LDI Briefing | April 2023

LDI, liquidity and returns: where do we go from here?

Liability Driven Investment (LDI) forms the core of many defined benefit (DB) pension schemes' investment strategies. However, questions have arisen following the gilt crisis last year around whether these strategies are still 'safe' given the use of leverage.

LDI - key considerations

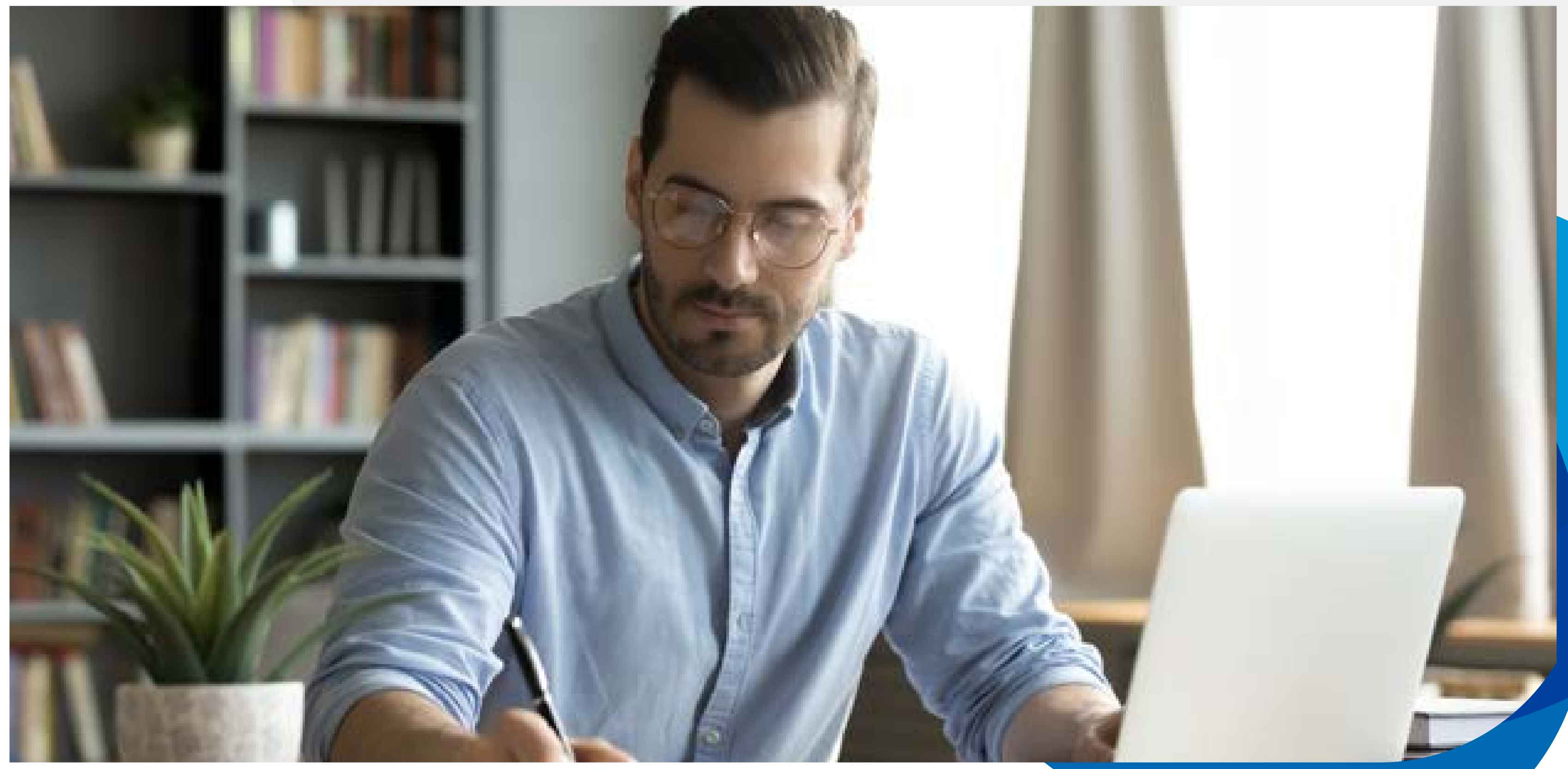
In this briefing we consider:

- Why the case for LDI remains strong
- How the LDI landscape has changed and where it is going next
- How to increase collateral without sacrificing returns
- Pooled funds vs. segregated accounts

Almost all DB pension schemes across the UK use some form of LDI. This is nothing new. LDI has been used for decades to help pension schemes reduce their exposure to movements in both interest rates and inflation. LDI remains accessible to all schemes through the range of investment structures available, and continues to be at the core of DB pension schemes' investment strategies.

