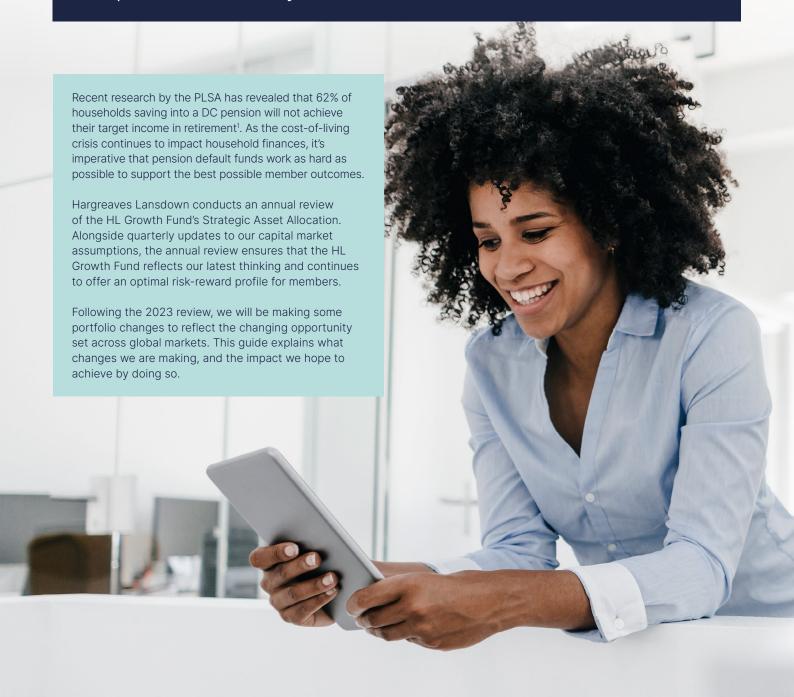
HL GROWTH FUND: ANNUAL ASSET ALLOCATION REVIEW 2023

For professionals only



Changes to the HL Growth Fund Asset Allocation

We have identified a number of opportunities to deliver a more attractive risk-adjusted return profile for the HL Growth Fund in our annual review. The current asset allocation is compared with the new asset allocation below:

Asset Class	Current Portfolio Weight	New Portfolio Weight
Cash	-	-
GBP Corporate Bonds	10%	-
Global Corporate Bonds - GBPH [†]	-	9%
Global High Yield Bonds GBPH [†]	5%	2%
\$ Emerging Market Debt - GBPH [†]	5%	-
Blended Emerging Market Debt – GBP*		2%
Global Government Bonds	-	2%
Global Index Linked Government Bonds	-	2%
Total Fixed Income	20%	17%
UK Equities	6%	10%
Global Ex-UK Equities	54%	51.7%
Emerging Market Equities	10%	12.7%
Global Smaller Companies	10%	8.6%
Total Equities	80%	83%
Total	100%	100%

^{*}Hard currency EM Sovereigns and EM Corporate Bonds will be hedged to Sterling, Local currency Sovereigns will be left unhedged.

RATIONALISING THE ASSET ALLOCATION:

Increased asset class diversification, decreased volatility

We add four new asset classes to the portfolio: global government fixed-income bonds, global government inflation-linked bonds, local currency government emerging market debt and hard-currency corporate emerging market debt. This broadening of the investment universe enables us to lower the expected volatility of the portfolio without sacrificing expected return.

A more diverse bond allocation

The latest review has resulted in a slightly lower overall allocation to Bonds. Moody's optimisation tool allocates 100% of fixed income to Global IG Corporate Bonds on an unconstrained basis. We took a pragmatic approach to ensuring sufficient diversification by reducing the weight in IG Corporates and allocating to additional fixed income asset classes. By gradually adding constraints in stages, we 'force' the optimiser to hold:

- Global Sovereign Bonds
- Global Inflation Linked Sovereign Bonds
- Global High Yield Debt
- Emerging Market Debt

A 2% allocation to each resulted in no change to the expected volatility of the portfolio, and a modest 0.04% reduction in expected annual return on a 10-year view compared to holding IG Corporate bonds alone. We believe this is a worthy trade off to provide potentially greater downside protection and some inflation proofing characteristics via the index linked debt.

A global approach to fixed income

The HL Growth Fund is managed by LGIM on a day-to-day basis, built according to our SAA. LGIM's imminent Global Corporate Bond Fund launch will allow us to benefit from exposure to a more diverse basket of underlying issuers. LGIM will also be launching a Global High Yield Bond Fund, which allows us to further diversify high yield exposure too.

In Government Bonds, we favour a global approach over a UK approach. The UK government debt market has a longer-term structure compared to the global index, which contributes to greater duration risk, especially in index-linked issues. A global approach better reflects the opportunity set and offers a more diverse portfolio too.

