STATE STREET GLOBAL ADVISORS

Target Leverage Funds & DB+

A Uniquely Efficient LDI Solution

Over 60% of UK defined benefit schemes are underfunded.[1]

Moreover, approximately 75% of defined benefit schemes sponsored by FTSE 350 companies are actually cashflow negative, with short-term outgoings exceeding income.[2]

In such situations, schemes need to use their assets much more efficiently.

To address these challenges we've developed an innovative solution that helps make the most efficient use of a scheme's cash, while dramatically reducing the governance burden.

[1] Source: Pension Protection Fund, March 2018.
[2] Source: Hymans Robertson, Ninth Annual Pensions Analysis Report, September 2018.

What Schemes Need

Defined benefit pension schemes have three major requirements:

Growth – to generate returns in order to meet funding targets.

Income – to meet their pension payments when they fall due.

Protection – to manage funding-level volatility, helping to protect against changes in interest and inflation rates.

Maximising portfolio efficiency helps increase the probability of achieving all three of these objectives.

Meeting Funding Targets

For schemes which are underfunded or cashflow negative, using leverage can allow them to maintain allocations to return-seeking assets for longer. It also frees up capital to be used elsewhere, for example to meet short-term cash outgoings or to increase allocations to growth, income or protection strategies.

This can increase the probability of meeting funding-level targets.

Increasing Diversification

Even when schemes are near full funding, greater diversification in asset class exposures may be warranted. In these cases using scheme capital more efficiently can release cash to invest into diversifying asset classes.*

Challenges

Existing approaches to accomplishing these aims can help but they often come with increased governance challenges, inflexibility or other inefficiencies.

A New Approach

Our aim was to develop a solution that combined the key attributes that make leveraged funds efficient while decreasing governance complexity — all in an integrated, easy-to-implement package.

* Diversification does not ensure a profit or guarantee against loss.

What An Ideal Solution Should Provide

An ideal solution to help defined benefit schemes meet their objectives should achieve three key aims:

Capital Efficiency – to free up capital so that it can be used elsewhere, for example, to make payments to pensioners or to invest in growth or diversifying assets.

Collateral Efficiency – helping to minimise the capital buffer needed to maintain leveraged exposure. An ideal solution would enable efficient movement of collateral between components.

Flexible Allocation – to allow schemes to tailor their allocation between different asset classes and also allow allocations to evolve over time as schemes de-risk.

Our first step was to look at existing solutions and understand where they worked and where they didn't.

Where Existing Approaches Fall Short

When we analysed existing approaches, we quickly found that they fail to deliver on all three of the most desirable traits. Here's why.

Standalone Solutions

This common solution uses separate leveraged pooled funds, with each fund giving exposure to a different asset class. Typically these funds would be leveraged LDI and synthetic equity for growth. This offers allocational flexibility and the use of leverage means that schemes can release cash up front, resulting in capital efficiency.

Unfortunately, the standalone nature of the two components means that collateral cannot be efficiently shared between the different funds and asset classes. Practically, this results in a higher likelihood of investor capital calls, increasing the governance burden on schemes. This can mean that the amount of collateral needed to maintain desired investment exposures is higher. This makes this type of solution collateral inefficient.

- ✓ **Capital Efficiency**
- ✗ **Collateral Efficiency**
- ✓ **Flexible Allocation**

Combined LDI and Equities

Here a single pooled fund holds both leveraged LDI and synthetic equity in a pre-defined proportion. In using leverage, schemes are able to release cash up front, giving capital efficiency. And, when needed, capital held within the fund can be used to collateralise either the LDI or equity exposures, giving collateral efficiency.

However, because the proportions of LDI and equity exposure are pre-defined in the combined fund, there's no flexibility to choose the asset allocations most appropriate to a scheme's individual circumstances.

Additionally, if a scheme wishes to de-risk at some point, through selling equities, the entire combined fund, including the LDI component, would need be sold and then separately bought elsewhere.

This leads to two problems: firstly, it's inefficient to sell and then re-buy the LDI component; and secondly, these transactions increase the governance burden that schemes face.

- ✓ **Capital Efficiency**
- ✓ **Collateral Efficiency**
- ✗ **Flexible Allocation**

Introducing Target Leverage Funds

We developed our Target Leverage Fund to address each of the main aims that schemes have: capital and collateral efficiency and allocational flexibility.

