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Currency Hedging: A No-Nonsense Guide

- Unrewarded FX risk, the inconsistency of currency baskets as "automatic" hedges, and declining hedging costs present a compelling case for adopting passive currency hedging.
- Unless FX exposures are being actively managed, the primary goal of currency hedging is to reduce portfolio volatility.
- Portfolios denominated in counter-cyclical currencies require substantial hedging, while those in pro-cyclical currencies need little-to-no hedging.
- Volatility minimization enhances risk-return profiles, unless significant hedging costs undermine portfolio performance.
- Investors can adopt an "enhanced" passive strategy by avoiding hedging safe haven currencies. The yen's favorable multi-year outlook suggests it should be one of the last currencies to hedge.

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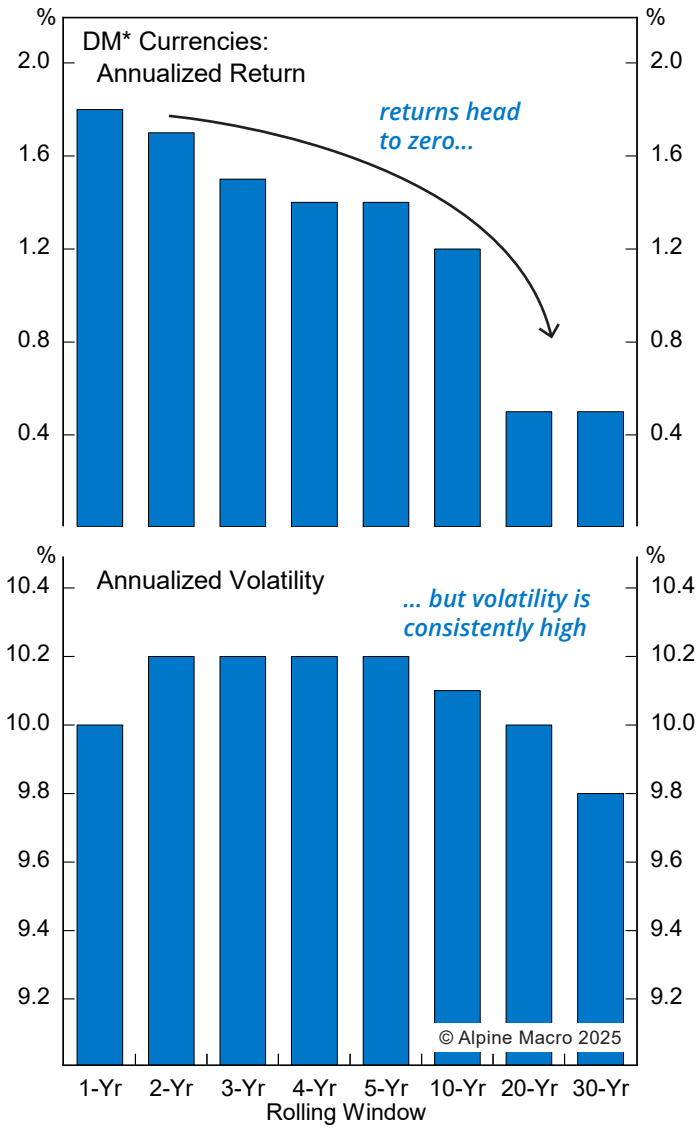
Chart 1 Passive FX Exposure: A Source Of Unrewarded Risk



*G9 "majors" vs. U.S. dollar
Note: Sample period is 1974-2024

Currency risk is mostly an unplanned side effect of where attractive investments are found. Investors must therefore decide whether to retain or hedge this FX exposure.

Yet, how clear cut is the case for hedging currencies? What should investors seek to achieve with a hedging strategy? Are negative spillovers inevitable? And how can allocators refine their hedging strategy beyond a basic approach? This report will attempt to tackle these questions.

The Case For Hedging

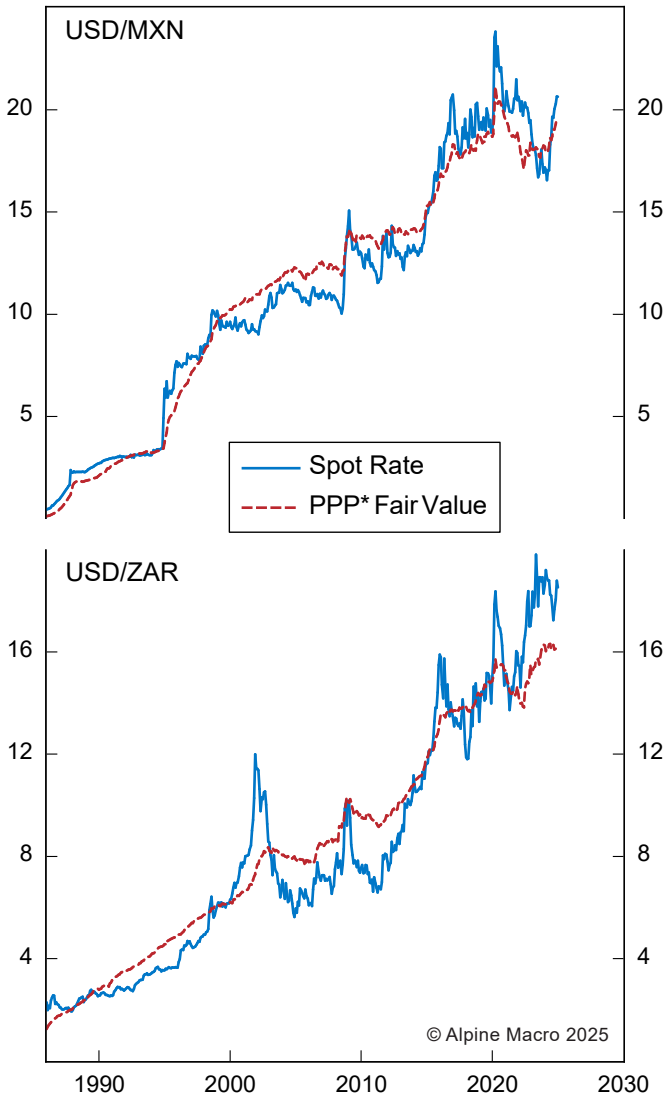
Faced with significant and usually unintended currency exposures, many investors choose to sidestep the issue — either doubting their FX expertise, or succumbing to common misconceptions.

