Managing the Fund's currency exposure

Decision required

The Fund has a substantial exposure to overseas currencies through its holdings in overseas assets.

The performance of these currencies relative to sterling represents a risk. This risk is, in the main, unmanaged and the Committee is asked to agree whether it should be managed?

Recommendation

In our view, both the risk is substantial enough and the cost of mitigation low enough to make consideration of managing the risk worthwhile (although not critical) from a cost versus benefit perspective.

We propose the Committee meet L&G (an incumbent manager with the capability to manage this risk) in the near future to discuss and agree an implementation approach.

Introduction

This note, addressed to the Pensions Committee of the Suffolk Pension Fund, discusses the Fund's exposure to overseas currency and considers whether the risk implicit in that exposure should be reduced.

Importance of currency risk

In terms of relative importance, in general terms, currency risk ranks below both strategic (i.e. the split between equity, bonds and alternatives) and structure (diversification) risk. Reviewing both the strategy and structure of the Fund have therefore been the priorities over the past year or so.

However, given both:

1. Strategic and diversification considerations have been reviewed for the Fund in recent times and changes implemented; and
2. Substantial change in these two factors in advance of the triennial Actuarial Valuation appears premature (for note, we do not currently believe any major change is required in any case).

Undertaking a review of the currency risk exposure in the Fund appears both sensible and opportune at the current time.

The Suffolk Fund's exposure to overseas currencies

As a reminder, the current target allocation of the Fund is set out in the following table.

Table: Current target allocation of the Fund

Equities		
	Manager	*Target %*
UK	BlackRock (active) L&G (passive)	9.0 6.0
Regional Split by 3rds	L&G	10.0
Global	Newton	13.0
Global	RAFI	8.0
Total		46.0

Bonds		
	Manager	*Target %*
Index-linked gilts	L&G (passive)	4.0
Target return bonds	M&G	9.0
	BlackRock	6.5
Cash	Internal	0.5
-	-	-
Total		20.0

Alternatives (Diversification)		
	Manager	*Target %*
Property	Schroder	10.0
Hedge funds	Pyrford Winton	6.0 4.0
Infrastructure	KKR Partners	5.0
Emerging market debt	L&G	2.0
Distressed debt	M&G	2.0
Timber	Brookfield	1.0
Private equity	Pantheon	4.0
Total		34.0

As a result of the Committee's desire to allocate to a wider universe of stocks to enhance returns and improve diversification, which we support, the Fund is also exposed to the reporting currency of that wider universe of stocks. For example, investing a proportion of the equity allocation in the US to diversify the concentrated UK stock market and gain exposure to the growth of US stocks, has also meant an exposure to the US dollar.

In terms of the Suffolk Fund allocation above:

1. Around 1/3 of the assets are denominated in overseas currencies, mainly via the overseas and global equity allocations, and therefore these are the focus of this report.

   We refer to these as the primary currency exposure (i.e. the denomination of an asset). We contrast this to secondary exposures later in this note.

2. The high level split of the overseas currency exposure within the equity mandate is 50% US dollar, 25% Euro and 25% Asia and emerging markets (inc Japanese Yen).

3. There is some hedging of these via currency hedged overseas equity units in the L&G funds. However, the allocation to hedged currency funds within L&G has not been reviewed for some time and the allocations are a residual of some changes implemented in recent years.

