Managing currency risk in pension funds

Neil Record
Chairman - Record Currency Management

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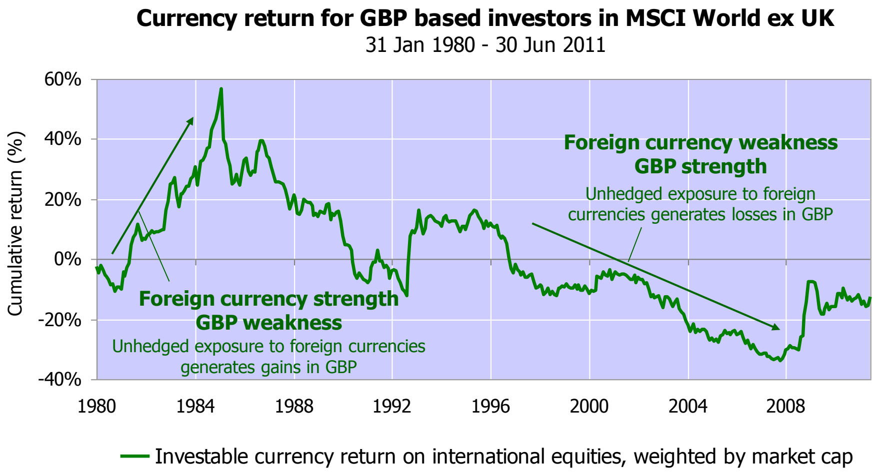
Why does currency risk & return matter?

- …because all UK pension funds have international assets…
- … and all international assets are denominated in foreign currencies
- Hence currency exchange rates affect asset values and returns

Currency returns are significant



Source: Record Currency Management Limited. Currency return represents 1m currency surprise based on exposure to MSCI World ex UK.

Currency management alternatives

- Funds can remain *unhedged*
- Funds can *passively hedge*
- Funds can *actively hedge*
- Funds can make an explicit choice about the size and nature of currency exposure (if any) they wish to hold – sometimes called *'passive plus alpha/beta'*

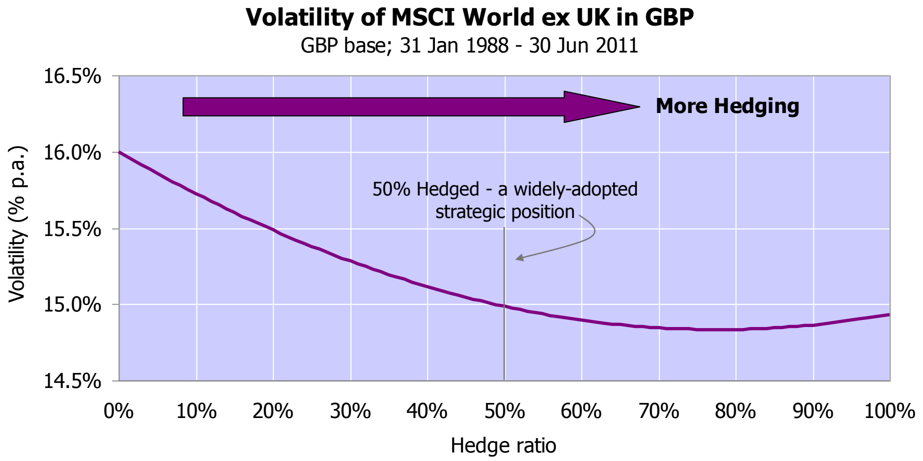
Unhedged

- International asset returns are fully exposed to foreign currency rate fluctuations
- This will contribute about 1.5% p.a. additional volatility to international equity portfolios and about 5% p.a. additional volatility to fixed income portfolios
- And in both cases, lower historic returns (30 yrs) versus hedged

Passive Hedging

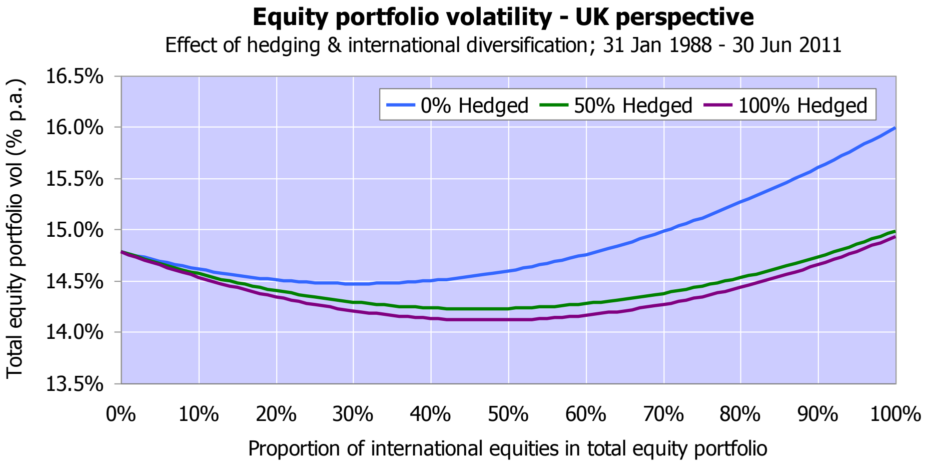
- Passive hedge
  - a series of short-term forward currency contracts
  - always to buy the local currency/sell the foreign currency
  - regularly adjusted to match the underlying assets, but remain a constant proportion (hedge ratio)
  - regularly rolled on maturity
- Pros: Very low cost (<10 bps p.a.); can fully eliminate currency risk
- Cons: Potentially disruptive negative cash flows, especially where hedge ratios are high; "regret risk"

