LDI – one year on

How has the market evolved?

September 2023

Contents

Overview

It's a year since the turmoil following the 23 September 2022 'mini-budget'. In absence of wider market data at this point, XPS has collated its own clients' experiences and looks at how the Liability Driven Investment (LDI) market has overcome the challenges that led some at the time to question LDI's very purpose.

Key findings:

1. **Pension schemes have increased their hedges:** The analysis found that the average XPS investment client, weighted by asset value, has increased its liability hedge by 3% between 30 June 2022 and 30 June 2023. Over the same period, aggregate UK defined benefit scheme funding levels are estimated by XPS to have improved by 17% when measured on a low risk liability basis.

2. **Hedging activity greatest in smaller schemes:** Schemes of all sizes have increased their hedging on average, but schemes below £10m increased hedging on average by 16% and schemes between £10m-£50m increased hedging by 10%. This in part reflects the greater scope smaller schemes had to increase their hedges given the lower initial hedging levels.

3. **22% of schemes have a lower level of hedging compared to a year ago:** This was either as a consequence of lost exposure during the LDI crisis or as a strategic decision in light of a need to appropriately manage liquidity and other operational factors going forwards.

   By number, 35% of XPS's investment clients increased their hedging and for 43% it has remained unchanged.

4. **Lower fees earned by LDI managers:** Fees paid to pooled LDI managers are estimated to have fallen by 7% over the last year as a result of rising gilt yields depleting the size of LDI funds, despite increased hedging by pension schemes and LDI funds running greater cash buffers. We have not seen LDI managers seeking to change their fee arrangements.

   In contrast, XPS has observed an emerging trend of some Fiduciary Managers materially increasing their fee to offset the falls in asset values and revenues.

> This analysis demonstrates that, far from being put off LDI as a risk management approach, pension schemes have employed it to further protect the funding level improvements that we have been witnessing.

Simeon Willis
Chief Investment Officer

Gilt economic backdrop

At the start of 2022, the yield on a 20 year gilt was 1.2%pa, and at that time it was expected that the yield on a 20 year gilt at the end of 2023 would be 1.3%pa. As of the time of writing the current yield is 4.7%pa. This rise in gilt yields means an investor is expected to cumulatively earn over 100% more over the 20 year life of their gilt investment than was the case at the start of 2022.

These rises have been spectacular and, in the main, highly beneficial for pension schemes.

So what has caused this and why have they taken everyone by surprise?

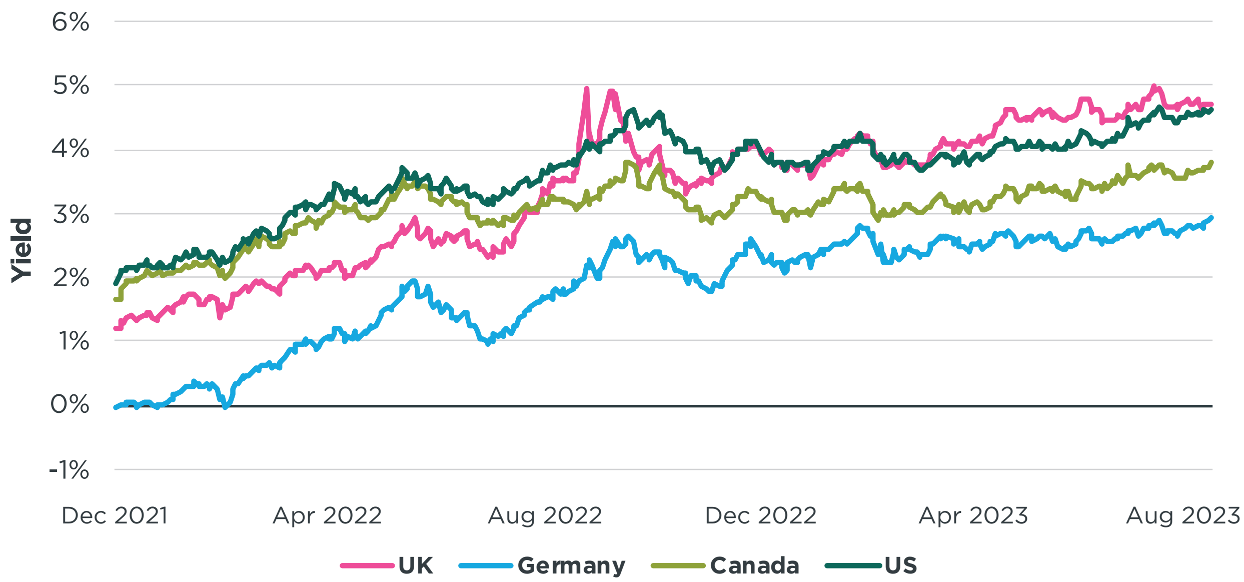
There are numerous factors, but three key ones are:

1. The global phenomenon of central banks taking strong steps to manage inflation
2. The increase in expected issuance of gilts and unwinding of Quantitative Easing
3. A declining demand for new gilts from pension schemes

The government bond yield rises experienced by the UK over the first part of 2022 in the run up to the September mini-budget were mirrored by both US and German government bond markets.

Chart 1 below shows the yield on UK gilts versus US, German and Canadian markets.

Chart 1: 20 year government bond yields since 31 December 2021



Source: Refinitiv

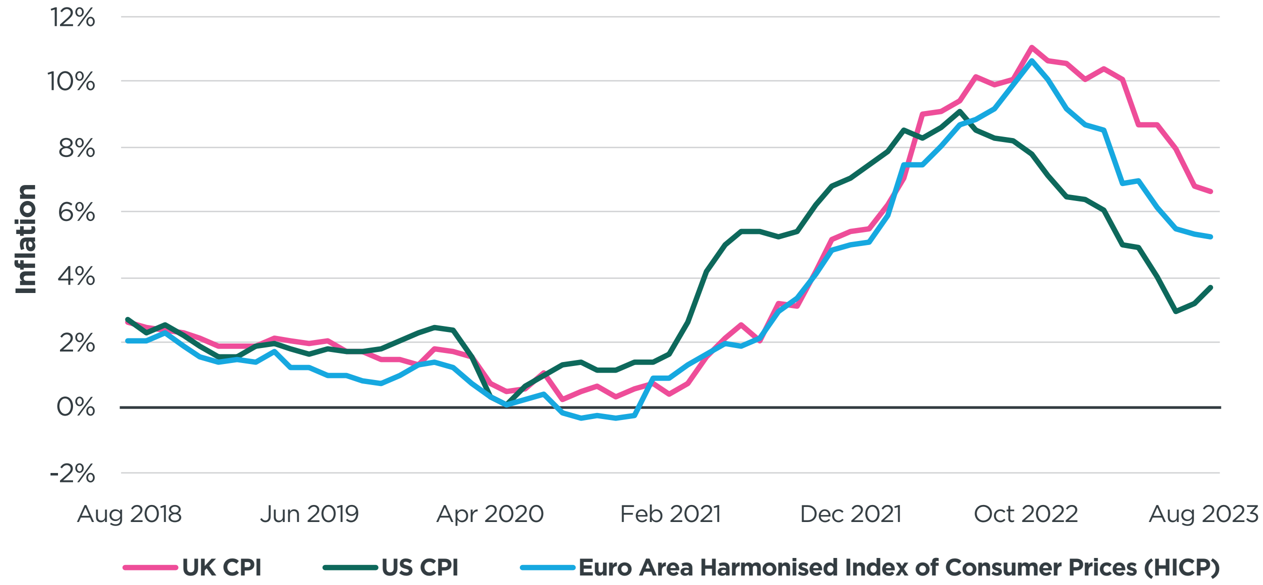
Following the exceptional circumstances of the mini-budget, unveiled by then Chancellor Kwasi Kwarteng, the sharp rise in gilt yields pulled away markedly from the global trend, only to settle back to trend by late November 2022.

