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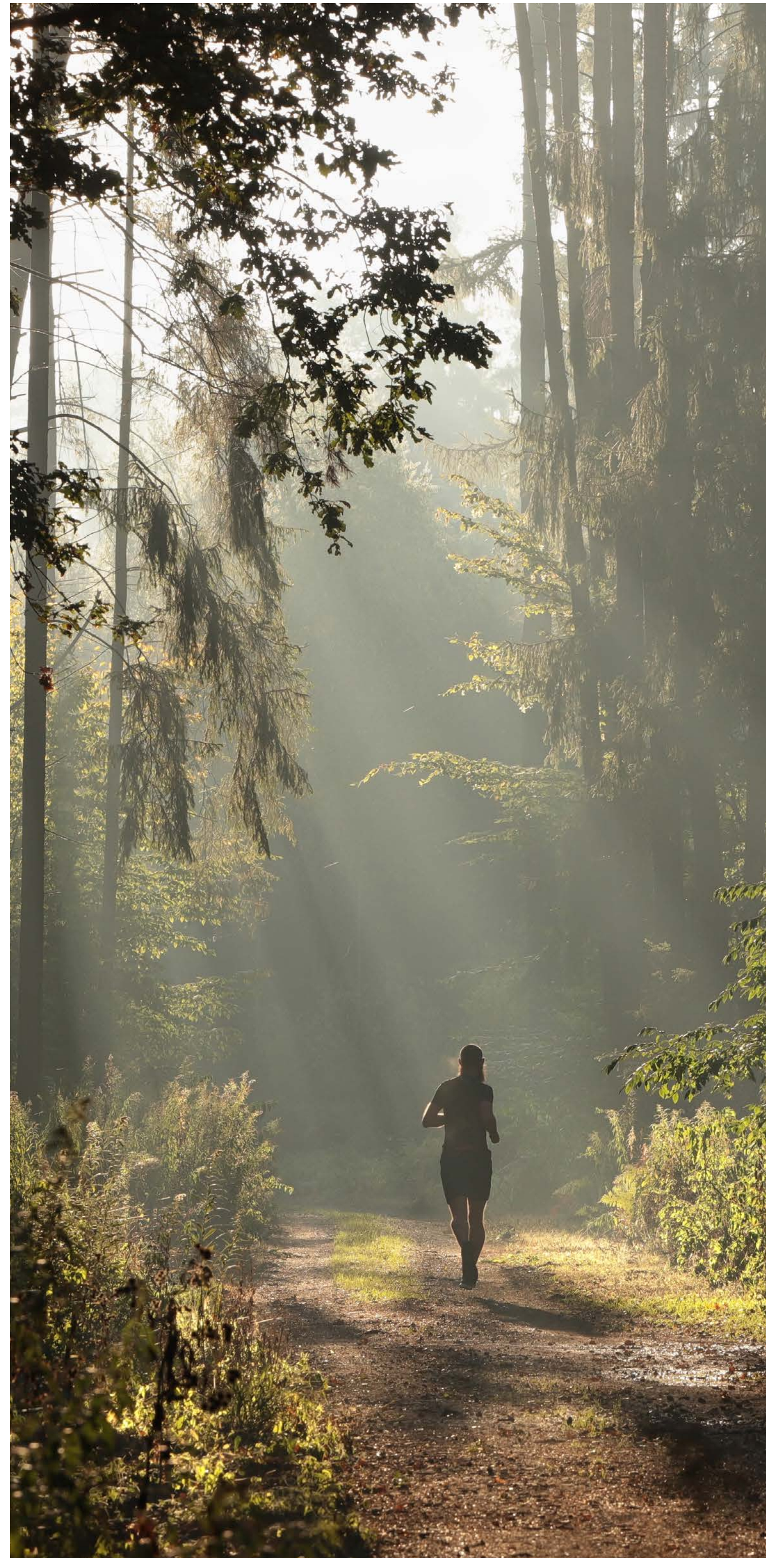
Capital at risk.

Running on into retirement?

Strategies for maintaining scheme health and unlocking surplus.



Maturing in age needn't mean being in poor health. Nor does it rule out ambition. So how can DB schemes opting to 'run on' retain healthy funding levels, while also seeking to benefit from a growth mindset?