As leveraged LDI made headlines over September and October 2022, regulators have turned their attention to the industry, and LDI managers and trustees have taken action to ensure that leveraged LDI portfolios are more resilient and robust towards the economic shocks seen last autumn. The framework announced by the Bank of England at the end of March appears to be consistent with the direction of changes that have been made to LDI funds over the last six months.

We believe there is still a compelling case for leveraged LDI. However, while changes have already been made to LDI portfolios, more focus is needed on the balance between liquidity within the investment strategy alongside schemes' hedging and return targets.



The case for LDI remains strong

Pension schemes have historically employed LDI to manage interest rate and inflation risk and these risks still need to be managed. An LDI strategy is proven as an effective method of controlling these risks in a wide range of market conditions.

Increased security of paying member benefits

Interest rate and inflation risks are real financial risks that impact the scheme's ability to pay member benefits. Movements in yields and inflation can cause significant increases in the value of the liabilities that need to be paid out to members, by increasing the size of future pension payments linked to inflation, increasing the cost of securing those benefits externally (e.g. with an insurance buy-out), and reducing the expected returns that can be allowed for when valuing future pension payments. These factors can result in increases to pension scheme deficits, and the purpose of liability hedging is to reduce the scheme's exposure to these risks, and help ensure members' benefits can be paid.

Let's consider how leveraged LDI can reduce these risks in the new environment where typical target leverage levels have fallen from around 3-4x to 2-3x.

Myth. The amount of pension to be paid is unchanged but because we have less assets now (following increases in yields) to pay them with, we are worse off.

Reality check. The amount of coupons and redemption payments for a fixed interest gilt holder is also unchanged. The value of the gilt has fallen because the future cashflows from the asset are being discounted by a higher rate; i.e. the same mechanism that reduces the value of a scheme's liabilities.

Consider two example pension schemes: both are invested in a diversified mixture of 60% growth assets. Scheme 1 invests 40% in unleveraged LDI, Scheme 2 invests 40% in leveraged LDI. The charts below compare the breakdown of both schemes' one year, 1 in 20 Value-at-Risk (VaR).

View charts +

While the expected return and LDI allocation may be the same, the amount of interest rate and inflation risk exposure is significantly reduced from using leverage. The unleveraged scheme is only hedging around 50% of their interest rate and inflation risk, whereas the leveraged scheme can hedge around 95% of these risks with the same up-front capital. By investing the same £ amount to leveraged LDI, the overall portfolio risk nearly halves in value. This lower risk helps to stabilise the scheme's funding position and helps to secure benefits paid to members.

Maintaining high hedge ratios may now mean less return-seeking assets, with more capital dedicated to leveraged LDI and collateral. Some schemes cannot afford to dedicate around 40% of their investment strategies to leveraged LDI, so may target a partial hedge of their liabilities through leveraged LDI. We still believe pension schemes will benefit to a greater extent under this scenario than using unleveraged instruments which result in lower hedge ratios.

Value at Risk warning

The gilt crisis has highlighted some of the issues with using Value at Risk. This risk measure demonstrates the minimum expected loss in a 1 in 20 case versus the expected position and therefore is a useful way to illustrate the impact of different strategies under 'most' scenarios. However, it is based on a large number of financial assumptions and economic simulations, so the risk numbers should not be considered predictions in isolation.

What's changed with LDI?