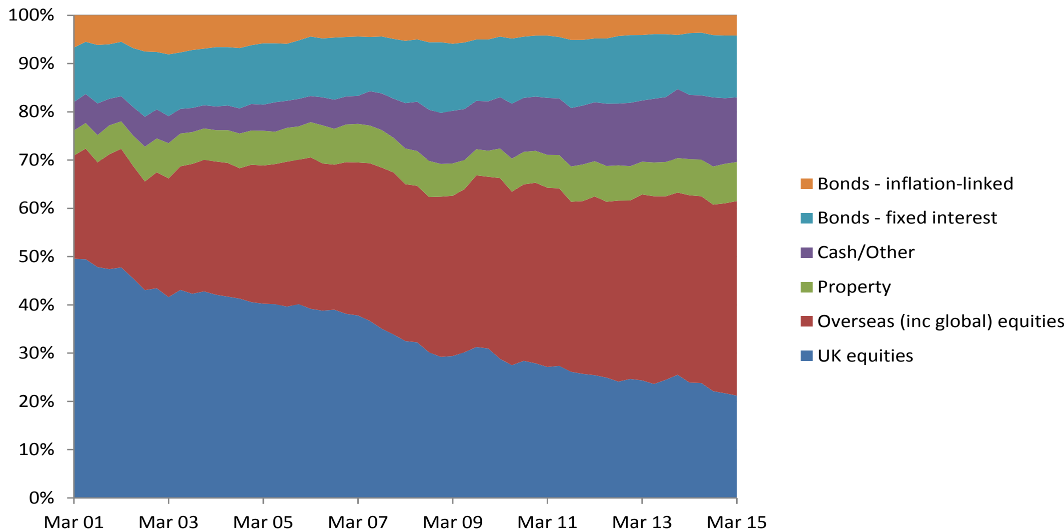
The overseas currency exposure discussed above is, in the main, a residual of the desired asset exposure and therefore not maintained with an expectation that it will add additional returns over the long term (i.e. the residual currency exposure is an uncompensated risk).

When considering the equity portfolio, although a currency is a less substantial source of volatility than the equity allocation itself (as we will show later in this paper), we always suggest the removal of an exposure to residual, unmanaged or uncompensated risk should be considered if it can be achieved efficiently (i.e. appears worthwhile on a cost versus benefit basis).

Context with wider LGPS

There has been a general trend for pension schemes to invest an increasing proportion of their assets overseas. This trend is shown in the following chart of (a simplified summary of) the average LGPS allocation.

Chart: LGPS 'average' asset allocation



In line with the factors that motivated the Suffolk committee, the change we have seen in the wider LGPS asset allocation has reflected a desire to embrace the following:

1. increased diversification;
2. increased opportunity set;
3. diversification of stock concentration issues within 'UK' indices; and
4. improved governance in overseas markets making these more transparent and investible (and therefore a more attractive area to allocate to).

Information on the level of currency hedging actually implemented within the LGPS is sparse and is difficult to assess based on numbers that implement a bespoke hedging mandate (it hides information on any hedging occurring within individual mandates, but not implemented at the total portfolio level).

However, our anecdotal perception and general market knowledge is that the number of LGPS Funds that implement a bespoke hedge is in the minority. Those which do tend to be the larger funds, given the governance required (this is certainly the case within the private sector).

However, this should not be considered a bar to currency hedging if the risk is considered substantial enough and there is adequate governance and time to consider the issues.

Secondary overseas currency exposure

Secondary currency exposure is a more subtle aspect than the primary exposure discussed earlier and it reflects a number of factors:

1. A company will be listed on a particular exchange and feature in a particular index. As a result, its shares are traded in the currency denomination of that index; however, its revenues may come from multiple currencies (for example, around 25% of UK companies' earnings come from the US and are therefore impacted by movements in the $/£ exchange rate);

2 Many companies report (and therefore account) and pay dividends in overseas currencies despite the country of listing (typically US Dollar dividends by global companies listed on non US exchanges). BP is an example of this as it is listed in the UK, but reports and pays dividends in dollars;

3 Companies' costs do not necessarily reflect their listing (the oil price is denominated in US Dollar) which will also impact performance; and

4 Companies engage in their own internal hedging.

For the purposes of this consideration, we consider these secondary exposures an unnecessary level of complication as:

1 Company balance sheet currency exposures are difficult to determine due to the inflows (costs of production), outflows (turnover) and level of internal hedging. This would require a company by company analysis which would be far too costly to justify; and

