional stockpicking. The expected return of a portable alpha strategy is the market return plus the excess-of-cash return of the alpha strategy minus financing frictions and operating costs.

Current Valuations: Aggregate valuations across multiple styles are near long-term averages. Among individual styles, the equity value style appeared extremely cheap in the early 2020s but spreads gradually normalized during 2023-24. They are still at healthy levels at the start of 2026 but no longer point to an exceptional tactical opportunity. Broad diversification across compensated factors, combined with modest tactical variation, may be the best approach for the years ahead.

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[4] See for example Ilmanen et al. (2021), "How do Factor Premia Vary Over Time? A Century of Evidence".

[5] Factor-tilted strategies exhibit many design variations. Our estimates are purely illustrative and do not represent any AQR strategy.

[6] Consistent with historical data, we assume low correlations between factors to produce our Sharpe ratio range for a diversified combination of long/short factors. As transaction costs depend on implementation and both transaction costs and fees vary with target volatility, our estimates are based on a transaction-cost-optimized strategy targeting 10% volatility with fees of 1 to 1.5%. Refer to the 2015 edition for discussion of factor premia assumptions. All assumptions are purely illustrative and do not represent any AQR product or strategy.

[7] We stress that this requires careful craftsmanship in portfolio construction as well as great efficiency in controlling trading, financing and shorting costs. Strategies that are less well-designed or poorly implemented may have much lower expected returns. See Israel, Jiang and Ross (2017), "Craftsmanship Alpha: An Application to Style Investing".

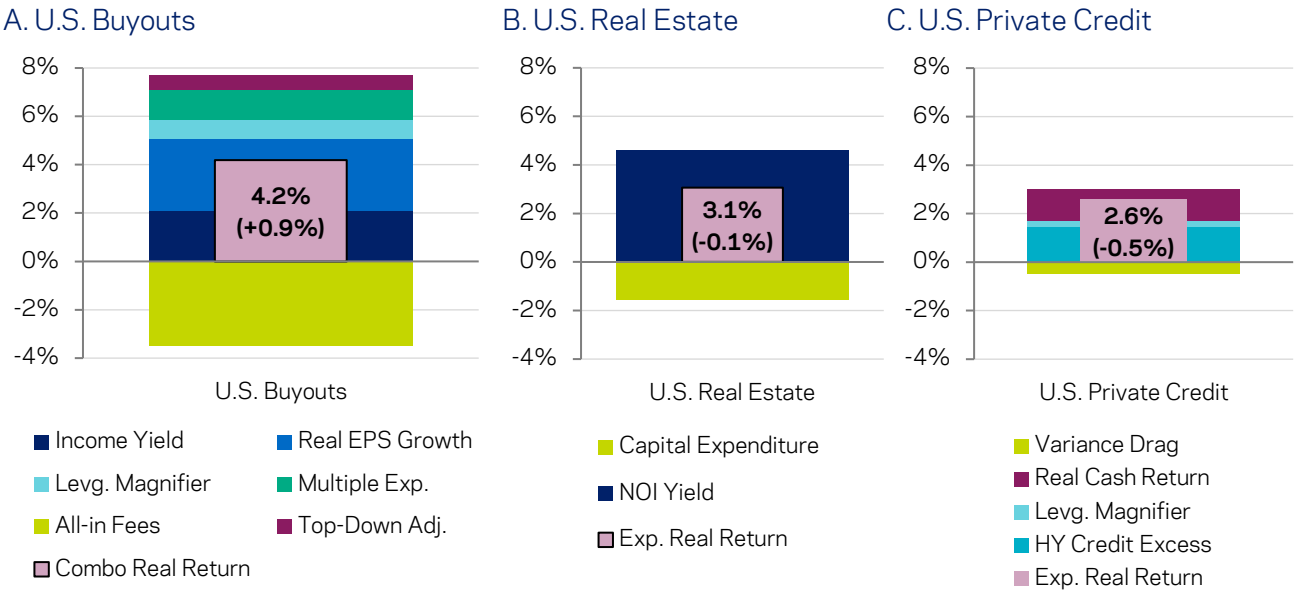
Private Assets

Illiquid assets are inherently harder to model than public markets, and data less plentiful. Nevertheless, we attempt to apply our discounted-cashflow approach to the illiquid realm.