This is a mistake. Institutional managers should at least consider the option of implementing passive[1] FX hedging for three key reasons.

The most compelling is that currency risk is uncompensated. Conceptually, currencies should have no long-term expected returns as they are not economic assets. Empirically, absolute spot returns average less than 2% in any given year and decline steadily towards 0% as time horizons are extended (**Chart 1**, top panel).

While returns are bounded by mean reversion, they come with significant volatility. For individual dollar pairs, annualized volatility hovers around 10% (**Chart 1**, bottom panel), compared to roughly 15% for equities and 5-8% for DM sovereign bonds. In fact, fixed income managers routinely hedge FX exposure to prevent it from overshadowing bond portfolio volatility.

Chart 2 These Aren't The Mean Reversions You're Looking For



*Based on relative manufacturing producer prices; source: OECD, Alpine Macro calculations

Longer-term investors often argue against hedging FX risk, claiming currencies mean revert to

1 The report will focus on passive hedging, broadly defined as reducing the impact of FX fluctuations on a portfolio (often using currency forward contracts), without trying to profit from currency movements. This contrasts with active FX management, which seeks to capitalize on currency movements through market views and dynamic strategies.

purchasing power parity (PPP). A basket of currencies will therefore act as an "automatic" hedge in a global portfolio. However, this reasoning has flaws:

- Whether currency exposure diversifies a global portfolio depends on the correlation between an investor's base currency and global equities (see next section).

- While currencies may gravitate toward PPP, EM currencies often lack stable and stationary means for their fair values (**Chart 2**). Instead, structurally higher inflation in EM economies causes PPP fair values to persistently decline, resulting in significant losses for unhedged EM FX exposure.

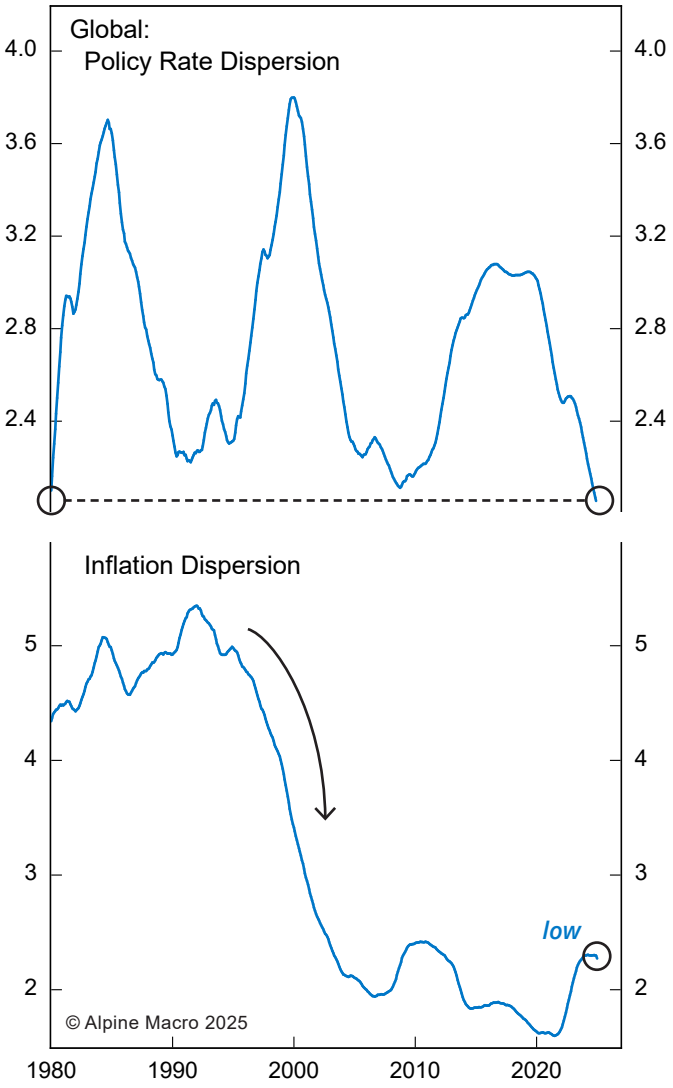
Finally, the *perceived* costs of hedging often deter investors from mitigating FX exposure. These costs typically fall into two categories: direct transaction costs and the forward premium (or cost of carry).

Direct transaction costs, including bid-ask spreads and administrative expenses, are negligible, especially given the growth in size and liquidity of currency derivative markets. These "all-in" costs rarely exceed 5 basis points annually.