Impact of passive hedging



Source: MSCI World ex UK, Record Currency Management

Hedging and asset allocation



Source: MSCI World ex UK, Record Currency Management

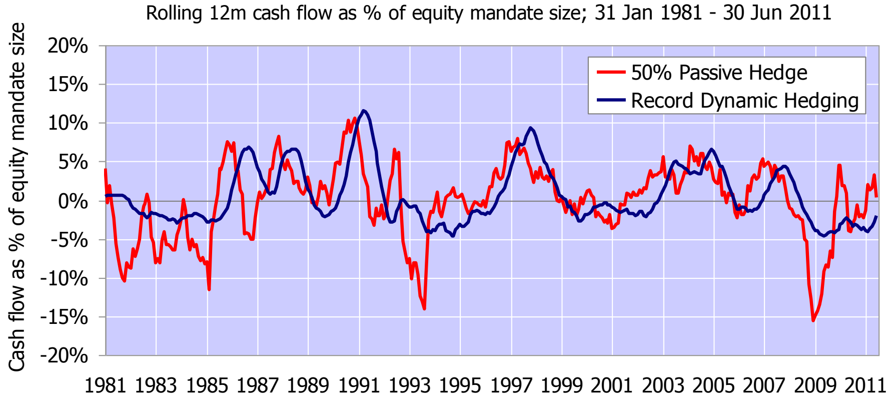
Active Hedging

- Active hedging is similar to passive, but instead of a constant hedge ratio, it is allowed to vary
- Specialist currency managers offer a variety of techniques or styles for active currency hedging
- A popular one is 'Dynamic Hedging', where the hedge ratio tends to follow the exchange rate:
  - Foreign currency strong = low hedge ratio
  - Foreign currency weak = high hedge ratio
- Dynamic hedging helps control negative cash flows

Controlling cash outflows

Hedging international equities to GBP

Rolling 12m cash flow as % of equity mandate size; 31 Jan 1981 - 30 Jun 2011



Source: Record Currency Management Limited. This slide is a simulation and has been provided for illustrative purposes only. The theoretical results have been calculated based on the passive and active hedging strategies standard implementation. The illustration is for a Sterling base currency investor hedging an MSCI World ex-UK Index (net) with specific contributions from USD, JPY, CHF and EUR (France and Germany).

Passive plus 'alpha/beta'

- Investors may consider that currencies constitute an asset or 'return' class
- If so, the highest quality return stream is likely to come from explicit choices about currency risk, not the result of equity or bond allocation
- So some investors eliminate all 'naturally occurring' currency exposure, and replace it with their chosen currency portfolio: "Passive plus alpha/beta"

Alpha or beta ?

- Alpha is positive return from active management. It requires persistent inefficiencies or characteristics to be successful
- Beta is positive return from a risk premium. The Forward Rate Bias ("carry trade") could be seen as a risk premium, with similar characteristics to the equity risk premium
  - Currency risk premium has strong 30-yr performance
- Investors could adopt either or both

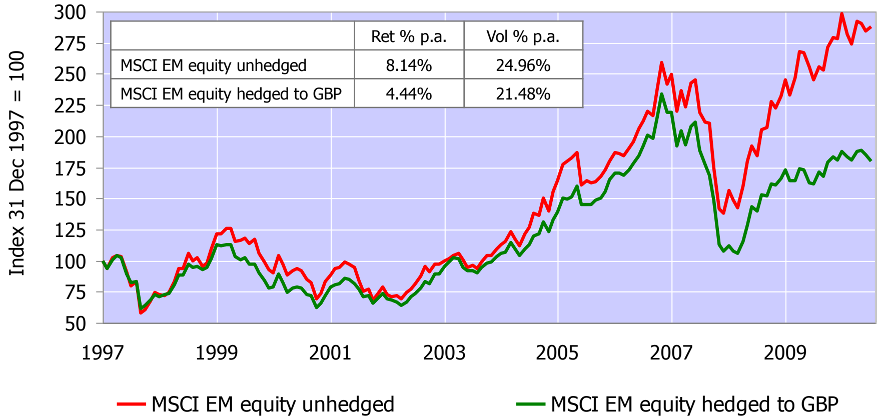
What about EM currencies?