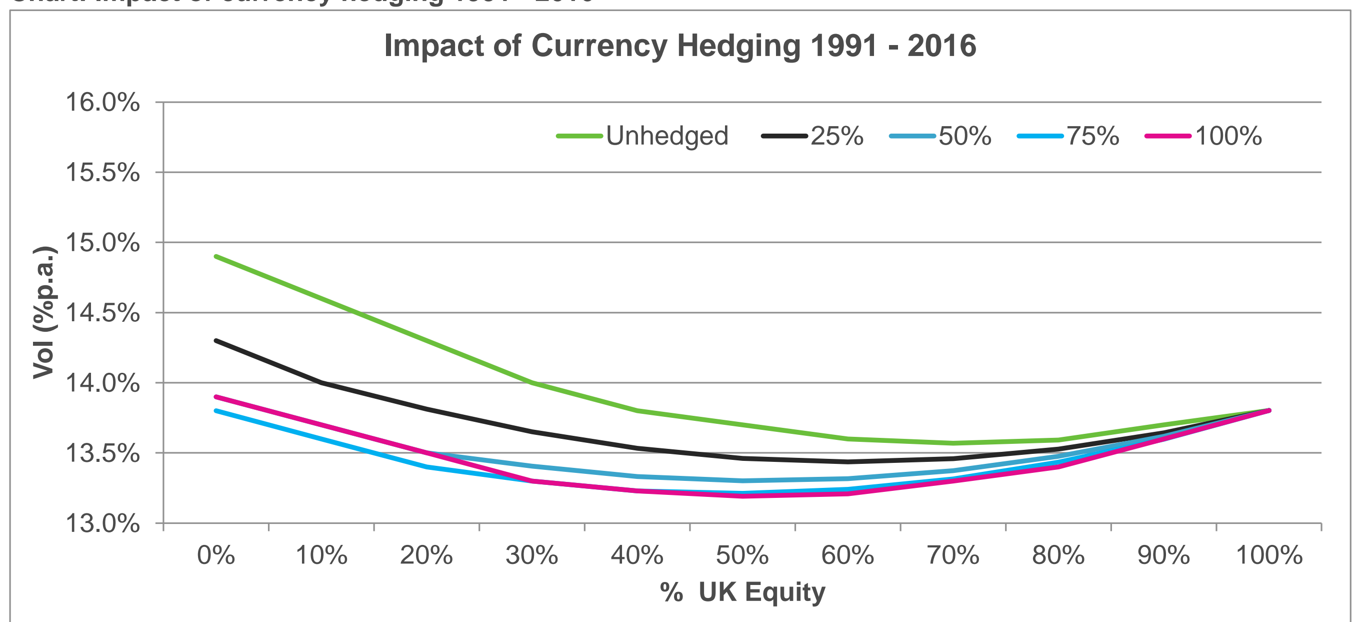
2 These exposures will change over time.

We therefore do not consider these secondary exposures further. We would view any attempt to tackle them as over engineered, costly and unreliable.

Currency hedging: back testing

Returning to the currency exposure by index denomination, we can consider the impact of hedging currency on the overall risk of a global equity portfolio. The data we have used looks back over a period of 25 years and is based upon monthly returns.

Chart: Impact of currency hedging 1991 - 2016



Source: DataStream

Comments:

1 Hedging has reduced the volatility of a global a global equity portfolio to a Sterling investor by around 10% p.a. over the past 25 years, as shown by the difference in volatility between 0% and 100% hedged portfolios with low UK exposure. Individual regional allocations have tended to show higher volatility, but

the diversification of currencies within global equities (and therefore the Suffolk portfolio) has acted to reduce overall currency risk.

2 There would have been no benefit in hedging more than 75% of exposure. It appears that a small amount of currency risk has acted to diversify equity risk.

3 Around the 60% UK equity proportion, close to the total allocation to sterling assets within the Fund, a hedge level between 50% and 75% would appear to have been sensible in terms of reducing volatility.