The cost of carry, largely driven by interest rate differentials, can be more significant, particularly for EM currencies. However, these costs have declined markedly over recent decades. The median EM policy rate spread over DM is now around 3.5%, just one-third of its level at the millennium's turn.

More broadly, global policy rate dispersion is near its lowest since 1980 (**Chart 3**, top panel). This reflects inflation convergence, spurred by central banks

Chart 3 FX Hedging More Attractive Amid Lower Policy Dispersion



Note: Expressed as a median absolute deviation; latest calculations are based on 100 policy rates and 143 consumer price indices

adopting explicit inflation targeting in the early 1990s (**Chart 3**, bottom panel). In short, reduced macro volatility has compressed short rate spreads, thereby increasing the appeal of FX hedging.

Bottom Line: Unrewarded FX risk, the failure of currency baskets to consistently act as "automatic" hedges, and declining hedging costs make a strong case for adopting passive currency hedging.

Unpacking The Approach Behind Passive Hedging

As discussed above, widespread confusion surrounding currencies and hedging leads many investors to forgo FX hedging entirely. Those who do choose to hedge often default to simplistic rules of thumb, such as hedging 50% — effectively choosing the "hedge of least regret."

However, asset allocators would benefit from adopting an approach grounded in sound portfolio construction principles. With passive hedging, the overarching aim should be to minimize portfolio volatility.[2] This enables risk budgets to be redeployed more efficiently to economic assets that offer a genuine risk premium.

There are only 3 components required for determining the volatility-minimizing hedge ratio:

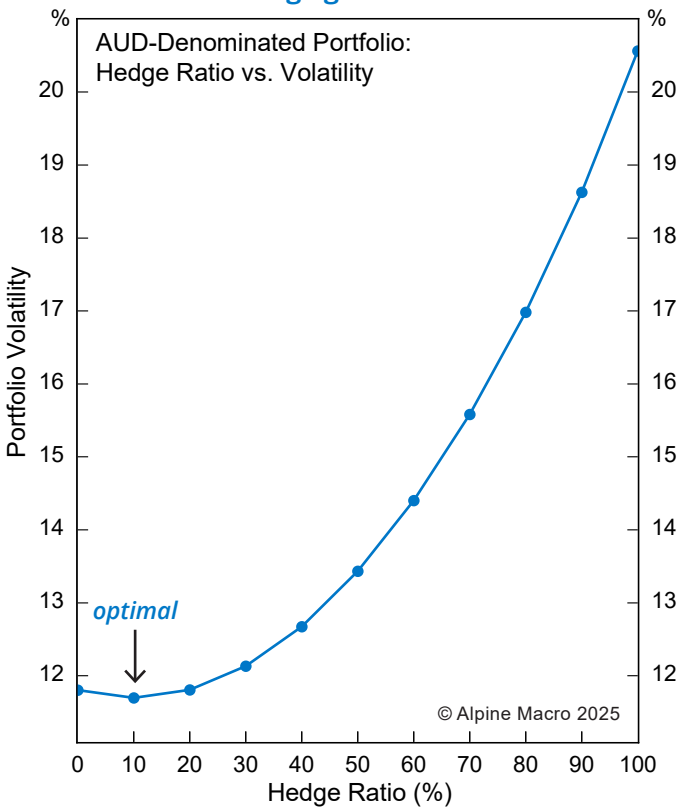
1. The correlation between the foreign equity market and the investor's domestic currency ($\rho_{EQ,FX}$)
2. The volatility of the foreign equity market (σ_{EQ})
3. The volatility of an investor's domestic currency (σ_{FX})

It should be apparent that defining the appropriate hedge ratio for reducing volatility does *not* require any currency forecasts, but only risk measures.

With these variables, the optimal currency hedging level that minimizes portfolio volatility can be expressed as:

$$h^* = 1 - \rho_{EQ,FX}\left(\frac{\sigma_{EQ}}{\sigma_{FX}}\right)$$

Chart 4 AUD Investor: No Benefits To Hedging



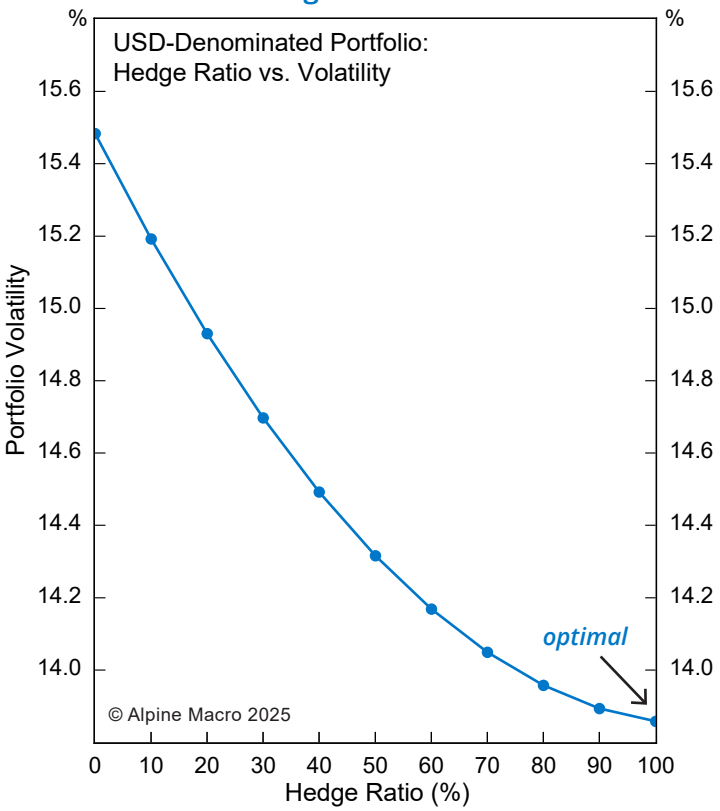
Note: Calculations based on a combination of unhedged and hedged global equity portfolios; sample period is 1994-2024; source: MSCI, Bloomberg Finance L.P., Alpine Macro calculations