- Emerging Market (EM) currencies tend to give excess return over developed market currencies
  - Higher GDP growth
  - Higher interest rates
- So we do not recommend hedging EM currencies because EM currency volatility is rewarded
- Not only may you not want to hedge, but you may wish to make an explicit allocation to EM currencies
  - Like ultra-short-dated EM local currency bonds

EM equity and currency returns

Currency contribution to EM equity returns

GBP base; 31 Dec 1997 - 30 Jun 2011



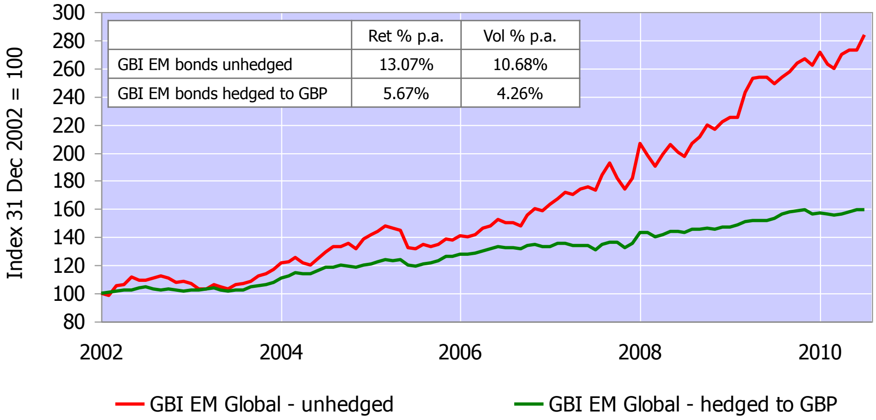
Source: MSCI, Record Currency Management. MSCI EM Equities Index rebased to 31 Dec 1997 = 100. Hedging transactions costs are not included

EM bonds and currency returns

Currency contribution to EM bond returns

GBP base; 31 Dec 2002 - 30 Jun 2011

	Ret % p.a.	Vol % p.a.
GBI EM bonds unhedged	13.07%	10.68%
GBI EM bonds hedged to GBP	5.67%	4.26%



Source: Record Currency Management, JP Morgan. The GBI EM Global index is an investable index that includes only those countries that are directly accessible by most of the international investor base, with bonds of maturity greater than one year.

Summary

- Hedging international developed market equities is risk-reducing for UK investors (and recommended)
  - Has also added modest value over the longer-term
- Dynamic hedging is a variant designed to control negative cash flows
- 'Passive plus' is a further option
- Hedging emerging market currencies is not recommended
- EM currencies could be a stand-alone asset, as could the Forward Rate Bias currency risk premium

Risk warnings

All data, unless otherwise stated in the footnote of the relevant page is as at 2nd December 2011.

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Performance warnings
Passive and dynamic hedging risk warnings
Hedging foreign exchange risk is typically undertaken at periodic rebalance points so that exposures and hedges are rebalanced to reflect the new information. Interim drift between hedged positions will take place because of market movements or because of tactical asset allocation changes in the currency composition of the underlying assets. In addition, hedges are generally rebalanced around certain tolerance levels. These factors will create divergence between the hedge returns and the fx impact on the underlying assets. In addition dealing costs must be taken into account. Further divergence can be caused by proxy hedges where the proxy currency and the underlying currency move relative to one another. Finally, it is generally the case that not all currencies in the portfolio will be hedged or proxied. This is typically the case where there the cost of hedging or the lack of a proxy currency becomes a factor.

Dynamic hedging
All passive hedging risk warnings are relevant to the dynamic hedging mandates. The following warnings are also relevant. Dynamic hedging mandates will vary the level of hedging in the portfolio at any time between the minimum and maximum hedge ratio range that is agreed. The investment strategy seeks to remove a proportion of the hedges on currencies which are observed to be strengthening against the base currency. This exposes the portfolio to losses in cases where the foreign currencies weakens relative to the base currency of the client. While there is a risk framework in place to reactivate the hedges when the foreign currency is observed to weaken, the portfolio will be exposed to losses between the periodic observation points in proportion to the extent of unhedged assets and the magnitude of the relative currency movement. Significant short term movements will cause greater losses.

Emerging markets
Emerging market currencies are typically subject to greater country-specific risks than developed market currencies. As a result of this and other factors, emerging market currency pairs are typically more volatile than developed market currency pairs. In addition, many (although not all) emerging market currencies are invested in through non-deliverable forwards (NDFs), which are cash settled, and the pricing of which is less deterministic than for deliverable forwards. Investment in emerging markets tends to be more volatile than more mature markets and the value of your investments could in some circumstances move sharply either up or down. In some circumstances currencies may become illiquid which may constrain the investment manager's ability to realise the investment. Political risks and adverse economic circumstances are more likely to arise putting the value of your investment at risk.

Before making a decision to invest, you should satisfy yourself that the product is suitable for you by your own assessment or by seeking professional advice. Your individual facts and circumstances have not been taken into consideration in the production of this document. Past performance is not a guarantee of future results. Portfolio returns are gross of fees and assume the reinvestment of all returns. The investment return and principal value of an investment will fluctuate so that when realised, may be worth more or less than the original investment.

This presentation shows portfolio returns on an unleveraged basis. Any increase of the gearing ratio will lead to greater volatility of the investment and potentially greater losses. Investors with significant leverage must be aware of the risk involved in the investment proposed, including the risk of total loss of the sum invested. Changes in rates of exchange between currencies will cause the value of investments to decrease or increase. The views contained herein are as of 2nd December 2011 and may have changed since that time.

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