REPORT PREPARED FOR

Oxfordshire Council Pension Fund

Fundamental Review of Asset Allocation

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PENSION FUND COMMITTEE – 10 MARCH 2017

FUNDAMENTAL REVIEW OF ASSET ALLOCATION

Report by the Independent Financial Adviser

Introduction

1. A Fundamental Review of the Investment Management of the Pension Fund is undertaken once every three years, to synchronise with the triennial Actuarial Valuation carried out by the Scheme Actuary. Its purpose is to take a hard look at the existing structure of the Fund's assets, to assess the need for changes and to make recommendations to the Pension Fund Committee accordingly.

2. In my previous report (presented to the March 2014 Committee) I divided the report into three main sections, representing the three levels at which decisions should be made for the effective management of such a fund. Given the proximity to the transition of assets to the Brunel Pension Partnership, this report focuses on the first two levels and does not cover the issue of Manager Selection. The report therefore covers:

   - **Overall Strategy** (paras 4 - 26*)* including asset allocation across suitable asset classes

   - **Investment Structure** (paras 27 - 35) covering the mandates under which the fund's investment managers should operate

   These are followed by:
   - **Summary of Recommendations** (para 36)

   - **Appendices -** containing one-page summaries of each of the external managers' mandates and performance

   - **Glossary -** providing definitions of investment terms used in the report.

3. First I will summarise the recommendations for change made in the **2014** report, and detail the consequent actions taken.

   a) Asset allocation strategy to take account of the Actuary's latest estimate of Funding Level

   b) Switch 4% from listed equity, 1% from Private Equity and 3% from Hedge Funds. Allocate 3% to Infrastructure and 5% to Diversified Growth. [**Action:** The Hedge Fund holding was sold and a Diversified Growth manager (Insight) was selected and funded with £80m in December 2014, and a further £15m in October 2016. No investment in Infrastructure has yet been made. The strategic allocation was altered to reflect the planned changes]

c) Switch UBS' Overseas Equity mandate to a Global Equity one
[**Action**: This was effected in June 2014]

d) Earmark up to £20m for Property opportunities
[**Action:** £10m was committed to **Bridges Property Alternatives Fund III**, but no suitable vehicle was identified for the remaining £10m]

e) Retain all the other managers in their existing mandates

Overall Strategy

4. The Oxfordshire Pension Fund has a number of characteristics which, in common with many other Local Government Pension Schemes, act as strong influences on the investment policy it can adopt. The first of these is the strength of the employer covenant. The second is the fact that each year it currently receives more money from employers – normal and deficit contributions – and employees than it is required to pay out as benefits. In addition, it receives investment income, in the form of dividends and interest payments, which is predominantly re-invested by the managers. In the past three years, the amount of Net Pension Payments into the fund has been £10-15m (excluding exceptionals) but this is on a declining trend. Estimates by the Actuary show net pension contributions of £7.6m in 16/17, but this is followed by annual amounts of just £1-5m in each year up to 22/23. It turns negative in 23/24 and the outflow exceeds £10m in 26/27.

5. In addition, however, the Fund receives Investment Income (amounting to £26.9m in 15/16) offset by Investment Management Expenses (£8.8m in 15/16). Assuming these two items grow at the same rate, the net income from these items will have reached £27m by 2024 when net pension contributions become negative. On the basis of these forecasts, there should not be any need for the Fund to realise assets in order to pay pensions within the next ten years. The Pension Fund can therefore take a long-term view on the likely return on its investments, and can, for example, afford to invest part of its assets in alternative or illiquid classes such as Private Equity, Infrastructure and Property.

