

Newsletter

Investment Insights

LDI PLUS



The use of liability driven investments (LDI), by which we mean the practice of using leverage to try to reduce the exposure of a pension scheme's funding position to interest rate and inflation movements, has become increasingly commonplace in pension schemes' investment portfolios.

In recent years we have seen two key trends emerging in the LDI market:

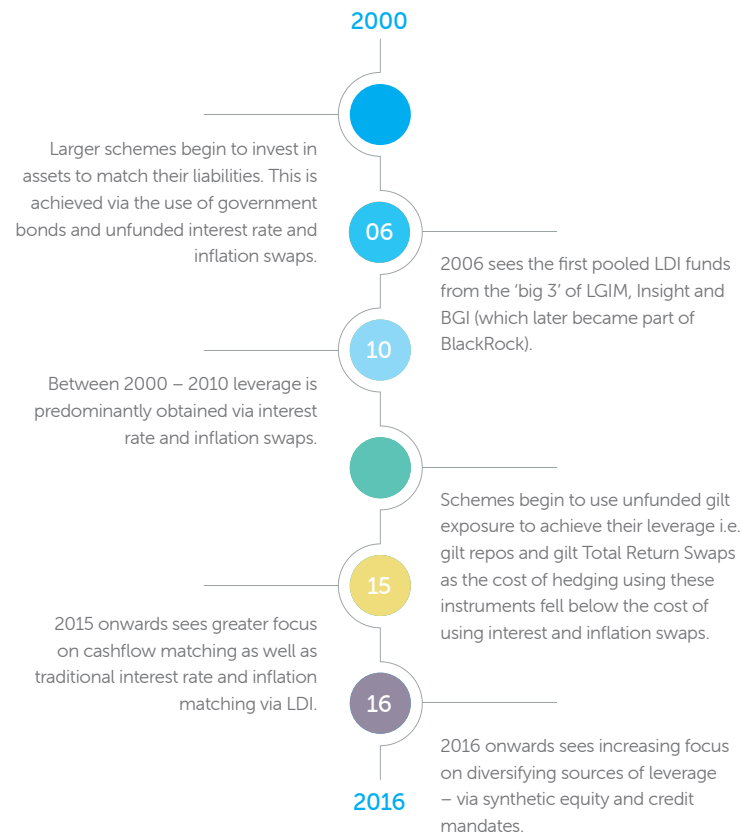
1. As funding levels have improved, some of our well-hedged schemes have been able to commit fewer assets to return generation, allowing them to reduce the amount of leverage in their LDI portfolios.
2. Other schemes – in particular those with large funding gaps or low levels of interest rate and inflation hedging – have been making use of innovations in the LDI market that allow them to either increase their level of hedging or boost expected returns.

This paper focuses on these new innovations, which we will refer to as "LDI Plus".

We believe that the strategies discussed in this paper will be of most interest to trustees of schemes that already have an LDI strategy in place. We do though aim, with the help of a glossary at the end of the note, for this to be accessible for those trustees less familiar with LDI.

1. The evolution of LDI Markets

Since LDI was first used by the largest pension schemes in the early 2000s, the options available to pension schemes have been continually evolving, from the introduction of pooled funds to innovations in the underlying investments used to gain interest rates and inflation exposure. The chart below illustrates how the options available to pension schemes have evolved over time:



The recent introduction of pooled LDI Plus funds recognises that trustees have become much more comfortable with leverage, having seen the pooled LDI market tested by the 2008 financial crisis and a range of regulatory changes since then. It also reflects improvements pooled managers have made in how they manage collateral calls and distributions for their clients. Finally, and perhaps most prominently, it is in response to demand from clients that want to push their assets harder than ever in this low yield environment.

We set out in the next section how and where these innovations might be used, before discussing in Section 3 what trustees should consider before making an LDI Plus investment.



