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PUBLIC

To: Members of Pensions and Investments Committee

Tuesday, 3 December 2019

Dear Councillor,

Please attend a meeting of the **Pensions and Investments Committee** to be held at **10.30 am** on **Wednesday, 11 December 2019** in Council Chamber, County Hall, Matlock, DE4 3AG, the agenda for which is set out below.

Yours faithfully,

Simon Hobbs
Director of Legal and Democratic Services

A G E N D A

PART I - NON-EXEMPT ITEMS

1. Apologies for Absence

   To receive apologies for absence (if any)

2. Declarations of Interest

   To receive declarations of interest (if any)

3. Presentation by Hymans Robertson (to be circulated)

4. Minutes (Pages 1 - 10)

To confirm the non-exempt minutes of the meeting of the Pensions and Investments Committee held on 22 October 2019

5. Investment Report (Pages 11 - 86)

6. Voting Activity (Pages 87 - 90)

7. Derbyshire Pension Fund 2019 Actuarial Valuation (Pages 91 - 140)

8. Exclusion of the Public

To move "That under Regulation 21 (1)(b) of the Local Authorities (Executive Arrangements) (Access to Information) (England) Regulations 2000, the public be excluded from the meeting for the following items of business on the grounds that they involve the likely disclosure of exempt information as defined in Paragraph(s)… of Part 1 of Schedule 12A to the Local Government Act 1972"

PART II - EXEMPT ITEMS

9. Declarations of Interest

To receive declarations of interest (if any)

10. Minutes (Pages 141 - 146)

To confirm the exempt minutes of the meeting of the Pensions and Investments Committee held on 22 October 2019

PUBLIC

MINUTES of a meeting of the **PENSIONS AND INVESTMENT COMMITTEE** held at County Hall, Matlock on 22 October 2019

PRESENT

Councillor J Perkins (in the Chair)

Derbyshire County Council

Councillors R Ashton, N Atkin, J Boult, P Makin, S Marshall-Clarke, R Mihaly and B Ridgway

Derby City Council

Councillors M Carr and L Eldret

Derbyshire County Unison

Mr M Wilson

Also in attendance – N Dowey, D Kinley, P Peat and N Smith.

R Graham and K Gurney (Pension Board members)

60/19 **MINUTES** **RESOLVED** that the minutes of the meeting held on 4 September 2019 be confirmed as a correct record and signed by the Chairman.

61/19 **DERBYSHIRE PENSION FUND ANNUAL REPORT** In accordance with the Local Government Pension Scheme Regulations 2013, the Administering Authority must prepare and publish an Annual Report for the pension fund on or before 1 December following the year end. The full Annual Report had been circulated to Members.

The Fund's Statement of Accounts also formed part of the County Council's Accounts which had already been considered and approved by the County Council's Audit Committee. Members requested that, in future, any comments received from the Audit Committee on the Pension Fund's financial statements be fed back to this Committee.

The external auditor's opinion, which confirmed that the information contained within the Annual Report was consistent with the Fund's Statement of Accounts for 2018-2019, was included in the Report. It also confirmed that the statements had been properly prepared in accordance with accounting standards and gave a fair view of the Fund's transactions during the year and its assets and liabilities at the year end.

This year, the Investment section of the Report contained a greater amount of detail with respect to LGPS Central Limited, the investment pooling company jointly owned by Derbyshire County Council and seven other Councils, and with respect to investment assets managed by the pooling company on behalf of the Pension Fund, in line with new CIPFA guidance on preparing the Annual Report.

RESOLVED (1) to approve the publication of the Pension Fund Annual Report as required by the Regulations; and

(2) that in future, any comments from the Audit Committee on the Pension Fund's financial statements are reported to the Pensions and Investment Committee.

62/19 **QUARTERLY PENSION ADMINISTRATION PERFORMANCE REPORT 1 JULY 2019 TO 30 SEPTEMBER 2019** A report from the Director of Finance & ICT was presented on performance levels achieved by the pensions administration team of Derbyshire Pension Fund and other activity undertaken in the second quarter of 2019-20 (Q2).

The new pension administration system, Altair, had provided the opportunity to measure membership records more accurately and transparently. There was now the facility to report on 'Work in Progress' cases separately. Under the previous system, the number of active member records was inflated by cases that were no longer active but had yet to be processed. The number of deferred member records was also inflated in a similar manner. The figures presented in Table 1 to the report, were a much clearer reflection of the membership position than it was previously possible to provide. The 'Work in Progress' figure included backlog as well as current work and, as part of the backlog management work referred to in the report, would help to support progress towards getting all administration work up to date. The facility to report in more detail on membership movements each quarter had also been developed. This would enable the accurate analysis of trends going forward.

There is a statutory requirement for employers to remit contributions by the 19th of the month following deduction from payroll. Employer performance in this area for the three months to the end of August was presented. A late contribution return represents a statutory breach and each case is recorded. It was reported that an employing authority had now been charged and the outcome was awaited.

Fifteen new academies had joined the Fund as scheme employers during Q2 and one new admission body had joined the Fund in Q2.

There had been one Application for Adjudication of Disputes Procedure (AADP) case presented to the Committee for consideration during Q2, and two appeals against the administering authority that were resolved at Stage 1.

The Committee was informed that an improved version of the Pension Calculator had been released on the Fund's website in September 2019. The calculator assists Fund members with their retirement planning and, consequently, reduces the number of benefit estimates requested.

Every LGPS Pension Fund employer is statutorily required to agree and publish its LGPS Discretions Policy. Changes to the LGPS Regulations in May 2018 required all employers to review and re-publish their Discretions Policies. The Team had supported employers to achieve this by developing and sharing a comprehensive guidance document and a template form, backed up by a significant communications effort. The result had been that, by the end of Q2, 284 (91.3%) of the Fund's 311 employing authorities were compliant. This compared very favourably with other LGPS Funds. Of the remainder, 12 had an outdated policy and 15 had no policy at all. Non-compliance represented a statutory breach, therefore work would continue to incentivise employers to comply, and Committee would be updated on progress. Members congratulated the Team on achieving this figure.

Annual Benefit Statements (ABSs) were produced this year from the new pension administration system, Altair. While this improved the bulk processing times, enabling all accurate ABSs to be generated by the statutory deadline of 31 August 2019, the project was let down by significant issues with printing, packing and posting.

In total, 86% of Active ABSs and 87% of the Deferred ABSs (excluding suppressions) were produced by the deadline. A further 668 Actives and 566 Deferreds were sent in September bringing the percentages up to 88% and 89% respectively. There were a further 1405 Actives and 236 Deferreds that should be ready to go to members in the next few weeks.

There were a number of reasons why ABS were suppressed, thereby preventing the Team from producing 100% by the deadline. The majority of the issues with Active ABSs related to pay queries that were yet to be resolved with employing authorities, and the main issue with Deferred ABSs was maintaining up to date addresses. There were also a further 6,251 records on the system that were under review, and it was likely that as those issues were resolved, some of these records would result in the production of a late ABS.

Members requested further details of the problems relating to the printing, packing and posting of the ABSs and the resulting data breaches. It was reported that the Derbyshire Pension Board was due to receive a report on the problems encountered during the production and despatch of the ABSs and on the Fund's subsequent actions to resolve the issues and avoid a recurrence. The Chair of the Pension Board agreed to report back to the members of the Committee, with the findings of the Board following its consideration of the report.

RESOLVED to note the workloads and performance levels outlined in the report.

63/19 **DERBYSHIRE PENSION FUND RISK REGISTER** The Risk Register was kept under constant review by the risk owners, with quarterly review by the Director of Finance & ICT. A copy of both the Summary and Main Risk Registers were presented. Changes from the previous quarter were highlighted. The Risk Register had the following four High Risk items:-

(1) Fluctuations in assets and liabilities (Risk No.15)
(2) LGPS Central related underperformance of investment returns (Risk No.25)
(3) Impact of McCloud judgement on funding (Risk No.32)
(4) Impact of McCloud judgement on administration (Risk No.40)

There was an inevitable risk for any pension fund that assets may be insufficient to meet liabilities and funding levels fluctuate from one valuation to the next, principally reflecting external risks around both market returns and the discount rate used to value the Fund's liabilities. Whilst the Fund had a significant proportion of its assets in growth assets, the newly agreed Strategic Asset Allocation Benchmark introduced a lower exposure to growth assets with the aim of protecting the improvement in the Fund's funding level following strong market gains since the triennial valuation in March 2016. For the March 2019 valuation, the Fund's actuary had indicated that assumed investment returns over the next 20 years and the likelihood of those returns being achieved will be considered when determining the discount rate to value the liabilities for the funding level. This risk based approach, rather than relating the discount rate to bond yields on a particular day, would be in line with the approach taken by the actuary to set employer contribution rates. The Pension Fund's Funding Strategy Statement was currently under discussion with the Fund's actuary and a separate report, on the agenda for this meeting of Committee, provided further information on the Actuarial Valuation and the Funding Strategy Statement.

The Fund was expected to transition the management of the majority of its investment assets to LGPS Central Limited (LGPSC), the operating company of the LGPS Central Pool (the Pool), over the next few years. Ultimately, the Fund was expected to invest via LGPSC's pooled investment vehicles. In the shorter term, the Fund had a discretionary management agreement with the company with respect to the Fund's UK equity portfolio, and advisory management agreements with respect to Japanese and Asia Pacific equities.

LGPSC was a newly formed company which had launched its first investment products in April 2018. There was a risk that the investment returns delivered by the company would not meet the investment return targets against the specified benchmarks.

The Fund had continued to take a meaningful role in the development of LGPSC, and had input into the design and development of the company's product offering to ensure that it would allow the Fund to implement its investment strategy. The company's manager selection process was scrutinized by the Partner Funds and the Fund would initially continue to carry out its own due diligence on selected managers as confidence was built in the company's manager selection skills. The performance of LGPSC investment vehicles was monitored and reviewed jointly by the Partner Funds. A separate Local Government Pension Scheme Investment Pooling Report provided further information on the Fund's expected transition plan and on the discretionary UK equity mandate.

The McCloud case related to transitional protections given to scheme members in the judges and firefighters schemes which were found to be unlawful by the Court of Appeal on the grounds of age discrimination. On 27 June 19, the Supreme Court denied the Government permission to appeal the judgement in the case. The Chief Secretary to the Treasury subsequently announced on 15 July 2019 that the Government respected the Court's decision and would fully engage with the Employment Tribunal to agree how the discrimination would be remedied; she also announced that remedies relating to the McCloud judgement would need to be made in relation to all public service schemes. It was anticipated that any remedy would be backdated to the commencement of transitional protection (April 2014 in the case of LGPS).