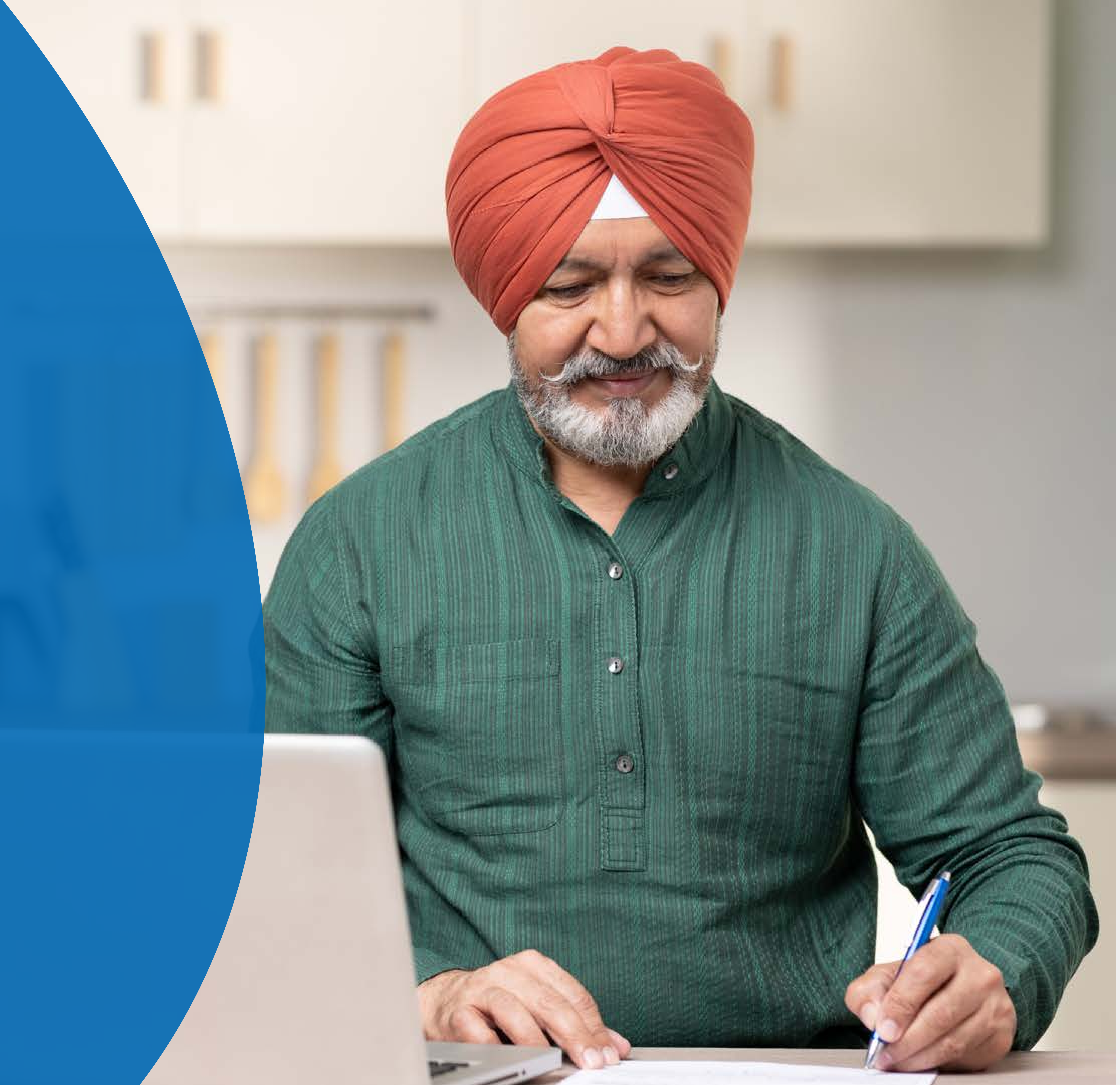
The Pensions Regulator (TPR) published a statement on what action they expect trustees to take in response to the market volatility. Specifically, TPR expects trustees to maintain enough liquid collateral to withstand a rise in yields of 3-4%. The financial markets regulators for Ireland, Luxembourg and the EU presented a letter to LDI managers stating that the LDI funds themselves should hold enough collateral to withstand a rise in yields of 3-4% before the funds reached insolvency (without any collateral calls).

In addition, the Bank of England announced at the end of March 2023 that LDI funds should be resilient to withstand a minimum yield increase of around 2.5%. Importantly, this is stated as the minimum level in 'normal times' but that they would generally expect additional resilience on top of this level. Further regulatory announcements are expected over coming weeks and months, which may mean that additional changes are required.