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Our latest DB endgame paper focuses on 'run-on' and investing to both pay pensions and generate surplus in the endgame. As with strategy design in general, there is no one-size-fits-all solution. Schemes need to weigh up trade-offs when it comes to meeting their objectives. This paper is about understanding those trade-offs.

Key risk: The value of investments and the income from them can go down as well as up and you may not get back the amount invested. Past performance is not a guide to future performance.

To do so, we believe it's important that multiple potential investment and extraction policies are considered, so that schemes can select a strategy that best reflects their objectives, circumstances, and beliefs.

We illustrate the trade-offs between benefit security and surplus generation for two case studies. The first is focussed on long-term surplus generation, where we flex the investment strategy. The second considers more regular surplus extraction, where we flex the extraction criterion.

With high funding levels now common, our analytics demonstrate that in both cases we find it should often be possible, regulations permitting, to generate substantial surpluses while maintaining a high level of benefit security.

Together with a strong qualitative understanding of the factors at play, we believe the framework we outline in this paper can put schemes in good stead to tackle the challenges they face.

A new dawn for extracting surplus?

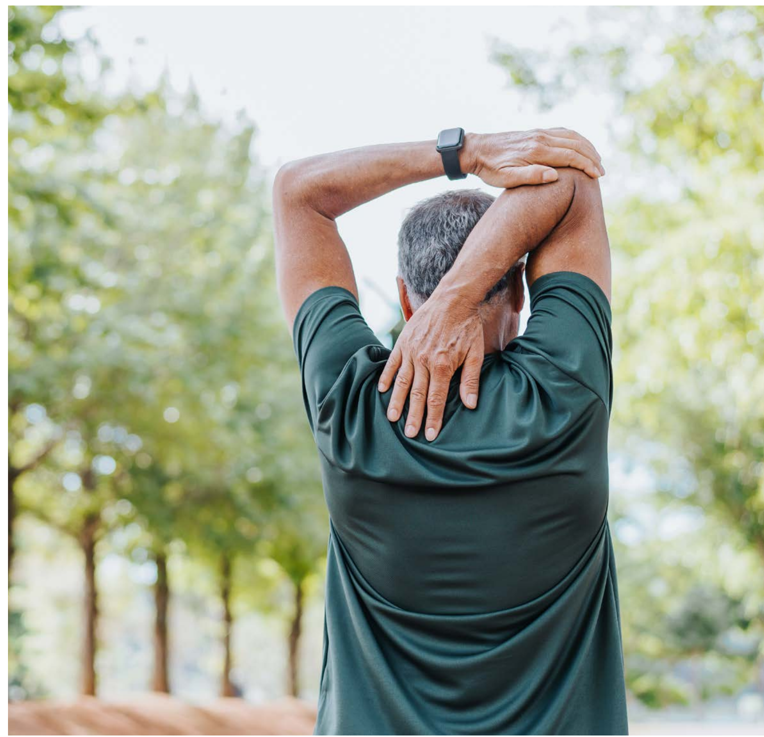
According to The Pensions Regulator (TPR), most DB pension schemes have seen material improvements in funding levels and many schemes are now expected to have exceeded their estimated buyout funding level. This gives trustees and sponsors an opportunity to reassess their long-term targets and consider their run-on, consolidator or insurance options[1].

This collective change in DB scheme circumstances since 2021 combines with a second driver for change: the government announced an overhaul of the UK pensions framework in 2023 with a consultation on "Options for Defined Benefit Schemes"[2], and steps are being taken to make surplus generation and extraction easier[3].

Two important questions trustees need to consider as they run on are:

- How should a scheme tailor its investment strategy towards growing the surplus, while seeking to protect accrued benefits?
- At what point is extracting surplus a 'safe' activity?

The above two questions are linked, with a critical consideration being why a scheme is aiming to grow its surplus.



Holistic or not?

An important feature of portfolio construction is that it should be holistic. As tempting as it might be, one shouldn't just blend together strategies for different jobs and assume the overall portfolio is ideal. Like baking a cake, the ingredients interact. For example, it can be tempting to think of CDI just as 'assets that pay pensions' but really all assets can pay pensions, and all assets can be sold as part of surplus extraction.

