London Borough of Hillingdon Pension Fund

Diversified Growth Fund Allocation – Review of Strategic Options (Discussion Document)

January 2019

Background

The Committee agreed to review the strategic allocation to Diversified Growth, currently managed by Ruffer.

This report considers alternative strategic allocations for the Council to consider.

It also provides a high level summary of the benefits and considerations, as well as the risk/return impact.

Addressee

— This report is addressed to London Borough of Hillingdon ("the Council") as administering authority of the London Borough of Hillingdon Pension Fund (the "Fund").

— This paper provides a high level summary of alternative strategies that could be considered if the existing allocation to DGF is removed.

Background

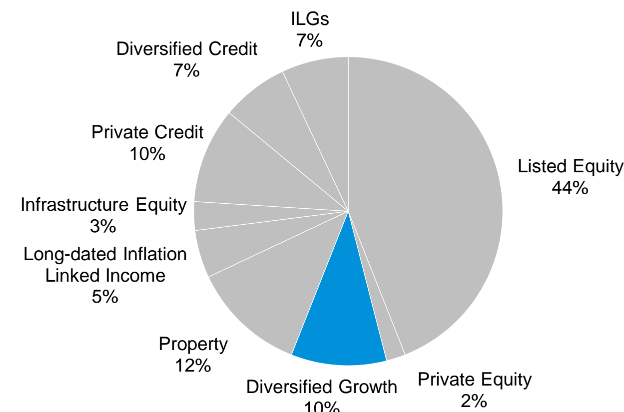
— In late 2018, the Committee reviewed the allocation to DGF and the mandate currently managed by Ruffer. The Committee did not have full confidence in the DGF allocation delivering the required performance objective. As such, the decision was taken to reallocate the Fund's capital held with Ruffer via the LCIV.

Scope of Report

— This report provides a high level summary of the following:

- Strategic options available to the Fund;
- Key considerations and benefits of each option;
- Impact on overall Fund risk and return of each alternative option;
- Next steps.

Current Strategic Benchmark



Asset Classes	Actual (%)	Benchmark (%)
Listed Equity	45.5%	44.0%
Private Equity	2.5%	2.0%
Diversified Growth	9.9%	10.0%
Property	13.2%	12.0%
Long-dated Inflation Linked Income	-	5.0%
Infrastructure Equity	2.7%	3.0%
Private Credit	6.9%	10.0%
Corporate Bonds	3.1%	-
Diversified Credit	7.7%	7.0%
Index-Linked Gilts (ILG)	7.0%	7.0%
Total	**100.0%**	**100.0%**

Note: Asset position as at 31 December 2018

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Current Strategy

The table opposite sets out the current Fund position and key considerations.

Description	Benefits	Considerations	Expected Return (% p.a.)	Value at Risk
Maintain strategic DGF allocation at 10%.	• DGF allocation should provide downside protection should market conditions deteriorate and flexibility to adapt to capture short term opportunities.	• The Officers /Committee have reduced confidence in the ability to meet the performance target. • The wider DGF universe has struggled to achieve target performance objectives and carries a high fee.	G+4.3%	£450m

Notes: Analysis estimated by KPMG, as at 30 November 2018, based on a roll forward of the 2016 Actuarial Valuation cashflows. Asset valuations as at 30 November 2018. Expected return shown is the outperformance above gilts-based liabilities. VaR: 3 year 95% Value at Risk represents the reduction in expected funding position in 3 years time under the 1 in 20 worst investment outcome.

- We consider a range of alternatives to the existing DGF allocation overleaf. A 10% shift in the Fund’s overall asset allocation will not dramatically move the risk / return characteristics of the overall Fund. We illustrate the impact of three alternative strategies overleaf.
- The proposed strategies seek to retain assets within the pool, streamline overall governance and deliver cost savings versus the status quo. We have restricted the options to avoid introducing new allocations outside of the pool.

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Alternative Strategies - Risk/Return Characteristics

We illustrate some detail on the risk and return implications for each of the alternative strategies presented.

Asset Classes	1. Current	2. Index-Linked Gilts + Equity	3. Index-Linked Gilts + Infrastructure Equity	4. Index-Linked Gilts + Long-dated Inflation Linked Income
Listed Equity	44.0%	49.0% (+5%)	44.0%	44.0%
Private Equity	2.0%	2.0%	2.0%	2.0%
Diversified Growth	10.0%	0.0% (-10%)	0.0% (-10%)	0.0% (-10%)
Balanced Property	12.0%	12.0%	12.0%	12.0%
Long Lease Property	5.0%	5.0%	5.0%	5.0%
Long-dated Inflation Linked Income *(The proposed LCIV mandate is > 75% LLP)*	-	-	-	5.0% (+5%)
Infrastructure Equity	3.0%	3.0%	8.0% (+5%)	3.0%
Private Credit	10.0%	10.0%	10.0%	10.0%
Diversified Credit	7.0%	7.0%	7.0%	7.0%
Index-Linked Gilts (ILG)	7.0%	12.0% (+5%)	12.0% (+5%)	12.0% (+5%)
Exp. Return (Gilts + p.a.)	Gilts+4.3%	Gilts+4.2%	Gilts+4.2%	Gilts+4.1%
3 year Value at Risk (1 in 20 chance)	£450m	£450m	£440m	£435m

