XPS Investment

Investment briefing

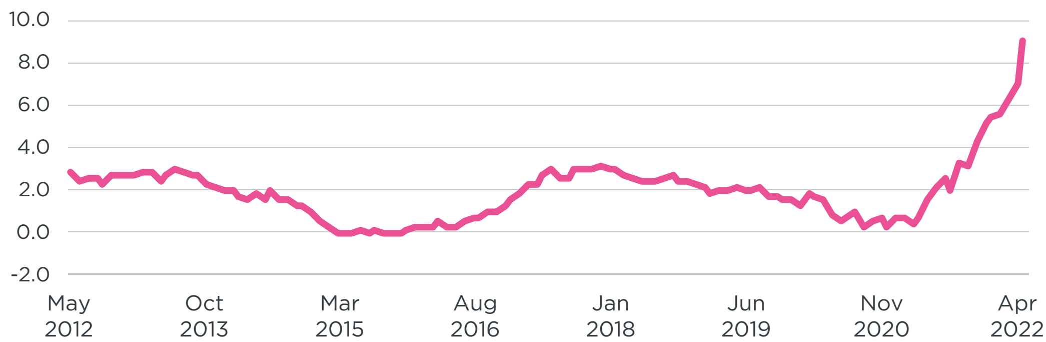
June 2022

Runaway yields — is your LDI hedge still on track?

In this note Mark Minnis highlights areas where a typical scheme's Liability Driven Investment (LDI) strategy should be reviewed in order to maintain control and make the most of opportunities that recent market movements have created.

Since the Pandemic started to impact global investment markets in early-2020, we have seen a steady rise in inflation. As shown in the chart below this accelerated into 2022 with CPI inflation over the 12 months to April 2022 reaching 9%.

Rolling 12-month CPI movements since 2012



Source: ONS

Future inflation expectations have also risen significantly over this period. This has prompted central banks to increase bank rates faster than initially expected and longer-term gilt yields have risen very significantly in the last 6 months. On 16 June the Bank of England announced a further 0.25% increase in the bank rate, taking it to 1.25%, the fifth increase in a row. This followed the US Federal Reserve increasing its benchmark policy rate by 0.75% on 15 June with further substantial rises expected later in the year.

These policy changes and erratic market movements will have created a number of practical issues for schemes' LDI portfolios, some of which are not immediately obvious.

There are several areas that every scheme needs to check:

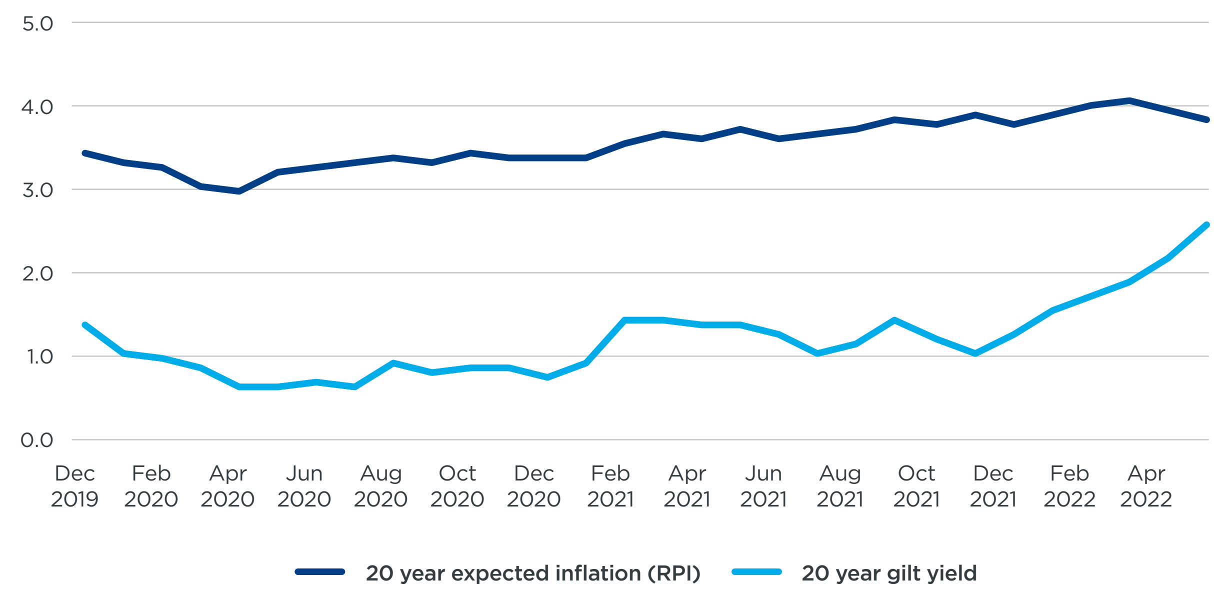
Key actions for Trustees

- Consider whether the market movements create an opportunity to increase your hedge level at attractive long term interest rates last seen over 6 years ago.
- Review your plan for meeting future capital calls to ensure you can avoid compromising your current portfolio in a scenario where yields continue to rise.
- Review your asset allocation to check that it is in-line with your SIP and assess the current expected return on assets versus the target in your Journey Plan.
- Review your liability hedge benchmark if inflation has changed by more than 0.5% since it was last reviewed.

Market backdrop — rising yields and inflation

Over the last year, inflation across the developed world has risen sharply. After initially viewing high inflation as a temporary impact of COVID, the war in Ukraine has awakened central banks to the threat of inflation more generally and they are eager to get it back under control by raising interest rates and reducing the quantity of government bonds on their balance sheets.

20 year gilt yields and expected RPI inflation



Source: Bank of England

Inflation (CPI) is now 9%, which is 7.5% higher than this time last year. UK base rates have increased from 0.1% to 1.25% over the same period, but with inflation well over the 2% target further base rate rises look likely.

Mark Minnis – Head of LDI research

Current issues in LDI

1 Opportune time to increase interest rate hedging

The sharp rise in inflation following COVID combined with the war in Ukraine has greatly affected the market during 2022:

- Long-term gilt yields have **increased by 1.6% so far in 2022**, which is equivalent to a c.25% fall in a typical pension scheme's liabilities. The speed of this yield rise has not been witnessed since the early 1990s.
- Long-term inflation expectations over the next 20 years have remained broadly unchanged in 2022, but are **0.9% higher than 2 years ago in April 2020**. Although the impact will vary depending on a scheme's inflation sensitivity, this will typically have increased liabilities by around 10%.
- These two factors combined have meant that many schemes have seen their **liabilities fall by around 15% to 20% in the last year**. Mirroring this reduction in liabilities, schemes utilising a leveraged LDI strategy will have seen a large depreciation in their LDI portfolios causing leverage to significantly rise. This in turn has led to LDI fund managers seeking to recapitalise these funds through collateral calls.
- This is also at a time where other assets typically used for topping up LDI are **falling in value**; equity markets have fallen, and credit spreads have widened.

Historically some schemes have held off employing hedging to the fullest extent due to a market view that interest rates were so low that they were bound to rise. That view took decades to play out to the extent it has, but now it has it is a great time for schemes to reassess that decision and look at increasing the level of hedging to the strategically optimal level. The strategically optimal level depends on a scheme's specific circumstances and doesn't necessarily mean fully hedged on all liabilities. This is because factors such as liquidity, target return and interaction with other investments in the portfolio are crucial factors in determining the right level of hedging.

If you've been waiting for interest rates to rise before increasing hedging, now is the time to act.