The distinction between surplus assets and other assets is also potentially dangerous for setting investment strategy. For example, as we shall see, at very high funding levels it can be possible to invest more than the surplus in growth assets but maintain a high degree of safety of accrued benefits.

This all said, a segmented or 'pot-based' approach is much easier to explain and can result in a sensible strategy in many cases in our view, provided care is taken to ensure that there aren't materially better alternative strategies given the scheme's particular objectives and constraints. We illustrate one such potential approach on the next page.

In practice, viable solutions can combine both ways of thinking. Candidate strategies may be based on intuition, but analytics can be used to make comparisons with other potential strategies to check nothing material has been left on the table.

1. Annual Funding Statement 2024 | The Pensions Regulator
2. Options for Defined Benefit schemes – GOV.UK (www.gov.uk)
3. The tax charge of 35% on pension surpluses was reduced to 25% on 6 April 2024.

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A candidate strategy: revisiting a matching / growth portfolio-based approach

The example below illustrates how trustees can consider their opportunity set and which asset types fit with their objectives:

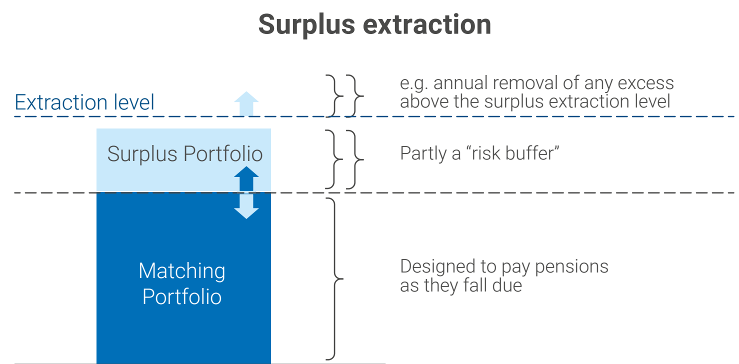
1. Construct a 'Matching Portfolio' to meet accrued benefits. This assumes trustees believe that cashflow matching in CDI and LDI is the most efficient way of paying pensions[4]. This may include exposure to cashflow-generating assets such as government bonds, investment grade credit, emerging market debt, private credit, other illiquid assets and high yield bonds. These aim to deliver predictable cashflows without needing to be sold.

2. Invest the remaining assets in a 'Surplus Portfolio'. This can serve at least partly as a 'rainy day portfolio' – a first point of call to be used to top up any deficit in the Matching Portfolio.

3. Ideally, calculate the liability using a dynamic discount rate that is sensitive to credit spreads. The idea is that only downgrades and defaults in the Matching Portfolio impact the funding position, as opposed to movements in spreads that don't impact the ultimate cashflows generated. A dynamic discount rate can be useful to avoid over- or under-extracting surplus.

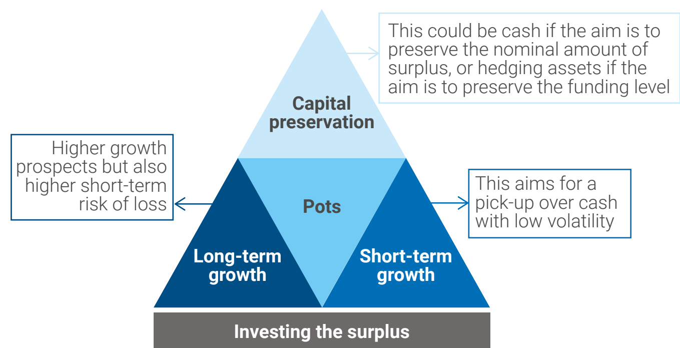
4. Extract money, for a range of potential purposes[5], if the total assets (and any agreed covenant support) are greater than a 'surplus extraction level' (a multiple of the liabilities). This could involve paying out money to the sponsor (or to a DC scheme), but it could also involve awarding one-off discretionary benefits, or increasing and effectively redefining the liabilities.

Surplus extraction



Source: LGIM as at June 2024, for illustrative purposes only.