6. The Fund had outstanding commitments of £23.9m to Private Equity and £14.3m to Property Limited Partnerships as at 31st December 2016 (using exchange rates current at that date). These will be drawn down over several years, but I asked the predominant managers – Partners Group and Adams Street – to estimate the net distributions (allowing for drawdowns) each year into the future from their Private Equity programmes. For the next four calendar years the expected flows back from the programs are (in £m):

	2017	**2018**	**2019**	**2020**
Partners Group	+8.0	+8.7	+7.3	+5.9
Adams Street	+6.5	+8.1	+8.9	+8.9

On the basis of these estimates it is clear that the remaining Property commitment can be comfortably financed from the Private Equity distributions.

7. Whereas private sector defined benefit pension schemes are required to value their asset and liabilities on a prescribed basis (known as FRS 17 or IAS 19), and the resulting surplus or – more commonly – deficit appears on the parent company balance sheet, Local Authorities are not similarly constrained. Whilst the proportion of Assets to Liabilities (or Funding Level) is still a highly significant figure, it is the Employer Contribution Level as determined by the Scheme Actuary which has the greatest impact on the Authority's finances in the immediate future. Indeed, one of the three main purposes of the Funding Strategy Statement is:

'To support the regulatory requirement in relation to the desirability of maintaining as nearly constant employer contribution rates as possible'

8. In seeking to narrow the gap between Assets and Liabilities, the key challenge is to identify asset classes that will, over the long term, provide a positive real return, in order to keep pace with the growth of liabilities. This in turn is largely determined by inflation – both in the inflation-linking of pensions in payment or deferral, and the rise in earnings of current employees. Such assets are known as 'Return-Seeking Assets', and include equities (listed and private) real estate, hedge funds and commodities. The Fund will also need to hold 'Liability-Matching Assets' (primarily fixed income investments) to limit the volatility of the Fund's market value, and to mirror to some extent the fluctuation of the value of liabilities with changes in bond yields.

9. The Funding Level of the Scheme has improved from **82%** in March 2013 to an estimated **90%** at March 2016. This has been caused partly by the 6.2% annual return achieved on the assets during the 3-year period (against a discount rate of 5.8%) and partly by the deficit funding payments received from the sponsoring employers.

Asset Allocation

10. The current strategic asset allocation of the Oxfordshire Fund shows the following split between return-seeking and liability-matching assets. The long-term smoothed investment return assumed by the Actuary in 2016 and 2013 is shown alongside each asset class.

		Assumed return	
	Fund %	2016	(2013)
UK Equities	29	7.4%	(6.9%)
Overseas Equities	30	7.4%	(6.9%)
Private Equity	9	7.4%	(6.9%)
Real Estate	81	5.9%	(6.0%)
Absolute Return	5	4.8%	
Return-seeking	**81%**		

Fixed Income	16	2.4 – 3.3%	(3.3 – 3.9%)
Infrastructure	3	5.9%	
Liability-matching	**19%**		
Expenses deduction		-0.2%	
Neutral discount rate estimate		**6.2%**	
Prudence allowance		-0.8%	
Proposed Discount Rate assumed		**5.4%**	**(5.8%)**

11. The Fund's current strategic allocation, shown in para 10, is accompanied by allowable ranges or 'bandwidths' for each asset class as shown on the following table. The purpose of these is to signal when market movements have pushed the asset allocation so far from its central target that the risk profile of the Fund is moving away from that of the central strategy. An example would be a 20% rise in equity values, which pushes the listed equity weight from 63% to, say, 68%, while shifting the bond weight from 15% to 13%. The regular rebalancing of the asset class back to its target weight when any of the ranges has been breached provides a discipline of adhering to strategy, while avoiding elaborate rebalancing every quarter.

Asset Class	**Target Allocation (%)**	**Range (%)**
UK Equities	29	27 - 31
Overseas Equities	30	28 - 32
Total Equities	**59**	55 - 65
UK Gilts	3	
Corporate Bonds	6	
Index-Linked Bonds	5	
Overseas Bonds	2	
Total Bonds	**16**	**14 - 18**
Property	8	5 - 9
Private Equity	9	6 - 11
Multi-Asset	5	4 - 6
Infrastructure	3	2 - 4
Cash	0	0 - 5
Total Other Assets	**25**	

12. A comparison of the distribution of the Oxfordshire Fund with a total of 88 LGPS Funds at March 31st, 2016 (by State Street) is reproduced below. The allocation to 'Global Pooled incl. UK' has been pro-rated between UK and Overseas Equities for the purposes of this comparison.