Notes: Analysis estimated by KPMG, as at 30 November 2018, based on a roll forward of the 2016 Actuarial Valuation cashflows. Asset valuations as at 30 November 2018. Expected return shown is the outperformance above gilts-based liabilities. VaR: 3 year 95% Value at Risk represents the reduction in expected funding position in 3 years time under the 1 in 20 worst investment outcome.

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Potential Options for Reinvestment

We outline the key considerations for each strategy in the table opposite.

Option	Description	Benefits	Considerations	Expected Return (% p.a.)	Value at Risk
2. ILGs + Equity (Passive)	DGF allocation is reinvested 5% into ILGs and 5% in passive global equities (reflecting Ruffer's current positioning).	• Provides similar protection against rising inflation and a similar expected return. • Cheap to run and assets remain under LCIV.	• Would increase the exposure to directional equity risk. Global equity markets have fallen significantly over Q4 2018. • ILGs are currently expensive versus historical levels.	G+4.2%	£450m
3. Index-Linked Gilts + Infrastructure Equity	DGF allocation is reinvested 5% into ILGs and 5% in infrastructure equity via the LCIV.	• Infrastructure equity provides access to an illiquidity premium and increases the contractual nature of the Fund's assets. • Provides increased protection against a rise in inflation. • Intention is to increase the strategic allocation to Infrastructure above 5%.	• The Fund will need to queue to deploy assets in infrastructure equity. The Fund will need to assess the LCIV proposition. • ILGs are currently expensive versus historical levels.	G+4.2%	£440m
4. ILGs + Long Dated Inflation-Linked Income	DGF allocation is reinvested 5% into ILGs and 5% in the LCIV Inflation-linked income fund (a blend of LLP and infrastructure debt).	• Provides increased protection against a rise in inflation.	• The Fund may have to queue to deploy assets in the inflation-linked fund. • ILGs are currently expensive versus historical levels. • Overall exposure to commercial property (> 20%) is a concern. It would be preferable for any future allocation to long-dated inflation to be funded from the existing UBS property allocation. • Expected return is slightly reduced.	G+4.1%	£435m

Notes: Analysis estimated by KPMG, as at 30 November 2018, based on a roll forward of the 2016 Actuarial Valuation cashflows. Asset valuations as at 30 November 2018. Expected return shown is the outperformance above gilts-based liabilities. VaR: 3 year 95% Value at Risk represents the reduction in expected funding position in 3 years time under the 1 in 20 worst investment outcome.

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Summary and Next Steps

The Officers and Committee should consider each of the options outlined in this paper.

Summary

— The Officers/Committee is considering potential strategic options for the capital currently invested in the Ruffer diversified growth mandate.

— The Fund has previously discussed its intention to increase the allocation to infrastructure equity and we believe that using part of the existing DGF allocation to do so would be preferable if the Committee is confident in the LCIV infrastructure proposition. We believe retaining an element of index-linked gilts to provide inflation protection and reduce overall costs is appealing.

— An alternative approach of creating an allocation that mirrors Ruffer's neutral 50:50 allocation to 'Greed' (equities) and 'Fear' (inflation-linked gilts) is also reasonable, particularly given the recent falls in equity markets. This can be implemented via passive management to provide a low cost portfolio.

— We are not convinced that redeploying the Ruffer allocation to the LCIV, long-dated inflation vehicle is optimal given the overall concentration in UK commercial property that would result. An allocation to this vehicle could be funded from the UBS property holding in due course.

— The Committee could consider whether allocating to non UK inflation linked bonds was appealing if an appropriate vehicle is available on the LGIM platform under the LCIV arrangements. The yield on global index linked bonds remains higher than UK yields.

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Appendices

A1. Asset Class Assumptions

A2. Modelling Methodology

A3. Disclaimers

Asset Class Assumptions - 30 September 2018

Introduction to the Assumptions

- These are our "best estimate" asset class return, volatility and correlation assumptions. We believe there is a 50:50 chance that the actual outcome will be above/below our assumptions.
- The assumptions are long-term, for a 10-year period, expressed in Sterling terms.
- Return assumptions are:
  - Annualised (i.e. geometric averages), rounded to the nearest 0.1%.
  - Expressed relative to the yield on fixed interest gilts (the annual yield at the 10-year tenor on the Bank of England spot curve). This yield was 1.6% at 30 September 2018.
  - Net of management fees.
  - Before tax. UK pension schemes are exempt from tax on investments. The impact of taxation may reduce returns for other investors.
- Volatility assumptions are based on the standard deviation of annual returns over a 10-year period, rounded to the nearest 0.5%.
  - Bond volatilities are sensitive to the duration of the index. Our Fixed Interest Gilts (FIG) and Index-Linked Gilts (ILG) assumptions both relate to Over 15 Year indices, but the cashflow profile of the ILG index is considerably longer than the FIG index. Hence the difference in volatilities does not necessarily mean that real yields are assumed to be more volatile than fixed yields.
- Correlation assumptions are based on the correlation of annual returns over a 10-year period, rounded to the nearest 5%.