Private Equity: We estimate an expected net-of-fee return for U.S. buyout funds. Every input is debatable, as data limitations necessitate lots of simplifying assumptions. We estimate unlevered return using the DDM: $E(r) \approx y_U + g_U$, where y_U = unlevered payout yield and g_U = real earnings-per-share growth rate. Then we apply leverage and the cost of debt, and finally we add expected multiple expansion and subtract an estimate of all-in fees (**see Exhibit 6A**).[8] The Top-Down Adjustment is the effect of averaging this bottom-up estimate with a simple top-down approach which applies size and leverage adjustments to a public proxy, assuming zero net alpha. Our private equity expected return fell sharply when the cost of debt increased in 2022-23. During 2025, cost of debt declined somewhat, and our multiple expansion estimate increased. Our final estimate of 4.2%, 0.9% higher on the year, is slightly higher than our U.S. public large cap estimate.

Real Estate: We estimate expected returns for unlevered U.S. direct real estate as represented by the NCREIF index. Of course, returns for individual real estate funds can vary vastly from the industry average (this is also true of PE). As with our DDM-based approach for equities, we sum payout yield and real growth, but for RE our real growth estimate is zero (**Exhibit 6B**). RE yields declined slightly over the past year.

Exhibit 6: Expected Real Returns for Private Assets as of December 31, 2025



Source: AQR, Pitchbook, Bloomberg, CEM Benchmarking, NCREIF Webinar Q3 2025. Buyout and real estate estimates as of September 30, 2025 due to data lags. Chart A: Real cost of debt is expected real inter-bank rate plus a spread based on bank loan data, averaged over 12 months. Chart C: Public proxy is based on Bloomberg Barclays U.S. Corporate High Yield (HY) Index in excess of duration-matched U.S. Treasury. Leverage estimate from Block et al. (2023). Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any AQR product or strategy. Please see disclosures for information regarding expectations and definitions for all indices referenced herein.

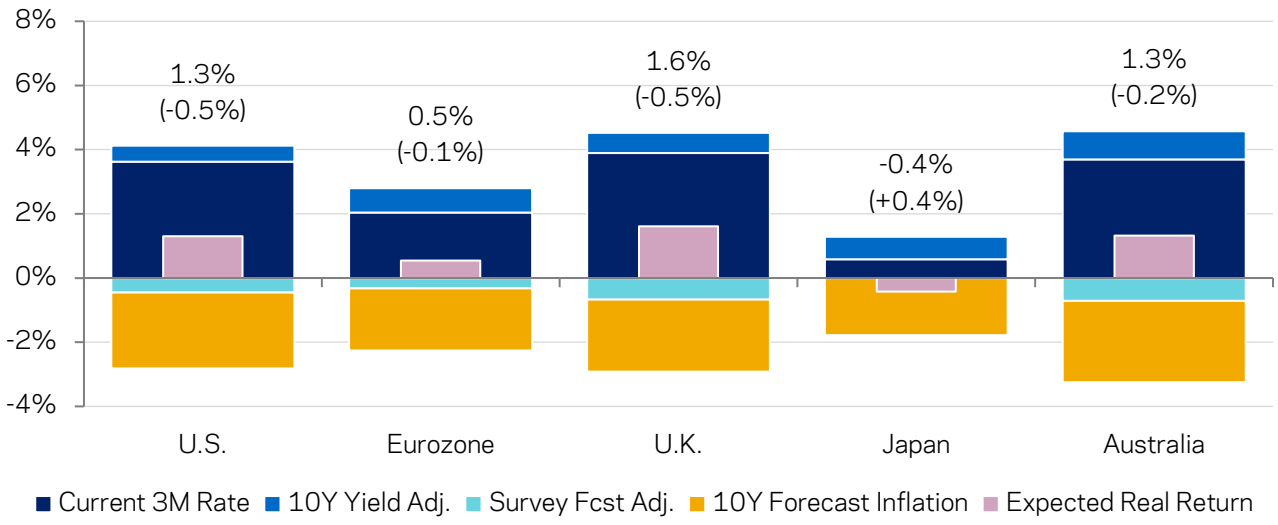
[8] See Ilmanen, Chandra and McQuinn (2020) for a detailed discussion of the original version of this framework and other ways to assess expected PE returns. This year we reduce our all-in fee estimate from 4% to 3.5% to reflect lower expected carried interest. Strictly speaking, our estimate applies to the current vintage rather than the entire PE market.