From around April this year, more persistent inflation in the UK compared to other countries prompted yields to start pulling away from the global trend once more. This persistent inflation in the UK can be attributed to a number of specific factors, including high dependency on imported food, reliance on imported gas and labour shortages following Brexit.

The US had experienced a more prompt reduction in inflation earlier in the year, followed by Europe, albeit there is a mix of experience across different European countries. Since June data was issued, UK inflation has started heading in the right direction with continued progress in the latest CPI announcement from the Office of National Statistics on 20 September, as inflation fell to 6.7% for the past 12 months to August.

Chart 2 below shows how UK CPI inflation compares to the US and Europe.

Chart 2: Inflation across UK, US and Europe since 31 December 2021



Source: Refinitiv

Gilt issuance is also an important factor. Over the next 5 years the Debt Management Office projects net issuance of £520bn which is more than double the net issuance for the 5 years prior to COVID-19. The Bank of England (BoE) also plans to reduce the stock of gilts acquired as part of quantitative easing. This was previously expected to be at a rate of £80bn per annum but the BoE announced that this would increase to £100bn for the next year in its minutes of the September 2023 Monetary Policy Committee meeting. This represents a significant level of supply at a point where pension schemes are already well hedged and are unlikely to be increasing exposure at the same rate of increase witnessed over the past decade.

XPS View

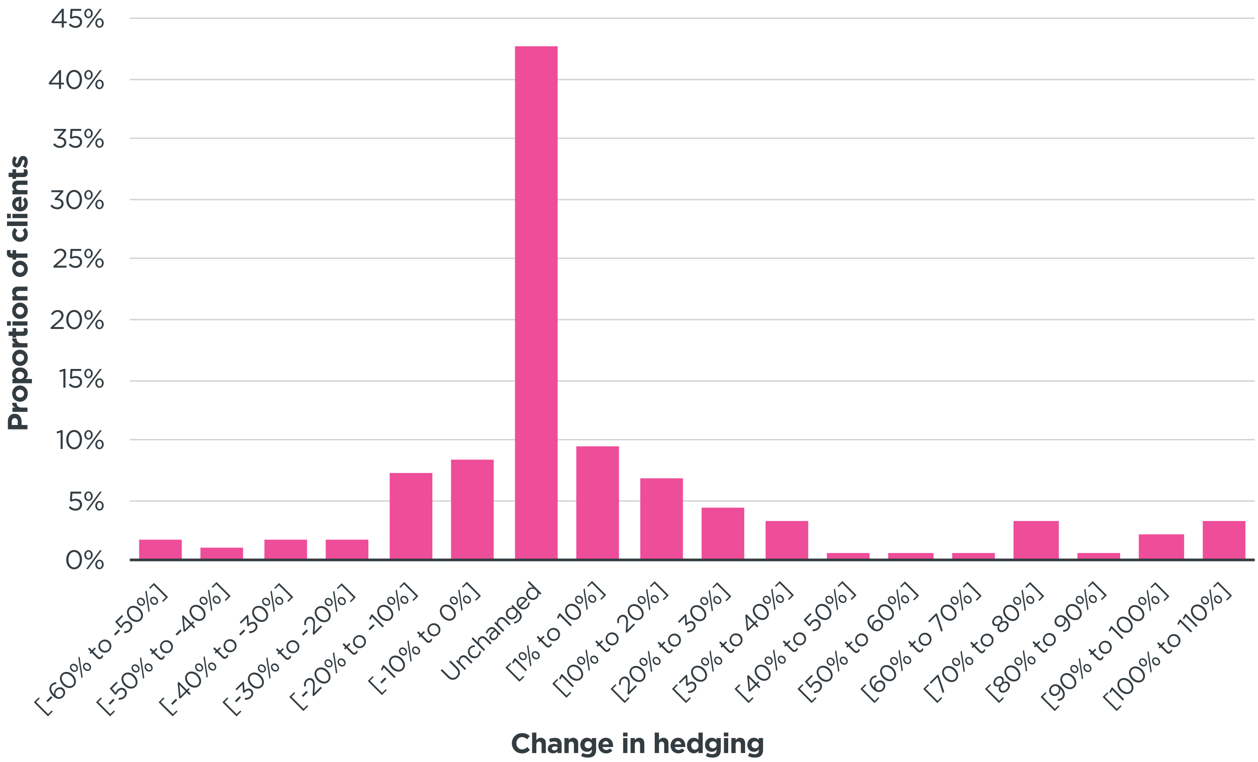
The current gilt yield reflects a tension between a number of finely balanced market forces. As a result we expect gilt yields to remain volatile for some time. We are therefore conscious of the potential for gilt yields to continue to rise substantially from the current point. Pension schemes need to ensure they have sufficient resilience to maintain their hedge in the face of a protracted rise in yields, if this were to materialise.