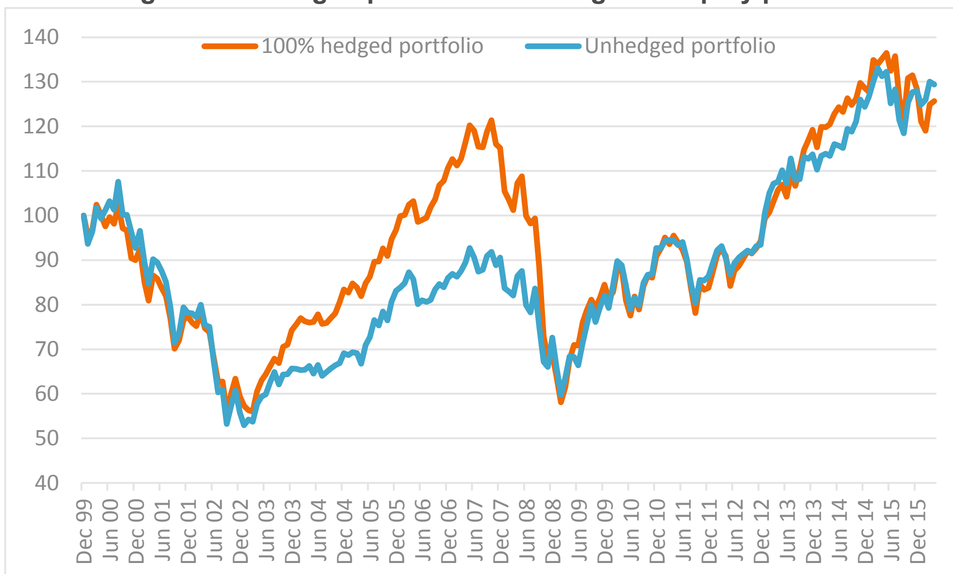
4 The results are dependent upon the time period considered. For the first half of the 25 year period considered the risk reduction achieved by hedging was more marked as currencies tended to be more correlated to the market. In the second half of the period, the risk reduction was less marked as currencies tended to be less correlated with the equity market. However, in both periods, hedging currency was risk reducing.

This means that by hedging we can either reduce overall risk in the Fund or alternatively allocate the currency risk elsewhere in the Fund to target additional returns.

Impact on performance

The following chart suggests that currency has had little long-term impact on returns to sterling investors since the late 1990s. Again we would caution reading too much into an individual time period, although this broadly coincides with the introduction of the new monetary policy regime that followed Bank of England independence.

Chart: Hedged vs unhedged performance of a global equity portfolio Dec '99 to Dec '15



However, even if you subscribe to a more general view that currency risk will 'wash out' over time, we believe the actual outcome to an investor is more nuanced than this. The chart also shows that short term performance deviations can be very significant, which can be important since:

1 benchmark and manager allocations change over time (either through rebalancing or active stock allocations), 'crystallising' relative currency performance; and

2 pension schemes that require asset sales to meet benefit payments may also crystallise short term currency volatility.

The Suffolk Fund is in a positive cashflow position at the current time (contributions received are in excess of benefits paid) and therefore this disinvestment issue is not relevant currently. At some point in the future, the

Fund will turn cashflow negative, but the need for overseas asset sales will likely be a long way in the future given the potential to realise income from UK assets.

Implementation

As the currency allocation is bespoke to the Fund, if the Committee would like to implement currency hedging, this will need to be a bespoke arrangement (even following LGPS pooling).

This could be achieved by either:

1. Appointing a manager to implement a segregated mandate of currency derivatives to hedge currency exposures[1].
2. Utilising existing L&G overseas equity passive funds that are currency hedged. By utilising fully hedged passive overseas equity funds within L&G, the effect across the Fund's total overseas equity assets would be to achieve somewhere around a 1/3rd currency hedge.

If 1 were the preferred option, L&G would appear an appropriate manager to consider, given they are experienced in this area and are an existing manager of the Fund. Management fees for a segregated mandate would likely be of the order of 0.05 to 0.1% p.a. of the notional value of the hedge. Transaction costs of implementation of the hedge (i.e. trading the underlying instruments) are very low as the instruments used are very liquid and highly traded.

