USS briefing: Investment performance assessment for DB

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Introduction

To assess investment performance, it is important to understand what the investment is seeking to achieve – performance must be assessed against objectives.

The DB investment strategy of the scheme seeks to do more than can be fully encapsulated in a single benchmark or set of benchmarks. We set multiple objectives and constraints for the investments and then performance against those objectives is assessed using an investment balanced scorecard for DB, alongside another for the DC section[2]. As described in the Report and Accounts (page 23 for year ending 31 March 2025), we assess performance across six categories, using a range of risk and return metrics.

In this note, we seek to explain the objectives and constraints for the DB investment strategy, how that strategy is informed by the views of employers, and how the actual portfolio is then constructed. We then highlight some of the metrics from the annual investment balanced scorecard assessment. These metrics help give context to, and answer recent questions posed to us about, the DB section's performance against those objectives and within those constraints. We also point out some metrics which we do not calculate or report as they do not aid understanding performance against the set objectives.

We cover:

1. What are the objectives and constraints for the DB investment strategy?
2. What is the Valuation Investment Strategy and how is it set?
3. How do the actual investments relate to the VIS?
4. How do we assess performance of the DB investment strategy?
    a. Absolute performance
    b. Performance relative to liabilities
    c. Funding position
    d. Performance vs comparators
5. What was the absolute return on the overall DB fund, including returns on growth assets?
6. How do we assess the performance of our liability-hedging assets?
7. How is risk in the DB portfolio assessed?
8. How have the underlying asset class mandates performed against their benchmarks?

[1] The Chief Risk Officer is responsible for investment performance reporting and assessment as part of his remit and the Investment Performance team reports into him.

[2] Strictly speaking, USS is a single-trust, hybrid scheme; and there are no separate "sections" for DB and DC. We use this vocabulary because, in the context of this note, we think it aids understanding.

1. What are the objectives and constraints for the DB investment strategy?

The objective of the DB fund is not simply to generate the highest returns. It has a different purpose to some other institutional investors (such as some endowments or pure DC schemes) and is thus managed differently with a specific set of objectives and constraints. Understanding the actual objectives of the DB investment strategy is key when seeking to understand how its performance is assessed, and how the fund may be benchmarked.

The primary objective of USS's DB section is to provide members with a guaranteed inflation-linked income for life in retirement. This income is promised regardless of what happens to the economy in the future. UK interest rates and inflation both impact expected returns and therefore impact the cost of providing that income and therefore the present value of the DB liabilities. In turn, this impacts the level of funding of the DB section of the scheme, calculated as the market value of the assets minus the present value of the liabilities. All else equal, as interest rates fall or inflation rises, the value of the liabilities rise, and the funding position worsens.

There is a limit to how far the trustee can allow the funding position to worsen before taking action. This is represented in the trustee's funding risk appetite, calibrated by reference to the risk capacity and appetite of the sector. Based on this risk appetite, the trustee puts a limit on investment risk relative to the scheme's liabilities. This limit reflects the legal and regulatory environment in which we operate, including the trustee's fiduciary responsibilities.

This investment risk is taken in broadly two ways. Firstly, through not fully hedging the liabilities; and secondly by investing in return-seeking (growth and credit) assets. Investment in these assets aims to generate returns to pay benefits and thus reduce the contributions needed to fund the promised DB pension benefits. However, investment in growth assets will add to the asset-liability risk of the scheme; the value of such assets may fall (or rise) when liability values are not doing so.

The DB investment strategy targets a greater return than the liability-hedging assets would provide alone, whilst maintaining a prudent approach to meeting the scheme's liabilities.

The DB fund is therefore run from an asset-liability perspective, meaning that its investment strategy is designed to:

i. ensure the DB fund can meet its primary legal obligation to pay the promised retirement benefits to members as they fall due;
ii. ensure the DB fund does not exceed the risk-bearing capacity of the employers that stand behind the scheme; and
iii. dampen the volatility in the contribution rate that employers and active members must pay into the scheme, relative to a strategy solely seeking to grow assets over time.

In summary, for the DB fund, managing risk in relation to its future benefit obligations ***must*** be considered alongside a desire to generate returns, and this shapes both the fund's objectives and the investment decisions taken in pursuit of those objectives.

This was one of the drivers behind the trustee setting a wider range of objectives for the investment manager (USSIM) in July 2022. Prior to that, USSIM's overall mandate objective had been to outperform a Reference Portfolio (i.e., a multi-asset composite benchmark) by a certain amount. However, the trustee wanted to evolve this approach to better mitigate the risk that the investment manager outperforms its benchmark but nonetheless the funding ratio, and therefore potential member and employer outcomes, worsen.