2. Applications of LDI Plus

Whilst LDI Plus is something that has been used by large schemes for a number of years, the launch of pooled funds has expanded the options available even for smaller pension schemes. These pooled funds differ from manager to manager, however they can be broadly split into two groups:

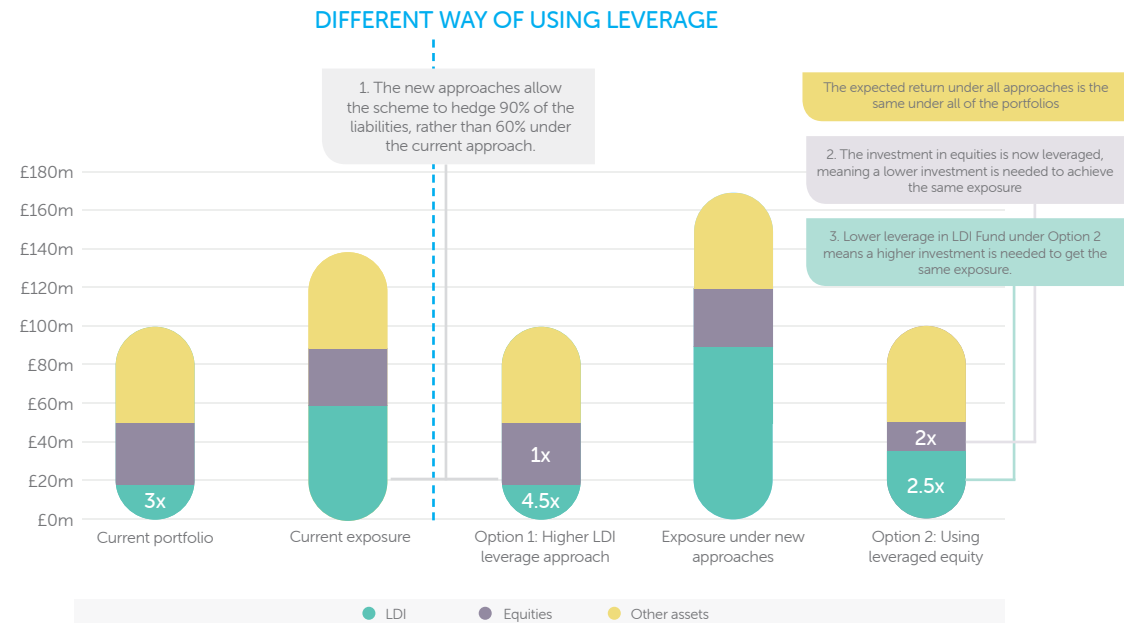
1. Those that offer LDI funds with higher levels of leverage than has previously been considered standard for pooled funds.
2. Those that offer leverage across different asset classes, for example diversified growth assets, equities or bonds rather than just gilts and swaps.

Whilst the method of implementation differs, and we touch on those differences in Section 3, there are two key applications for these new funds: increasing the level of protection, or taking on further growth risk to try to enhance returns (or both). We consider these approaches further below.

i. Increasing the level of interest rate and inflation protection

In some cases, the decision not to hedge interest rate and inflation risk may be an active decision taken by trustees. However, for many trustees such a position reflects a need to hold enough assets in return-seeking investments in order to meet funding or recovery plan assumptions. This means there are not enough assets left to hedge as much interest rate and inflation risk as desired.

In such a situation, either of the LDI Plus approaches above could be used to help increase the likelihood of achieving the recovery plan target whilst also increasing hedging. See the examples in the on the right.



In this example, we assume that the scheme needs to invest 80% of the portfolio in return-seeking assets in order to generate the return required under its recovery plan. Under the current arrangement, the LDI Portfolio is three-times leveraged, allowing the scheme to hedge 60% of its interest rate and inflation exposure.

Option 1 shows that by switching the 3-times leveraged LDI Portfolio into funds that offer 4.5-times leverage, the scheme can increase its interest rate and inflation protection to 90% whilst maintaining the 80% investment in return seeking assets.