5. Finally, the Surplus Portfolio may be thought of in terms of three 'pots' of assets which can be blended according to the aims of the Surplus Portfolio. Some of the surplus could be a risk buffer against adverse experience of the Matching Portfolio versus liabilities, with the rest invested in short- or long-term growth:



Source: LGIM as at June 2024, for illustrative purposes only.

Conceptually considering the objectives for the Matching and Surplus Portfolios separately is useful, but further analysis is needed at the total level to quantify the investment and extraction policies for a given scheme's objectives, circumstances, and beliefs.

4. This is debated in a previous whitepaper Core DB strategy: Revisiting assets that pay pensions
5. Subject to evolving legislation

Key risk: The value of investments and the income from them can go down as well as up and you may not get back the amount invested. Past performance is not a guide to future performance.

Case study 1: A holistic investment strategy for long-term surplus generation

The above construction could be overly constraining. In a recent blog we gave an illustration of why a holistic approach is important. We considered two relatively simple optimisations of investment strategy across three building blocks – diversified growth, CDI and LDI, and assumed no surplus extraction in the near term.

To assess benefit security, we used a probability of failure (PoF) metric i.e. the chance of failing to ultimately pay all promised benefits, assuming no further contributions. Accrued benefits were considered 'secure' if there was less than a 1% chance of ultimate failure. Accordingly, given a secondary objective to grow the surplus, we sought to maximise the expected return of scheme assets subject to the PoF being less than 1%. If that wasn't possible, we just minimised the PoF.

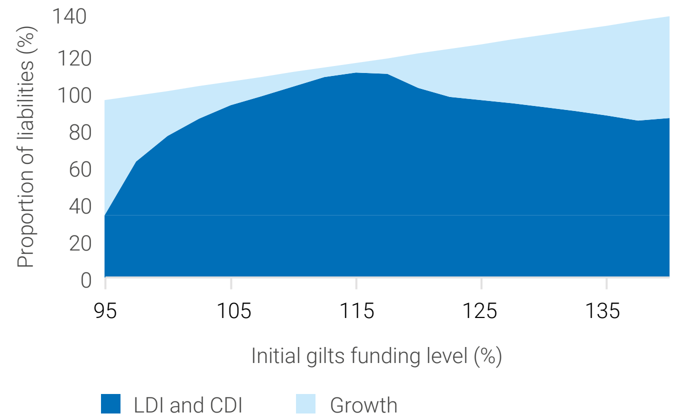
The charts below show our results. For different initial funding levels, we've shown the optimised asset allocation, expressed as a proportion of the liabilities.

The results suggest that as the funding level increases above 115%, matching assets within a CDI and LDI strategy becomes less relevant to protecting accrued benefits, and you are freer to focus on growth.

This analysis assumed no regular extractions of surplus, which makes life relatively simple. For some schemes, more regular extractions may be more suitable, however. For example, it could be generationally unfair to current pensioners to wait over a decade to use any surplus generated to uplift pensions.

But if regular extractions are taken, it's critical that we understand their long-term impact. This is our next case study.

Maximise expected return subject to PoF <1% (otherwise minimise PoF)



Source: LGIM calculations at 31 January 2024. Further details can be found on the LGIM blog[6]. **Assumptions, opinions and estimates are provided for illustrative purposes only. There is no guarantee that any forecasts made will come to pass.**

6. Unlocking surplus: adapting to an evolving endgame

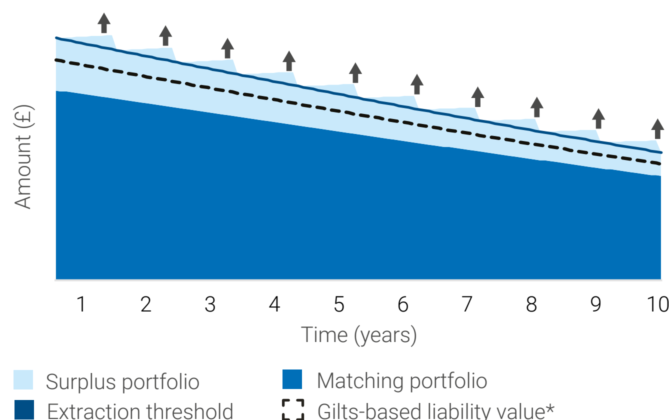
Case study 2: Setting a regular extraction policy
For this case study, we consider a scheme that is invested with a 'Matching Portfolio' invested in a CDI and LDI strategy and a 'Surplus Portfolio' invested in short-term growth, which aims for a pick-up over cash with low volatility. The scheme wishes to send a regular surplus payment to the sponsor.