Private Credit: Private credit industry-level data are limited, so we model the asset class as floating-rate high yield listed credit, with a small adjustment for industry-average leverage. We assume that higher fees and investors' preference for smooth returns fully offset any illiquidity premium on average. Industry-wide private debt modification rates are similar to average default rates for single-B listed credit, hence the choice of a high yield proxy. See the 2024 edition for further discussion. Our latest real return estimate of 2.6%, 0.5% lower on the year, reflects narrowing spreads and lower cash rates in 2025 (**Exhibit 6C**).

Cash

Our cash forecasts are a simple average of three inputs: current short rates, 10-year bond yields and survey-based forecasts of average short rates. The first two inputs reflect pure risk premium and pure expectations hypotheses, respectively, and the third input gives more direct evidence of market expectations for rate changes. **Exhibit 7** shows that most cash forecasts declined in 2025, but they remain positive in most markets (Japan's rising but negative real rate is an exception). These positive real cash returns continue to imply slimmer risk premia for other asset classes, notably equities and private assets.

Exhibit 7: Expected Real Returns for Cash as of December 31, 2025



Source: Bloomberg, Consensus Economics and AQR. Estimates as of December 31, 2025. Eurozone is cap-weighted average of Germany, France, Italy, Netherlands and Spain. Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any portfolio that AQR currently manages.

Special Topic: Currency Risk and Currency Hedging

Our headline real return estimates are expressed in local currency terms, and are therefore not directly comparable across countries for an investor in one country. To convert them to expected real returns in the investor's own currency, we must apply the following adjustments:

Hedged assets: To convert nominal returns, add the **expected nominal interest rate differential**. To convert real returns, add the **expected real interest rate differential**. We can use our cash CMAs for this, possibly with an adjustment for interbank-Treasury spreads. This differential captures the expected carry return of a currency hedge, and effectively ensures that "you can only earn your own risk-free rate risk-free."

Unhedged assets: To convert nominal returns, add the expected spot currency return. There are many ways to estimate this; one simple assumption is that relative purchasing power is preserved, which implies the expected spot currency return is equal to the **expected inflation differential**. Under this assumption, higher inflation erodes real purchasing power, and the nominal exchange rate adjusts to ensure identical goods still cost roughly the same when priced in a common currency. Under this assumption, **expected real returns are the same regardless of currency** (inflation and currency adjustments cancel out). This simple assumption ignores deviations from purchasing power parity and other measures of currency valuation, which could be incorporated as a further adjustment.

Exhibit 8 illustrates these corrections using our assumptions for U.S. and European equities from the perspective of U.S. and eurozone investors. Panel A starts from local real returns and converts them to USD and EUR nominal returns. Panel B shows an alternative decomposition into the investor's expected risk-free (cash) return and the expected return on equity and currency risk.

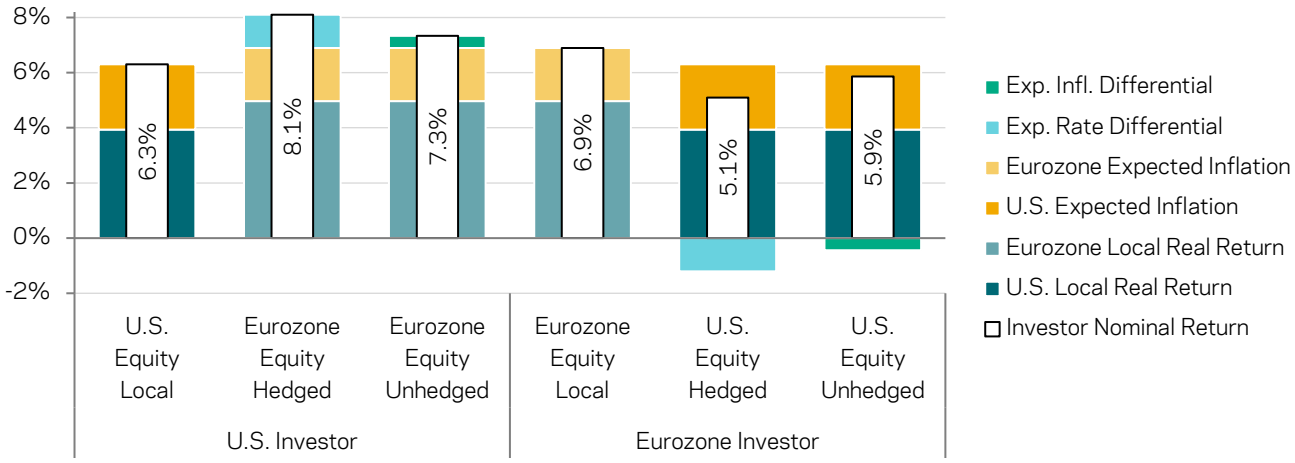
To hedge or not to hedge?