Option 2 shows an alternative way of achieving almost the same thing. In this scenario, the scheme's existing equity allocation (previously 30%) has been removed. These assets have then been divided between a 15% allocation to a 2-times leveraged equity portfolio and a 15% additional allocation to the LDI Portfolio such that the exposures are the same as in Option 1.

We have used leveraged equities only as an example. It would also be possible to do something similar with the credit or diversified growth parts of the portfolio.

ii. Boosting returns

Alternatively, it is possible to use these approaches to increase the expected return on your assets, rather than increase the level of interest rate and inflation hedging. Taking an example where a scheme has £30m in LDI and this was hedging £90m of interest rate and inflation exposure. By increasing your level of leverage to 4.5 times, the scheme can achieve the same exposure with a £20m investment in LDI, freeing up £10m of assets. The £10m could be invested in return-seeking assets, such as equities or diversified growth, thus increasing the expected return on your assets without changing your interest rate and inflation exposure.



How much leverage is too much?

A common question from trustees when considering these solutions is, "how much leverage is too much for a pension scheme?"

There is no single answer that applies to all schemes. When determining the right level for your scheme, the main consideration will be how the scheme will meet any collateral calls.

Increasing the level of leverage leads to collateral calls and distributions happening more frequently. In our experience, whereas a fund with three times leverage may make collateral calls or distributions once a year, a fund with 4.5 times leverage could be expected to make collateral calls or distributions six times a year.

It is imperative that the scheme has the governance to manage these and a streamlined method for meeting any collateral calls in order to avoid the level of hedging being reduced inadvertently.

It is equally important that the scheme has other (non-leveraged) assets with sufficient liquidity (and low dealing costs) to be used for collateral calls and distributions.

We suggest that trustees consider how collateral calls would be met in stressed scenarios. For example, if using leverage on gilts and equities, you might consider how you would meet collateral calls in a scenario where gilt yields increase and equities fall simultaneously, perhaps with a large transfer value being payable at the same time.

Finally, in very extreme scenarios, if the overall level of leverage is too high, then the scheme risks collateral calls being made that are larger than the remaining, non-leveraged assets and therefore simply cannot be met.

Overall, schemes should look to keep leverage at the lowest level that allows them to achieve their overall risk and return objectives.

3. Considerations when using LDI Plus

As with any investment, there are a number of factors that should be considered before investing in LDI Plus. The key issues to consider are as follows:

i. Overall level of risk

There is no such thing as a free lunch. Using LDI Plus to boost return expectations means increasing your allocation to risky assets. If you are already hedging most of your interest rate and inflation risk, then this may lead to an increase in your overall level of investment risk. The level of risk should be assessed on a whole-scheme level to ensure the trustees are comfortable with increasing leverage to increase return expectations.

ii. Suitability of the remainder of your portfolio for meeting collateral calls

As discussed in the “How much leverage is too much?” box, establishing how you will meet collateral calls is key when putting strategies that use leverage in place. In particular, you need to be comfortable that there is sufficient liquidity, diversification and stability in the rest of the portfolio to meet collateral calls.

iii. Complexity and governance

As those already invested in LDI strategies will know, such strategies can be demanding in terms of the time needed to ensure appropriate training and monitoring.

Provided the increased collateral call requirements can be managed by the LDI manager without input from the trustees, the increased-leverage option is no more demanding than a traditional LDI strategy once established.

Similarly, once implemented, leveraging the growth assets should not materially add to governance requirements. However, this approach will require some additional considerations at the outset. In particular, it is possible to use separate funds for the scheme’s leveraged growth and leveraged protection strategies or to invest in a single fund that provides leveraged exposure to both growth and protection assets. Which of these options is selected will affect the accuracy of the hedge, how you meet collateral calls and the overall level of governance required to maintain your investment portfolio. It is therefore important to consider this at the outset. It is worth noting that overall, the number of collateral calls would typically be lower under this approach than the increased-leverage option.

iv. Fees

Whilst fees on these newer approaches vary by manager (as do the fees on more conventional LDI options), overall, they are not a barrier to using LDI Plus funds and in some cases can be a more cost-effective way of achieving the exposure you want.

v. What are you exposed to?