Following the judgement in the McCloud case, and confirmation that remedies relating to that judgement would need to be made to all public service schemes, LGPS benefits accrued from 2014 may need to be enhanced so that all members, regardless of age, would benefit from the 'underpin'. Alternatively, restitution may be achieved in a different way, for example by paying compensation. Quantifying the impact of the judgement at this stage was very difficult because it would depend on the compensation awarded, members' future salary increases, length of service and retirement age, and whether (and when) members withdrew from active service. The Government Actuary's Department (GAD) had estimated that the impact for the LGPS as a whole could be to increase active member liabilities by 3.2%, based on a given set of actuarial assumptions.

The Fund's actuary had adjusted GAD's estimate to better reflect Derbyshire Pension Fund's local assumptions. The revised estimate as it applied to the Fund was that total liabilities (i.e. the increase in active members' liabilities expressed in terms of the employer's total membership) could be around 0.4% higher as at 31 March 2019, an increase of approximately £26.7m. These numbers were high level estimates and depended on several key assumptions. The impact on employers' funding arrangements was expected be damped by the funding arrangements they had in place, however it was likely that there would be unavoidable upward pressure on contributions in future years.

For cost cap changes, the Government had stated its intention to apply these from April 2019. The LGPS Scheme Advisory Board (SAB) had announced a pause in the cost cap management process pending the outcome of the case. The SAB said it may resubmit the existing proposals or review the package, taking into account the cost of any remedy resulting from the McCloud case and the impact of backdating.

The uncertainty caused by the McCloud judgement was reflected on the Risk Register under two separate risks for clarity, one under Funding and Investments and one under Administration, although the two risks were closely linked.

The funding risk related to the risk of there being insufficient assets within the Fund to meet the increased liabilities. The administration risk related to the enormous challenge that would be faced by administering authorities and employers in potentially backdating scheme changes over such a significant period; this risk had been recognised by SAB. The Fund would continue to keep up to date with news related to this issue from the Scheme Advisory Board, the Local Government Association, the Government Actuary's Department and the Fund's actuary.

No new items had been added to the Risk Register and no items had been removed from the Risk Register. However, the current score for Risk No. 37 Delayed Annual Benefit Statements (ABS) and/or Pensions Savings Statements (PSS) which covered the risk of fines/sanctions/reputational damage due to the late issuance of annual ABSs and/or PSSs had been increased from 6 to 9 as the probability score had increased from 2 to 3 following recent delays in issuing statements. The current score for Risk No. 38 Failure to recruit and retain suitable pension administration staff/Over reliance on key staff, a risk which could lead to a deterioration in service levels with the same possible consequences of Risk No.37 above, had also been increased from 6 to 9 as the impact score had been increased from 2 to 3 due to an increased recognition of the impact that staff departures were having on the administration of an increasingly complex scheme.

RESOLVED to note the risk items identified in the Risk Register.

64/19 <u>DERBYSHIRE PENSION FUND 2019 ACTUARIAL VALUATION</u>

Members were updated on the progress towards the completion of Derbyshire Pension Fund's 2019 Actuarial Valuation.

The Actuarial Valuation was a planning exercise for the Fund to determine:

- The expected cost of providing the benefits built up by members at the valuation date in today's terms (the liabilities) compared to the funds held by the Pension Fund (the assets).
- The contributions needed to cover the cost of the benefits that active members would build up in the future (the Primary Contribution Rate).
- An appropriate plan for making up the shortfall if the Fund had less assets than liabilities. This plan would cover the amounts which would need to be paid (the Secondary Contribution Rate) and the timeframe over which they will be paid (the Recovery Period).

The Fund's actuary, Hymans Robertson, determined the information above for individual employers, or pools of employers, as well as for the Pension Fund as a whole in order to determine the appropriate contribution rates and any deficit recovery plans for each employer, or pool of employers.

The Valuation was calculated as at 31 March 2019 and would set the contribution rates and any deficit recovery plans from 1 April 2020 to 31 March 2023, which would be detailed in the Rates and Adjustments Certificate appended to the Valuation.

As part of the valuation process, the Fund reviewed the funding strategy to ensure that an appropriate contribution plan and investment strategy was in place. The funding strategy was set out in the Funding Strategy Statement (FSS) which was the Fund's key governance document in relation to the actuarial valuation.

If an employer was unable to meet its pension liabilities and there was no cover provided by either a guarantor or other body, these pension liabilities would become the responsibility of the Fund as a whole which meant that they would need to be covered by the other Fund employers. The impact of this was linked to the size of the relevant deficit of the reneging employer. The Fund's actuary had carried out a funding risk profiling exercise which gave a broad measure (a funding risk score) of the urgency of funding for each of the Fund's employers taking into consideration a range of metrics, including: funding levels; maturity of the membership; and net cashflows.

The extent of an employer's legal obligation and financial ability to support the scheme, the employer covenant, was also an important consideration in funding decisions. The Fund had issued Employer Health Check Questionnaires to all of the Fund's Tier 3 employers (those scheduled and admitted bodies that did not benefit from local or national tax payer backing or did not have a full guarantee or other pass-through arrangement with a body with such backing). The information received as part of the covenant review was currently being assessed and would be taken into consideration alongside the funding risk scores in the categorisation of Fund employers within the FSS. Any penalties incurred for not engaging would be reported to this Committee.

The Fund's actuary was preparing a paper on the areas that would be impacted by the McCloud judgement to assist with the Fund's decision on how to manage the risk and uncertainty caused by the outcome of the case in funding strategies until a remedy was confirmed.

A Valuation Timetable had been prepared and was presented for Members' information.

RESOLVED to note the progress towards the completion of the Fund's 2019 Actuarial Valuation as set out in the report.

65/19 <u>THE ROLE OF THE ADJUDICATOR IN THE 'APPLICATION FOR ADJUDICATION OF DISAGREEMENTS PROCEDURE' (AADP)</u>

Members were informed of a change to the role of Stage 1 and Stage 2 adjudicators in respect of appeals against decisions made by Derbyshire Pension Fund Scheme employers or by Derbyshire County Council as the administering authority of the Pension Fund.

Until now, when a Stage 1 adjudicator, or the Committee at Stage 2, had upheld an appeal by a Fund member, the Local Government Pension Scheme Regulations (LGPSR) had been interpreted as limiting the adjudicator's powers, when considering appeals, to referring cases back to the original decision-maker to reconsider their decision. However, recent determinations made by The Pensions Ombudsman in cases escalated by LGPS members had highlighted that adjudicators also had the power to impose a decision on an employing authority or the administering authority.

Going forward, at both stages of the process, there was now the option for the adjudicator to implement a 'replacement decision'. In many ill-health cases, the adjudicator would continue to ask the employer to reconsider a case about which they had concerns. But, in some cases, where the employer's decision appeared not to have properly considered the medical information, a replacement decision, for example Tier 1 ill-health benefits rather than Tier 2, could be imposed at either Stage 1 or Stage 2.

This revised approach was expected to result in fewer cases reaching Stage 2. Where cases did reach Stage 2, they would be investigated and a report would be presented to Committee which would set out the range of options available

RESOLVED to note the change to the role of Stage 1 and Stage 2 adjudicators in respect of appeals against decisions made by Derbyshire Pension Fund employing authorities or against Derbyshire County as the administering authority of the Pension Fund.

66/19 <u>**EXCLUSION OF THE PUBLIC**</u> **RESOLVED** that the public be excluded from the meeting during the Committee's consideration of the remaining items on the agenda to avoid the disclosure of the kind of information detailed in the following summary of proceedings:-

<u>**SUMMARY OF PROCEEDINGS CONDUCTED AFTER THE PUBLIC HAD BEEN EXCLUDED FROM THE MEETING**</u>

1. To consider the exempt reports of the Director of Finance and ICT on:-

   a) Local Government Pension Scheme Investment Pooling
   (contains information relating to the financial or business affairs of any particular person (including the Authority holding that information))

   b) Proposed transfer of Equitable Life Assurance Society's Additional Voluntary Contributions (AVC) Business to Utmost Life and Pensions (contains information relating to the financial or business affairs of any particular person (including the Authority holding that information))

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Agenda Item No. 4(a)

DERBYSHIRE COUNTY COUNCIL

PENSIONS AND INVESTMENTS COMMITTEE

11 December 2019

Report of the Director of Finance & ICT

INVESTMENT REPORT

1 Purpose of the Report

To review the Fund's asset allocation, investment activity since the last meeting, long term performance analysis and to seek approval for the investment strategy in the light of recommendations from the Director of Finance & ICT and the Fund's independent adviser.

2 Information and Analysis

(i) Report of the External Adviser

A copy of Mr Fletcher's report, incorporating his view on the global economic position, factual information for global market returns, the performance of the Fund and his recommendations on investment strategy and asset allocation, is attached as Appendix 1.

(ii) Asset Allocation and Recommendations Table

The Fund's latest asset allocation as at 31 October 2019 and the recommendations of the Director of Finance & ICT and Mr Fletcher, in relation to the Fund's new strategic asset allocation benchmark.

The table also shows the recommendations of the Director of Finance & ICT, adjusted to reflect the impact of future investment commitments. These commitments (existing plus any new commitments recommended in this report) relate to Private Equity, Multi-Asset Credit, Property and Infrastructure and total around £290m. Whilst the timing of drawdowns will be lumpy and difficult to predict, the In-house Investment Management Team (IIMT) believes that these are likely to occur over the next 18 to 36 months.