For most **U.S. investors**, currency risk is a small component of total portfolio risk (see **Exhibit 9**). Many don't bother to hedge, even though currency risk has tended to be positively correlated to the rest of the portfolio and exacerbated equity drawdowns in 2008 and 2022. However, in the mid-2020s hedging to USD has been a positive carry trade (as shown in Exhibit 8), and this has led some US investors to consider hedging for the first time.

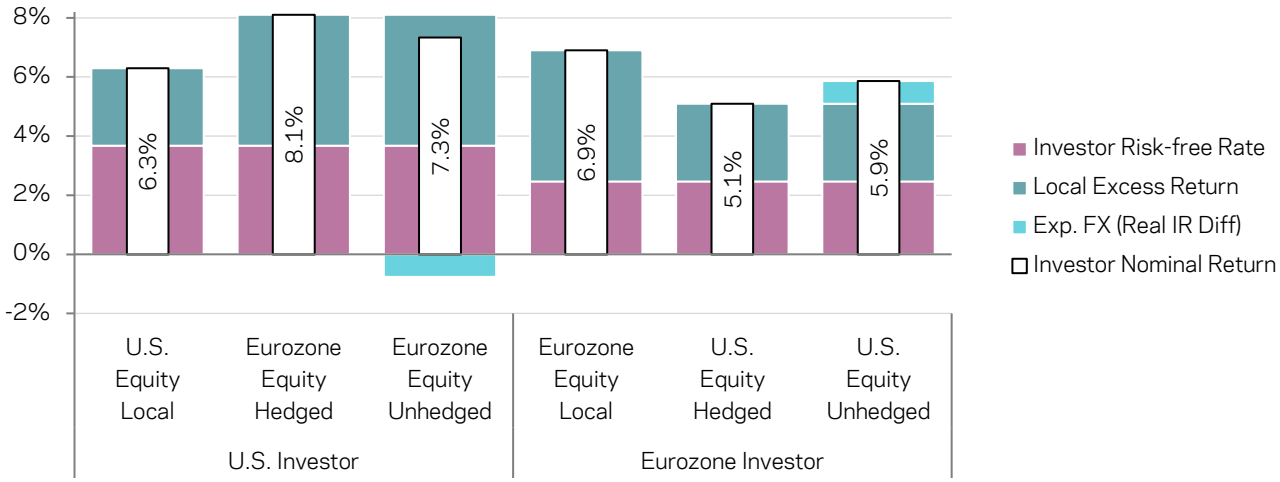
For many **European investors**, USD risk is a big deal: at the start of 2026, a cap-weighted global 60/40 portfolio is not just 60% equities and 40% bonds, but also effectively holds a 40% position in the U.S. dollar. Until recent years, European investors have tended to embrace this USD exposure, remembering the impressive diversification it delivered in 2008 and again in 2022. On top of this, the wide rate differential has made hedging seem expensive especially for EUR- and CHF-domiciled investors. However, concerns about the reliability of the USD's "safe haven" status, its elevated valuation and volatile US trade policy have led some investors to reconsider hedging in 2025. Even a decent diversifier can add to portfolio risk if you have too much of it, and optimizers seeking the maximum portfolio Sharpe ratio or minimum portfolio risk hedge ratio will often point to ***partial hedging***.