Simply put, the optimal hedging ratio[3] depends on an investor's perspective. Investors whose home currency is positively correlated with global equities require less hedging, as their depreciation during risk-off periods naturally offset portfolio losses. Conversely, investors with home currencies negatively correlated with global risk assets benefit from

2 As will be discussed later, this objective can be relaxed somewhat should an investor want to incorporate high conviction market views.

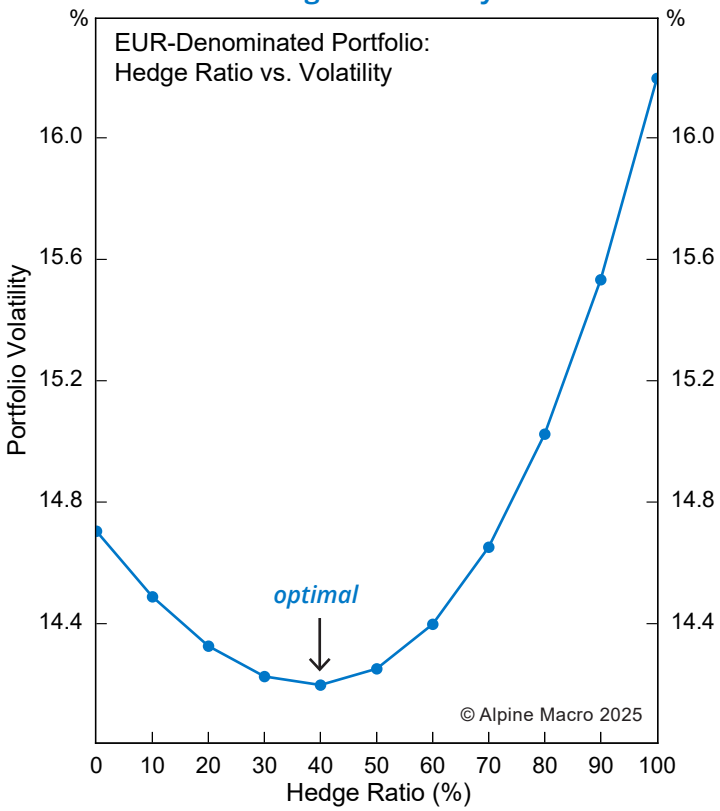
3 If h^*=1, it implies a 100% hedge of FX exposure, while h^*=0 indicates no hedging of FX exposure. Although the formula can yield hedging levels exceeding 100% or falling below 0%, we assume for simplicity that investors operate within a hedging range bounded by 0% and 100%.

Chart 5 USD-Based Investor: Best To Fully Hedge



Note: Calculations based on a combination of unhedged and hedged global equity portfolios; sample period is 1994-2024; source: MSCI, Bloomberg Finance L.P., Alpine Macro calculations

Chart 6 EUR-Based Investor: The Optimal Hedge Lies Midway



Note: Calculations based on a combination of unhedged and hedged global equity portfolios; sample period is 1994-2024; source: MSCI, Bloomberg Finance L.P., Alpine Macro calculations

higher hedging, particularly during market sell-offs given that it would help blunt FX losses.[4]

A few empirical examples should help clarify this concept.[5]

For instance, an Australian-based investor's portfolio is denominated in arguably the most pro-cyclical DM currency. The Australian dollar typically outperforms when global growth is firm, tempering portfolio gains, while weakening during market turmoil, cushioning losses. This implies that leaving FX exposure largely unhedged helps smooth portfolio fluctuations.