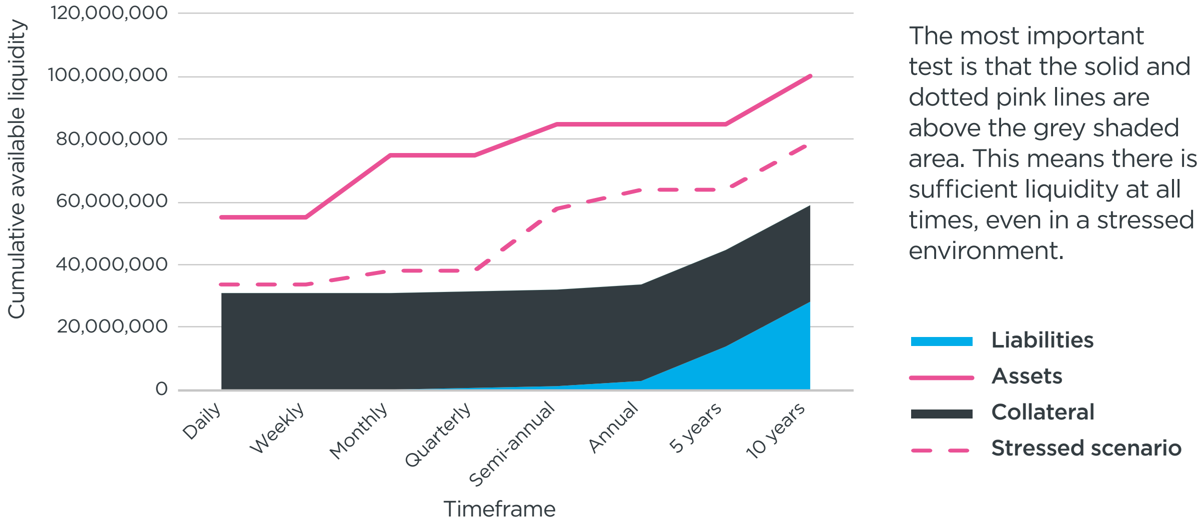
See our June investment briefing for further information on the current market environment, click here

2 LDI collateral depletion

Long-term gilt yields have risen by 1.6%. The impact of a fund's collateral will depend on the duration and leverage but, for illustration, a 20 year duration fund with 2X leverage would have fallen in value by c.50% since the start of the year, requiring additional funding. Furthermore, yields could continue to rise in future, and additional capital calls could occur. It is very important to put in place or review your LDI collateral policy to ensure sufficient liquid assets are available to meet future capital calls and maintain your liability hedge. Schemes with allocations to illiquid assets need to pay particular attention as they won't be able to divest from these assets in time to meet capital calls, meaning that the source of available funds is more limited.

This can be assessed using a liquidity ladder showing the portfolio's resilience to meeting its liquidity requirements in a range of scenarios and stresses.

Example scheme – Liquidity ladder



The most important test is that the solid and dotted pink lines are above the grey shaded area. This means there is sufficient liquidity at all times, even in a stressed environment.

Source: XPS calculations

A liquidity ladder shows if a scheme has sufficient liquidity across all different timeframes. The key is that a scheme should have headroom between its asset liquidity and the collateral and liability requirements, in both a normal and stressed scenario.

A further consideration is the impact that any changes to the asset allocation will have had on the overall risk and return characteristics of the portfolio. Depending on the degree to which leverage is used and the exposure to growth assets, the allocation between higher returning and defensive assets may have changed meaningfully. This can be reviewed against your SIP to check if you are still allocated within your target range.

Given the sharp rise in yields, now is the time to review your LDI collateral waterfall and portfolio liquidity.

3 Changes in liability inflation characteristics

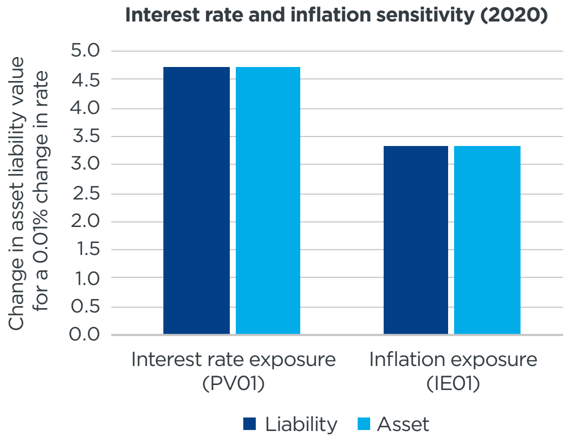
Some pension increases are subject to inflation with specific caps (e.g. 5%) and floors (e.g. 0%), known as Limited Price Indexation or 'LPI'. As few assets are available with LPI increases, schemes are restricted to using either assets with full RPI inflation exposure or no inflation exposure. This is by its nature an approximate process and the combination of fixed and inflation linked assets that provides the optimal hedge depends on how close inflation expectations are to the caps and floors. Due to the large change in inflation expectations since April 2020, the optimum mixture of index-linked and fixed assets is likely to have materially changed.