Across all fixed income allocations, corporate bonds and hard currency non-sterling issues will be hedged back to Sterling to avoid unintended currency risk. Local emerging market debt will be left unhedged.

Three flavours of emerging market debt

Our new asset allocation brings additional Emerging Market credit opportunities through the inclusion of corporate and local-currency government EM bonds. Exposure will be split into three buckets: one third in each of the liquid markets (local currency government, hard currency government and hard currency corporate). This was a judgement based on analysis of common market approaches and a desire to avoid too much exposure to local currency bonds, which tend to be more volatile for UK investors.

A higher weight in equities

On an unconstrained basis, the optimiser would breach our upper limit for equity exposure, at the expense of allocating more to fixed income. As we have diversified the bond sleeve to include Emerging Market Debt and High Yield, we were able to reduce the equity from the unconstrained starting point without sacrificing expected return.

Adjustments to regional equity exposure

We increased our weight in UK equities. UK equities are constrained at 12% of total equity exposure, which we believe maintains a significantly lower UK weight compared to the average of our peers². Global Ex-UK equities have been trimmed to increase UK exposure. As UK equities are expected to be lower risk for UK clients than overseas equities, our increased weight frees up risk budget for additional exposure to riskier equity opportunities elsewhere. We have increased exposure to Emerging Markets from 12.5% to 15% of total equity exposure as a result. Global Smaller Companies are being modestly trimmed from 12.5% to 10% of total equity exposure, since Emerging Markets offer a more attractive risk-adjusted return profile in combination with other asset classes.

[†]GBPH represents a currency hedged asset class, to remove the impact of foreign exchange on returns.

Strategic Asset Allocation at Hargreaves Lansdown



Strategic asset allocation ("SAA") aims to help our clients find, understand, and stick with an appropriate investment strategy. One that best matches their objectives, risk appetite and target returns. Our SAA process aims to ensure that HL clients with similar investment objectives across different HL products experience a similar investment journey and similar investment outcomes.

In the context of our Workplace Solutions business, SAA applies to our default growth phase fund – the HL Growth Fund. The Fund is designed to capture 85% of stock market risk, which we believe represents the optimal level for the typical workplace member. The risks associated with the strategy are managed through a 10-year de-risking glidepath into a flexible retirement fund, and members have the option to tailor their risk level by blending the default with our ABC Funds, or by self-selecting entirely. We hope to extend our SAA framework to cover the de-risking fund and the ABC Funds as soon as practicable.

The SAA is set by the Strategic Asset Allocation Forum ("SAAF"). Chaired by Robert Farago, Head of Strategic Asset Allocation, the Forum meets monthly to set house policy on SAA. The Forum reviews the SAA models used by relevant funds run by Hargreaves Lansdown Fund Managers (HLFM), including HL Growth. It also pursues a research agenda to inform future thinking. The SAAF is made up of five voting members:

Robert Farago - Head of Strategic Asset Allocation

Robert joined HL in November 2021 to develop our strategic asset allocation models for the HLFM range. Robert joined from Aberdeen Standard Investments where he held the position of Head of Thought Leadership. Prior to that he was the Head of Asset Allocation at Schroders Private Bank.

Lee Gardhouse - Chief Investment Officer

Lee is Chief Investment Officer at Hargreaves Lansdown. He has been with HL for 27 years and was instrumental in setting up HLFM and developing our fund research process. Lee provides line management to our team of Fund Managers and provides strategic direction for the HLFM business.

Emma Wall - Head of Investment Analysis & Research

Emma joined HL as Head of Investment Analysis in April 2019 having previously worked at Morningstar where she was Senior International Editor, providing investment news, views and analysis to individual investors across the UK, Australia, Canada and India.

Tom Nall – Head of Investment Proposition

Tom joined HL in December 2019 to build out our investment proposition across all distribution channels. Prior to joining HL, Tom was a Director of a proposition development consulting firm specialising in pensions and employee benefits. His past experience includes 8 years in proposition development and benefit consulting for Aviva, and holding the post of Workplace Solutions Director at SimplyBiz, where Tom developed their auto-enrolment solution.

Ziad Gergi - Head of Multi Manager Funds

Ziad joined HL from Barclays in December 2021, where he worked for 17 years. He ended his tenure as the head of its high-net-worth multi-asset team and was featured in Citywire Wealth Manager's Top 100 study into the most influential people in UK fund selection. Ziad leads the team responsible for managing the HL Growth Fund.

In addition, the SAAF has a number of other members who provide additional expertise and challenge to the voting members. They are:

Stephen Barnett – Head of Quantitative Investment Analysis

Stephen joined HL in August 2021 to head up our team of Quantitative Investment Analysts within HLFM. Prior to joining H, Stephen was a Director of Fidelity International and Head of Portfolio Construction and Risk for Europe. Stephen also has experience as Head of Fundamental Equity Portfolio Construction at Goldman Sachs and as an analyst at JPMorgan.