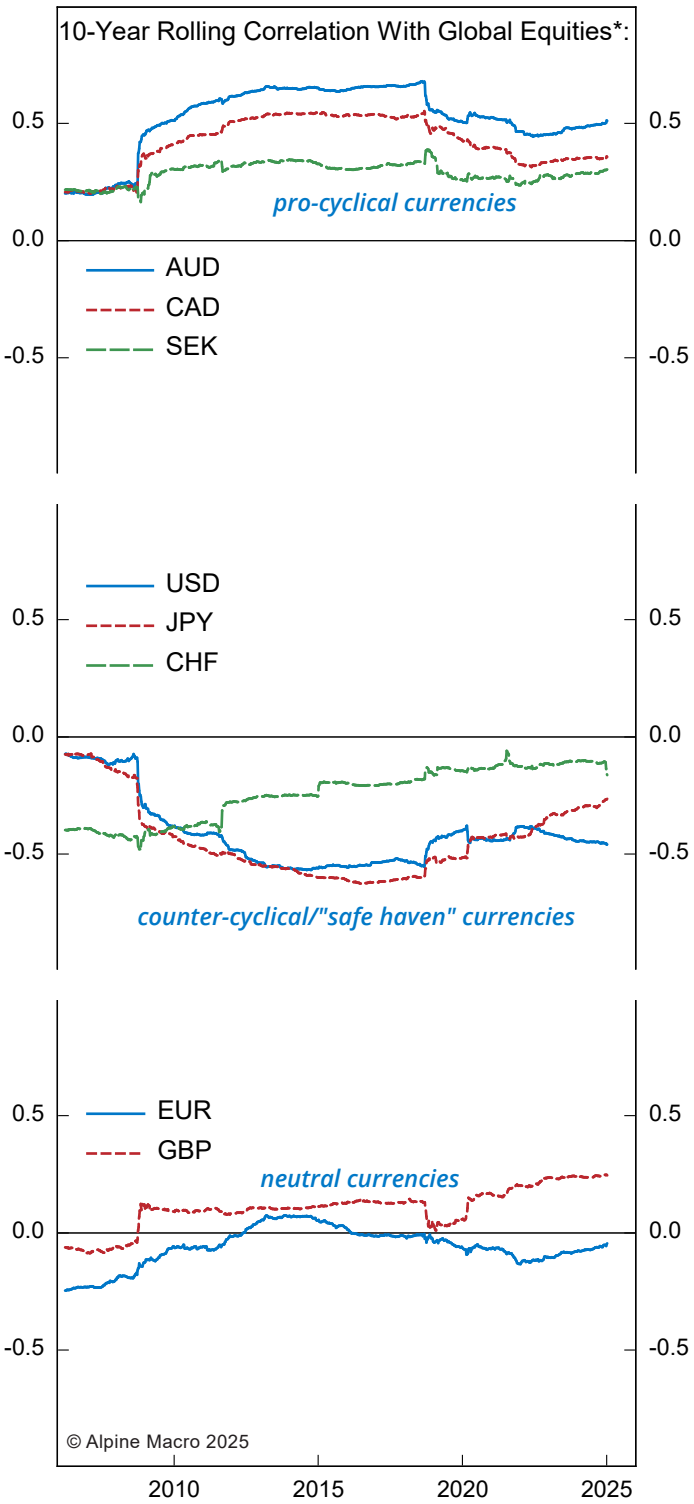
Historically, what would have been the ideal hedging ratio? **Chart 4** reveals that Australian investors would have minimized portfolio volatility by hedging only 0-20% of their FX exposure. In fact, the flat portfolio volatility in this range suggests that a fully unhedged stance would have been the most practical choice.

An American-based investor faces the opposite dynamic due to the counter-cyclicality of the dollar.

4 The final term of the formula says that the degree of hedging or unhedging needed to stabilize returns on foreign equities is scaled by the relative volatility of the equity market compared to the investor's currency. Its influence on the optimal hedging level is generally minor, so it will be safely omitted from this analysis.

5 For simplicity, hedging examples assume a global portfolio that is fully allocated to stocks. However, the principal takeaways remain the same even if other assets, such as bonds, real estate, or commodities, are considered as part of the portfolio mix.

Chart 7 The Key Determinant For Passive Hedging



*Based on weekly price returns of AC World Mid & Large Cap Index (local currency) and broad nominal effective exchange rates; source: MSCI, BIS

Table 1 Base Currency Determines Optimal Hedging Level

	Portfolio Denomination	Optimal Hedging Level (%)	Portfolio Volatility (Unhedged)	Portfolio Volatility (Optimal % Hedge)	Volatility Reduction (p.p.)
Pro-cyclicals	CAD	0	12.2	12.2	0.0
	AUD	10	11.8	11.7	0.1
	SEK	20	13.7	13.3	0.3
Neutrals	GBP	30	14.3	13.9	0.4
	EUR	40	14.7	14.2	0.5
Safe Havens	CHF	60	16.3	14.5	1.8
	JPY	70	17.9	14.1	3.8
	USD	100	15.5	13.9	1.6

Note: Optimal hedging level calculations based on a combination of unhedged and hedged global equity portfolios, and rounded to the nearest 10%; sample period is 1994-2024; source: MSCI, Bloomberg Finance L.P., Alpine Macro calculations

Their portfolio volatility would have been minimized only by *fully hedging* their FX exposure (**Chart 5**).

What about currencies that do not neatly fall into pro- or counter-cyclical categories, such as the euro? Intuitively, the optimal hedging ratio would lie between the extremes of fully hedged and fully unhedged. **Chart 6** confirms this expectation.

Chart 7 and **Table 1** summarize the key takeaways for investors, segmented by their home currency:

- *Pro-cyclical currencies*: Investors should generally favor leaving FX exposure largely unhedged.
- *Counter-cyclical/"safe haven" currencies*: Investors should lean toward fully hedging FX exposure.

- *Neutral currencies*: Investors should have an optimal hedging ratio that steers away from both extremes.

Bottom Line: To minimize portfolio volatility, conceptual reasoning and empirical evidence suggest that investors are best served fully hedging FX exposure if their home currency is counter-cyclical, and *vice versa*.

Is Volatility Reduction Worth The Cost?

The passive currency hedging strategy outlined above narrowly focuses on minimizing portfolio volatility. Understandably, many asset allocators may view this approach as insufficient, as it overlooks return performance.

These concerns are likely to be overstated.

Chart 8 replicates the earlier hedging exercise, now juxtaposing volatility (shown inverted) with the portfolio's Sharpe ratios. The message is clear: the optimal hedging ratio not only reduces volatility but is also broadly aligned with improved risk-adjusted performance. The pattern holds consistently across nearly all of our remaining currency set.[6]

This outcome should not be surprising. As emphasized earlier, passive currency exposure has no expected long-term return. Similarly, hedging currencies should not notably affect portfolio returns over an extended time horizon. This suggests that the volatility-impact from hedging is the primary driver of risk-adjusted performance.