Using derivatives to gain exposure to asset classes can restrict, or even alter, what you are exposed to. In particular, for the leveraged growth approach:

- If using leveraged equity or credit, any active management will be lost and replaced with a passive return. Furthermore, the choice of indices to track may constrain you towards large-cap stocks and developed markets.
- Credit exposure can be achieved using credit default swaps. However, the return profile achieved differs to that of a physical bond portfolio, so caution should be taken when considering this type of investment.

- Finally, if using a single fund to gain leveraged exposure to growth as well as protection, issues can arise. In particular:
 - If the growth element is actively managed and performs poorly such that you wish to replace that growth manager, you would also need to unwind and replace the LDI portfolio.
 - The trustees may not have a choice over whether gilts or swaps are used for the hedging element of the portfolio, which may mean the accuracy of the hedge is lower than under other options.
 - The interaction between the growth and the hedging portfolio can mean that the level of hedging fluctuates over time, which may not be suitable for some schemes.

The exact implications of the above are too detailed for this note but should be discussed with your adviser and fully understood if you are considering using leverage on growth-style assets.

By contrast, simply using more leverage in your hedging portfolio releases assets for investments in an asset class and manager of your choice. There is therefore greater flexibility in terms of your choice of return-seeking assets under this approach.

Conclusion

Pension schemes have been using leverage within their LDI portfolios for a number of years now. Following the lead of larger schemes, managers have more recently launched a range of funds that offer either higher levels of leverage or leverage on alternative asset classes (i.e. not just swaps and gilts).






These funds primarily offer schemes the opportunity to:

- further reduce risk;
- increase expected returns; or
- both.

As such, we believe the strategies discussed in this paper may be of interest to both trustees of schemes already invested in LDI as well as those that have not previously invested in LDI.

Trustees should continue to evaluate the implementation of their LDI strategies over time to ensure it achieves the objectives that they set out in the most efficient way. The continued evolution of the market and new tools available may also mean that previous constraints to investing in LDI can now be overcome.

Considerations for LDI PLUS

-  Is the current level of hedging low and constrained by the amount needed to be invested in growth?
-  Is the rest of your portfolio liquid enough to manage the collateral calls?
-  Are your other growth assets reasonably well diversified?
-  Does the trustee board have sufficient governance to manage a higher leverage portfolio?
-  Are you comfortable with the way in which leverage is achieved on the growth-style assets?

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Reminder: Don't use if you don't need to!



Glossary

Collateral calls:

Collateral calls are a way of managing counterparty risk when using derivatives. As the markets underlying those derivatives move, the value of the derivative contracts will fluctuate and so too will the level of leverage. Each manager will have a certain amount of variability in the level of leverage that their funds are able to withstand. If market movements are large enough that the value of the underlying contracts move outside these bands, the funds may call on the investors to provide more capital in order to restore the desired level of leverage.

Hedge ratio:

The proportion of interest rate and/or inflation risk that has been removed.

Leverage:

Leverage is achieved when the exposure of an asset to markets is higher than the value of the investment. This is commonly used in pension schemes in order to increase the exposure of assets to interest rates and inflation to match the exposure of the liabilities and therefore reduce the impact that changes in these rates have on the funding position of the scheme.

Liability driven investments (LDI):

Whilst LDI can be used to mean any investment held to match your liabilities, here we refer to LDI as investments that use leverage to try to reduce the exposure of a pension scheme's funding position to interest rate and inflation movements.

Liquidity:

A measure of how quickly and at what cost an asset can be redeemed. A liquid asset can be sold quickly and at a relatively low cost.

Pooled:

Pooled funds combine the assets of lots of investors and then invest them in line with a centralised mandate. The investors have no discretion over the assets held within the Fund.

Segregated:

In contrast to pooled funds, segregated portfolios manage assets to an individual client's specifications. Historically, this was the only way to implement LDI and is still how some larger schemes manage their LDI as it allows them to match their liabilities more closely.

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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