Allocation at end-March 2016			
Asset Class	**WM Average (%)**	**Oxfordshire (%)**	**Relative**
UK Equities Overseas Equities	20.6 39.5	28.0 31.1	**+7.4** **-8.4**
Total Equities	**60.1**	**59.1**	**-1.0**
Total Bonds	**16.4**	**16.4**	**=**
Property Private Equity HF, other Alternatives **Total Alternatives** **Pooled Multi-Asset**	**9.1** **4.7** **4.0** **17.8** **2.8**	**7.8** **9.3** **0** **17.1** **4.3**	**-1.3** **+4.6** **-4.0** **-0.7** **+1.5**
Cash	**2.9**	**3.1**	**+0.2**

13. The allocation by Oxfordshire to the major asset classes is very similar to the average allocation across LGPS Funds with the main differences being:
    - A higher UK Equity weighting, with a correspondingly lower Overseas Equity weighting
    - Twice the average weight in Private Equity
    - Nil against 4% in ‘Hedge Funds and other alternatives’ (incl. Infrastructure)

Performance

14. The performance of the overall Oxfordshire Fund **relative to the LGPS peer group** is shown in the following table

(% p.a.)	**t**	**3 years**	**5 years**
LGPS average	**+0.2**	**+6.4**	**+7.1**
Oxfordshire	**-0.4**	**+6.2**	**+7.3**
Oxon %-ile rank	**63**	**66**	**49**

At the asset allocation level, the Fund’s relative bias towards UK Equities and away from Overseas Equities was a negative contributor, as the Overseas index returned 9.4% p.a. while UK only returned 3.7%. However, the 4% allocated to Private Equity instead of Hedge Funds etc was beneficial as Private Equity gave a 7.4% p.a. higher return. At the manager level, the Global Equity performance was a negative (see para. 15) but Fixed Income out-performed the peer group average by 1.1% p.a.

15. The performance of the Oxfordshire Fund **relative to its own composite benchmark** is shown in the following table. As the performance objective is to out-perform the benchmark by 1% annually, the returns achieved are disappointing.

(% p.a.)	**1 year**	**3 years**	**5 years**
Benchmark	**+0.3**	**+6.6**	**+7.6**
Oxfordshire	**-0.4**	**+6.2**	**+7.3**
Deviation	**-0.7**	**-0.4**	**-0.3**

Looking at the 3-year returns, it is clear that the deficit is attributable to the under-performance of UBS' and Wellington's Global Equity portfolios, which lagged their benchmark by 2.0% and 1.1% respectively. The only significant offset came from the 2.2% out-performance of the Private Equity portfolio. As the Fund adheres closely to its strategic asset allocation, there is no contribution to the deviation from asset allocation.

16. It should be noted that the Performance Analysis service for LGPS Funds was discontinued in April 2016, when State Street announced it would withdraw the service from June 30th. Some members of the WM team moved to PIRC with the intention of continuing the service, but this has been delayed while a procurement exercise is undertaken on behalf of LGPS Funds.

Brunel

17. In previous Fundamental Reviews, the Financial Adviser has proposed an asset allocation strategy for the Oxfordshire Fund, showing spot targets and bandwidths for each of the asset classes deemed suitable for inclusion. The next stage consisted of a proposed method for accessing each asset class, taking as its starting point the Fund's incumbent managers and their mandates.

18. This latter stage is altered in the light of the forthcoming establishment of the Brunel Company. Brunel has provisionally identified 22 portfolios from which the 10 participating funds will choose how to allocate their Fund. These 22 categories, shown in the Table below, comprise 11 Equity, 2 Diversifying, 5 Private Markets and 4 Debt strategies.