If 2 were the preferred solution, this would require some switching within the existing L&G funds. Fees for currency hedged funds are c0.03% p.a. above unhedged, reflecting the additional management required (noted below).

Governance

Segregated bespoke currency hedges do require some additional governance including cash collateral to provision for gains and losses on derivatives positions. Cashflow management of the currency hedge will also be required by the Fund Officers (working with the hedge manager) to maintain the collateral level (monies will go back and forth as derivatives positions move from gains to losses as currencies change relative to sterling).

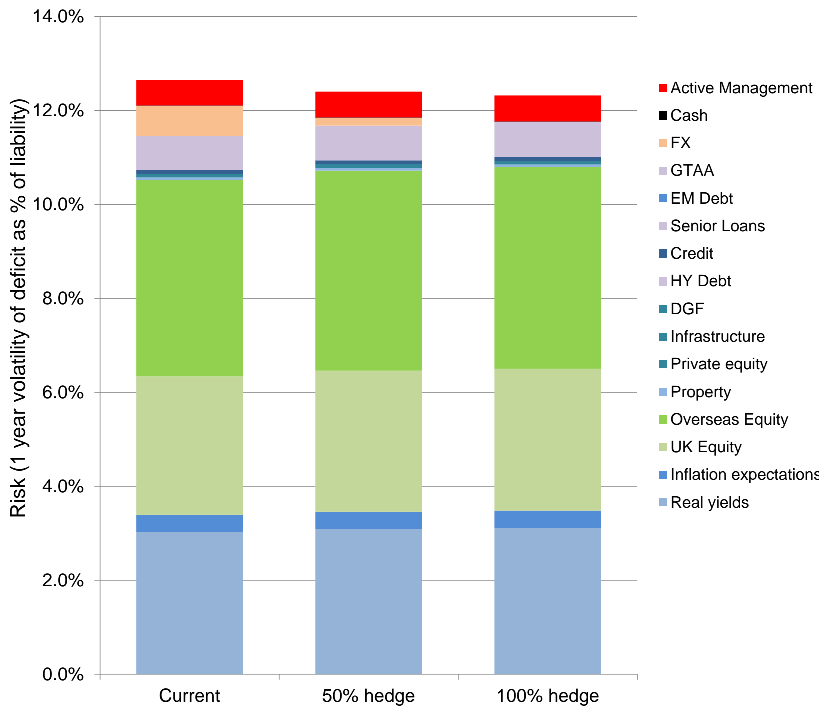
L&G pooled funds will require no additional governance as they manage the currency exposures and cashflows within the funds themselves (reflecting the additional fee).

Risk impact on the Suffolk Fund

An analysis of the risk impact of implementing a 50% and 100% currency hedge on a portfolio of assets similar to the Suffolk Fund is shown in the following chart (reliances and limitations of this analysis are shown at the end of this document).

[1] The details of this are beyond the scope of this paper. However, at a very high level, the currency hedge is implemented by swapping a proportion of the Fund's overseas currency exposure for Sterling in the derivatives market. This involves fixing the price of overseas currencies in advance on a rolling basis by entering into financial derivatives referred to as currency futures.

Chart: Comparison of risk projections assuming different levels of currency hedge



The implementation of a currency hedge in this modelling had no impact on expected return.

Consideration of currency hedging therefore seems worthwhile given the potential 5% risk reduction as shown above.

Hedging benchmark or actual allocations

There is a question over whether any currency hedge should look to manage the actual or benchmark currency exposure of the Fund.

In an idealised world we would propose managing the actual currency exposure of the Fund as the active managers are generally taking active allocation positions relative to their benchmark indices. These active positions will likely include some view on currency, but currency will generally not be a primary driver and, except in extreme circumstances, managers are unlikely to hedge these positions.