The Target Leverage Funds are a powerful range of 4- and 5-times leveraged equity and LDI funds — that can help fuel growth and tailor-match liabilities.

Efficient Use of Capital

The leverage in our Funds gives capital efficiency because it helps to free up capital that can then be used elsewhere by a scheme, for example, to pay benefits, increase diversification or to allocate to other growth, income or hedging assets.

Efficient Use of Collateral

Our innovative Efficient Collateral Pool gives our solution collateral efficiency. This mechanism provides low-friction, daily movement of collateral between the Pool and the LDI and Equity Target Leverage Funds.

Each day, as markets move, our solution responds by moving cash into and out of the Efficient Collateral Pool, bringing each LDI and Equity Target Leverage Fund back to its target leverage level. We manage that, so schemes don't have to.

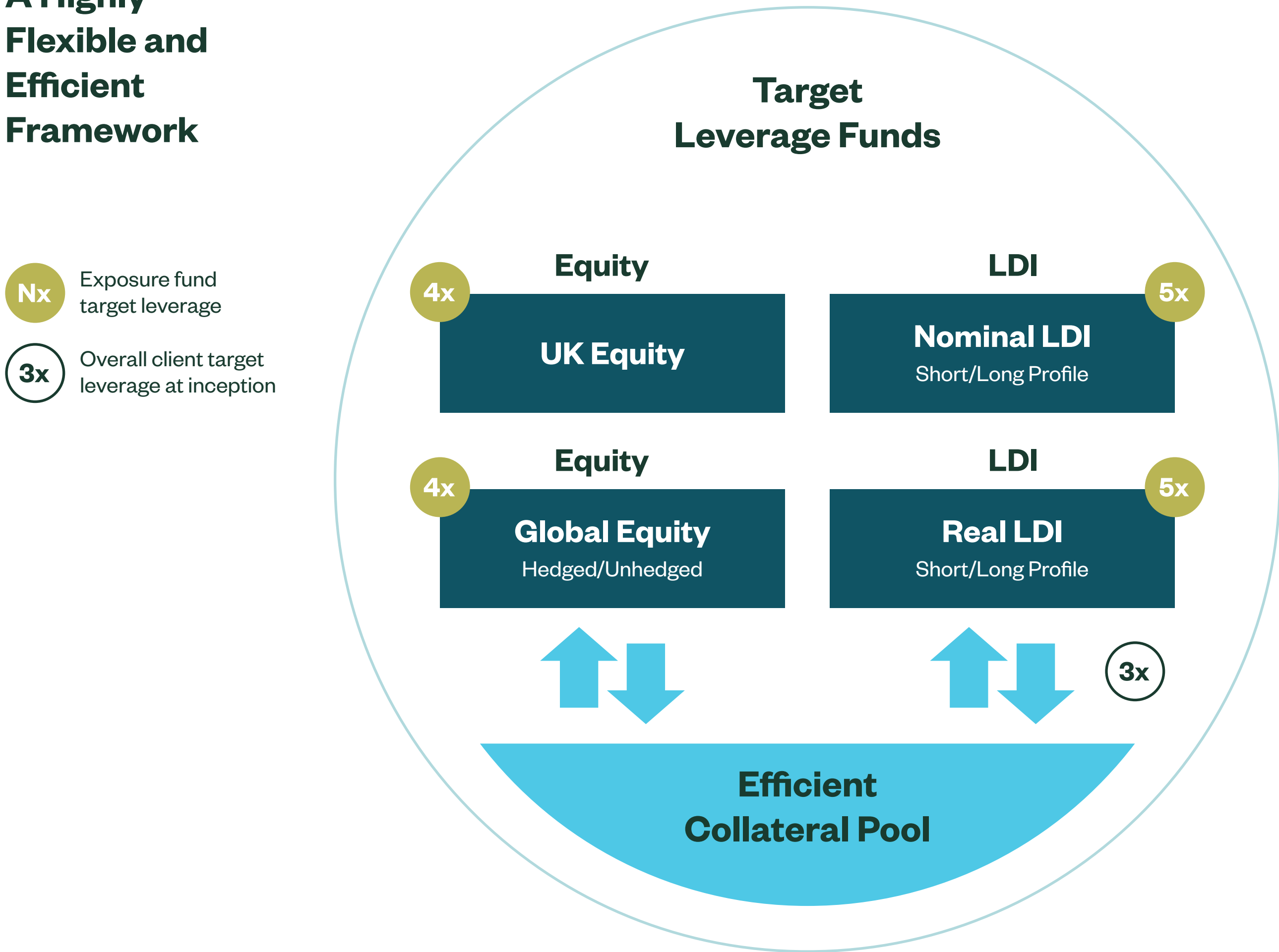
This efficient use of collateral can help to significantly improve risk management and lower the governance and administrative burdens (such as capital calls) that schemes may face. Fewer capital calls may also mean that there is less risk of a scheme being a forced-seller of assets.