UK pension scheme developments

XPS Investment has conducted a comprehensive analysis of hedging activity across its client base, by assessing liability hedging changes in 178 pension funds between June 2022 and June 2023. This sample, representing 81% of the XPS Investment client base by value, provides an indication of the wider LDI market in the absence of market-wide information which is currently being collected by the Pension Protection Fund (PPF) and the Pensions Regulator (TPR).

Chart 3 below summarises the change in hedge ratio across XPS investment's client base between June 2022 and June 2023. Schemes have increased hedging by 3% on average. There was however a considerable dispersion of hedging changes across different schemes.

Chart 3: Clients change in hedge ratios (all clients)

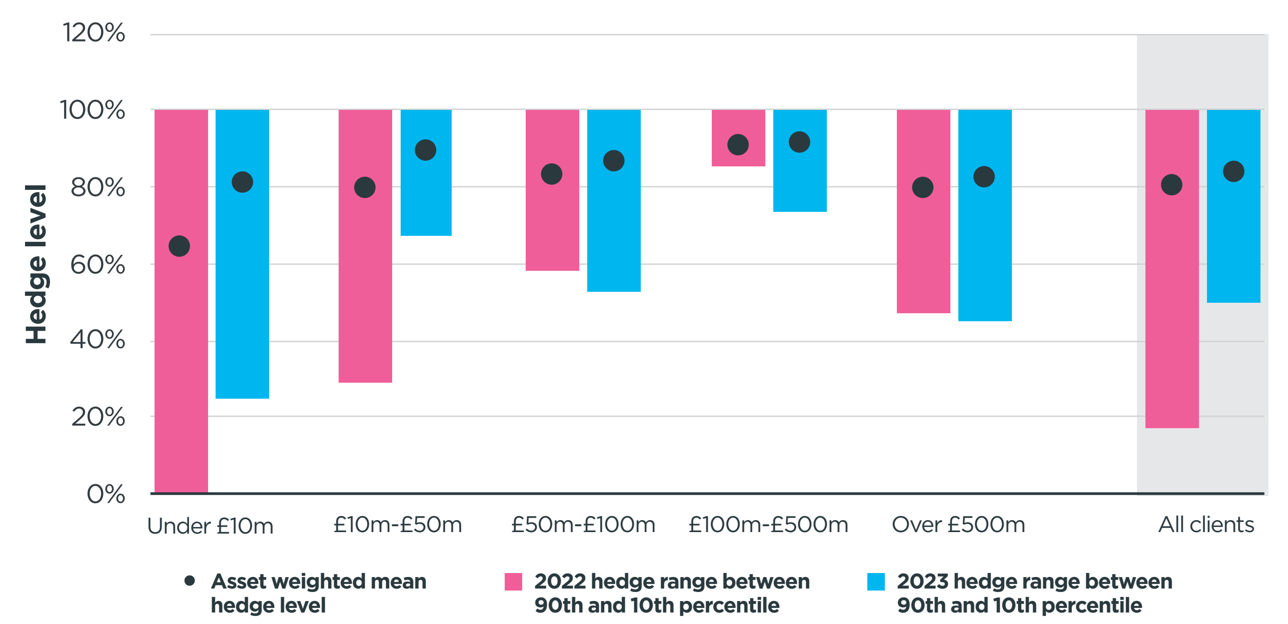


Source: XPS Pensions Group

22% of schemes have a lower level of hedging compared to a year ago. This was either as a consequence of lost exposure during the LDI crisis or as a strategic decision in light of a need to appropriately manage liquidity and other operational factors going forwards. By number, 35% of XPS's investment clients increased their hedging and for 43% it has remained unchanged.

Chart 4 below shows the 90th percentile ranging up to the 10th percentile of clients' hedge levels for each size category of clients along with the asset weighted mean level of hedging. These are shown for June 2022 and June 2023.

Chart 4: Liability hedge distribution by client size



Source: XPS Pensions Group

This highlights that smaller schemes account for a larger proportion of the schemes that have materially increased hedging.