John Page – Head of Investment Risk

John joined HL in November 2021. He provides independent oversight of HLFM's investment activities and heads our team of Investment Risk Managers. John joins HL after a long stint at abrdn, where most recently he held the role of Head of Investment Risk Oversight.

Other subject matter experts as necessary to the SAAF agenda.

The SAAF blends the wealth of knowledge held collectively by its members with a range of quantitative inputs.

Within the HL Growth Fund, HLFM aim to deliver the best return available for the Fund's risk budget of 85% global equity volatility, (although there are no guarantees and this is not the fund's objective), while maintaining sufficient diversification within the portfolio.

The de-risking phase of our strategy is provided via investment in the BlackRock MyMap 4 Fund. Although we don't control the asset allocation, we use Moody's Portfolio Risk Analytics to model the expected returns/risks of this fund, in the same way as for the HL Growth Fund. Our estimations of member outcomes at retirement therefore reflect our performance expectations for both stages of the default investment arrangement.

Capital Market Assumptions

Hargreaves Lansdown have partnered with Moody's Analytics, who provide a range of quantitative inputs into our process: a robust set of Capital Market Assumptions, a portfolio optimisation tool and an extensive range of risk measures.

Capital Market Assumptions ("CMAs") are a key input into our Strategic Asset Allocations. Expected returns and volatility for asset classes in our investment universe, and the correlations between them, are updated quarterly. These forecasts are underpinned by investment theory, historical market data and expert opinion. Expected returns on risk assets are based on the cash return, plus a risk-premia associated with the specific asset class.

We use these CMAs to calculate portfolios along the efficient frontier: theoretically the most efficient portfolio available for any given level of risk. The resulting portfolios are typically focussed on a few asset classes. We then apply a series of constraints to arrive at more diversified portfolios offering a similar level of risk and return, including the HL Growth Fund.

In addition to CMAs and an optimisation tool, the Moody's system generates projected scenarios for portfolios and asset classes that provide us with a detailed risk analysis for the fund.

A summary of the key CMA changes between December 2021 and December 2022 are:

- Expected returns on cash, fixed income securities, equities and commodities have risen on a 1 and 10-year outlook.
- Significantly higher interest rates now compared to December 2021 are driving higher expected returns across the asset spectrum.
- US equities are expected to give the greatest return on a 1 and 10-year view, whereas Asia Pacific Equities (Ex-Japan) were considered the best potential returning asset in December 2021.
- Volatility is expected to increase for sovereign and corporate bonds, on both a 1 and 10-year view.
- A mixed outlook for equity volatility, with some regions expected to see reductions (Japan, Asia Pacific, Emerging Markets), and some regions expected to see increases (US) on a 1 and 10-year view.



Forecasts must be treated as estimates only and are subject to considerable uncertainty. They reflect Moody's views as a snapshot on 31 December 2022 and do not allow for subsequent market developments. Moody's outlook is not guaranteed, and actual performance and risk is likely to differ from the forecasts.

Defining the investment universe

Building on Kinlaw, Kritman and Turkington's definition³, we have defined eight characteristics of asset classes for inclusion in our investable universe:

- 1. The composition must be stable (but not static)
- 2. They are directly investable
- 3. The components are similar to each other
- 4. The asset class is dissimilar to other asset classes
- 5. Investing raises the 'expected utility' of the portfolio
- 6. Selection skill is not necessary to invest
- 7. Investors can access the asset class at scale in a cost-effective way
- 8. Investors can calculate credible forecasts for return, risk and their correlation to other assets, for inclusion in an optimisation process

This definition rules out several potential asset classes. Private markets are not directly investible, hedge funds require selection skill, cryptocurrencies cannot be credibly forecast and more specialist investments such as litigation finance cannot be accessed at scale in a cost-efficient manner. HL Growth has some exposure to major private asset classes, real estate and infrastructure, through listed equities.

Outcomes

As part of the portfolio review process, we model the expected annual return and volatility on a 10-year view to demonstrate the expected impact of portfolio changes.

We model the expected impact on a member's end pension pot based on a 22-year-old being automatically enrolled for the first time with no existing fund, as well as a 30-year-old, a 40-year-old, a 50-year-old and the 'typical' (average age) member. Fund values are assumed to be the average for our clients of that age (or for all clients in the case of the 'typical member'), and contributions are based on the average nominal contribution for our clients at each age, between the starting age and 65.

The new asset allocation is more efficient and offers a better risk adjusted return. We expect it to deliver a lower level of risk compared to current asset allocation, with only a marginally lower return . We consider not only the expected end fund value at retirement, but also the likelihood of achieving the PLSA Retirement Living Standard Incomes using the fund value accrued. The more efficient nature of the HL Growth Fund's new asset allocation reduces the variation in forecast returns over the long term. In turn, this gives us greater certainty of the outcomes we are likely to deliver for members.