The scheme is initially 105% funded on a liability basis that has gilts-based (+0%) discounting on average (as in case study 1), so is prudent, but is credit-sensitive i.e. uses a dynamic discount rate[7]. As mentioned earlier, the motivation for a dynamic discount rate is that only the downgrade and defaults on credit assets should impact the funding position, as opposed to movements in spreads that do not impact the ultimate asset cashflows delivered, reflecting the primary objective of a run-on strategy. This is helpful when regular payments out are intended, as it helps avoid over- or under-extraction.

The prudence in the liability basis means the 'Matching Portfolio' only needs to be 85% of the value of the liabilities, invested in bonds expected to generate a higher return than gilts to cumulatively match cashflows. As a result, the remaining 'Surplus Portfolio' is 20% of the liabilities (despite the surplus on this liability basis only being 5% of liabilities).

In this illustrative example, the assets are expected to generate surplus of around 1.3% per annum from excess return on the assets over the liabilities[8]. This generates surplus that can be extracted yearly based on a funding level extraction threshold. We set this as a multiple of the value of the liabilities. This is illustrated below:

Expected yearly extractions



*With dynamic discount rate. Source: LGIM calculations, June 2024.
Assumptions, opinions and estimates are provided for illustrative purposes only. There is no guarantee that any forecasts made will come to pass.

"The challenge is to set a suitable threshold for surplus extraction. Set it too low and the security of accrued benefits may be compromised."

The challenge is to set a suitable threshold for surplus extraction. Set it too low and the security of accrued benefits may be compromised. Set it too high and surplus may be distributed too late. The analytics shown on the next page can help to determine a suitable trade-off. To summarise the graphic, it shows the extent to which more aggressive policy boosts expected extraction amounts but also reduces member security.

Looking at it in more detail, the left-hand column gives an indication of member security by plotting funnels of doubt (i.e. percentiles over time) of the funding level assuming no deficit contributions. In terms of benefit security, you can think of 'good' as staying above 100%. There is relatively little risk with no extractions as you can see from the top-left box.