The only exception to this finding pertains to the yen as a base currency. The top panel of Chart 9 illustrates the steep decline in the Sharpe as the hedge ratio is ramped up to its volatility-minimizing level. However, this has little to do with the yen itself, which exhibits the same mean-reverting behavior as other DM currencies (Chart 9, middle panel).

Instead, the drop in risk-adjusted performance is directly tied to the persistent premium Japanese investors *pay* to hedge their FX exposure (Chart 9, bottom panel). Due to Japan's unique deflationary backdrop since the early 1990s, domestic policy rates always remained below global rates. Clearly, a roughly 2% average hedging premium over several decades would act as a significant drag on portfolio returns.

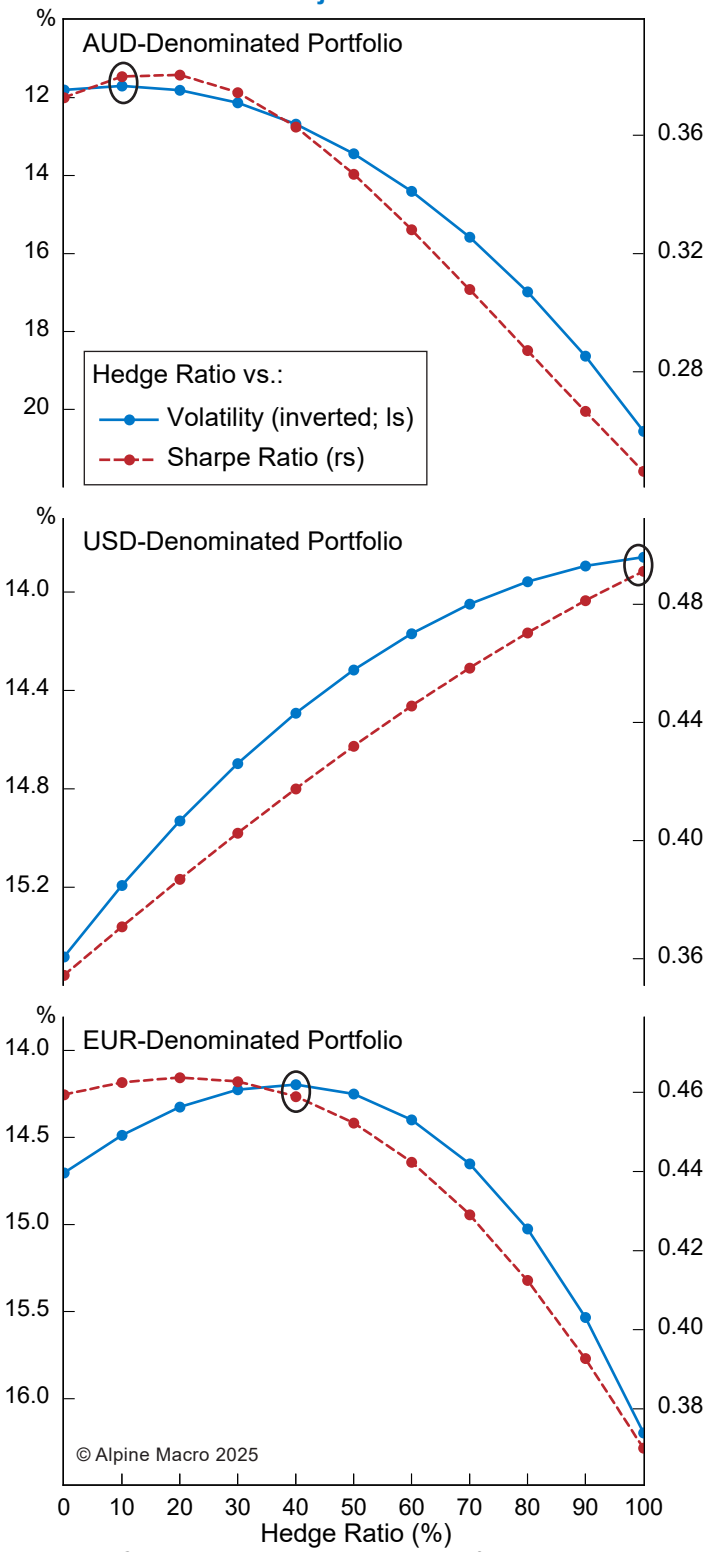
Bottom Line: Risk-return profiles tend to improve with more optimal hedging, as volatility reduction dominates return considerations. The exception to this general rule is when investors must continually pay a meaningful hedging premium.

Parting Thoughts On Strategy

This report aimed to demystify currency hedging for asset allocators. The key takeaway is that passive hedging generally leads to less volatile portfolios, particularly when an investor's home currency exhibits strong counter-cyclical tendencies. Furthermore, the by-product of volatility reduction is almost always higher risk-adjusted performance.