Asset Category	Old Benchmark	New Benchmark	Fund Allocation	Fund Allocation	Permitted Range	Benchmark Relative Recommendation		Recommendation		Adjusted for Commitments (1)	Benchmark Sterling Return	Benchmark Sterling Return
			31/7/19	31/10/19		AF 11/12/19	DPF 11/12/19	AF 11/12/19	DPF 11/12/19	DPF 11/12/19	3 Months to 30/9/19	3 Months to 31/10/19
Growth Assets	**62.0%**	**57.0%**	**56.0%**	**55.7%**	**+/- 8%**	**-**	**(1.3%)**	**57.0%**	**56.0%**	**57.8%**	**n/a**	**n/a**
UK Equities	25.0%	16.0%	17.4%	17.3%	+/- 4%	-	+1.3%	16.0%	17.5%	17.5%	1.3%	(2.1%)
Overseas Equities:	33.0%	37.0%	35.6%	35.4%	+/- 6%	-	(1.6%)	37.0%	35.4%	35.4%	n/a	n/a
North America	12.0%	12.0%	10.1%	10.5%	+/- 4%	(1.0%)	(2.0%)	11.0%	10.0%	10.0%	4.9%	(3.3%)
Europe	9.0%	8.0%	8.6%	8.5%	+/- 3%	-	(0.6%)	8.0%	7.5%	7.5%	1.5%	(1.8%)
Japan	5.0%	5.0%	6.5%	6.6%	+/- 2%	-	+1.0%	5.0%	6.0%	6.0%	6.6%	2.3%
Pacific ex-Japan	4.0%	4.0%	5.3%	5.0%	+/- 2%	-	-	4.0%	4.0%	4.0%	(0.8%)	(4.1%)
Emerging Markets	3.0%	5.0%	5.1%	4.8%	+/- 2%	+1.0%	-	6.0%	5.0%	5.0%	(0.5%)	(4.6%)
Global Sustainable	-	3.0%	-	-	+/- 2%	-	-	3.0%	3.0%	3.0%	3.5%	(2.8%)
Private Equity	4.0%	4.0%	3.0%	3.0%	+/- 2%	-	(1.0%)	4.0%	3.0%	4.8%	1.5%	(1.9%)
Income Assets	**18.0%**	**23.0%**	**19.5%**	**20.5%**	**+/- 6%**	-	**(1.9%)**	**23.0%**	**21.1%**	**24.5%**	**n/a**	**n/a**
Multi-Asset Credit	4.0%	6.0%	5.5%	6.1%	+/- 2%	-	0.3%	6.0%	6.3%	8.2%	0.9%	0.9%
Infrastructure	5.0%	8.0%	6.0%	6.4%	+/- 3%	-	(1.2%)	8.0%	6.8%	8.0%	0.7%	0.7%
Direct Property (3)	5.0%	5.0%	4.7%	4.7%	+/- 2%	+1.0%	(0.3%)	5.0%	4.7%	4.7%	0.4%	0.4% (2)
Indirect Property (3)	4.0%	4.0%	3.3%	3.3%	+/- 2%	(1.0%)	(0.7%)	4.0%	3.3%	3.6%	0.4%	0.4% (2)
Protection Assets	**18.0%**	**18.0%**	**17.3%**	**17.3%**	**+/- 5%**	**(2.0%)**	**(0.7%)**	**16.0%**	**17.3%**	**17.3%**	**n/a**	**n/a**
Conventional Bonds	5.5%	6.0%	5.5%	5.5%	+/- 2%	(1.0%)	(0.5%)	5.0%	5.5%	5.5%	6.2%	2.2%
Index-Linked Bonds	6.5%	6.0%	5.8%	5.7%	+/- 2%	(1.0%)	(0.2%)	5.0%	5.7%	5.7%	7.8%	(1.5%)
Corporate Bonds	6.0%	6.0%	6.0%	6.1%	+/- 2%	-	-	6.0%	6.1%	6.1%	4.0%	1.3%
Cash	**2.0%**	**2.0%**	**7.2%**	**6.5%**	**0 – 8%**	**+2.0%**	**+3.9%**	**4.0%**	**5.6%**	**0.4%**	**0.1%**	**0.1%**

Total Investment Assets totaled £5,133.5m at 31 October 2019
(1) Recommendations adjusted for investment commitments at 31 October 2019 and presumes all commitments are funded from cash.
(2) Benchmark Return for the three months to 30 September 2019.
(3) The maximum permitted range in respect of Property is +/- 3%.

The table above reflects the following three categorisations:

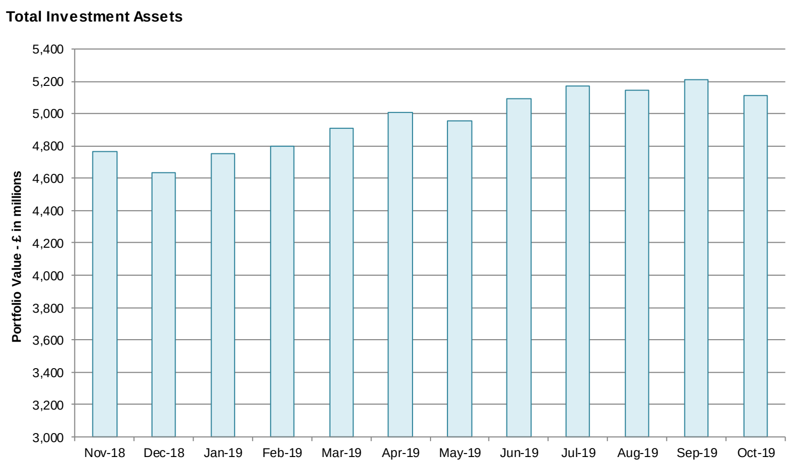
- **Growth Assets**: largely equities plus other volatile higher return assets such as private equity;
- **Income Assets**: assets which are designed to deliver an excess return, but with more stable return patterns than Growth Assets because income represents a large proportion of the total return of these assets; and
- **Protection Assets**: lower risk government or investment grade bonds.

Relative to the new benchmark, the Fund as at 31 October 2019, was overweight Cash, and underweight in Growth Assets, Income Assets and Protection Assets.

If all of the Fund's commitments (existing plus any new commitments recommended in this report) were drawn-down, the cash balance would reduce by 5.2% to 0.4%. However, in practice as these commitments are drawn-down, they will be partly offset by new net cash inflows from dealing with members, investment income, distributions from existing investments and changes in the wider asset allocation.

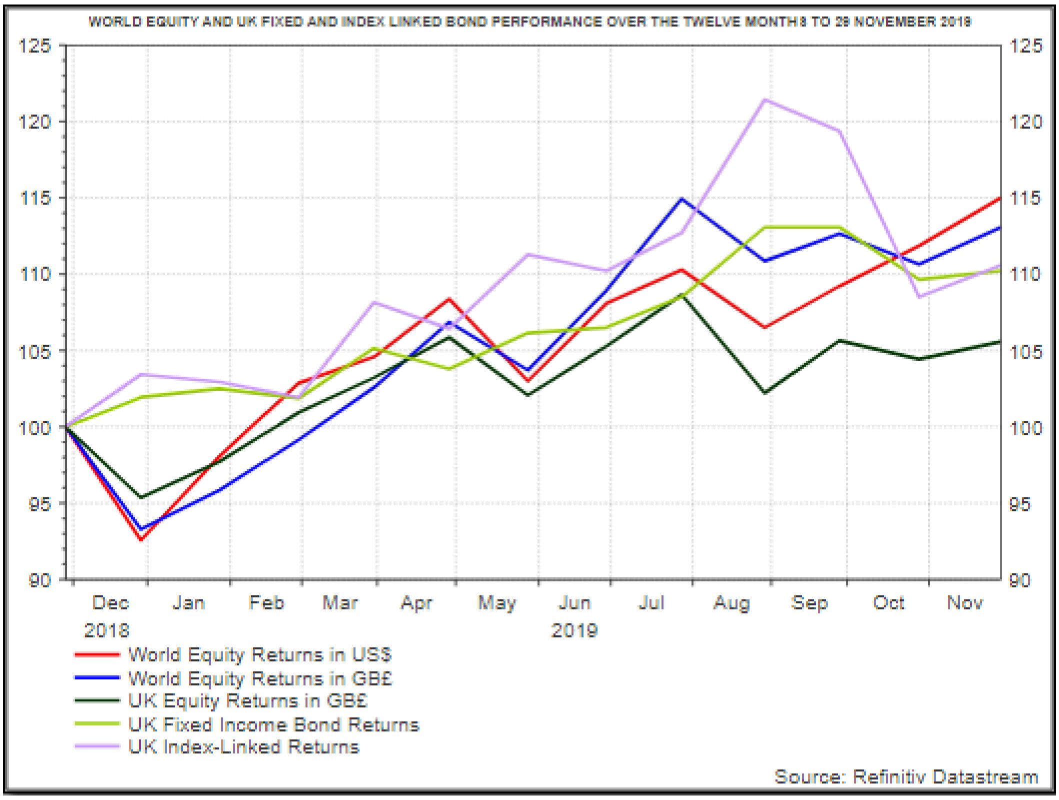
(iii) Total Investment Assets

The value of the Fund's investment assets fell by £40.5m (-0.8%) between 31 July 2019 and 31 October 2019 to just over £5.1bn, comprising a non-cash market loss of around £60m and cash inflows from dealing with members & investment income of around £20m. Over the twelve months to 31 October 2019, the value of the Fund's investment assets has risen by £360.5m (7.6%), comprising a non-cash market gain of around £260m and cash inflows from dealing with members & investment income of around £100m. A copy of the Fund's valuation is attached at Appendix 2.



The Fund's valuation can fluctuate significantly in the short term, reflecting market conditions, and supports the Fund's strategy of focusing on the long term.

(iv) Market returns over the last 12 months



The chart above shows market returns for Global Equities in Sterling and the US dollar, UK Equities, UK Fixed Income and UK Index Linked bonds for the twelve months to 29 November 2019.

Global Equity markets sold-off sharply in Q4 2018, with the quarter recording a 10.5% fall in sterling terms. Investor confidence was impacted by a number of factors, including concerns over the sustainability of US economic growth; an indication from the US Federal Reserve that there was scope for further interest rate rises; worries over a slowdown in China; and fears of a global trade war.

Equity markets recovered strongly in Q1 2019, with the FTSE All World Equity Index returning +12.2% in US Dollar terms; +9.6% in Sterling terms. Whilst global economic data moderated in the quarter, optimism that trade relations between the US and China might improve, together with a more dovish tone from the US Federal Reserve (the Fed), lifted equity markets.

Equity markets generally rose in Q2 2019 (FTSE All World +3.8% in local currency terms), and sterling investors also benefited from a weaker pound (FTSE All World +6.2% in sterling terms).

The FTSE All World index was largely unchanged in local currency terms in Q3 2019, returning 0.2%. However, sterling investors continued to benefit from a weaker pound, with a global equity return in sterling terms of 3.5% for the quarter.

Whilst the global equity market has risen in Q4 2019 to date (to 29 November 2019, FTSE All World +5.3% in local currency terms), a stronger pound has largely offset most of the gains (FTSE All World +0.4% in sterling terms). The fourth quarter of the year has also experienced a sizeable rotation out of relatively expensive 'growth' stocks exhibiting low corporate earnings volatility and strong share price momentum into cheaper 'value' stocks, often in less fashionable sectors.