However, this adds a further layer of complexity which would require frequent detailed analysis of manager allocations and rebalancing of the currency hedge portfolio.

Overall, we prefer a benchmark based approach which will deal with a significant proportion of any risk without the need to be concerned about over engineering at the margins.

For this reason, we also recommend clients are pragmatic around the currencies hedged and the use of proxies where appropriate to allow efficient implementation of hedging in the most significant and liquid currencies.

Strategic versus tactical considerations

There is a question about whether any tactical views should be overlaid on any agreed strategic currency hedging target.

However, to implement such a strategy would require an appropriate level of governance and advice on market cycles.

We are wary of the implementation of such a strategy as currencies can move a long way (and for a long time) from any assessment of fair value and the additional return being targeted is purely based on the managers skill to ‘call’ this move.

This has potential to offset the more simple risk reduction targeted and therefore we are not proposing it is pursued.

Conclusion and recommendation

Anecdotally we understand that the majority of pension schemes do not hedge overseas currency exposure.

We believe that this is not because they do not consider it a risk, but that it tends to be a lower priority than other risk considerations. It can also be more complex for smaller schemes to find an appropriate solution and even some larger LGPS schemes struggle with the governance required (Committee understanding and implementation).

However, it is a real risk which, for a large fund like Suffolk, can be managed at low cost.

We therefore believe it is appropriate for the Committee to undertake further consideration into implementation approaches and ask a manager (we would suggest L&G as an incumbent) to present to the Committee on management approaches so a final decision can be made as part of the wider review of the Fund structure following the triennial Actuarial Valuation.

Prepared by:-

Matt Woodman, Senior Investment Consultant

For and on behalf of Hymans Robertson LLP

Risk Warning

Please note the value of investments, and income from them, may fall as well as rise. This includes equities, government or corporate bonds, and property, whether held directly or in a pooled or collective investment vehicle. Further, investment in developing or emerging markets may be more volatile and less marketable than in mature markets. Exchange rates may also affect the value of an investment. As a result, an investor may not get back the amount originally invested.

Past performance is not necessarily a guide to future performance.

RELIANCES AND LIMITATIONS

The expected returns and volatilities pertaining to particular structures have been obtained through modelling and are therefore highly dependent on the specific assumptions made, in terms of risk and return expectations, both for asset classes and managers. Expected returns and volatilities are calculated using 5000 simulations of Hymans Robertson Asset Model (HRAM), the stochastic scenario generator developed by Hymans Robertson LLP, calibrated using market data as at 31 January 2016. Relative returns and volatilities are based upon geometric returns in excess of those calculated using a set of typical pension fund liability cashflows.

The model is intended to provide indications of the returns and the mainstream risks which a structure could typically be expected to incur. It is in no way intended to indicate the frequency or impact on the fund of extreme moves in either asset portfolio or liability values. Asset class assumptions have, where possible, been chosen to be broadly consistent with the output of HRAM, which is used in asset-liability modelling work. Active risk and return assumptions for managers are encapsulated in tracking error (risk versus benchmark) and information ratio (expected return per unit of active risk) parameters. These have been chosen to broadly reflect the anticipated performance of managers. In setting the expected returns for active managers, we have assumed that these

managers exhibit a degree of skill. While all modelling assumptions are partially subjective and subject to considerable uncertainty, this caveat applies particularly in respect of outperformance by active managers given the relative lack of directly relevant empirical evidence. Fee indications are based on typical fee levels for the size and type of mandate.

The risk referred to in this report is measured by the (annualised) estimated standard deviation of the returns of the assets relative to the liability returns. Such a measure is appropriate for measuring 'typical' variations in the relative values of the assets and liabilities over short time periods. It is not appropriate for assessing longer term strategic issues because such issues will depend inter alia on (a) cash flows into and out of the fund (b) more extreme outcomes that are not captured using the volatility measure and (c) asymmetry in the range of outcomes from different financial instruments. This model should therefore not be used as a replacement for a full investment strategy review.