 For Investment Professionals only

LGPS **INTELLIGENCE**

Focusing on the long term

LGPS funds face a combination of economic and demographic risks. To manage these risks, we believe in long-term, objective-driven investing.

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ASSESSING LONG-TERM RISKS

LGIM believes in objective-driven investing. This means investment solutions should take account of client-specific objectives and manage risk in a holistic way towards these objectives.

In particular, long-term objectives such as "paying all pensions as they fall due" should be the primary drivers of all scheme decision making.

The two key risks that Local Government Pension Scheme (LGPS) funds face are:

1. **Economic risks** – broadly defined as scheme assets underperforming or liquidity requirements not being correctly anticipated
2. **Demographic risks** – our Long-term Thinking[1] looks at these risks in great depth, but the most well-known example here would be longevity risk – the risk that scheme members live for longer than expected

Our view of success for pension schemes is "the assets outlasting the liability cashflows so that all pensions are paid". We believe focusing on this long-term success provides a holistic way to achieve the right risk balance. In this paper we explore the consequences of employing the LGIM view of success for the LGPS.

[1] http://www.lgim.com/library/knowledge/thought-leadership-content/long-term-thinking/baby_boom.pdf

DEFINING SUCCESS FOR THE LGPS

Defining success precisely for the LGPS can be challenging. One reason is that some consider that there is a strong covenant in local government. However, funds are not immune to affordability considerations. A higher chance of meeting accrued benefits using only *existing* assets (ie. not allowing for future contributions) has a lower chance of requiring any further deficit contributions. As such, understanding the risk of existing assets being able to meet existing/accrued benefits is important.

Another complicating factor is future accrual, meaning there is no end in sight for either asset or liability cashflows. This presents a potential balancing act for the LGPS as funds become better funded. On the one hand there is a need to reduce the risk associated with accrued benefits. On the other hand there is a desire to keep the cost of future accrual low. A more growth-heavy strategy reduces the expected cost of future accrual but it also comes with a risk that the strategy underperforms, requiring substantial deficit contributions. As an example, should a very well-funded scheme that is open to future accrual, de-risk into gilts and corporate bonds to reduce the risk of assets underperforming and the fund requiring deficit contributions? Or should it maintain a substantial growth allocation to keep the expected cost of future accrual down?

The reality is that many LGPS funds do not want to significantly reduce their equity weights as they desire a high expected return to keep expected costs low. This is why a number of LGPS funds are considering equity protection instead as a tool to help improve their investment outcomes and achieve their long-term investment objectives.

It is not the purpose of this paper to enter this debate. We have, for the sake of argument, assumed that investment strategy is set with respect to accrued benefits only. This makes success easier to define. Subject to this assumption, we present some of our ideas on achieving long-term success that we hope you will find thought provoking. However, we recognise a potentially wider debate involving the role of future accrual.

A MINDSET SHIFT

To understand the shift in mindset we advocate, it is worth thinking about what ultimately LGPS funds ought to care about. Is it a funding level figure, a deficit figure, short-term volatility or value at risk?

As an example, how should one judge an investment strategy relative to another that has a higher expected return, a lower chance of full funding at the next valuation date and a comparable 1-in-20 gilts funding level after 10 years? We argue none of these metrics are, in themselves, the key numbers to focus on from an investment strategy perspective.

We believe that probabilistic/stochastic measures of long-term success, incorporating as many risks that the fund faces as can be modelled, are more appropriate for the modern world where computing power is more widely available.

RETHINKING LONG-TERM SUCCESS

Our approach is, for each possible future scenario, to calculate what we call the proportion of benefits met (‘PBM’) as a measure of success. This is calculated as simply the sum of the pensions that can be paid from existing assets divided by the sum of the pensions promised.

As a simplified example, suppose a scheme has promised payments of £100 per annum for the next 20 years but existing (current) assets only last for 10 years. In this instance PBM would be 50%, as only 50% of benefits promised can be paid.