The changes

Action taken by LDI managers	What does this mean for trustees?
Pooled funds and segregated mandates have significantly increased the size of yield movement they can withstand before capital runs out. Buffers have been increased from 1-2% twelve months ago to 3-4% today.	**More capital.** Schemes will need to allocate more capital to LDI funds than was previously needed to receive the same level of liability hedging. **Reduced risk.** The risk of another gilt-market sell-off, reinforced by LDI funds de-leveraging, has been reduced as they now contain more collateral and so the funds are much less likely to need to cut exposure.
Pooled LDI funds continue to require a move in yields before collateral is requested to be paid into the funds of around 0.4%-0.7%.	**Same frequency of calls, but smaller amounts.** Collateral is likely to be requested from LDI managers at the same magnitude of gilt movement as before the gilt crisis (although with higher volatility in gilt markets we might expect this to occur more frequently). However, due to lower leverage, the calls are likely to be for much smaller amounts. **Governance and liquidity are key.** It is still very important that trustees have in place well documented governance processes and sufficient access to a range of liquid funds to meet collateral calls.

From what we have seen, the leverage reductions made to pooled and segregated mandates are similar across most LDI managers. In our view, selecting an LDI manager on achievable leverage should not be a deciding factor in most cases. The Bank of England have now set a tougher framework for LDI funds (March 2023), however the regulatory landscape is yet to be finalised, particularly around the Pensions Regulator's minimum levels of resilience for the LDI funds which DB schemes can invest in (further details are expected in April 2023). Question marks also still remain as to what extent the findings from the House of Lords Industry and Regulators Committee will be incorporated into regulation going forwards – particularly those around leverage controls and changes to accounting standards and the impact that has on LDI demand. However, in our view, leverage will remain standardised across managers.



Implications for portfolio liquidity and return

It has always been vital that trustees have access to liquid collateral alongside their leveraged LDI funds, usually in the form of a "collateral waterfall". This structure allows a scheme's LDI manager to take collateral from a series of funds held by the scheme in priority order, only moving onto to the next fund in the waterfall once the previous one has been depleted. These collateral waterfalls need to be agreed amongst the trustees and LDI manager in advance.

We consider there to be broadly three types (or tiers) of collateral, based on their liquidity and volatility characteristics:

TIER 1	**Assets that meet day-to-day collateral calls.** This includes daily liquid assets with very stable prices such as cash or money market funds.
TIER 2	**Assets that aim to generate moderate returns and are readily convertible into Tier 1 assets.** Examples include absolute return bond funds, asset backed securities funds, and low-duration liquid credit funds.
TIER 3	**Funds that generate higher returns.** These are not expected to be accessed for collateral requirements frequently, but can be sold if other sources of collateral are exhausted. Examples include diversified growth funds, multi-asset credit funds, and potentially even listed equities.

Collateral waterfalls have always been an integral part of managing an LDI strategy and remain so. Given recent regulatory changes to increase liquid collateral, our view is that the importance of Tier 1 collateral has increased alongside the need for Tier 3 collateral to help trustees maintain return requirements. The space for Tier 2 collateral is likely to diminish in client portfolios going forwards in all but the most collateralised and well-funded schemes. We would be happy to advise clients going forwards as to how these should be structured for their particular scheme.

How to increase collateral without sacrificing returns

Schemes should consider using synthetic credit or equity, where needed, to free up more assets to be used as liquid collateral. This also diversifies schemes' leverage across different asset classes, which is expected to benefit schemes by making collateral calls less likely. For example, reducing the leverage to gilt exposures but introducing some leverage to credit or equity exposures means that the scheme is less exposed to collateral calls on any one type of asset in the event of market disfunction. In addition, having the ability to choose where leverage is taken can also reduce the risk of the scheme being a forced seller of any particular asset by providing additional flexibility. For example, in the 2022 crisis, selling liquid growth assets was not usually a big issue but this may not be the case in future if growth assets have suffered substantial losses as part of that crisis.

Synthetic credit (e.g. credit default swaps (CDS)) +

Synthetic equity (e.g. equity futures or equity Total Return Swaps (TRS)) +

We believe these instruments are useful for pension schemes who need to generate high returns, whilst also allowing for higher levels of hedging, and appropriate levels of liquid collateral. As we have noted, further changes to regulation are likely to come and the potential use of these strategies may be limited if regulators set overall leverage limits for client portfolios (as opposed to just limiting leverage restrictions to LDI portfolios).