Exhibit 8: Currency Adjustments for Hedged and Unhedged Assets as of December 31, 2025

A. Adjustments to Local Real Returns



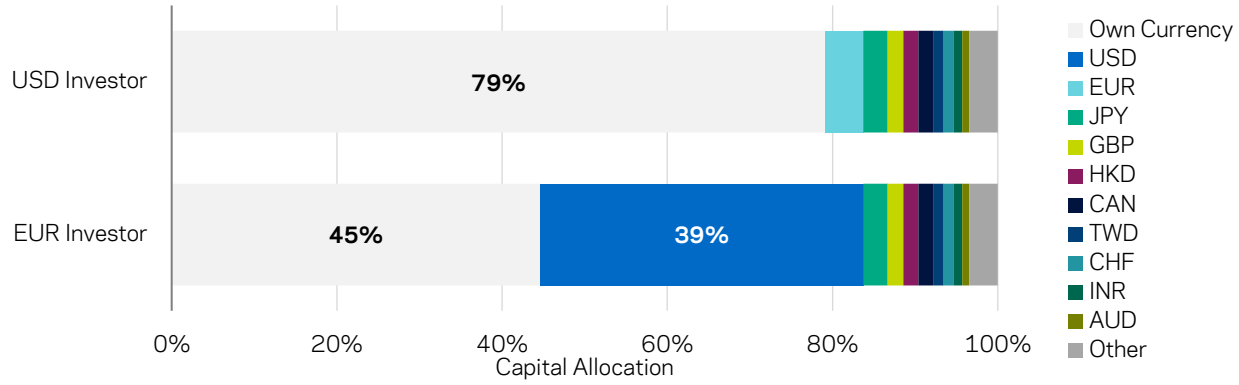
B. Decomposition to Investor Risk-Free Return and Return on Risk



Source: Bloomberg, Consensus Economics and AQR. Estimates as of December 31, 2025. Eurozone is cap-weighted average of MSCI large-cap indices in Germany, France, Italy, Netherlands and Spain. Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any portfolio that AQR currently manages. Please see definitions for referenced indices in the disclosures.

Exhibit 9: U.S. Dollar Risk Is a Big Deal for Non-U.S. Investors

Currency Exposures in a Global 60/40 Portfolio with Unhedged Equities, as of December 31, 2025



Source: MSCI and AQR. Weights as of December 31, 2025. The 60% allocation to MSCI ACWI is assumed to be unhedged. The 40% allocation to global bonds is assumed to be hedged. Not representative of any portfolio that AQR currently manages.

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Appendix: Tables

Exhibit A1: Expected Local Real Returns for Equities as of December 31, 2025

	Payout-Based			Earnings-Based			Combined				
	Div. Yield (A)	Real g_{EPS} (B)	Real Ret. (A+B)	$CAEP_{Adj}$ *0.5 (A)	Equil. g_{EPS} (B)	Real Ret. (A+B)	Pay-out	Real EPS G	Local Real Return	*1yr Change*	Excess-of-Cash
U.S. Large	1.2%	3.5%	4.7%	1.4%	1.8%	3.2%	1.3%	2.7%	**3.9%**	*-0.2%*	2.6%
U.S. Small	1.4%	3.7%	5.1%	2.8%	2.2%	5.0%	2.1%	2.9%	**5.1%**	*-0.1%*	3.8%
Eurozone	2.8%	3.0%	5.9%	2.3%	1.8%	4.1%	2.6%	2.4%	**5.0%**	*-0.4%*	4.4%
U.K.	3.1%	2.2%	5.3%	2.6%	1.8%	4.4%	2.9%	2.0%	**4.9%**	*-0.6%*	3.3%
Japan	2.0%	3.9%	5.9%	2.1%	1.8%	3.9%	2.0%	2.9%	**4.9%**	*-0.1%*	5.3%
Glob. Dev. ex US	2.6%	3.1%	5.8%	2.3%	1.8%	4.1%	2.5%	2.5%	**4.9%**	*-0.4%*	4.5%
Global Dev.	1.5%	3.5%	5.0%	1.6%	1.8%	3.4%	1.5%	2.6%	**4.2%**	*-0.2%*	3.0%
EM ex China	2.2%	2.8%	5.1%	2.4%	2.2%	4.6%	2.3%	2.5%	**4.8%**	*-0.7%*	3.5%
China	2.0%	3.8%	5.8%	3.7%	2.2%	5.8%	2.8%	3.0%	**5.8%**	*-0.6%*	5.6%
All EM	2.2%	3.1%	5.3%	2.8%	2.2%	5.0%	2.5%	2.6%	**5.1%**	*-0.7%*	4.1%
Global All	1.5%	3.2%	4.7%	1.7%	1.8%	3.6%	1.6%	2.6%	**4.2%**	*-0.2%*	3.1%