Following positive performance in the first half of 2019, government bond valuations moved to unprecedented levels in Q3 2019, as central banks reacted to deteriorating global economic growth. Having kept target interest rates unchanged at 2.0% -2.25% since the start of the year, the US Federal Reserve reduced the target range twice in the third quarter of the year.

The European Central Bank also cut its deposit rate from -0.4% to a record low of -0.5% in September and announced that it would be restarting its quantitative easing programme, with a commitment to purchase €20bn of bonds a month until inflation expectations came 'sufficiently close to, but below, 2%, at which point interest rates could also start rising again'. The Governing Council of the ECB signalled that eurozone interest rates were likely to stay lower for longer than previously expected. Bond markets were also supported in Q3 2019 by the on-going trade tensions between the US and China which escalated in August following the announcement by President Trump of an additional 10% tariff on $300bn of Chinese imports, prompting retaliatory measures.

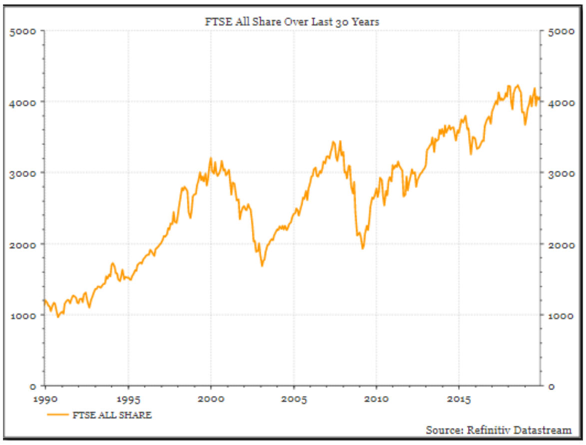
UK Conventional bonds returned 6.2% in Q3 2019, with longer dated gilt yields falling sharply (and prices, therefore rising), outperforming shorter dated maturities as the curve flattened. Having started the quarter at 0.83%, 10-year gilt yields ended the quarter at 0.49%, a record new low.

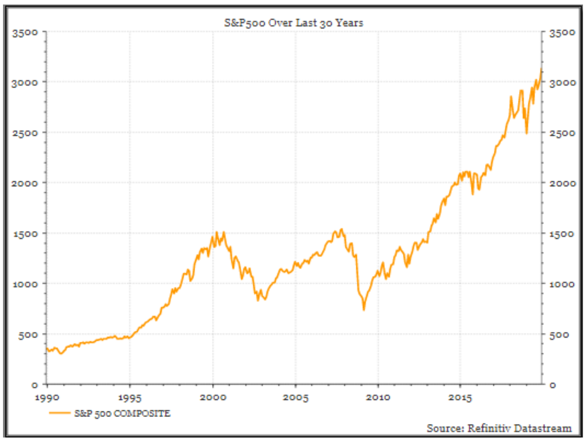
UK Index-Linked bonds returned 7.8% in Q3 2019, outperforming UK conventional bonds by 1.6%. 10-year real yields, which had hit a record low in the previous quarter, fell a further 0.56% to -3.01% at 30 September 2019.

Globally, the economic outlook is regarded as having stabilised in Q4 2019 to date, and the appetite for riskier assets has increased, pushing down demand for sovereign bonds. The US Federal Reserve cut rates for a third time this year in October, lowering the target for the federal funds rate range to 1.5% - 1.75%, which almost reversed all of the increases in US rates seen the previous year. However, the statement that accompanied the cut suggested that further reductions were not expected at that stage.

UK bond yields have risen sharply in Q4 to date (with prices falling), as fears over a ‘no-deal’ Brexit have receded and investors have become increasingly concerned that UK public spending is likely to increase significantly following the upcoming General Election with a significant accompanying increase in public sector borrowing.

Asset class weightings and recommendations are based on values at the end of October 2019, and are relative to the new strategic asset allocation benchmark which became effective on 1 January 2019. Many global stock markets are trading close to all-time highs, and it should be noted that recent asset class returns (see charts below which show the long term performance of the FTSE All Share and S&P 500 Composite) remain well in excess of long term averages.





(v) Longer Term Performance

Figures provided by Portfolio Evaluation Limited show the Fund’s performance over 1, 3, 5 and 10 years to 30 September 2019.

Per annum	DPF	Benchmark Index
1 year	5.7%	5.8%
3 year	7.8%	7.3%
5 year	9.0%	8.4%
10 year	8.8%	8.7%

The Fund under-performed slightly over the one year period but out-performed over all other time periods.

(vi) Category Recommendations

	Old Benchmark	New Benchmark	Fund Allocation	Permitted Range	Recommendation		Benchmark Relative Recommendation	
			31 Oct-19		AF	DPF	AF	DPF
Growth Assets	62.0%	57.0%	55.7%	± 8%	57.0%	56.0%	-	(1.0%)
Income Assets	18.0%	23.0%	20.5%	± 6%	23.0%	21.1%	-	(1.9%)
Protection Assets	18.0%	18.0%	17.3%	± 5%	16.0%	17.3%	(2.0%)	(0.7%)
Cash	2.0%	2.0%	6.5%	0 – 8%	4.0%	5.6%	+2.0%	+3.6%

The new strategic asset allocation benchmark reflects a re-balancing of the Fund's assets from Growth Assets to Income Assets, and also introduces a new 3% allocation to Global Sustainable Equities.

At an overall level, the Fund was overweight Cash at 31 October 2019, and underweight Growth Assets, Income Assets and Protection Assets, although if commitments waiting to be drawn down were taken into account, the Fund would move to an overweight position in Growth and Income Assets. The table on page 2 assumes that all new commitments will be funded out of the current cash weighting; in practice as private market commitments are drawn down they are likely to be funded partially out of cash and partially by distributions (income and capital) from existing investments and sales of public market assets. The Fund has progressively reduced its exposure to Growth Assets over the last two years, as equity valuations have become increasingly stretched, and increased the allocation to Income Assets and Protection Assets.

The IIMT recommendations reflected in this report: marginally increase Growth Assets to 56.0% (1% underweight), albeit the regional composition is changed from the current allocation as follows: North American Equities -0.5%; European Equities -1%; Japanese Equities -0.6%; Asia-Pacific Ex-Japan -1.0%; Emerging Markets +0.2%; and Global Sustainable Equities +3.0%); increase Income Assets by 0.6% (Infrastructure +0.4% and Multi-Asset Credit +0.2%); hold Protection Assets at 17.3%; and reduce Cash by 0.9%. The IIMT notes that the recommendations are subject to market conditions, which could be significantly impacted in the short term by the UK General Election, Brexit uncertainty and developments in the US – China trade negotiations, and flexibility will be required to respond to the resultant market conditions. Furthermore, the majority of the regional equity sales will be dependent on the investment of the proposed new 3.0% allocation to Global Sustainable Equities which is subject to the completion of satisfactory due diligence, including the finalisation of the non-DCC framework by the provider.

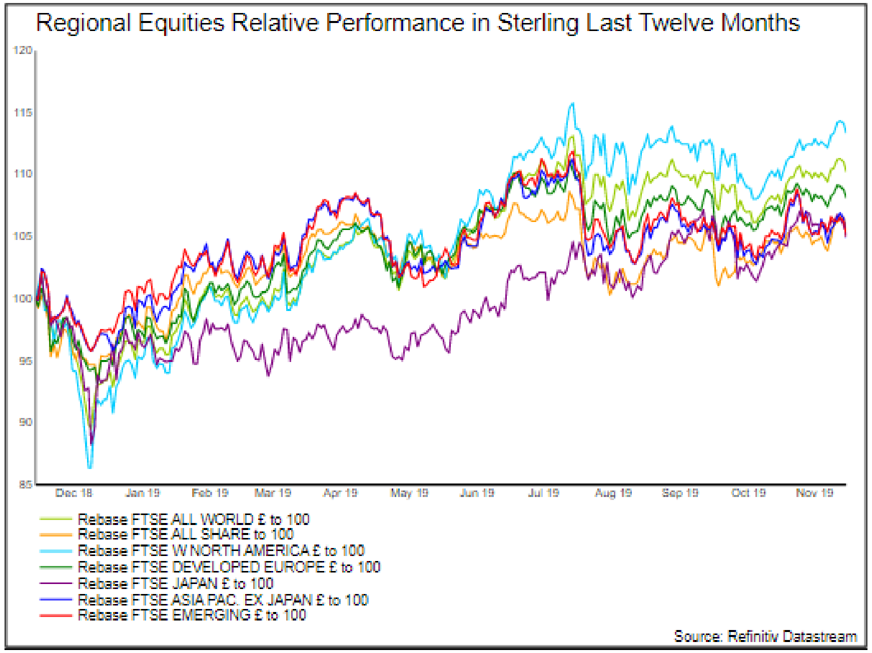
The IIMT continues to recommend a defensive cash allocation. Public markets, supported by accommodative monetary policy, continue to trade on rich valuations, at the same time as lower nominal GDP forecasts point to pressure on revenue growth and at the same time as reduced earnings forecasts still appear to be too optimistic. Despite the apparent economic stabilisation suggested by recent data, global trade and investment remain weak and global political risk has shown no sign of abating. Furthermore, as noted above, the cash weighting will be reduced as the Fund’s current commitments are drawn down.

(vii) Growth Assets

At 31 October 2019, the overall Growth Asset weighting was 55.7%, down from 56% at 31 July 2019, reflecting relative market weakness.

The IIMT recommendations below marginally increase the overall Growth Asset weighting to 56.0%, 1% underweight relative to the benchmark. The IIMT believes that a small underweight position is warranted due to continued rich equity valuations, the late cycle nature of the global economy and the continued heightened level of political risk.

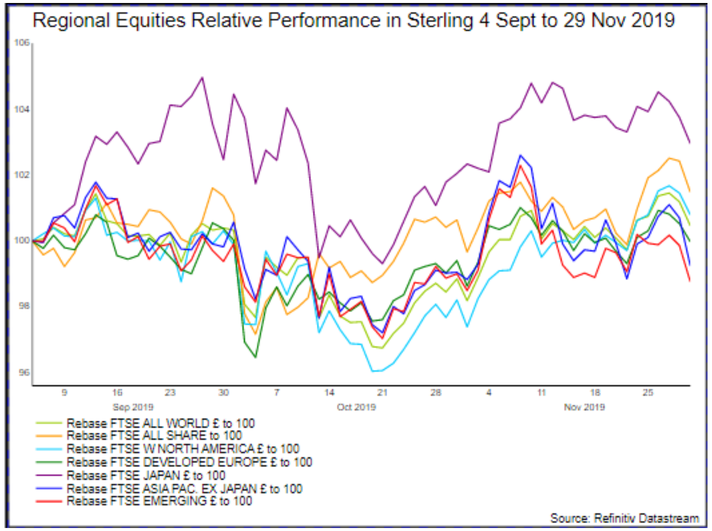
The Chart opposite shows the relative regional equity returns in sterling terms over the last twelve months, and the charts overleaf show the returns since the last Investment Report was presented to Committee and in Q4 2019 to date. Over the last twelve months, the US market has provided the strongest returns in sterling terms, closely followed by returns from Developed Europe.