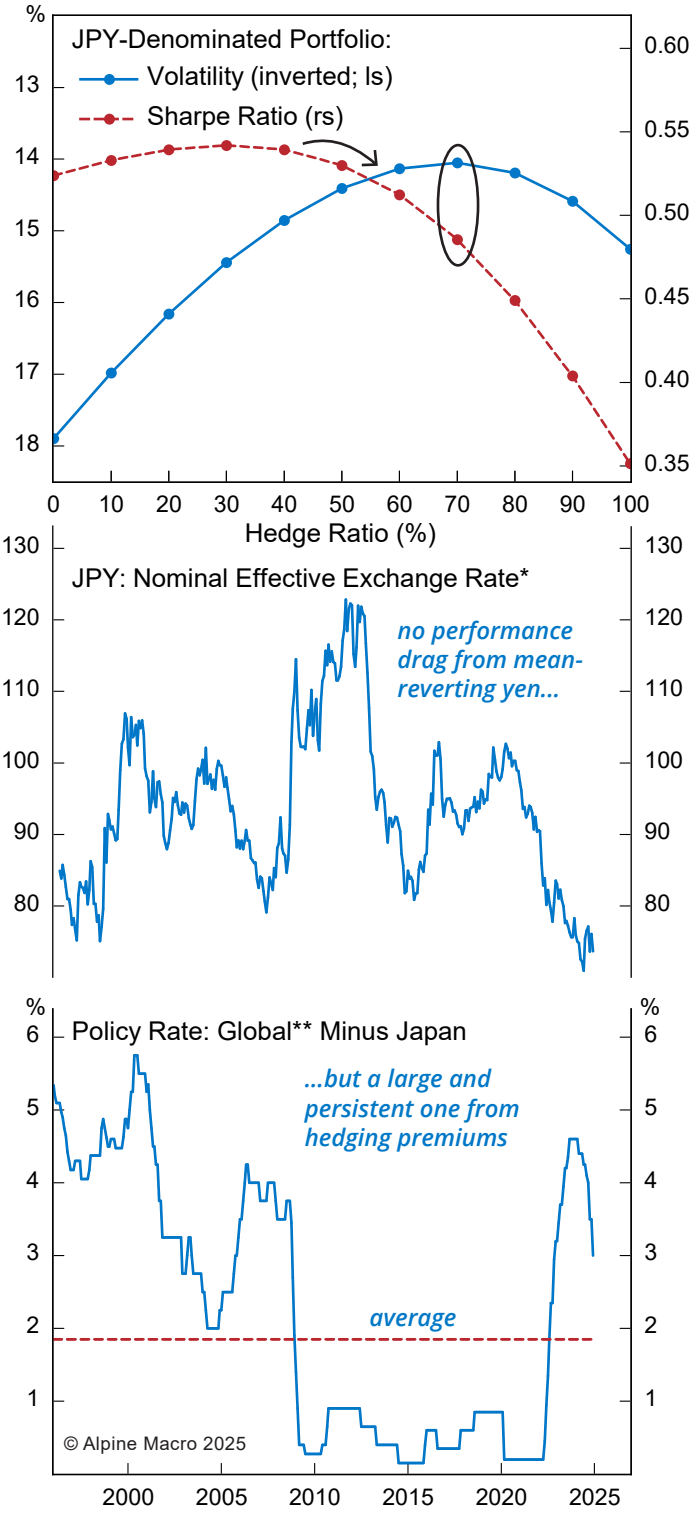
6 Granted, higher risk-adjusted performance does not necessarily imply improved returns. An investor could experience hedging losses yet achieve a higher risk-adjusted return if the reduction in volatility more than offsets the impact. While the "you can't eat Sharpe ratios" critique is valid, it highlights that some asset allocators may better achieve their objectives by either avoiding passive hedging altogether or adopting an active management strategy that integrates market views to generate positive FX returns.

Chart 8 Vol Reduction Typically Means Better Risk-Adjusted Performance...



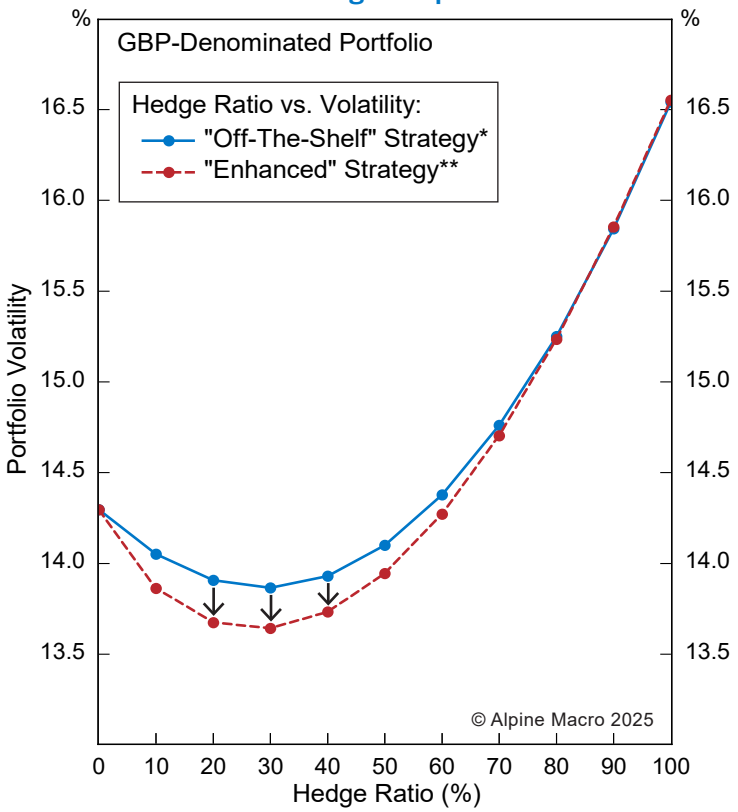
Note: Calculations based on a combination of unhedged and hedged global equity portfolios; sample period is 1994-2024; source: MSCI, Bloomberg Finance L.P., Alpine Macro calculations