Stakeholder engagement presentation

BRUNEL
Pension Partnership

Portfolios

Portfolio	Performance Target	Portfolio	Performance Target
UK Core Equities	FTSE All Share +1%-2%	Diversified Growth Funds	3 Month LIBOR +4.5%
Global Core Equities	MSCI World +1-2%	Hedge Funds	3 Month LIBOR +4.5%
UK Equities – High	FTSE All Share +3%	Infrastructure – Capital	+7%-8% Absolute
Global Equities – High	MSCI World +3%	Infrastructure – Income	+5%-7% Absolute
Sustainable Equities	MSCI World +1%-3%	Private Equity	7 Day Libor +5%
Global Equity Income	MSCI World +1%-3%	Property	IPD UK PPF +1%
Low Volatility Global Equity	MSCI World	Private Debt	3 Month LIBOR +4.5%
Emerging and Frontier Markets	MSCI Emerging Markets +2%-4%	Global Bonds	Barclays Global Aggregate Bond Index +0.5%-1%
Passive Global Equity	MSCI World (ACWI)	Sterling Corporate Bonds	iBoxx Sterling Non-Gilt +1%
Passive UK Equity	FTSE All Share	UK Gilts	FTSE All Stock 15 year +1%
Passive - Other	As appropriate	Multi-Sector Credit	3 Month LIBOR +3% -4%
		Liability Driven Investments	As appropriate

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19. The managers for each of these categories will be selected at the Pool level, so that there is the possibility that money managed by Oxfordshire's existing managers will be transitioned into one or more of the Brunel categories, to be run in a different style by new managers. While the Oxfordshire Committee will determine how the Fund is allocated between the 22 categories, it will not be in a position to determine (as it does at present) which manager should be selected for any of the mandates. I have suggested that in this Review I should make recommendations on the allocation of the Fund between the 22 categories, but have been advised that this would be premature, as the Brunel portfolios are provisional at present.

20. Instead I shall make recommendations on the Fund's strategic allocation across broad asset classes, and refine these later in the year when the menu of Brunel portfolios has been finalised. Additionally, this report will not contain any recommendations to terminate any of the existing managers, or to appoint new ones, as it would be unnecessarily costly for the Fund to incur an additional set of transition costs shortly before the Brunel Company is set up.

21. The long-term nominal returns expected by Baillie Gifford's multi-asset team are shown below:

Equities	**7.5%**
Gov't Bonds (Developed)	**3.75%**
Investment-Grade Bonds	**5.0%**
Property	**5.75%**
Infrastructure	**7.0%**
Cash	**3.25%**
Inflation (UK CPI)	**2.0%**

Compared with the Actuary's assumptions (para 10), the Equity and Property forecasts are similar, but Baillie Gifford expect higher returns than the Actuary does on Bonds and Infrastructure.

22. The improvement in the Funding Level to 90% in 2016 (see para 9) gives the scope to reduce the equity weighting in the strategic asset allocation, continuing the shift made after the 2013 Actuarial Valuation. **A further reduction of 5% in the equity weight**, with a corresponding addition to matching assets, would produce a slightly lower expected return overall, but one with less volatility. I would suggest moving the passive proportions up slightly to 30% of total equity allocation for both UK and global equities, so reducing Manager risk as well as overall risk.

23. **In the short term, an increased allocation to Fixed Interest would be a suitable way to achieve this change**. Whilst in the longer term it may make sense to increase the allocation to infrastructure, this should wait for the establishment of the Brunel Company to identify suitable opportunities.

24. Apart from this proposal to switch 5% of the Pension Fund from Equities to Fixed Interest, I am not recommending any change to the list of asset classes in which the Fund invests. The 2014 Review made the case for investing in Diversified Growth Funds in preference to Hedge Funds, and also set out the reasons for investing in Infrastructure. While the first of these has been implemented, and the second one has not yet been, I continue to recommend DGF's and Infrastructure as suitable investments for Oxfordshire. Equally, I have not altered my view of the unsuitability of Currency or Commodities as asset classes.