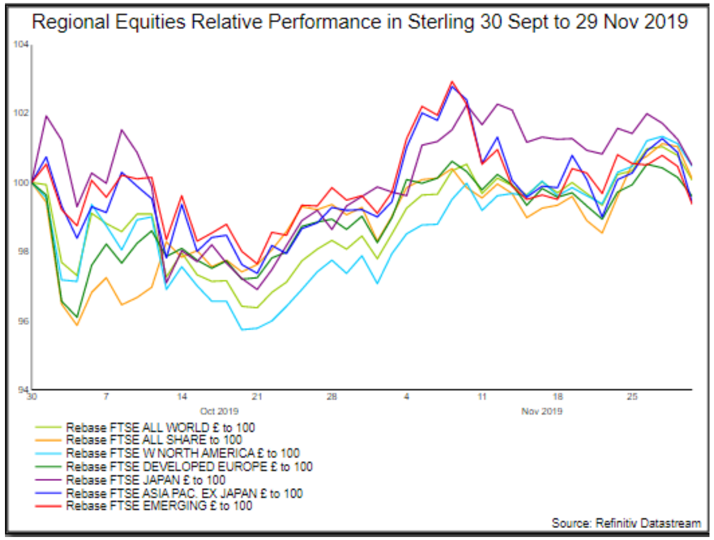


In local currency terms, Japanese Equities were the best performer in Q3 2019, returning 3.5%, whereas Asia Pacific Ex-Japan was the worst performing region with a return of -3.9%. Sterling returns in Q3 2019 benefited from a weaker pound, with Japanese and Asia Pacific Ex-Japan Equities returning 6.6% and -0.8% over the quarter in sterling terms.

During Q4 2019 to date, equity returns have generally been positive in local currency terms, ranging from 6.9% in Japan to 0.8% in the United Kingdom. However, sterling's strength against both the euro and the dollar over the period has limited the gains from overseas equities in sterling terms.

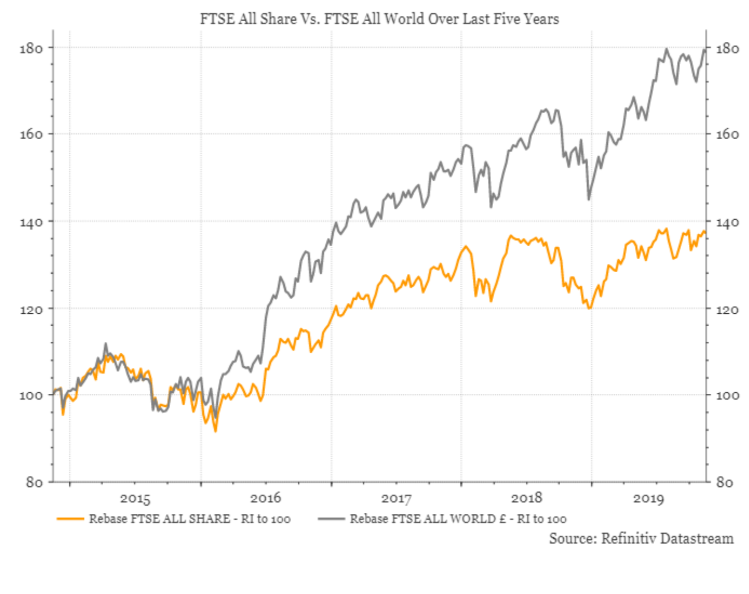
UK Equities have underperformed other global equity markets in Q4 2019 to date, in local currency terms, up 0.8% versus a FTSE All World return of 5.3%, affected by heighted political uncertainty and a stronger pound (which weighed on the internationally-exposed large cap stocks). However, the stronger pound has resulted in broadly comparable regional returns in sterling terms.





United Kingdom Equities

DPF Weightings	
Old Neutral	25.0%
New Neutral	16.0%
Actual 31.10.19	17.3%
AF Recommendation	16.0%
IIMT Recommendation	17.5%
Benchmark Returns (GB£)	
Q3 19/20 to 29 Nov-19	0.8%
Q2 19/20	1.3%
1 Year to Sept-19	2.7%
3 Years to Sept-19 (pa)	6.8%
5 Years to Sept-19 (pa)	6.8%



Whilst there were no transactions in the period, relative market weakness reduced the weighting in UK Equities from 17.4% at 31 July 2019 to 17.3% at 31 October 2019; 1.3% overweight relative to the benchmark. The transition to a passive UK Equity product was largely completed during November 2019.

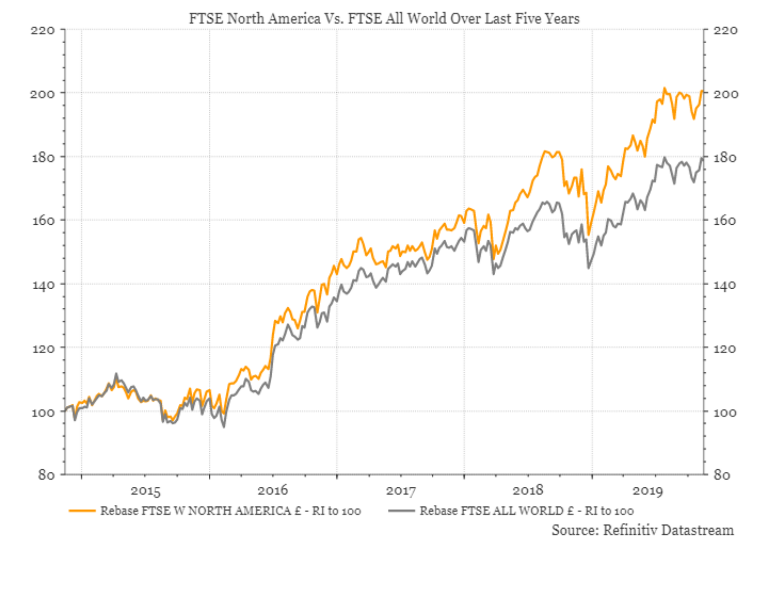
Mr Fletcher recommends a neutral weighting of 16% in UK Equities and notes that the prolonged uncertainty over Brexit has caused the UK market to underperform the rest of the world, and as a result the UK equity market has become ‘‘cheap’’ on a relative valuation basis. Mr Fletcher notes that he would more cautious about a further reduction in the allocation unless there is a compelling opportunity to invest elsewhere.

The IIMT notes that UK GDP has slowed this year, albeit the UK avoided recession in Q3 2019 and the labour market remains reasonably robust. Political risk remains heightened in the run-up to the General Election in mid-December 2019 and on-going concerns around the Brexit negotiations continue to weigh on sentiment.

However, whilst the IIMT believes that UK Equity returns may be volatile in the short-term, over the longer-term UK Equity valuations and dividend yields are attractive on both an absolute basis and on a relative basis compared to other equity markets. With around 70% of the earnings of the UK market generated overseas, investors are currently able to access those earnings at attractive levels. As a result, the IIMT recommends a marginal addition to the UK weighting to return it to 17.5%.

North American Equities

DPF Weightings	
New Neutral	12.0%
Old Neutral	12.0%
Actual 31.10.19	10.5%
AF Recommendation	11.0%
IIMT Recommendation	10.0%
Benchmark Returns (GB£)	
Q3 19/20 to 29 Nov-19	0.8%
Q2 19/20	4.9%
1 Year to Sept-19	10.4%
3 Years to Sept-19 (pa)	15.1%
5 Years to Sept-19 (pa)	16.4%



There were no transactions in the period but relative market strength increased the Fund's North American Equity weighting to 10.5% at 31 October 2019, 1.5% underweight.

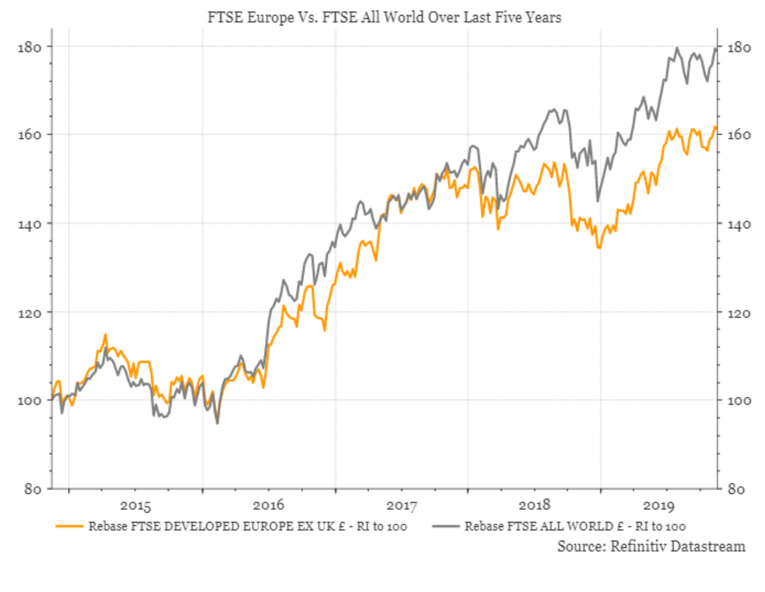
Mr Fletcher notes that the US continues to have a higher growth rate than other developed markets and the direct benefit of actual interest rate cuts, but this is more than fully priced into the current level of valuations. Therefore, Mr Fletcher recommends that the Fund remains 1% underweight in US Equities.

It is thought unlikely that President Trump's signature on the recent bills supporting the protestors in Hong Kong will do lasting damage to relations with China. However, the market appears to have priced in a successful conclusion to the 'Phase One' trade negotiations between the US and China which, it should be noted, would still leave tariffs between the two countries at far higher levels than before the start of the trade war. Political uncertainty in the US is also likely to increase over the next year as the rhetoric surrounding the US Presidential race steps up.