Schemes below £10m increased hedging on average by 16% and schemes between £10m-£50m increased hedging by 10%. This in part reflects the greater scope these smaller schemes had to increase their hedges given the lower initial hedging levels. They typically would employ simpler investment strategies with greater liquidity compared to larger schemes, and with lower levels of hedging they experienced greater improvements in their funding positions as a result of the yield rises.

Whilst the average hedging level increased across all client size bands, there is a greater range of hedging levels now than a year ago for medium sized schemes between £50m-£100m and £100m-£500m. A common pattern here was greater allocations to more sophisticated illiquid strategies combined with relatively high initial hedge ratios, reducing flexibility.

XPS View

This analysis demonstrates that, far from being put off LDI as a risk management approach, pension schemes have employed it to further protect the funding level improvements that we have been witnessing.

However a meaningful proportion of schemes have had their levels of hedging curtailed as a result of the the disruption of the crisis. Given yield moves to date, fortunately these lost hedges in the main are unlikely to have detrimentally impacted financial performance for these schemes but they remain more exposed to ongoing risk.

LDI manager developments

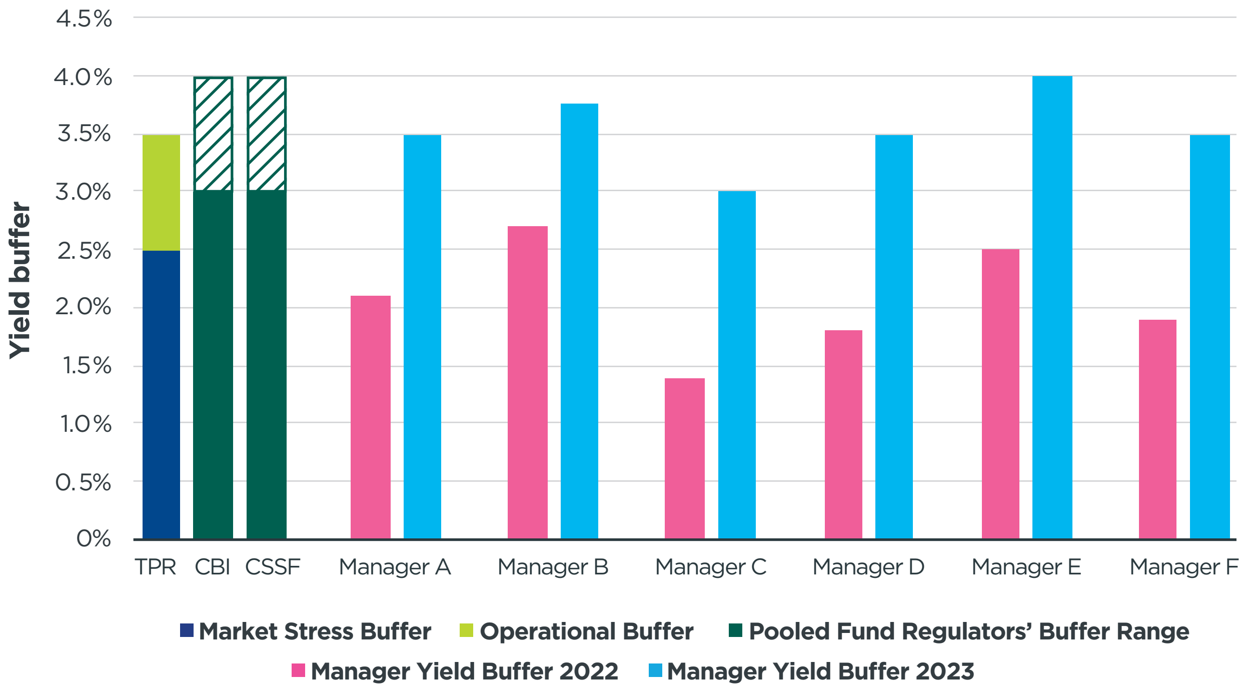
A notable immediate development in the pooled LDI market was the change in target leverage levels and revision of the triggers employed for deleveraging or releveraging.