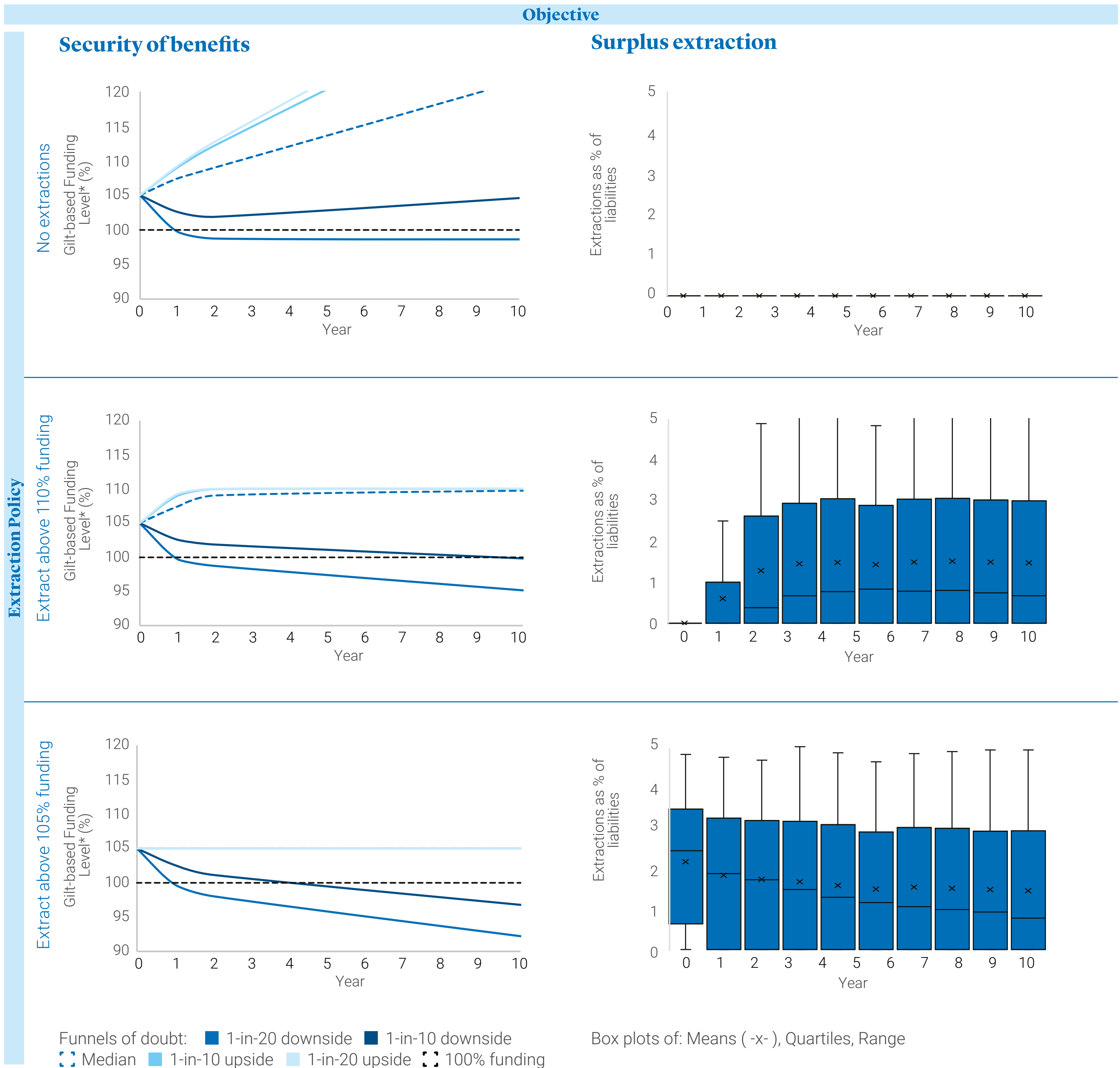
In contrast, in the bottom-left box we can see that there is substantial risk with an extraction level of 105%. This may not be a concern if the covenant is particularly strong so that deficit contributions can be paid regardless. But in many cases, this policy may present too great a risk to accrued benefits. Moving to extractions above 110% funding, shown in the middle, materially reduces this risk.

The right-hand column reflects the other objective: extracting surplus[9]. As expected, a more prudent extraction policy (i.e. a higher extraction threshold) results in lower expected withdrawals in the short term, although it is likely to result in a larger eventual surplus.

We believe extraction and investment policies should be designed in parallel, allowing for the scheme circumstances and objectives. In this paper we have used some case studies to give a flavour of the analysis required, but there is a wide range of factors to consider in deciding an appropriate strategy – we've outlined some of these in Appendix A (page 7).

7. For some schemes we recognise that setting a credit-sensitive discount rate may be impractical. In such cases, embedding greater prudence into the extraction policy could make sense.
8. This breaks down as 85% x 1.2% = 1.0% excess return from a matching portfolio of 85% of liabilities and 20% x 1.5% = 0.3% excess return from the cash-plus portfolio of 20% of liabilities

Analytics can help us understand the trade-off between beneĀt security and faster extractions



*With dynamic discount rate. Source: LGIM calculations, June 2024. Key modelling assumptions are in Appendix B. Extractions are expressed as a proportion of outstanding liabilities. **Assumptions, opinions and estimates are provided for illustrative purposes only. There is no guarantee that any forecasts made will come to pass.**

9. You may note we have used different percentiles for funding levels than for the yearly extractions. This can be justified on two counts. First, you are likely to be more interested in 'the tail' for funding levels, as benefit security is of prime importance. Second, a percentile of cumulative amounts is not comparable to the same percentile of yearly amounts.