The investment framework adopted since July 2022 sets multiple objectives for the investment manager including target liability hedge ratios (for managing the interest rate and inflation sensitivity of the DB liabilities) and target levels of growth assets, both aligned with the Valuation Investment Strategy ("VIS" – see below). However, it deliberately does not set a single benchmark, and performance is instead assessed using a range of different metrics.

2. What is the Valuation Investment Strategy ("VIS") and how is it set?

The VIS is set out as a theoretical, but investible, asset allocation across three key components: growth assets, credit assets, and liability hedging. Liability hedging is expressed through interest rate and inflation hedge ratios.

It is developed following the most recent actuarial valuation to represent in a simple way the trustee's investment risk appetite, to support the actuarial valuation and feed into the scheme's Financial Management Plan (FMP). It is also used to monitor progress against the valuation projections via the Monitoring & Actions Framework.

From November 2023 to early March 2024, the trustee ran an engagement programme with stakeholders on the VIS. A summary of that programme can be found on the USS website.

USS then consulted employers on its Statement of Investment Principles (SIP) in spring 2024. Although not a part of the SIP, the VIS composition was made available alongside the SIP consultation, and this found that:

- The vast majority of employers responding expressed broad support for a modest increase in liability hedging (from 40% to 50%), typically commenting that it would support greater stability in the funding position.
    - A smaller number called for less risk to be taken, citing the improvement in the funding position.

- Similarly small numbers wanted the investment strategy to take more risk citing the scheme's open status and its ability to take a long-term view of investment.

- In deciding upon its investment approach, the trustee considered carefully the balance of views provided by employers, of which there was a wide range.
- The trustee took these views into consideration when considering potential investment strategies alongside many metrics of expected returns and risks for those candidate strategies, including potential for greater future required contributions and potential for a deficit to emerge.
- The trustee's consideration of potential investment strategies also had to take account of the trustee's legal and regulatory responsibilities.

The current VIS is 60% invested in growth assets and has 50% hedge ratios for managing the interest rate and inflation risks of the scheme's liabilities.

3. How do the actual investments relate to the VIS?

The VIS does not define the actual assets in which the investment manager (USSIM) may invest; it is a hypothetical investment strategy which is expected to deliver appropriate long-term returns underlying the valuation at an acceptable level of risk.

The actual implemented investment portfolio can differ from the VIS (within limits set by the trustee). USSIM is set risk constraints and return objectives by the trustee in respect of the implemented portfolio which pay regard to the level of risk and expected return associated with the VIS.

USSIM takes a holistic approach to portfolio construction which looks at the total portfolio. This includes consideration of the robustness of prospective returns across plausible macro scenarios, the resilience and flexibility of portfolio exposures under adverse market conditions, the integration of responsible investment factors such as the exposure to systemic risks as well as more traditional measures of risk and expected return.

Given that this holistic portfolio construction approach seeks to achieve many objectives with the total portfolio, care should be taken when attributing returns to individual components of the portfolio. Those components do not exist in isolation and cannot simply be increased or decreased as a proportion of the total portfolio without considering the impacts across all the objectives and risk limits.

For example, given the risk appetite of the trustee, which is set with reference to the HE sector, the more the trustee hedges inflation and interest rate risk, the more of the overall risk appetite is available for investing in growth assets. Hedging of interest rate and inflation risk actually frees up risk capacity to invest in growth assets.

As greater hedging frees up the capacity to invest in growth assets, any analysis of the out-turns from hedging may need to take into account the added return from any additional investment in growth assets enabled by that hedging.

To be a realistic alternative, the counterfactual that removes hedges may also need to have an appropriate amount of growth assets removed to keep investment risk within appetite. On the other hand, a strategy which hedges more in order to support greater investment in growth assets would be constrained by the amount of leverage the scheme can take on. These examples show how, in order to understand potential outcomes for the DB investment strategy, it is essential to look at the portfolio holistically.

4. How do we assess the performance of the DB fund?

As detailed above, the trustee sets multiple objectives and constraints for the investments, and measures performance against those through the investment balanced scorecard process. The metrics that are considered in the balanced scorecard assessment include:

a. Absolute performance

At 31st March 2025, the DB fund's returns were:

- Down 1.4% over 1 year
- Down 6.2% per annum (p.a.) over 3 years
- Up 1.7% p.a. over 5 years
- Up 3.9% p.a. over 10 years

b. *Performance vs liabilities*

At 31st March 2025, relative to liabilities (using a Liability Proxy that mirrors the interest and inflation sensitivity of the liabilities), the DB fund's returns were:

- Up 10.2% over 1 year
- Up 15.8% p.a. over 3 years
- Up 14.1% p.a. over 5 years
- Up 6.9% p.a. over 10 years

c. *Funding position*

This performance versus liabilities is reflected in a greatly improved funding position for the DB section of the scheme. This has moved from a £14bn deficit at 31st March 2020 to a £10bn surplus at 31st March 2025 (on a technical provisions basis).