This is commonly specified as the % level of yield rise that can be accommodated by the available liquid assets in the pooled fund or immediately accessible to the LDI manager.

The chart below illustrates the Pension Regulator's guidance on the hedge buffer which comprises two elements, a market stress buffer of 2.5% and an operational buffer, which is not set at a specified minimum although 1% was suggested. Two prominent overseas pooled fund regulators, the Central Bank of Ireland (Ireland) and the Commission de Surveillance du Secteur Financier (Luxembourg) specified a range of between 3-4% for pooled funds within their jurisdiction.

In Chart 5 below we have illustrated the target buffer levels in place both before the gilts crisis, and in place now, alongside the regulatory levels.

Chart 5: Regulator and LDI manager yield buffers



Source: TPR, CBI, CSSF, Managers, XPS calculations

There has been a marked increase in capital buffers, equating to a large reduction in leverage, but there is quite a wide disparity in absolute leverage levels across the different funds. It is important to note that these also correspond with different operational procedures.

Table 1: Summary of pooled LDI fund operational arrangements

Factor	Manager A	Manager B	Manager C	Manager D	Manager E	Manager F
BAU capital call notice (business days)	**10 BD** Discretion to act earlier	**4 BD**	**None** Capital calls are automatic	**c5 BD** Dependent on dealing cycle	**Was 7 BD** **Now reduced to 3 BD**	**Was 20 BD** **Now 8 BD**
Accelerated capital call notice (business days)	**Was same day** **Now 2 BD**	**At manager's discretion**	**Automated**	**At manager's discretion**	**Same day**	**5 BD**
Additional non-LDI assets required with manager	**Not required**	**Not required** But in practice difficult to avoid	**Not required** Can use external funds	**Not required**	**Not required** But in practice difficult to avoid	**Not required**

Source: Managers

The table demonstrates that some managers have materially shortened their timeframes for calling capital which provide greater scope to meet near term liquidity needs if required.

XPS View

Manager actions have improved operational robustness for their clients. However practices vary across the managers so due diligence remains important.

Schemes also need to remain conscious that whilst the reduced leverage within the LDI pooled fund provides greater protection from extreme short term market movements, the need to maintain the higher buffer means that schemes need to have plenty of additional capital readily available to meet capital calls.

LDI management fees

Following the substantial changes in leverage within the LDI industry, there have been some significant shifts in the quantum of fees that schemes pay for LDI. The LDI crisis has also led to a disparity in fees charged by pooled LDI providers.