CDS may also be useful for schemes that are very close to buyout (less than one year) but do not yet hold physical allocations to credit. These schemes may choose to invest in CDS to help align the hedging strategy with the buy-out price but avoid the transactions costs associated with buying and selling physical credit over a relatively short period of time. It is important to note that CDS will behave similarly to, but not the same as, physical credit.

Should schemes consider moving to a segregated account?

The gilts market crisis was certainly not isolated to pooled funds – segregated accounts also struggled to meet collateral requirements and some were forced to reduce their hedging levels as a result. However, segregated LDI portfolios do offer a higher degree of flexibility not accessible to pooled funds, and we expect that on average this increased flexibility would have improved pooled fund clients' experiences over September and October 2022. For most small-to-medium sized schemes we still believe pooled LDI funds make sense, mainly due to their lower fees and lower ongoing governance. Where a scheme's size is sufficient though, trustees should consider whether a move to segregated would be beneficial. In addition, a bespoke pooled arrangement (a pooled fund with a single investor) offers some of the benefits of each approach for medium to large-sized schemes.

Small to medium-sized schemes - stick with pooled

Lower entry cost, lower governance and lower fees. Pooled LDI funds offer schemes much lower fees for accessing liability hedging exposure than segregated mandates. Fees for small clients are much lower due to minimum fixed fees on segregated accounts, and the governance burden is lower, relative to segregated mandates.

Limited liability. Pooled LDI funds tend to operate as limited liability investment vehicles, which means a scheme's liability ends at the value invested in the LDI funds. Where limited liability applies, aside from instructing their LDI manager to meet collateral calls, it is therefore not possible to lose more money than invested into the fund, even in the most extreme market environment.

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Medium to large-sized schemes - the case for segregated

Higher governance. Segregated LDI accounts come with higher governance requirements as investment agreements are made directly between the scheme and counterparty banks. Trustees are advised to have these documents checked by scheme lawyers (which adds to fees), although these documents are becoming increasingly standardised. The minimum fixed fees associated with segregated accounts means they are only suitable for larger schemes, although if these minimum fixed fees are met then segregated accounts can often work out being significantly cheaper than a pooled solution.

Less chance of exposure being cut. Segregated mandates do not operate as limited liability investment vehicles. This does mean that a scheme could be liable for losses in excess of the value of the investment into the segregated account. However, the advantage of this is that managers can afford schemes more flexibility in terms of how collateral requirements are met, which means a scheme's exposure is more likely to be maintained through periods of volatility. Increasing collateral buffers becomes a conversation with the investment manager in relation to an appropriate size, rather than a forced deadline as in a pooled fund.

Segregated clients also have access to a range of additional liquidity tools (e.g. credit repo) which can improve the collateral resiliency of schemes without needing to increase the LDI allocation.