The current VIS seeks to support the funding ratio over the medium to long term but comes with volatility over the shorter term. This makes the liabilities less suitable as a shorter-term benchmark.

This is one of the reasons why performance vs the liabilities is *a* measure of performance but not *the* only measure.

d. Performance relative to "comparators"

In order to put the performance of the DB fund in context, we also compare its performance to a series of hypothetical "comparators" each year.

These comparators are hypothetical alternative portfolios, mostly constituted of public market indices, which the investment manager could have invested in (within the limits set by the trustee). These comparator portfolios have higher or lower levels of growth assets and higher or lower levels of liability hedging than the VIS, alongside using the VIS itself as a comparator.

Over the financial year to 31st March 2025, the DB fund generated higher returns than, or "outperformed", 4 out of 10 comparators. The four comparators it outperformed had higher liability hedging than the DB fund, including one that also had a higher allocation to growth investments. The DB fund underperformed the other 6 of the 10.

It should be noted that the comparators comprise mostly public market investments, whereas the invested portfolio of the DB fund also comprises significant investments in private assets. Over this period, private growth investments as a whole underperformed public market indices used in comparator portfolios, and this was the key reason for the divergence in performance relative to the mostly public market comparators.

The performance of the DB fund's private market mandates is separately assessed over the medium / long-term using a variety of methods, but one key input is the comparison of returns relative to the performance achieved by other investors using data sourced from private data providers. Public market mandates are assessed against market indices, where appropriate.

5. What was the absolute return on the overall DB fund, including returns on growth assets?

For the financial year to 31st March 2025, the overall DB fund return was -1.4%. The main components of this return were:

- The return-seeking part of the DB fund's portfolio which includes growth assets and credit
    - Growth assets provided a standalone return of +5.2% and contributed +3.1% to the overall DB fund return
- Foreign currency exposure, which provided negative returns due to the strength of GBP versus other currencies
- Liability hedging assets, which broadly matched the negative returns (i.e., reduction in size) of the scheme's liabilities (though USSIM only hedged about half of this risk, so the scheme benefitted very significantly from this position over the year).

The return on the growth part, of +5.2% over the financial year, was achieved with a diversified portfolio of assets including public and private equities, infrastructure, and property.

These asset classes exhibit a variety of risk-return characteristics and together look quite different to any single public market equity index such as the MSCI World. In such popularly used indices, large companies, like the American tech giants, have recently had outsized weightings based on their very high market values. The returns of these types of indices are therefore highly related to the performance of a small number of such stocks. Given all that, for context, over the same period the MSCI World returned +7.9% on an FX-hedged basis.

6. How do we assess the performance of our liability-hedging assets?

We do not report a standalone "return" on the hedging assets as this is not a useful metric of achievement of objectives. In fact, a higher "return" on the hedges might be a negative result for scheme funding if it was driven by falling interest rates on long-dated bonds leading to a rise in the value of the liabilities and an associated reduction in the funding ratio for the scheme (i.e., a reduction in the surplus, or the emergence of a deficit). This is because the value of the liabilities would be expected to rise by more than the value of the scheme's assets given interest and inflation exposures that are only partially hedged.

In the investment balanced scorecard, the trustee assesses the performance of USSIM's hedging activities by looking at the development of the hedge ratios vs targets and the effectiveness of the hedges, with the latter viewed through the relationship of the hedging assets to the liabilities including correlation and beta. We also look at the breadth of assets held within the liability hedging strategy and how these have contributed to the scheme relative to only holding liability matching UK government bonds. Over the calendar year 2024, the trustee's Investment Committee assessed USSIM's hedging activities as having achieved their target.

Furthermore, if we were to calculate returns on hedging assets we would need to take account of much more than the returns on the hedge trades alone. We might, for example, need to estimate the impact on returns from the extra growth assets in which we were able to invest ***because*** we were holding those hedging assets. In order to estimate the impact of this, we would potentially need to construct an alternative investment strategy which had less hedging and therefore materially less growth assets in order to stay within its risk appetite. Based on this, we did perform the following estimations back in 2024 which provide some useful context:

The estimate of the aggregate monetary "loss" on all LDI investments bought after 31 March 2017 as at 31 March 2023 is less in size than the estimate of the aggregate "gain" on all LDI investments over the previous 6 years (from April 2011 to March 2017).