Some LDI funds are charged as a % of liabilities hedged, whereas others are charged based on assets under management. In the new lower leverage world, an asset based fee might be considered by some to be getting less hedging for your money. We have looked into the impact on fees charged.

We have looked at the LDI managers that charge fees on assets under management and the reduction in leverage that has been applied to their funds, combined with the managers that charge on liabilities hedged. Weighted by market share, we estimate that on average pension scheme investors will be paying 8% more as a result of this factor in isolation. However, this is only part of the picture. Over the 12 months from 30 June 2022 to 30 June 2023, we estimate that liabilities have fallen in value by 17%, meanwhile our client base have typically increased their hedges by 3% of liabilities (which is a 4% increase as a proportion of the original level of hedging of 81%). When these three factors are combined pooled LDI managers will be receiving lower fees of the order of 7% less than a year ago.

Therefore, in general, pension schemes are paying significantly less for hedging than they were last year.

A similar picture of substantially reduced revenues is likely to be true for segregated LDI management fees, although data on additional assets that may have been received to reduce leverage levels is not readily available, making estimation of fee changes difficult.

XPS View

We note that LDI managers have not sought to change their fee arrangements in light of the falling revenues. In contrast, Fiduciary Managers have also been impacted by falling asset values, with their revenues typically linked to the value of assets they manage. XPS has observed an emerging trend of some Fiduciary Managers materially increasing their fee to offset the falls in asset values and revenues.

The sustained rise in gilt yields has substantially driven down asset management fees, despite the perceived gains that LDI managers have made through regulator-enforced lower levels of leverage.

Mark Minnis
Head of LDI research

Other developments in the LDI market

There have been a number of other developments over the last 12 months, two in particular are summarised below:

- **Corporate bond collateral:** In segregated LDI strategies there has been an increase in the adoption of collateral management strategies that permit the use of corporate bonds along side gilt and cash investments. We note this approach has not featured in pooled fund arrangements to date. We will be writing on this topic separately but note that it is a change we have observed and one that should be approached cautiously.
- **Increased use of Asset Backed Securities in collateral waterfalls:** The development of collateral waterfalls have created a useful role for high quality liquid ABS due to its features of being liquid, low risk and diversified. ABS also does not contribute to a scheme's LDI hedge, meaning it can be sold for cash without disrupting the hedge arrangement.

To find out more about ABS, please see our recent paper **here**

Conclusions

The data tells us that confidence in the appropriate use of LDI strategies has grown over the last 12 months, despite the disruption caused by the extreme volatility witnessed in September and October 2022.

This is likely due to pension schemes' funding positions having improved materially, and trustees looking to lock in the gains, to prevent losses in case of a market reversal.

Continued demand for increased hedging will likely persist whilst pension scheme's funding levels are improving but this demand is likely to plateau at some stage. This will need to be delicately managed given forthcoming gilt issuance and in light of quantitative tightening potentially leading to continued gilt yield rises in the future.

The developments in the pooled LDI market have created a more robust operational environment but trustees need to ensure they fulfil their side of the bargain too, with sufficient capital available at short notice outside of the LDI arrangements to maintain the allocation in the event of further yield rises.

However, markets do not conform to forecasts and substantial yield falls are always a possibility. After all, that is the primary role of LDI – to protect schemes in those scenarios.

Actions for trustees

1	**Check** your current funding status and that your risk and return targets remain appropriate against your longer term target and journey plan.
2	**Look** for scope to refine your hedge to reduce risk to protect your funding position.
3	**Ensure** that you are familiar with the latest regulatory guidance issued in April 2023 including ensuring you have sufficient liquidity and suitable operational arrangements to maintain your hedge in good times and in bad.

How can we help?

If you would like to find out more on any of these matters, please get in touch with Simeon Willis or Mark Minnis or your usual XPS contact.

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