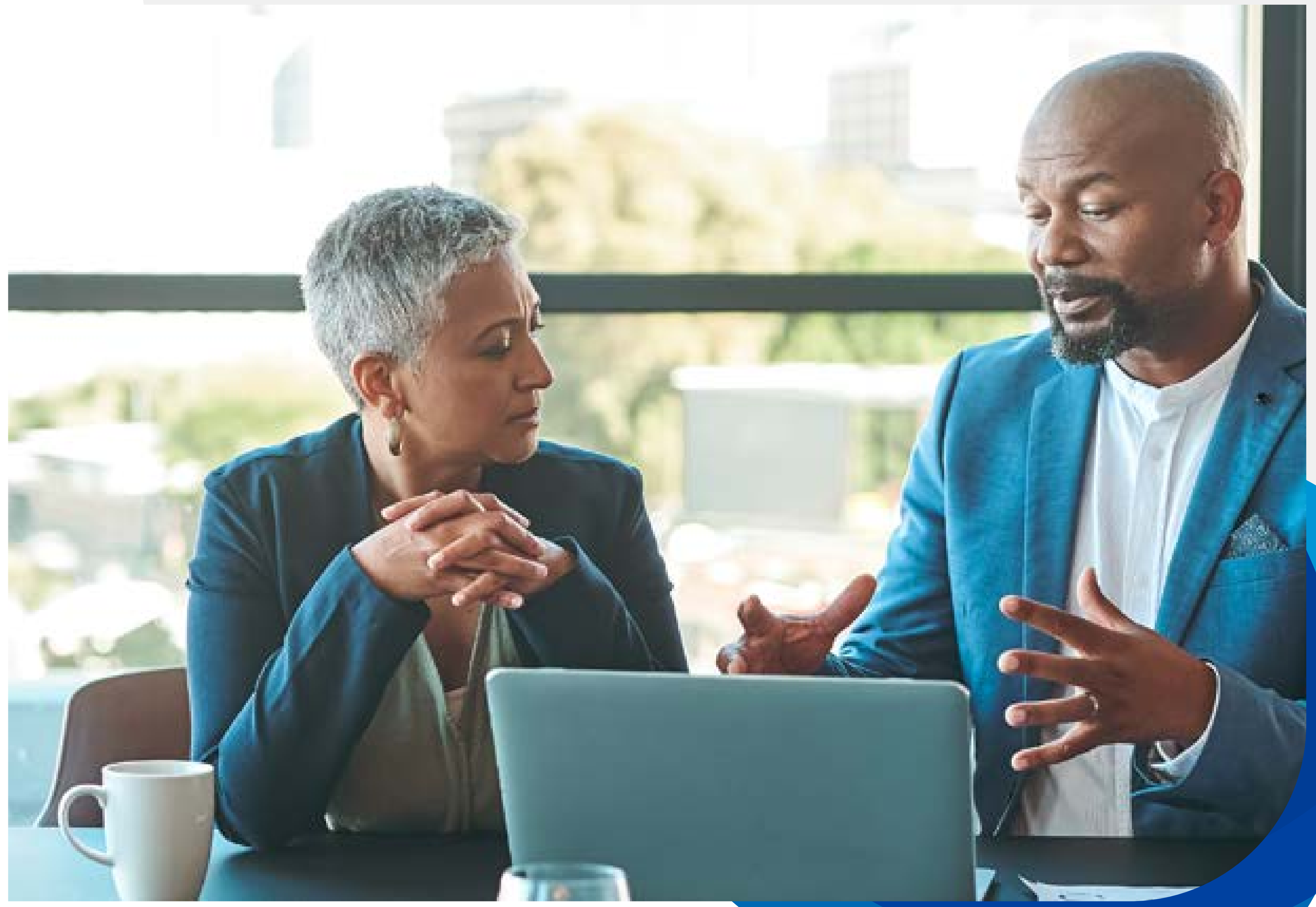
So where do we go from here?

Trustees have been re-considering how they allocate collateral and balance this with their required return and hedging targets, in line with new guidance and regulation. Further changes to regulation are likely to come, particularly around the Pensions Regulator's minimum levels of resilience for LDI funds which DB schemes can invest in (further details expected April 2023). With those changes, trustees and consultants need to ensure that any leveraged LDI strategy is reassessed and reshaped to comply with guidance.

Reinforcing collateral waterfalls remains sensible, but clearly the competing interests of risk management, return, and liquidity may put a strain on asset allocations. Trustees should think about which asset classes use leverage within their schemes' portfolios and consider introducing a more diversified approach to leveraged exposure. It is relatively straightforward to obtain leveraged credit and equity exposure for both pooled and segregated accounts, which helps achieve this aim and reduce the frequency and/or size of collateral calls.

Pooled funds came under a lot of scrutiny following the gilts crisis, but we believe there are still advantages to using them. However, for large enough schemes that can tolerate the increased governance, trustees should consider the merits of a segregated mandate.

The LDI landscape has changed materially since the volatility experienced in September and October 2022, in our view for the better. Pooled LDI funds and segregated portfolios have access to more collateral and have improved their operational processes. Leveraged LDI remains an important tool to help stabilise scheme's funding levels on their path to meet their long-term targets by protecting against what remain the largest risks to pension schemes – interest rates and inflation.



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The above is for information purposes only and should not be construed as investment advice. Prior to making decisions, scheme trustees should discuss their individual circumstances with their investment adviser.

Please contact your Barnett Waddingham consultant if you would like to discuss any of the above topics in more detail. Alternatively get in touch via the following:

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