Flexible Allocations

Our Target Leverage Funds allow schemes to choose different exposures to suit their individual requirements and gives them the ability to easily adjust their allocations when scheme circumstances change.

In addition to our Target Leverage Funds, SSGA offer a wide range of other leveraged and unleveraged funds that schemes can use, meaning there's even more efficiency and flexibility in reserve.

A Highly Flexible and Efficient Framework



Complete Range of Funds

Our Target Leverage Funds are designed to work together or in isolation, providing precision-matching and flexibility.

Equity Funds (4 Times Leverage)
State Street Target Leverage UK Equity Fund
State Street Target Leverage World Equity Fund
State Street Target Leverage World Equity Hedged Fund

LDI Funds (5 Times Leverage)
State Street Target Leverage Nominal Rate Short LDI Fund
State Street Target Leverage Nominal Rate Long LDI Fund
State Street Target Leverage Real Rate Short LDI Fund
State Street Target Leverage Real Rate Long LDI Fund

Efficient Collateral Pool
State Street Target Leverage Cash Fund

Delivers Across the Board

Delivering capital efficiency, collateral efficiency and flexible allocation, our Target Leverage Funds are uniquely efficient, helping you make better use of your assets.

1

Capital Efficiency
We use synthetic growth and LDI assets to free up cash via leverage.

2

Collateral Efficiency
Our innovative Efficient Collateral Pool allows fast, low-friction movement of collateral between the Equity and LDI allocations.

3

Flexible Allocation
Clients can choose the most appropriate asset allocations for their circumstances with inbuilt flexibility to evolve their allocations over time.

1. Frees Up Cash

Using our Target Leverage Funds, for every £1000 of a typical scheme's exposure a maximum of around £467 could be released:

Before (Typical Scheme Allocation)

Equities	£300
Government Bonds	£400

Using SSGA Solution

£75	Target Leverage Equity Fund
£80	Target Leverage LDI Funds
£78	Target Leverage Collateral Fund

£467 cash freed to:

- Increase growth asset allocations.
- Invest into Cashflow-Driven Investing (CDI) products.
- Improve portfolio diversification.
- Pay member benefits.

This part of the allocation is unchanged

Corporate Bonds	£150
Other Assets	£150

£150	Corporate Bonds
£150	Other Assets

Source: SSGA, for illustrative purposes only. Assumptions, for the purposes of this illustrative example: LDI Fund leverage*: 5x, Growth Fund leverage*: 4x, Overall Client leverage at point of investment: 3x

2. Dramatically Reduced Governance Burden

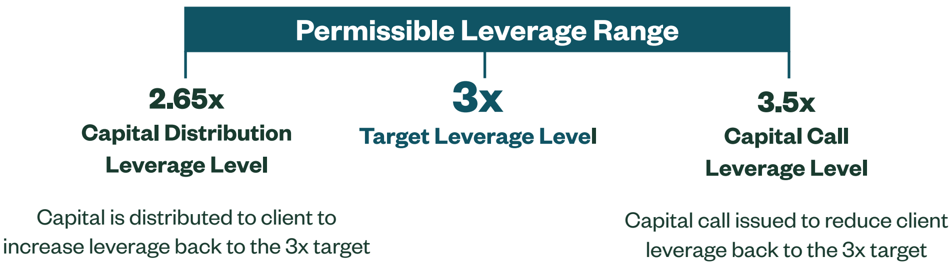
Leveraged pooled funds will usually entail capital calls at some point. A capital call is where investors are called on to provide additional capital into a solution, in order to reduce the solution's overall leverage level.