Chart 9 ...Unless Hedging Costs Are Onerous



*Broad index; source: BIS
**Median of U.S., Germany/Euro Area, U.K., Canada, Switzerland, Sweden and Australia

Chart 10 Small Refinements Can Lead To Meaningful Improvements



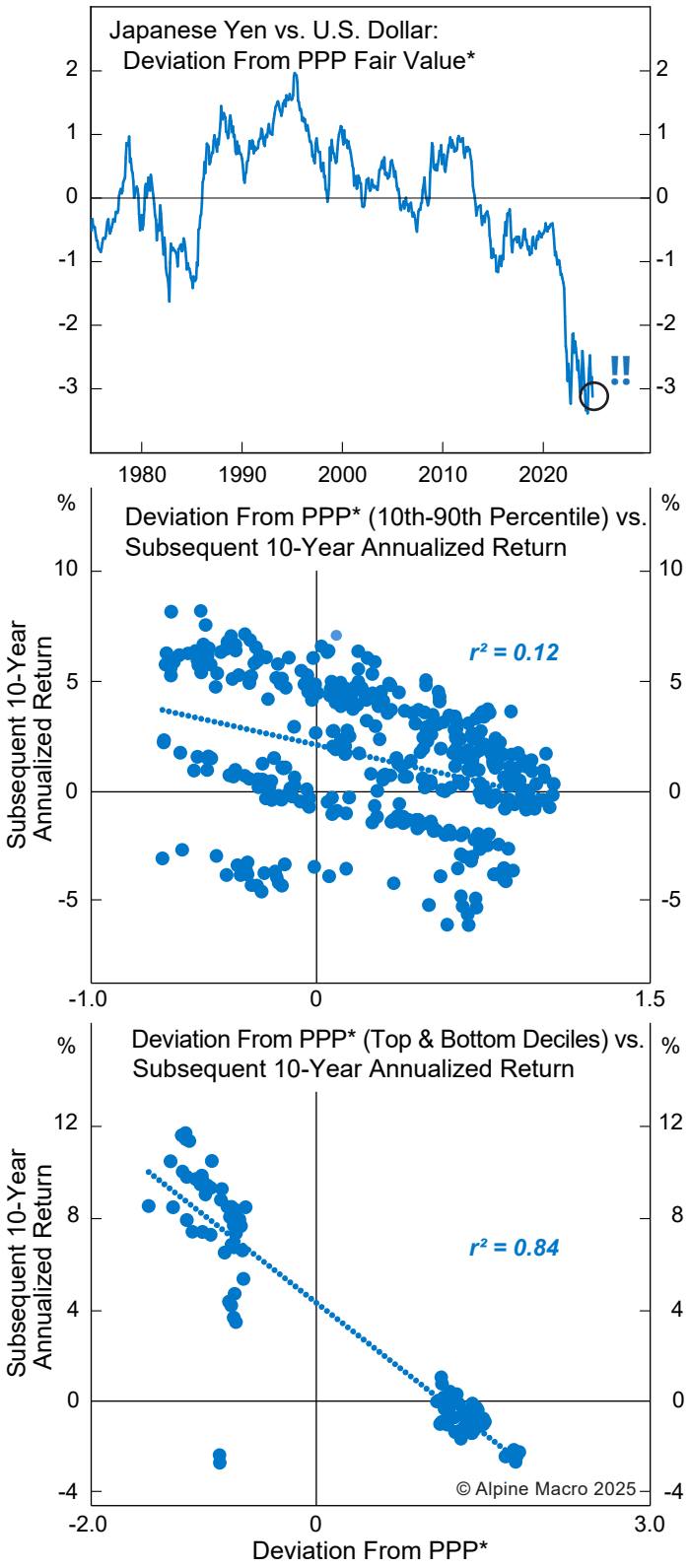
*Proportional hedging across all major currency exposures
**Pro-cyclical currencies are hedged first, followed by neutral currencies, and lastly counter-cyclical currencies
Note: Calculations based on a combination of unhedged and hedged global equity portfolios; sample period is 1994-2024; source: MSCI, Bloomberg Finance L.P., Alpine Macro calculations

That said, the "off-the-shelf" hedging strategy discussed can be tailored to improve practicality or reflect high-conviction market views.

For example, instead of applying the optimal hedge ratio uniformly across all currency exposures, managers could prioritize hedging pro-cyclical currencies while leaving safe haven currencies unhedged or hedging them only when necessary. This would strengthen a portfolio's defensive characteristics during market downturns.

Chart 10 shows how this adjustment, applied to a GBP-based investor, further diminishes portfolio volatility.

Chart 11 Maintain Long Exposure To The Yen



*Based on relative manufacturing producer prices; shown standardized; source: OECD, Alpine Macro calculations

This strategy can also incorporate a forward-looking perspective by entirely avoiding hedging the Japanese yen. The currency is now generationally cheap after having fallen to 3 standard deviations below its PPP fair value (**Chart 11**, top panel). Of course, the predictive power of valuations is strongest at extremes. This is particularly true for the yen (**Chart 11**, middle & bottom panels).

The odds of a powerful multi-year rally in the yen are rising as Japanese monetary policy shifts away from the zero lower bound. As such, it would be prudent for investors to maintain unhedged exposure to the currency.

Bottom Line: Investors can employ an "enhanced" passive hedging strategy by avoiding hedging safe haven currencies whenever feasible. The favorable multi-year outlook for the yen suggests it should be among the last currencies considered for hedging.

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