PBM creates an easier way to think about success, given all the risks and uncertainties LGPS funds are managing. Investment strategy should focus on obtaining the most attractive distribution for PBM as possible, based on many simulations of what could happen in the future.

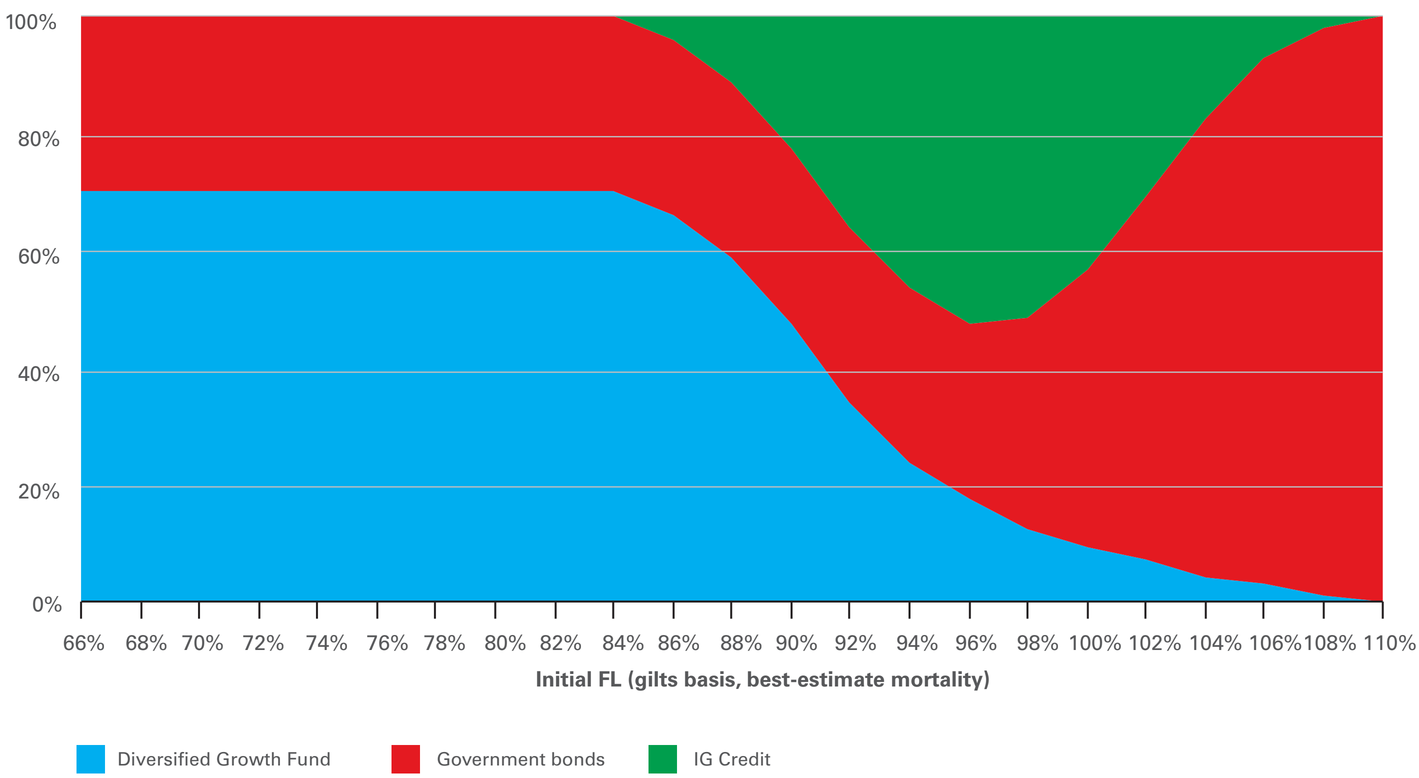
One summary statistic of the distribution of PBM values is the expected (ie. average) value of PBM over all simulations. We call this metric the expected proportion of benefits met or ‘EPBM’. This takes into account both the chance of assets failing to outlast liability cashflows and the extent of the failure if there is one. Higher EPBM values are better, reflecting a higher expected proportion of promised benefits met from existing assets.