Source: AQR, Consensus Economics, Bloomberg. Estimates and methodology as of December 31, 2025. See main text for methodology. Real gEPS in col (2) is 25Y real EPS growth with buyback adjustment, cross-sectional adjustment and GDP adjustment. Real return in col (9) is the average of cols (3) and (6), and is also the sum of cols (7) and (8). 1-year change is based on current methodology. Based on respective MSCI indices. Eurozone is a cap-weighted average of MSCI large-cap indices in Germany, France, Italy, Netherlands and Spain. Global estimates are cap-weighted averages. For emerging markets, payout-based estimate is dividend yield + forecast GDP per capita growth. Excess-of-cash return is calculated by subtracting real cash return estimates. Estimates are for illustrative purposes only, are not a guarantee of performance and are not representative of any portfolio that AQR currently manages. Please see definitions for all indices referenced herein in the disclosures.

Exhibit A2: Expected Local Returns for 10-Year Government Bonds as of December 31, 2025

	Y	RR	I	Y + RR - I		
	Nominal Yield	Rolldown Return	10-Year Forecast Inflation	Expected Local Real Return	*1yr Change*	Excess-of-Cash Return
U.S. 10-Year	4.2%	0.6%	2.4%	**2.4%**	*-0.1%*	1.1%
Japan 10-Year	2.0%	0.9%	1.8%	**1.1%**	*+0.9%*	1.6%
Germany 10-Year	2.9%	0.7%	2.0%	**1.5%**	*+0.6%*	1.2%
U.K. 10-Year	4.5%	1.0%	2.2%	**3.2%**	*+0.4%*	1.6%
Australia 10-Year	4.7%	0.5%	2.5%	**2.7%**	*+0.3%*	1.4%
Global Dev. 10-Year	3.8%	0.7%	2.2%	**2.3%**	*+0.2%*	1.2%
Global Dev. ex U.S.	3.4%	0.8%	2.0%	**2.2%**	*+0.6%*	1.7%
U.S. Aggregate	*4.0%*	*0.6%*	*2.4%*	***2.5%***	*-0.4%*	*1.2%*
Global Aggregate	*3.2%*	*0.6%*	*2.2%*	***2.0%***	*0.0%*	*0.9%*

Source: Bloomberg, Consensus Economics and AQR. Estimates as of December 31, 2025. "Global Developed" and "Global Developed ex US" are GDP-weighted averages. U.S. and Global Aggregate are based on the corresponding Bloomberg indices (durations 6.0 and 6.4 years), and also include convexity and variance terms as described overleaf for credit indices. Rolldown return is estimated from fitted yield curves and based on annual rebalance. Excess-of-cash return is calculated by subtracting real cash return estimates described later in the article. Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any portfolio that AQR currently manages. Please see definitions for all indices referenced herein in the disclosures.

Exhibit A3: Expected Real Returns for Credit Indices as of December 31, 2025

	A. Spread Return OAS * 0.5	B. Treasury Real Yield Y - I	C. Rolldown Return R_T+R_C	D. Convexity & Variance Con - Var	Expected Real Return A+B+C+D	*1yr Change*	Excess-of-Cash Return
U.S. Corp. IG	0.4%	1.7%	0.6%	0.2%	**2.8%**	*-0.3%*	1.5%
U.S. Corp. HY	1.3%	1.5%	0.4%	-0.5%	**2.7%**	*-0.8%*	1.4%
EM USD Sov.	0.9%	1.7%	0.6%	-0.0%	**3.2%**	*-0.6%*	1.9%

Source: Bloomberg, AQR. Estimates as of December 31, 2025. OAS and duration data are for Bloomberg Barclays U.S. Corporate Investment Grade (IG), U.S. Corporate High Yield (HY) and Emerging USD Sovereign (EM USD Sov) Indices. Index durations are 6.9 years, 3.0 years and 7.0 years respectively. For EM debt we use US HY OAS rolldown due to data limitations. Excess-of-cash return is calculated by subtracting real cash return estimates described later in the article. Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any portfolio that AQR currently manages. Please see disclosures for information regarding expectation and definitions for all indices referenced herein.