To meet capital calls, schemes typically need to raise capital from elsewhere within their portfolio. We know that capital calls represent a governance challenge for many schemes.

Our solution helps to ease that challenge by treating leverage holistically across the entire Target Leverage Fund range. The Efficient Capital Pool makes efficient use of the collateral available within the solution itself, thereby reducing the likelihood of a capital call being required to provide further collateral.

3. Reduced Capital Calls

When a scheme's overall leverage gets too high, we will call for capital from the scheme. When it gets too low, we will distribute capital back to the scheme. We perform this leverage monitoring, so schemes don't have to do this themselves.



This differs from existing LDI funds, where capital calls are based on the overall fund's leverage and all investors within the fund will get capital calls at the same time. In our solution capital calls are based on each individual scheme's leverage level.

The efficient nature of the Target Leverage Funds means that there are likely to be far fewer instances when a scheme will need to raise further cash to answer capital calls. The reduction can be dramatic, further easing the governance challenge on schemes.

4. Improved Overall Risk Management

We've already seen how our Target Leverage Funds can help schemes make the most efficient use of their capital but that's not all: By applying leverage on both the equity and bond components, and so providing more effective diversification, our solution also improves the overall scheme risk management profile.

Introducing DB+

DB+ is a new way for DB clients to interact with SSGA.

With DB+, we take ownership of much of the administration and governance that schemes themselves or their consultants would historically have undertaken.

DB+ is an optional service layer, designed to further increase the efficiency of your LDI implementation and management.

From initial implementation, through managing the portfolio all the way to handling the scheme's cashflows, the DB+ service dramatically reduces administrative burden.

Implementation, Tailored

SSGA can own the transition from where you are now to where you want to be.

You specify which funds should form the portfolio — this may or may not include our Target Leveraged Funds — and we take care of the rest.

We can help with implementing, for example:

- Target interest-rate and inflation-rate hedge ratios.
- Target desired growth and matching-asset allocations.
- Triggers to accelerate initial implementation. These can be based on market or funding levels.

Portfolio, Managed

SSGA can monitor the portfolio and rebalance where necessary in line with objectives, targets, thresholds and eligible funds set out by you within the DB+ agreement, including:

- Overall interest-rate and inflation-rate hedge ratios.
- Tenor points interest-rate and inflation-rate hedge ratios.
- Asset allocation, such as growth versus matching assets.
- Funding-level monitoring.

Cash Flow, Solved

SSGA can handle cashflow requirements for your scheme – importantly, this can include capital calls or distributions from any leveraged funds held.

We can manage your liquidity needs by redesigning the hedge to accommodate any redemptions or reduce leverage following contributions.

The Uniquely Efficient LDI Solution

Our solution addresses all the major challenges of existing LDI approaches.

We believe it is unique in the pooled-fund market in delivering on three critical areas: giving capital and collateral efficiency alongside flexible allocation.

Our solution can help schemes make the most efficient use of their capital, freeing up funds that can then be used to allocate to growth investments, improve hedging or pay benefits.

At the same time, our innovative Efficient Capital Pool helps substantially ease the governance burden by making the need for capital calls far less common and more easily handled.

Providing all these advantages in one easy-to-implement package is what makes our solution uniquely efficient and ideally suited to solving the most pressing problems facing pension schemes today.

Our DB+ service adds a further layer of efficiency. Used with or without our Target Leverage Funds, this service package removes many of the remaining administrative burdens of an LDI portfolio, further freeing schemes to concentrate on other areas, safe in the knowledge that their liability hedging requirements are being taken care of.

To learn more about how our LDI solutions could help your scheme please contact your relationship manager or call 020 3395 6391.

About State Street

Our clients are the world's governments, institutions and financial advisors. To help them achieve their financial goals we live our guiding principles each and every day:

Start with rigour
Build from breadth
Invest as stewards
Invent the future

For four decades, these principles have helped us be the quiet power in a tumultuous investing world.

Helping millions of people secure their financial futures.

This takes each of our employees in 27 offices around the world, and a firm-wide conviction that we can always do it better. As a result, we are the world's third-largest asset manager with over $3 trillion* under our care.

* This figure is presented as of 30 June 2020 and includes approximately $69.52 billion of assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated.

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