One aspect that is even less intuitive, is the different way the pension increase caps work for deferred members compared to pensioners. Pensioner member inflation caps are applied annually (known as 'year on year'), however, deferred member increase caps are cumulative based on the average level of inflation between the date of the member's exit from the sponsor's business and date of retirement. For deferred members, this means that very high levels of inflation in a particular year can fully feed through into benefit increases where the average level over the lifetime is below the cap. Whereas for pensioners this will be capped annually.

This additional complication is taken into account within the setting up of LDI strategies but demonstrates the scope for a change in market conditions to significantly impact how benefits can change depending on market conditions.

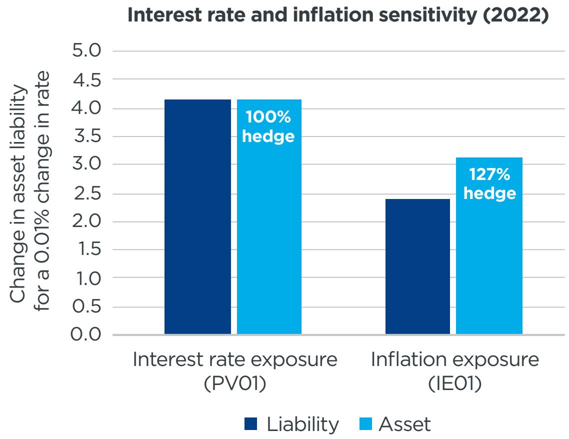
To illustrate this, we show a LDI benchmark for a typical scheme calibrated based on market conditions on April 2020 compared to March 2022. Note all other Actuarial assumptions are the same.

Cashflow benchmark calibrated for April 2020 financials



The scheme is assessed to be c.70% inflation-linked. Due to expected inflation being relatively low in April 2020 at around 2.5%, materially below the 5% pension increase cap assumed in this example, our analysis shows these benefits to be very inflation-linked. This was particularly pronounced for short-dated liabilities.

Cashflow benchmark calibrated for March 2022 financials



The inflation linkage is assessed to be around 10% lower at c.60%. The large fixed cashflows in the early years are explained by the fact that expected inflation over the next few years is at 4.5% to 5.5%, which is either close to or above the 5% pension cap. As such, these benefits are assessed as being more fixed in nature.

Source: XPS calculations

If you have not reviewed your liability hedge recently a high-level review can indicate if a more detailed review or recalibration is required. In this example if the inflation hedge was set to 100% in April 2020 it would have increased to 127% in March 2022 due to changes in expected inflation. This means the scheme would be significantly over-hedged on inflation.

As a minimum, schemes should review their liability hedge design at least every 3 years following the completion of each Actuarial Valuation, but it is important that the hedge design for any scheme is also reviewed following a significant change in expected inflation such as we have witnessed recently. Furthermore, for many schemes, particularly those with complex pension revaluation and increase rules or where a high target liability hedge ratio is pursued, review should occur annually.

It is imperative that schemes revisit their hedge design where it was last assessed in periods with lower anticipated inflation and particularly where large target hedge ratios are in place.

Key areas for consideration

Is there scope to increase your hedge?

Long term gilt yields were last this high in 2016. Many schemes have previously decided to hold off hedging until long term gilt yields rise. Now that rise has happened there is no better time to reassess if your scheme's overall level of hedging can be increased to lock in this benefit.

Assess your portfolio's liquidity

Given the sharp rise in yields during 2022, schemes using leveraged LDI will have seen an increase in their LDI fund leverage which in many cases has led to capital calls from LDI fund managers to top up available collateral. This will have depleted liquid non-LDI assets. It is important to ensure that sufficient liquidity remains in the portfolio to satisfy any future additional capital calls. Liquidity stress testing and scenario analysis are both powerful tools to assess this.

Review Liability Hedge benchmark

Schemes that last revisited their hedge design when expected inflation was materially lower are likely to be over-hedged on inflation compared to what they are targeting. The current level of hedging should be reviewed and if necessary updated to reflect current market conditions.

Asset Allocation

Both the impact of LDI capital calls and general market movements may have resulted in asset allocations drifting significantly out of line versus target. This may have materially affected your overall expected return, risk exposure and diversification levels. This needs to be assessed in the context of your short and medium term portfolio objectives and longer term Journey Plans.

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