Limitations and Risk Warnings

- There can be no guarantee that any particular asset class or investment manager will behave in accordance with the assumptions.
- The assumption setting process is subjective and based on qualitative assessments rather than a wholly quantitative process. Newer asset classes can be harder to calibrate due to the lack of a long-term history. Some asset classes may rely on active management to help deliver the assumed return.
- Where these assumptions are used within asset-liability modelling, please note that the model's projections are sensitive to the econometric assumptions. Changes to the assumptions can have a material impact upon the modelling output.

Asset Class	Sector [1]	Return [2]	Volatility [3]
Global Equity	Developed (passive)	4.0%	20.0%
	Developed (core active)	4.5%	20.5%
	Developed (unconstrained)	5.0%	21.0%
	Emerging (passive)	5.0%	30.0%
Alternatives	Hedge Funds: Multi-Strat FoF	2.5%	10.0%
	Private Equity	7.0%	30.0%
	Diversified Alternatives	6.0%	22.0%
	Infrastructure Equity	4.6%	12.0%
Property	UK Balanced	2.5%	13.0%
	Long Lease	2.5%	8.0%
DGF	Diversified Growth Funds	3.5%	12.0%
Gilts	Fixed Interest Gilts (passive) [4]	0.0%	6.7%
	Index-Linked Gilts (passive) [4]	0.0%	11.3%
Credit	Investment Grade (passive) [4,5]	1.1%	7.3%
	Diversified Credit [5]	2.2%	11.0%
	Distressed Debt	6.0%	15.0%
	Junior CRED	5.0%	14.0%
	Senior CRED	1.8%	7.0%

Source: KPMG, 30 September 2018

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Modelling Methodology

Modelling Principles

- SOFIA is a stochastic model that simulates a large number of possible future economic outcomes, in which financial conditions develop in a number of different ways, defined by assumptions for average outcomes and the range of variability. The results of the projections are shown by ranking the calculated outcomes from best to worst and presenting the following scenarios:
  - **Median**: this is the middle outcome and can be thought of as the "expected result". Half of the modelled outcomes are better than this and half are worse.
  - **Bad:** this splits the results so that there is a one in five (20%) chance of having a worse outcome. This is a measure of risk.
  - **Very Bad:** this splits the results at a one in twenty (5%) chance of having a worse result. This is a more extreme measure of downside risk.
  - **Good and Very Good (where shown):** these illustrate possible positive outcomes.
- The "Value at Risk", where shown, is defined as the difference between the Median scenario and the Bad or Very Bad scenario, i.e. it represents the variability of funding outcomes and shows the magnitude of the possible downside from the expected result. Please note that this is not the same as the possible downside loss from the starting position.

Investment Strategy

- We can model different investment strategies to illustrate the effects of different risk/return trade-offs. For each portfolio, the model assumes that the chosen strategy remains fixed over the full projection period. Assets are annually rebalanced back to the original allocations.

Investment Strategy

- Where the model illustrates a scheme-specific funding basis, the funding basis is calculated in the same way across all the investment portfolios modelled. We therefore focus on the effect of investment strategies on asset values and hence surplus/deficits, without the distorting effect of differing liability methodologies. However, in cases where the discount rate allows for a risk premium, the magnitude of the risk premium may depend on the proportion of return-generating assets in the portfolio, and therefore in practice the funding basis may be different under different investment strategies.

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Disclaimers

- The information contained herein is provided for the sole benefit of the London Borough of Hillingdon Pension Fund. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.
- The output from our modelling is based on a large number of underlying assumptions. Changes to these assumptions can have a material impact on the results of the modelling.
- The outcomes shown are not intended to be the best possible, or worst possible outcomes. The actual outcome could be better than the 5th percentile, or worse than the 95th percentile.
- The modelling analysis is based on portfolios containing a wide range of asset classes and different approaches to fund management. Clients should not make decisions to invest in these asset classes or approaches to fund management based solely on the modelling analysis.
- Cashflow profile and liability figures are based the Fund's actuarial valuation and rolled forward to 30 September 2018 in line with market conditions.
- The only risk factors we have considered in our modelling are those that affect the values of pension schemes' assets and the financial assumptions used to value schemes' liabilities. Some of the risks we have not considered include demographic risks such as the life expectancy of pension schemes' members and future changes to members' benefits.
- Past performance cannot be relied upon as a guide to the future.

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