The IIMT believes that the increasingly late cycle nature of the US economy, coupled with rich equity valuations, increasing political risk and the sharp rise in the US equity market in the calendar year to date (+27.7% in local currency; 25.8% in sterling) support an underweight position, and recommends that the Fund's position is reduced by 0.5% to 10% (2% underweight).

European Equities

DPF Weightings	
Old Neutral	9.0%
New Neutral	8.0%
Actual 31.10.19	8.5%
AF Recommendation	8.0%
IIMT Recommendation	7.5%
Benchmark Returns (GB£)	
Q3 19/20 to 29 Nov-19	-0.2%
Q2 19/20	1.5%
1 Year to Sept-19	6.0%
3 Years to Sept-19 (pa)	9.9%
5 Years to Sept-19 (pa)	9.7%



Whilst there were no transactions in the period, relative market weakness reduced the Fund’s allocation to European Equities to 8.5% at 31 October 2019.

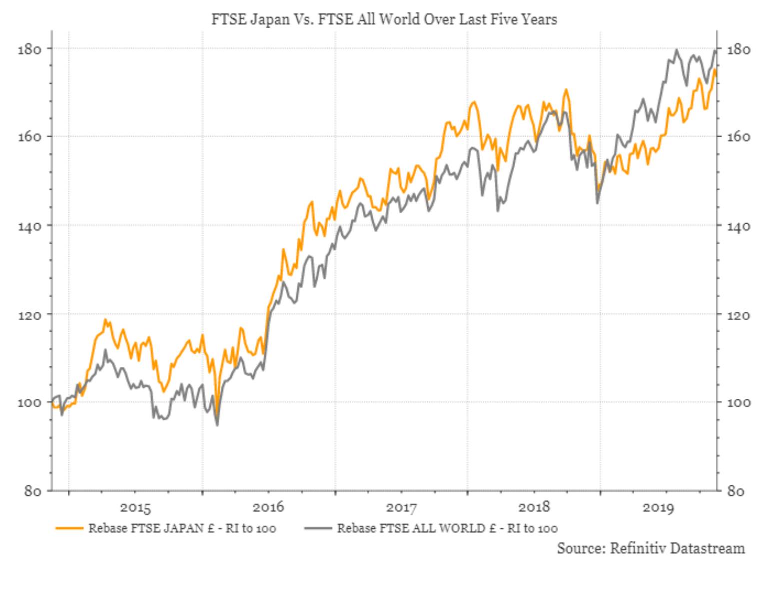
Mr Fletcher recommends a neutral position of 8%, noting that the US – China trade negotiations have had a marked impact on European manufacturing growth.

Whilst the European Central Bank has provided further monetary policy support to the eurozone economy (the eurozone economy has slowed significantly over the last year with growth falling to 0.2% in both Q2 & Q3 2019) and has indicated that rates are likely to remain lower for longer than expected, the effectiveness of monetary policy, as interest rates have moved further into negative territory, has been questioned. The ECB itself has stated that an expansion in fiscal policy will be required to support the economy and lift inflation back towards its target level.

The IIMT believes that the sharp rise in the European Equity market (up 25.5% in local currency terms and 19.2% in sterling since the start of the calendar year) represents an opportunity to ‘lock-in’ some further profit against an uninspiring background and recommends reducing the current weighting by 1% to 7.5% (0.5% underweight).

Japanese Equities

DPF Weightings	
Old Neutral	5.0%
New Neutral	5.0%
Actual 31.10.19	6.6%
AF Recommendation	5.0%
IIMT Recommendation	6.0%
Benchmark Returns (GB£)	
Q3 19/20 to 29 Nov-19	0.5%
Q2 19/20	6.6%
1 Year to Sept-19	0.3%
3 Years to Sept-19 (pa)	8.4%
5 Years to Sept-19 (pa)	12.2%



Whilst there were no transactions in the three months to October 2019, relative market strength increased the weighting by 0.1% to 6.6% at 31 October 2019; 1.6% overweight against the benchmark.

Mr Fletcher believes that the slowdown in global trade and industrial production is having a marked impact on the Japanese economy. As a result, Mr Fletcher has retained his neutral recommendation in respect of Japanese Equities.

The IIMT notes that Japanese economic growth has slowed throughout 2019 (Q1 0.6%; Q2 0.4% & Q3 0.1%). The Japanese service sector has outperformed the weaker manufacturing sector which has struggled in the face of lower exports. Japanese industry has been affected by global trade tensions including a dispute with South Korea and a slowdown in growth in China, which is Japan's biggest trading partner.

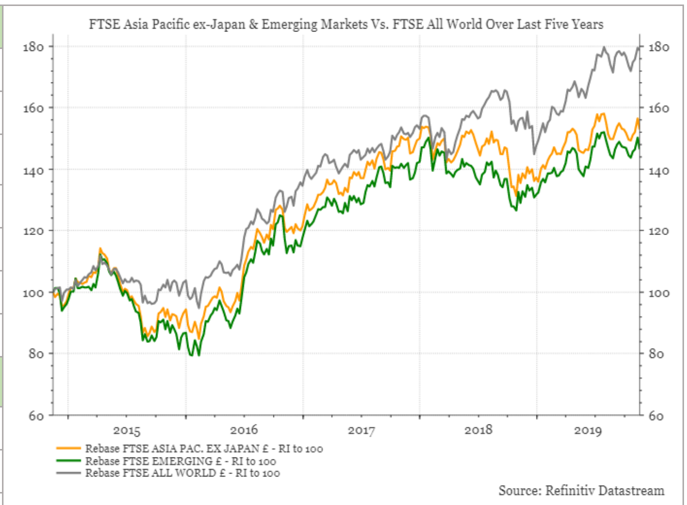
It is unclear at this stage what impact the upcoming planned increase in sales tax from 8% to 10% will have on domestic consumption. The Prime Minister Shinzo Abe has given orders for Japan's first economic stimulus package since 2016 to attempt to counter the effect of the global slowdown, any potential impact from the higher consumption tax, and the risk of a slowdown in spending after next year's Tokyo Olympics.

Notwithstanding the 2019 slowdown, the IIMT believes that the long term story in Japan remains intact, with structural changes in governance, the labour market and productivity. Furthermore, valuations remain attractive relative both to their historical ranges and other developed markets, and the diversifying and defensive qualities of the Japanese market (e.g. the safe-haven status of the ¥) provide investment support.

Whilst the IIMT believes that an overweight position remains appropriate, recent market strength presents an opportunity to take some profit and recommends that the allocation is reduced by 0.6% to 6.0%; 1.0% overweight.

Asia Pacific Ex-Japan and Emerging Market Equities

DPF Weightings	Asia-Pac	EM
Old Neutral	4.0%	3.0%
New Neutral	4.0%	5.0%
Actual 31.10.19	5.0%	4.8%
AF Recommendation	4.0%	6.0%
IIMT Recommendation	4.0%	5.0%
Benchmark Returns (GB£)	**Asia-Pac**	**EM**
Q3 19/20 to 29 Nov-19	(0.4%)	(0.4%)
Q2 19/20	(0.8%)	(0.5%)
1 Year to Sept-19	4.1%	7.1%
3 Years to Sept-19 (pa)	8.2%	8.4%
5 Years to Sept-19 (pa)	9.2%	8.7%



Relative market weakness reduced the Fund's allocation to both Asia Pacific Ex-Japan Equities and Emerging Market Equities by 0.3%, respectively, to 5% and 4.8% at 31 October 2019.

Mr Fletcher has continued to recommend a neutral weighting of 4% in Asia Pacific Equities as this region is also affected by the slowdown in global trade and industrial production.

Whilst the IIMT continues to believe in the long term growth potential of these regions, the short term outlook is less clear, as evidenced by the negative returns over recent months. Economic data in the region has continued to disappoint, with no convincing signs of improvement in either China or South Korea. The divergence in the performance of the services sector and the manufacturing sector noted elsewhere, is also apparent in China. Recent monetary stimulus measures from the Chinese central bank have, to date, been met with lacklustre demand.

Both South Korea and Taiwan have experienced weak export demand caused by slowing smartphone demand as well as the spill over from the US-China trade war. The political protests in Hong Kong have affected economic activity in the area and concerns remain about the potential response from the Chinese government.

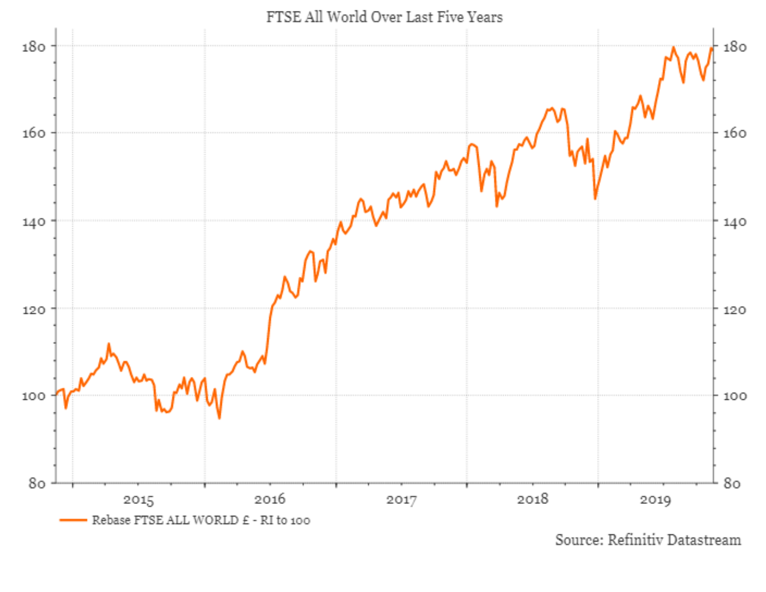
In India, the central bank has provided monetary stimulus via lower interest rates this year, and the government has announced a range of new policies to boost supply and demand, as economic growth has slowed. Brazilian pension reforms (including increasing retirement ages from 56 to 65 for men and from 53 to 62 for women), seen as vital in the effort to control public finances and restore confidence in the economy, and continuing monetary easing are expected to provide support for the economy in Brazil.

As doubts grow in the developed markets about the ability of further monetary measures to stimulate demand, the emerging economies are still seen as having monetary 'firepower' available to support slowing economies and the long term potential for the emerging markets remains.

The IIMT recommends that the Fund reduces the Asia Pacific Ex-Japan Equity weighting by 1.0% to take it to a neutral position of 4%, whilst adding marginally to Emerging Market Equities to return the region to a neutral weighting of 5%.