Exhibit A4: Expected Real Returns for U.S. Private Equity as of September 30, 2025

Unlevered			Leverage		Levered							
y_U	g_U	$r_U=y_U+g_U$	D	k_D	$r_L=r_U+D^*(r_U-k_D)$	m	$r_G=r_L+m$	f	$r_N=r_G-f$	r_T	avg (r_N,r_T)	
Income Yield	Real Growth	Real Return	Debt to Equity	Real Cost of Debt	Levered Real Return	Mult. Expansion	Gross Real ER	Fees	Net Exp. Real Return	Top-Down Est.	Combo Real Return	*1yr Change*
2.1%	3.0%	5.1%	69%	4.0%	5.9%	1.2%	7.1%	3.5%	3.6%	4.8%	**4.2%**	*+0.9%*

Source: AQR, Pitchbook, Bloomberg, CEM Benchmarking. Estimates as of September 30, 2025. Real cost of debt is expected real inter-bank rate plus a spread based on bank loan data, averaged over 12 months. Strictly speaking, our inputs are log returns and should be converted to simple returns before leverage is applied, then converted back to log returns, but we omit this minor adjustment. Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any AQR product or strategy.

Exhibit A5: Expected Real Returns for U.S. Private Real Estate as of September 30, 2025

NOI	C ≈ NOI / 3	CF ≈ NOI - C	g	ER = CF + g	
NOI Yield	Capital Expenditure	Cashflow Yield	Real Growth	Unlevered Real Return	*1yr Change*
4.6%	1.5%	3.1%	0.0%	**3.1%**	*-0.1%*

Source: AQR, NCREIF Webinar Q3 2025. Estimates as of September 30, 2025. Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any AQR product or strategy.

Exhibit A6: Expected Real Returns for U.S. Private Credit as of December 31, 2025

C=OAS*0.5 +roll	L	C * L	R	C*L - V + R	
HY Credit Excess	Leverage Multiplier	Levered Excess Return	Real Cash Return	Expected GM Real Return	*1yr Change*
1.4%	1.2	1.7%	1.3%	**2.6%**	*-0.5%*

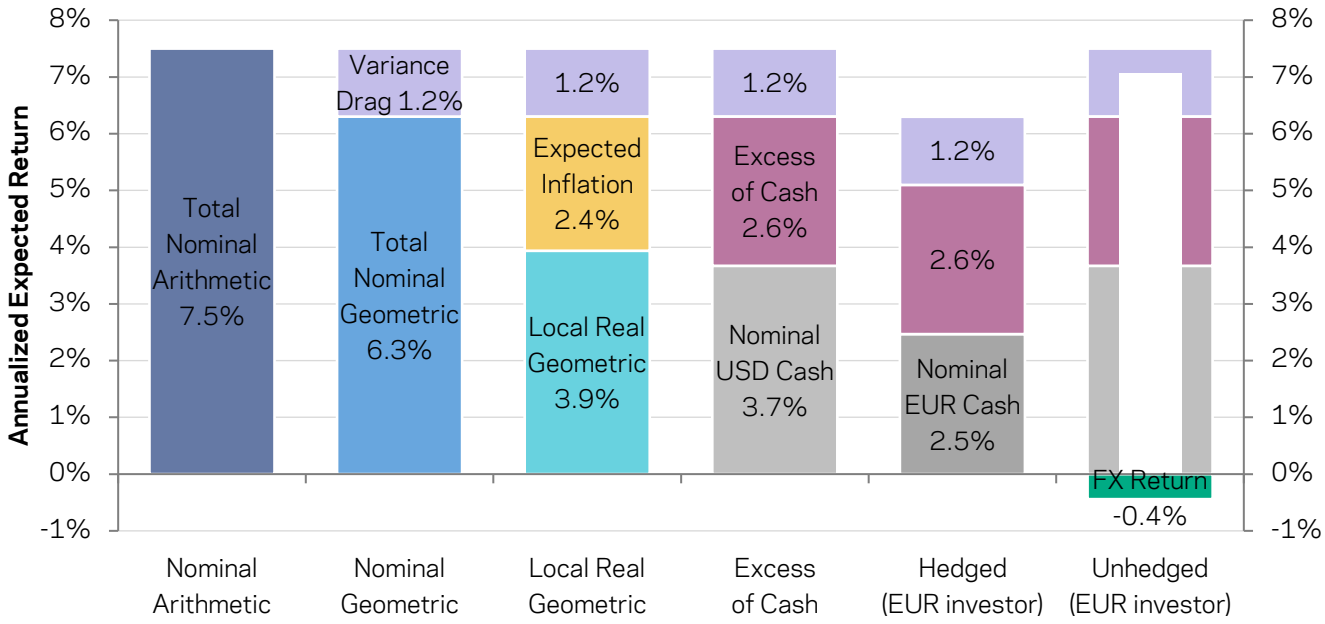
Source: Bloomberg, AQR. Public proxy is based on Bloomberg Barclays U.S. Corporate High Yield (HY) Index in excess of duration-matched U.S. Treasury. Leverage estimate from Block et al. (2023). Cambridge Associates Private Credit modification rate from 2002 to 2017 was 10% compared to 11% default rate for Moody's single-B listed credit. V is a variance drag term. All assumptions are purely illustrative and do not represent any AQR product or strategy. Methodology and return assumptions are subject to change and are as of December 31, 2025. Please see disclosures for information regarding expectation and definitions for all indices referenced herein.