SETTING INVESTMENT STRATEGY

One approach to investment strategy is to seek a high value for EPBM. Whilst we would not advocate that this is the only measure to be taken into account, it is interesting to see the results of choosing asset allocations that aim to maximise this metric.

In *Figure 1* we show allocations that seek to maximise EPBM for a scheme with characteristics typical for the LGPS. The calculations involve testing many different strategies using just three basic building blocks (for the sake of simplicity): a Diversified Growth fund (DGF), investment grade credit and government bonds[2].

Figure 1: Glidepath of asset allocations that seek to maximise EPBM



Source: LGIM calculations

2. For the purposes of allowing the potential cashflow-matching properties of credit to shine through we have also assumed that inflation risk is hedged using LDI, which imposes a collateral constraint.

As might be expected, higher funding levels are associated with lower allocations to growth assets. This is because upside potential is reducing relative to downside risk as the scheme becomes better funded, promoting a less risky investment strategy. At high funding levels, there is a substantial allocation to credit (assuming inflation risk is hedged. If not then assets with inflation-linked contractual cashflows may be attractive, or a more diversified growth strategy). Indeed, even when a scheme is 100% funded on a gilts basis there is some allocation to return-seeking assets, providing a buffer against longevity risk and other residual risks[3].

In our experience, traditional funding level driven strategies may:

- target an inappropriate level of return in some cases, failing to take into account all the risks schemes faced (such as longevity risk)
- fail to recognise cashflow-matching benefits of credit and other assets that generate contractual cashflows, so only hold them for diversification purposes.

Looking at long-term measures of success can help inform broad asset allocation strategy. They may also highlight the benefits of strategies that shape asset cashflows closer to liability cashflows.

SHAPING CASHFLOWS ISN'T JUST ABOUT BONDS

Gilts and corporate bonds are very useful in that they can more precisely match liability cashflows than growth assets. But bonds are not the only way to target a desirable profile of asset cashflows. Real assets (such as property and infrastructure debt) and equity dividends can provide a supporting role. Equity options may also help[4]. In particular, schemes can sell 'unnecessary' upside, or upside they believe is overpriced, and use this to pay for downside protection. This could have a positive impact on measures such as EPBM.

Another potentially attractive option for some LGPS funds could be cashflow generating multi-asset funds similar to those used for income-drawdown in Defined Contribution retirement pots[5]. These may adopt sophisticated liquidity management techniques to help generate a reliable cashflow stream. Using such funds allows schemes to 'port in' these capabilities at low cost and with minimal governance burden. Other growth strategies that may help include active strategies that focus in selecting companies with sustainable dividends that are likely to grow with inflation. This can help both meet pension cashflows (improving liquidity) and provide 'implicit' liability hedging.