25. The Asset Allocation Strategy which I recommend is therefore as follows:

Asset Class	**Target Allocation (%)**	**Range (%)**
UK Equities Overseas Equities	26 28	24 - 28 26 - 30
Total Equities	**54**	**50 - 58**
UK Gilts Corporate Bonds Index-Linked Bonds Overseas Bonds	To be specified	
Total Bonds	**21**	**19 - 23**
Property Private Equity Multi-Asset Infrastructure Cash	8 9 5 3 0	6 – 10 6 – 11 4 - 6 2 – 4 0 - 5
Total Other Assets	**25**	**18 - 31**

26. The pace of implementation of the new strategy will be dependent on the timing of the establishment of the Brunel Company. There will need to be detailed consideration of the choices available through Brunel before allocations are made to the different categories offered by Brunel.

Investment Structure

Active or Passive management?

27. The basic distinction here is that an active manager will attempt to run a portfolio to produce a return which *exceeds* the return on a relevant index of that asset class (e.g. the FTSE All Share Index for a UK Equity portfolio) whereas a passive manager will aim to produce a return *equal to* the index return. The active manager may use a number of different techniques to select stocks for his portfolio (see 'Investment styles' below), while the passive manager will normally operate a system of index-replication which generates a portfolio as close as possible to the notional portfolio underlying the relevant index.

28. The passive manager will utilise very little discretion in managing his 'tracker' fund, as computer programs will be used to ensure the holdings continue to match the index constituents closely. There are significant economies of scale for a passive manager, as a larger fund can replicate more of the smaller constituents in an index, while the overheads remain relatively constant. As a result of all these factors, the fee charged to the investor under a passive mandate is far smaller than for an active one. As shown in the Appendix to this report, the fee payable on the passive mandates are around 5 times smaller than those paid to active managers.

28. One of the considerations for the Pension Fund is whether the active manager can generate sufficient performance (gross of fees) in excess of the index to compensate for the lower fee charged by the passive manager. There are also, however, other considerations. By its nature, a market index is always fully-invested, whereas an active manager has the freedom to hold a certain amount of cash if he expects a general fall in the market. If the active manager uses this freedom at the right time, he can cushion the impact of a general market decline. Similarly, the active manager can – and should – hold a lower weight than the index in sectors he expects to be relatively weak, whereas the passive manager is obliged to maintain the index weight in every sector at all times. At present some **29%** of the Fund's UK Equities, and **27%** of the Overseas Equities, are managed passively. This has reduced the management fees payable, and reduced the risk of manager under-performance. As proposed above, these figures would both increase to 30%.

29. For most developed markets there is a choice of indices which can be replicated – in the UK, for example, investors can choose the broadest index (the FTSE All Share) or select size bands (FTSE 100, FTSE 250 or FTSE Small-Caps). [The All-Share Index comprises approximately 80% FTSE 100; 16% FTSE 250; 4% FTSE Small-Cap]. It is in large, liquid, well-researched

equity markets (such as the US or UK) that indexation is more often employed, on the grounds that few active managers will be able to outperform in such efficient markets. Secondly, it must be remembered that a passive mandate is not the same as a low-risk portfolio. It may minimise *relative* risk, but not *absolute* risk.

30. The Oxfordshire Fund has been invested in Legal & General's FTSE 100 tracker, even though the UK Equity benchmark is the All-Share Index. This mismatch has been offset by the composition of Baillie Gifford's UK Equity portfolio which has a significant overweight in the FTSE 250. Over the 10 years to March 2016, the All-Share out-performed the FTSE 100 by some 0.6% annually, as shown in the table below. In the year to March 2016, however, and in the final three quarters of 2016, the FTSE 100 has led by 3.1%.