Global Sustainable Equities

DPF Weightings	
Old Neutral	-
New Neutral	3.0%
Actual 31.10.19	-
AF Recommendation	3.0%
IIMT Recommendation	3.0%
Benchmark Returns (GB£)	
Q3 19/20 to 29 Nov-19	0.4%
Q2 19/20	3.5%
1 Year to Sept-19	7.8%
3 Years to Sept-19 (pa)	12.2%
5 Years to Sept-19 (pa)	13.3%



The new strategic asset allocation benchmark includes a 3% allocation to Global Sustainable Equities, and Mr Fletcher recommends a 3% neutral allocation. The Committee has already approved the use of a non-DCC framework to appoint two or three investment managers to manage the planned allocation on a discretionary basis and the IIMT is currently waiting for the non-DCC framework to be finalised. It is expected that this will happen in early December.

The IIMT remains positive about the long term growth prospects for the asset class and recommends a neutral allocation of 3.0%. Whilst noting that completion of the necessary due diligence, and call-off from the non-DCC framework should result in investments being made into the asset class in early January 2019, some flexibility will be required around the timing of any investment.

Private Equity

DPF Weighting					
Old New	New Neutral	Actual 31.10.19	Committed 31.10.19	AF Recommendation	IIMT Recommendation
4.0%	4.0%	3.0%	4.8%	4.0%	3.0%
Benchmark Returns (GB£)					
Q3 19/20 to 29 Nov 19	Q2 19/20	1 Year to Sept-19	3 Years to Sept-19 (pa)	5 Years to Sept-19 (pa)	
1.1%	1.5%	3.7%	7.8%	7.6%	

The Private Equity allocation remained flat between 31 July 2019 and 31 October 2019 at 3.0%; 4.8% on a committed basis.

Mr Fletcher recommends a neutral weighting of 4% in Private Equity. The IIMT continues to seek out opportunities which offer higher returns than public markets, including co-investment and secondary funds, and recommends that the current invested and committed weightings are maintained while opportunities are assessed.

Private equity earnings multiples have increased over the last few years, and are now approaching record highs, particularly in respect of large and mega cap deals, making it difficult to find attractive opportunities at this stage in the cycle, albeit there remains some scope to invest in small and mid-cap private equity funds, which offer better relative value. Consideration is also being given to investing in listed small-cap stocks as an alternative, and this is currently under review as part of a LGPS Central Pool collaboration exercise.

(viii) Income Assets

At 31 October 2019, the overall weighting in Income Assets was 20.5%, up from 19.5% at 31 July 2019, principally reflecting net investment of around £30m. The IIMT recommendations below would take the overall Income Asset weighting to 21.1%, and the committed weighting to 24.5%.

Multi Asset Credit

DPF Weighting				
Old Neutral	New Neutral	Actual 31.10.19	AF Recommendation	IIMT Recommendation
4.0%	6.0%	6.1%	6.0%	6.3%
Benchmark Returns (GB£)				
Q3 19/20 to 29 Nov-19	Q2 19/20	1 Year to Sept-19	3 Years to Sept-19 (pa)	5 Years to Sept-19 (pa)
0.5%	0.9%	3.8%	3.6%	n/a

Net investment of £30m in September 2019 increased the invested weighting from 5.5% at 31 July 2019 to 6.1% at 31 October 2019; 8.2% on a committed basis versus a neutral weight of 6%. Whilst this implies the pension fund will be 2.2% overweight should all the commitments be drawn-down, in practice it is unlikely that the commitments will be fully drawn, and some of the existing closed-ended investments have now entered their distribution phase (i.e. returning cash to investors).

Mr Fletcher recommends a neutral 6% allocation to Multi-Asset Credit in order to increase the diversified opportunity set going forward.

The IIMT continues to remain positive about the long-term attractions of this asset class. Whilst Multi-Asset Credit is likely to under-perform in a 'risk-off' environment, the under-performance should be lower than that experienced by Growth Assets. The IIMT continues to prefer a bias towards defensive forms of credit (e.g. senior secured corporate or infrastructure debt with low default rates) with strong covenants, floating rate protection and a yield pick-up, whilst noting that both multiples and leverage are rising and investment needs to be supported by robust due diligence.

The IIMT recommends increasing the invested weighting by 0.2% to 6.3% in the upcoming quarter (0.3% overweight) to cover existing commitment draw-downs.

Property

DPF Weighting				
Old Neutral	New Neutral	Actual 31.10.19	AF Recommendation	IIMT Recommendation
9.0%	9.0%	8.0%	9.0%	8.0%
Benchmark Returns (GB£)				
Q3 19/20 to 29 Nov-19	Q2 19/20	1 Year to Sept-19	3 Years to Sept-19 (pa)	5 Years to Sept-19 (pa)
Not Available	0.4%	2.3%	6.3%	7.6%

The Fund's allocation to Property remained at 8.0%. Direct Property accounted for 4.7% (0.3% underweight) and Indirect Property accounted for 3.3% (0.7% underweight). The committed weight was 8.3% at 31 October 2019.

Mr Fletcher notes that the property market continues to provide diversified returns and that the Direct Property Manager has outperformed the property benchmark. Mr Fletcher continues to recommend a neutral overall allocation to Property, with a preference for a 1% overweight position in Direct Property and a 1% underweight in Indirect Property. Mr Fletcher recognises that it will take time to build the property allocation to a neutral position.

The IIMT recommends maintaining the current 4.7% allocation to Direct Property while the Property Manager continues to seek out attractive propositions. The Property Manager notes that investment transaction levels remained at low levels during Q3 2019 as the political situation continued to dampen investment decisions. Transaction levels are expected to improve as and when some Brexit clarity occurs as investors have significant capital to invest and the UK remains a major target for investors.

The IIMT continues to assess indirect property opportunities, with a focus on vehicles invested in specialist areas which provide strong covenants and sustainable rental growth. The IIMT recommends maintaining the Indirect Property weighting at 3.3% (3.6% on a committed basis), whilst actively investigating further investment opportunities in this asset class.

Infrastructure

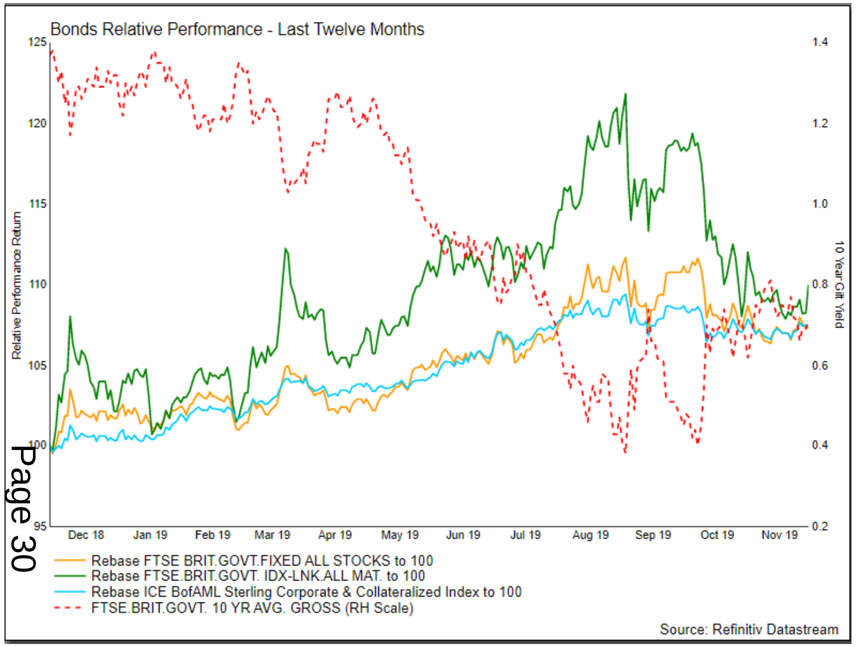
DPF Weighting					
Old Neutral	New Netural	Actual 31.10.19	Committed 31.10.19	AF Recommendation	IIMT Recommendation
5.0%	8.0%	6.4%	8.0%	8.0%	6.8%
Benchmark Returns (GB£)					
Q2 19/20 to 29 Nov-19	Q2 19/20	1 Year to Sept-19	3 Years to Sept-19 (pa)	5 Years to Sept-19 (pa)	
0.5%	0.7%	2.8%	2.6%	2.2%	

Investment in the three months to October 2019 totalled £23m, and the invested weighting increased to 6.4%; 8.0% on a committed basis.

Mr Fletcher recommends a neutral weighting of 8% relative to the benchmark, acknowledging that this will take time to achieve. The IIMT continues to believe that Infrastructure is an attractive asset class, with a bias towards core infrastructure assets which offer favourable risk-adjusted returns, predictable long term cash flows which are often linked to inflation, and low correlation to other major asset classes. Future investment opportunities, which are in line with these objectives, continue to be assessed. It is recommended that rising levels of political and regulatory risk are managed through increased levels of geographical diversification.

The IIMT recommends increasing the invested weighting by 0.4% to 6.8% in the upcoming quarter, in anticipation of existing commitment draw-downs. Due diligence is also ongoing on a number of closed-ended fund opportunities, and it is anticipated that these will lead to future commitments over the coming months.

(ix) Protection Assets



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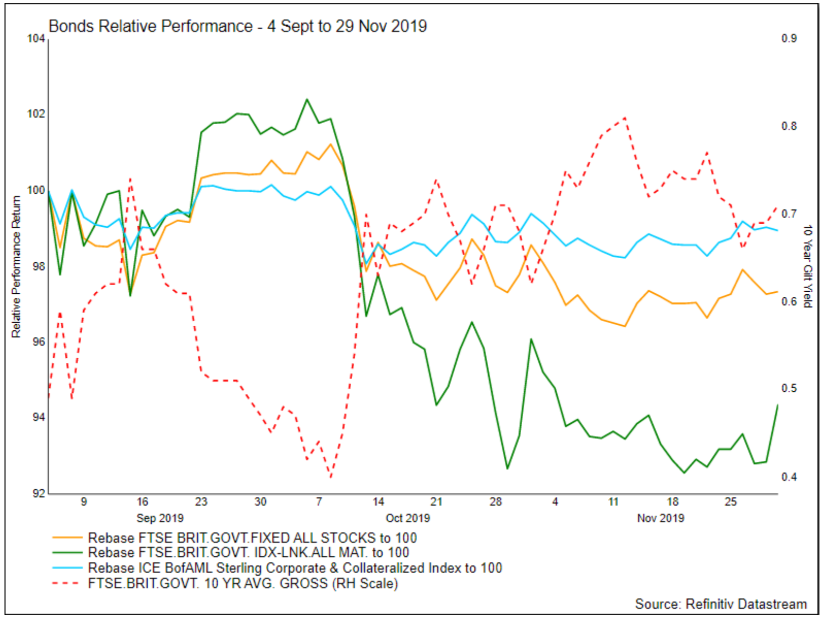


The weighting in Protection Assets at 31 October 2019 was 17.3%, the same as reported at 31 July 2019.