Time for a fresh perspective

Investing for run-on when in a position of surplus requires a different perspective given that for many years schemes have focussed on building funding levels to repair deficits and de-risking as funding levels increase. Designing surplus extraction and investment policies for the new landscape is no easy matter and there is no one-size-fits-all solution – different strategies make sense in different cases. However, we believe a combination of the following three key approaches can put schemes in good stead to tackle the challenges that they face:

- Adopting a holistic approach supported by models to help understand trade-offs, including surplus generation versus long-term security
- Pot-based categorisation of assets to help keep choices manageable but being mindful of its potential pitfalls
- Gaining a strong qualitative understanding of the different factors involved

There's a wide range of considerations when it comes to deciding how to select the investment strategy and extraction policy. In the table below we've summarised some of the key questions we believe schemes need to consider.

Appendix A

Question	Considerations
Are you targeting growth or defence?	More in growth increases the expected surplus, but may put accrued benefits at greater risk.
What's your defensive strategy: cash or LDI?	If the aim of the surplus is to hedge benefit increases, it can make sense for it to be an extension of the Matching Portfolio. If the aim is as a risk buffer, then cash may be preferable.
What risks should be included in the risk buffer and how should it be calculated?	The risk buffer needs to seek to mitigate against investment risk, demographic risk, any fees payable out of the scheme and any regulatory changes that have a negative impact on funding. TPR's draft Funding Code states "We would expect that a scheme considers an asset and liability Value at Risk (VaR) of at least 1-in-6 downside level event and the ability of the employer to repair any additional deficit from that event". Regulatory guidance and codes of practice on this may be established following the government's consultation on "Options for Defined Benefit Schemes"[10] and the approach to surplus management.
What's your time horizon for growth?	Longer-term investors often prefer higher return targets[11]. Views on the efficiency of generating excess returns at different target levels matter[12]. Other considerations include aligning the duration of debt instruments with the time horizon. Longer-term strategies can also tolerate greater illiquidity.
Which risks can be managed?	Unhedged risks such as from longevity uncertainty can influence the strategy depending on the measures of success used.
How does the surplus interact with the other assets?	There are potential arguments for investing the surplus in credit. For example, a scheme may be targeting a buyout and the matching portfolio is underweight credit sensitivity due to headroom constraints. However, investing the surplus in more credit leaves potential diversification benefits on the table.
What's your scheme's funding position?	At higher funding levels schemes are likely to be able to take more overall investment risk without materially threatening accrued benefits.
What's your scheme's maturity?	The maturity of the scheme influences buyout pricing, the matching strategy and the time horizon so should be considered in holistic portfolio construction.
How strong is your covenant?	A weaker covenant may discourage risk-taking at least if overfunded on a buyout basis[13].
How do you aim to extract any surplus?	A higher extraction rate may require a more aggressive strategy to generate the returns needed to support the extractions. On the other hand, higher extractions will lead to lower funding levels which may curtail risk-taking capacity. Analytics can help understand the trade-off.
Have you considered productive finance?	There is no clear definition of 'productive finance,' but the general aim is to support the UK's equity market, economy and environment, often via private assets. Schemes may be able to drive societal benefits by continued investment in assets such as those that will play a role in a green transition. There could also be diversification[14] benefits from broadening the opportunity set. Schemes should assess their illiquidity tolerance and whether they are in a good position to harvest any illiquidity premium available. Those schemes interested in run-on for the long term may have a greater tolerance for illiquidity, as opposed to those in the waiting room or those wishing to preserve the optionality of pivoting to buyout.

10. Options for Defined Benefit schemes – GOV.UK (www.gov.uk)
11. A higher return target over long horizons is questionable academically – please see these two blogs here and here.
12. For example, it may be worth overweighting mid-risk assets at lower return targets (relative to a strategy of mixing the global market portfolio with riskless assets) because investors with high return targets often 'bid up' equities due to leverage aversion, depressing their expected return.
13. If underfunded it could promote a more aggressive strategy to close the deficit as quickly as possible before the sponsor goes bust – see our paper here.
14. It should be noted that diversification is no guarantee against a loss in a declining market.

Appendix B – key model assumptions for the second case study

Liability discount basis	Credit-sensitive so that only credit risk is from downgrades and defaults. Average strength (i.e. at average spreads) is gilts + 0%.
Deficit contributions	None
Sharpe ratio of funding level returns from investment risk	0.50 (high, reflecting cashflow-matching benefits)
Longevity risk in liabilities	2.0% p.a.
Initial scheme duration	15 years
Number of simulations	1,000

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Key risks

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