To March 2016..	**10 years**	**5 years**	**3 years**	**1 year**	**Q2-Q4 2016**
FTSE 100	**+4.1**	**+4.7**	**+2.4**	**- 5.2**	**+19.0**
FTSE All Share	**+4.7**	**+5.7**	**+3.7**	**-3.9**	**+17.2**
Deviation	**-0.6**	**-1.0**	**-1.3**	**+1.3**	**+1.8**

[Sources: State Street Global Services Performance Services 2016 and Financial Times]

31. Looking ahead to the formation of Brunel, it is the All-Share tracker which is expected to be on the Brunel platform. To simplify the transition into Brunel, and to capture the recent relative strength of the FTSE 100, **I recommend that the Oxfordshire Fund switches its L&G FTSE 100 holding into the L&G All-Share fund. This should incur minimal costs, and will put the Oxfordshire Fund in a better position for the transition into Brunel.**

Separate Allocation to UK equities?

32. Over the past 18 years, allocations to UK equities as a proportion of overall equities has reduced steadily, from 73% in 1998 to just 30% in 2016 [State Street Local Authority Annual League Tables, March 2016]. Even 30% vastly overstates the size of the UK equity market (some 7% of World Equities by market value) and it is worth asking whether a specific allocation to UK equities is still necessary, rather than a single Global Equity allocation.

33. There are a number of arguments advanced in favour of retaining a UK allocation:

- Historically, up to 2013, UK equities had performed well relative to other world markets*, although in the three years 2014-16 Global Equities' return was some 8% p.a. ahead of UK Equities – partly due to the weakness of sterling in 2016.
- Holding £-denominated assets matches the currency of the liabilities for a UK Pension Fund, thereby removing one source of mismatch risk

- UK equities give an investor exposure to global businesses, and are not solely linked to the fortunes of the UK economy
- Active managers of UK equity portfolios have a greater knowledge of, and access to, UK- based companies, and are therefore in a better position to out-perform than managers of global equity portfolios
- Global Equity managers tend to focus on the large-cap stocks, whereas a UK-only manager can delve into the mid- and small-cap stocks in search of value.
- UK-listed companies are better regulated than those listed on many foreign exchanges

* Data supplied by UBS shows that UK Equities out-performed Global Equities in each of the three decades up to end-2013:

	UK.	(% p.a.)	World
1984 – 93	**+18.8**		**+15.3**
1994-2003	**+ 6.1**		**+ 5.6**
2004-13	**+ 8.8**		**+ 8.4**

34. **While some of these points are open to challenge, I would still recommend maintaining a specific UK Equity allocation.** Since the last Fundamental Review, the UBS mandate with Oxfordshire has been changed to a Global Equity one, so that both they and Wellington are measured against a MSCI ACWI benchmark.

Responsible investment

35. The Fund's policy is set out in the section of the Statement of Investment Principles headed 'Social, Environmental & Ethically Responsible Investment' (shown on page 82 of the Pension Fund's 2015-16 Report and Accounts) and will be incorporated in the forthcoming Investment Strategy Statement. We have found that the Fund's equity investment managers provide good summaries in their quarterly reports of their most recent engagement with companies. This covers issues of corporate governance, corporate social responsibility and executive remuneration, as well as voting on AGM or EGM resolutions.

Recommendations

36. **The Committee is RECOMMENDED to:**

    a) **Retain the existing asset classes, but de-risk by reducing the Equity allocation by 5% and increasing the Fixed Interest allocation by 5% [paras 22, 23]**

    b) **Switch the holding in LGIM's FTSE 100 Index Fund into LGIM's FTSE All-Share Index Fund [para 31]**

    c) **Maintain a specific allocation to UK Equities [para 34]**

d) Maintain the existing external investment managers until the introduction of the Brunel Company, but then scrutinise the choice of mandates available within Brunel [paras 20, 26]

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