If we had run a significantly lower hedge ratio over the 2017-23 period, we would have had to have less in growth assets. Our broad-brush estimate of the "loss" we would have avoided by having a lower hedge ratio is more than offset by our broad-brush estimate of the gain we would not *have earned through having less in growth assets in order to remain within risk appetite. We estimate the gain from having more in growth assets over this period, made possible by having greater hedges, to be more than 2x the "losses" that could be attributable to the hedges.*

Please note that these are estimates viewing ex-post results, over a particular period, on hedge trades which have an objective of managing aggregate risk exposure rather than seeking return outcomes.

7. How is risk in the DB portfolio assessed?

Noting that outcomes are not assessed solely on returns, it is worth considering how risk outcomes are assessed. Performance on hedging assets is assessed by considering their impact on the risk of the scheme – through hedge ratio evolution and through hedge effectiveness. Portfolio-level risk metrics in the investment balanced scorecard include asset-liability volatility, value-at-risk (VaR), liquidity and counterparty measures.

The asset-liability Self-Sufficiency (SS) VaR on the DB fund was over £13bn at 31st March 2025. This is a modelled number which suggests there is a 5% chance that over 1 year the funding level could reduce by £13bn (or more). With the SS and technical provisions (TP) surpluses standing at c£5bn and c£10bn respectively at that date, such a move would have taken the DB section into deficit.

This measure is used by the trustee in setting the VIS and then a limit is put on it in order to ensure the investment risk taking is within risk appetite. Greater allocation to growth assets, or less hedging assets, would be expected to increase this number.

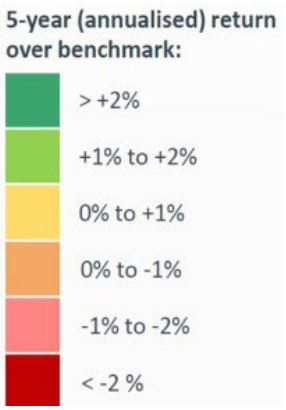
8. How have the underlying asset class mandates performed against their benchmarks?

One of the broad categories considered in the investment balanced scorecard assessment is "Active Management". Under this category the trustee looks at performance vs comparators to understand the impact of broader asset allocation decisions (per 4d above).

We also seek to assess active management of mandates. As for the overall performance of the DB fund, analysis of performance of individual mandates is conducted in the context of the objectives set for those mandates. Some mandates are operating at the whole-scheme level for hedging or for rebalancing or tilting overall scheme exposure. Certain mandates are asked to seek diversified sources of risk premia, in the context of the total portfolio, rather than to maximise return per unit of risk / capital. We also have a significant allocation to a passive approach which is assessed based on tracking error relative the particular index.

There are seventeen mandates across public and private markets which are managed relative to an index benchmark. These seek to outperform their benchmark, subject to limits on their level of risk relative to that benchmark. These have total asset values of c.£31bn at 30 June 2025, the last date the investment balanced scorecard metrics were reported. Each of these has an outperformance target relative to the index benchmark. For Private Markets generally, the benchmarks also include an element for the expected illiquidity premium on top of the index return; and for Private Equity we add an expected leverage premium on top of that.

We assess performance on such mandates over a 5-year period. There are 12 mandates (5 private markets; 7 public markets) with c.£29bn with such a track record. These are reported in bands of annualised relative performance, as per this key:



Of those 12 mandates, we report the number and % of this c.£29bn AuM achieving these return bands (per annum), relative to benchmarks (which includes any liquidity or leverage premium) over 5 years – this data is to 30th June 2025 (this being the latest investment balanced scorecard assessment):

- 3 mandates (representing 29% of active mandate AuM) delivered relative returns >2% (dark green)
- 3 mandates (15% of active mandate AuM) delivered relative returns +1% to +2% (light green)
- 4 mandates (13% of active mandate AuM) delivered relative returns 0% to +1% (yellow)
- 0 mandates (0% of active mandate AuM) delivered relative returns 0% to -1% (orange)
- 1 mandate (26% of active mandate AuM) delivered relative returns -1% to -2% (pink)
- 1 mandate (16% of active mandate AuM) delivered relative returns <-2% (red)

As part of the investment balanced scorecard assessment, we also consider other metrics (such as data on performance achieved by other Private Markets investors) - typically over longer periods over which such analysis is more instructive.

(Note: some of the private asset June valuations were not included in the data above as they were not available when published for the assessment.)