Other Appendices

Unit Translations

Expected returns can be reported in many different units, and investors seeking to combine the wisdom of several providers must first ensure all are in the same units. **Exhibit A7** may be a useful reference.

Exhibit A7: U.S. Equities Expected Return in Different Units as of December 31, 2025



Source: AQR. Estimates as of December 31, 2025 for U.S. large-cap equities. Estimates are for illustrative purposes only, are not a guarantee of performance and are subject to change. Not representative of any portfolio that AQR currently manages. Please see disclosures for more information on estimates.

Sources and Methodology for Long-Term Historical Expected Returns

Sources for historical equity and bond expected returns are AQR, Robert Shiller's data library, Kozicki-Tinsley (2006), Federal Reserve Bank of Philadelphia, Blue Chip Economic Indicators, Consensus Economics and Morningstar. Prior to 1926, stocks are represented by a reconstruction of the S&P 500 available on Robert Shiller's website which uses dividends and earnings data from Cowles, interpolated from annual data. After that, stocks are S&P 500. Bonds are long-dated Treasuries. Real equity yield is simple average of two measures: (0.5 * Shiller E/P * (1+g*5) + g and Dividend/Price + g. The g term is assumed long term real earnings per share (EPS) growth which is 1.5% up until 2010 after which it incrementally increases to 1.8%; 1+g*5 multiplier accounts for EPS growth during 10-year earnings window; 0.5 multiplier reflects long-term payout ratio. Real bond yield is 10-year real Treasury yield minus 10-year inflation forecast as in Ilmanen (2011), with no rolldown added.

Methodology for Forecast Error Analysis (Exhibit 1)

Not only are return forecasts uncertain, but also any measures of uncertainty are debatable. Forecasting requires humility at many levels. We first produce historical time series of yield-based estimates for U.S. equities and U.S. Treasuries using the method described in the previous paragraph (analysis starts in 1900, but we use data from 1870s onwards). We test their predictive power using quarterly overlapping 10-year periods since 1900 and measure the distribution of errors. See the 2018 edition for more details. Error ranges in Exhibit 1 are based on interquartile ranges of these distributions, adjusted for current volatility estimates.

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The Bloomberg US Corporate Index measures the investment grade, fixed-rate, taxable corporate bond market.

The Bloomberg US Corporate High Yield Bond Index measures the USD-denominated, high yield, fixed-rate corporate bond market.

The Bloomberg Emerging Markets USD Sovereign and Sovereign Owned Index aims to include US dollar-denominated debt issued by emerging market sovereigns, government guaranteed, and 100% government owned emerging market issuers.

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