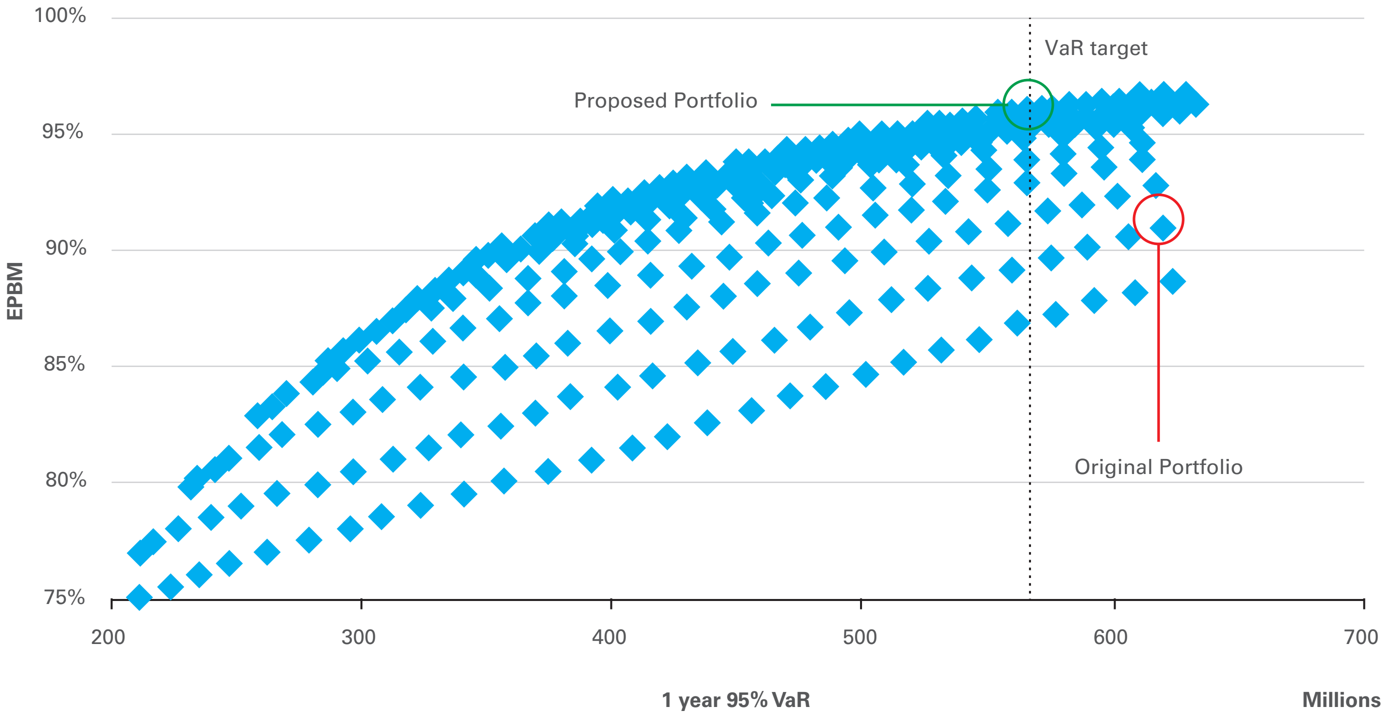
USING MULTIPLE LENSES

Our framework provides a holistic way for schemes to select appropriate investment strategies. However, it is not 'one size fits all', so some care and caveats are needed.

In practice, schemes should take into account a range of metrics, including more traditional measures before changing their investment strategy. Different metrics offer different insights into benefit security. Sometimes there are trade-offs involved and a scheme may want, for example, to seek to maximise long-term success subject to a short-term risk constraint. How this might work is shown illustratively in *Figure 2*. Each dot in *Figure 2* represents an investment strategy. The degree of short-term risk determines its position horizontally and expected long-term success determines its position vertically. Given a certain degree of tolerance for short-term risk, one can select the portfolio that seeks to maximise expected long-term success.

3. Further discussion of this can be found here http://www.lgim.com/library/knowledge/thought-leadership-content/foresight/LGIM_Foresight_Sep_2016.pdf
4. For a discussion of how equity options could be used please see http://www.lgim.com/library/knowledge/thought-leadership-content/lgps-intelligence/LGPS_Intelligence_June_2017.pdf
5. such as LGIM's Retirement Income Multi Asset fund

Figure 2: Understanding the trade-off between short-term risk and long-term success



Source: LGIM calculations

There is no single 'right' investment strategy but consideration of a range of metrics can help schemes avoid a wrong one.

WHAT NEXT?

We would be very happy to work with you and your advisers to discuss our findings in more detail, and show how they could be relevant for your scheme. We are also happy to offer a bespoke training session with your committee to help them understand our approach to long-term risk.

LGIM offers objective-driven investment solutions.

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