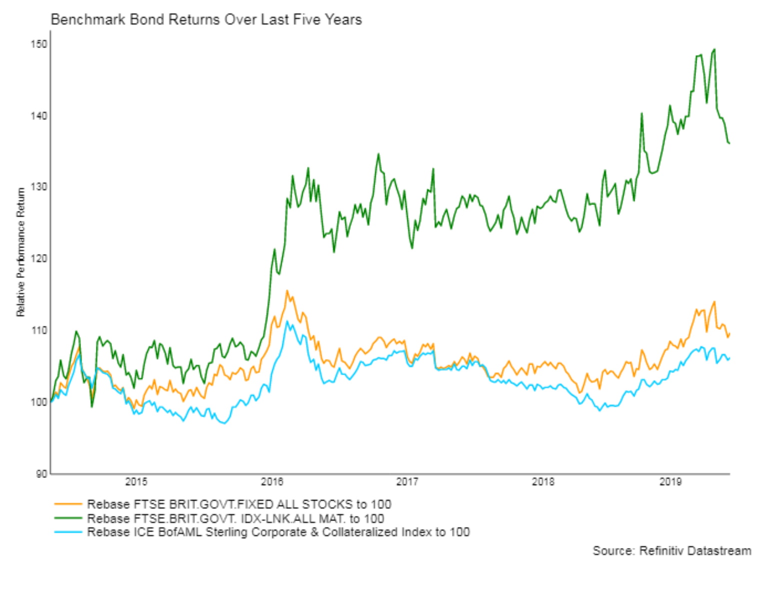
The IIMT recommendations below maintain the weighting at 17.3%.

The charts above show the relative bond returns over the last twelve months, and since the last Committee meeting.

The UK 10 year government bond yield fell sharply (i.e. prices rose) between May 2019 and September 2019 as UK economic activity slowed and uncertainty about the UK's departure from the EU intensified. However, bond yields have risen in Q4 2019 to date as fears over a ''no-deal'' Brexit have receded and investors have focussed on concerns that UK public spending is likely to increase significantly following the upcoming General Election.

Conventional Bonds

DPF Weightings	
Old Neutral	5.5%
New Neutral	6.0%
Actual 31.10.19	5.5%
AF Recommendation	5.0%
IIMT Recommendation	5.5%
Benchmark Returns (GB£)	
Q3 19/20 to 29 Nov-19	(2.6%)
Q2 19/20	6.2%
1 Year to Sept-19	13.4%
3 Years to Sept-19 (pa)	3.2%
5 Years to Sept-19 (pa)	6.0%



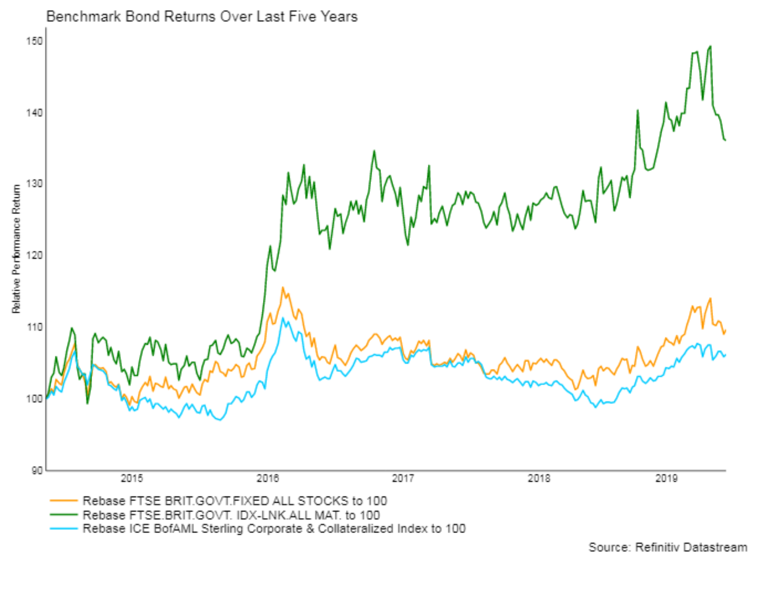
There were no transactions in the period, and the weighting in Conventional Bonds remained flat at 5.5%; 0.5% underweight.

Mr Fletcher recommends a 1.0% underweight position of 5.0% against the benchmark. Mr Fletcher notes that bond markets have, over the last few months, fully priced in the decision by the world's major central banks to return to monetary accommodation. Recently yields have started to rise as some of the ''irrational exuberance'' over the level of yields has dissipated. Mr Fletcher believes that government bond yields are still too low and expects them to continue to rise.

Whilst the IIMT agrees that conventional sovereign bonds do not appear to offer good value at current levels, they are diversifying assets and continue to afford greater protection than other asset classes in periods of market uncertainty – as demonstrated in Q3 2019 when Brexit uncertainty increased. The IIMT recommends maintaining the current weighting of 5.5%, 0.5% underweight relative to the benchmark.

Index-Linked Bonds

DPF Weightings	
Old Neutral	6.5%
New Neutral	6.0%
Actual 31.10.19	5.7%
AF Recommendation	5.0%
IIMT Recommendation	5.7%
Benchmark Returns (GB£)	
Q3 19/20 to 29 Nov-19	(6.9%)
Q2 19/20	7.8%
1 Year to Sept-19	18.4%
3 Years to Sept-19 (pa)	4.9%
5 Years to Sept-19 (pa)	9.6%



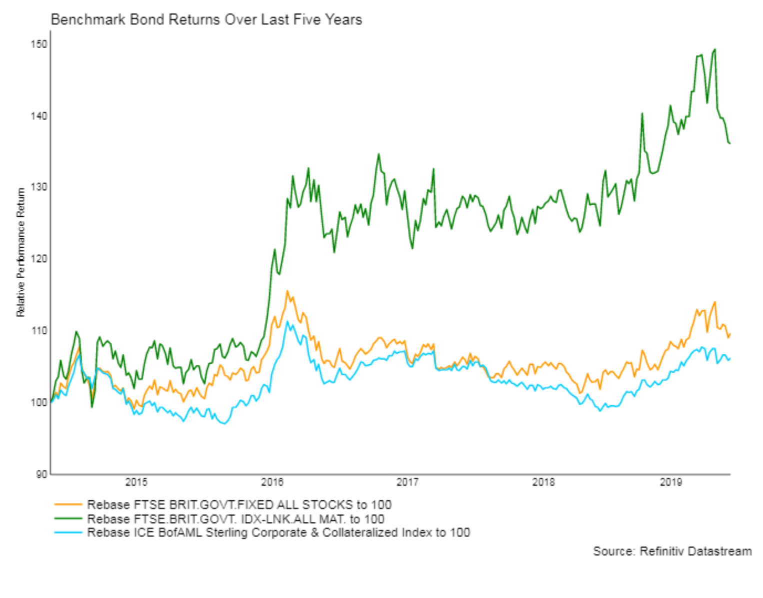
Relative market weakness reduced the Fund’s weighting in Index Linked Bonds to 5.7% at 31 October 2019; 0.3% underweight. There were no transactions in the period.

Mr Fletcher notes that UK Index-Linked gilts have now become even more expensive, and the long duration of these bonds increases the risk of adverse returns in a rising yield environment. Mr Fletcher believes that it is appropriate to be underweight in this asset class, and recommends a 1.0% underweight position of 5%, and that the Fund should continue to hold some US TIPS (US Index Linked Bonds) as well as UK Index Linked.

The IIMT agrees with Mr Fletcher regarding the current value of UK Index-Linked Bonds. It is also noted that the proposed consultation (due to begin in January 2020) on the proposal of the UK Statistics Authority (UKSA) to align the Retail Prices Index (RPI) with the Consumer Prices Index including owner occupiers’ housing costs (CPIH) is likely to lead to increased volatility in UK Index Linked Bonds. The IIMT recommends that the current 0.3% underweight position of 5.7% against the benchmark is maintained, with the current exposure to US TIPS (around 20% of the Index-Linked portfolio) being maintained due to the greater potential for price appreciation in US Index Linked Bonds.

Corporate Bonds

DPF Weightings	
Old Neutral	6.0%
New Neutral	6.0%
Actual 31.10.19	6.1%
AF Recommendation	6.0%
IIMT Recommendation	6.1%
Benchmark Returns (GB£)	
Q3 19/20 to 15 Nov-19	(0.8%)
Q2 19/20	4.0%
1 Year to Sept-19	11.5%
3 Years to Sept-19 (pa)	3.7%
5 Years to Sept-19 (pa)	6.2%



Whilst there were no transactions in the period, relative market strength increased the weighting in Corporate Bonds at 31 October 2019 to 6.1%; 0.1% overweight.

Mr Fletcher notes that the current outlook for the investment grade non-government bond market is uncertain. Mr Fletcher believes that government bond yields are likely to rise, and that this will likely lead to an increase in investment grade bond yields, resulting in negative returns. Investment grade credit is also vulnerable because of the high leverage, low interest cover (particularly in the US) and falling liquidity. Mr Fletcher continues to believe that corporate bonds should be held at a 6% neutral position because the main risk in the bond market comes from the direction of yields and this will have the biggest impact on the returns of longer duration government bonds.

The IIMT concurs with Mr Fletcher and recommend a maintained 6.1% allocation to Corporate Bonds, whilst noting that the current average credit spread, of around 120 to 130 basis points over sovereign bonds, is increasingly insufficient to compensate for the increased default and volatility risk.

It should be noted that the Fund may transition its legacy UK corporate bond portfolio into a global investment grade corporate bond fund developed by LGPS Central Limited over the next few months. Should such a transition take place, it is proposed that the Fund's corporate bond benchmark is realigned to that of the underlying LGPS Central Limited product.

(x) Cash

The Cash weighting at 31 October 2019 was 6.5%, 4.5% overweight relative to the benchmark. Mr Fletcher has maintained his 2% overweight allocation of 4% to Cash, noting that if bond yields continue to rise from their current low level, this additional allocation to cash could be deployed to the bond market if the prospects for equities markets do not improve.

Public markets continue to trade on rich valuations despite the late cycle nature of the global economy, heightened levels of global political risk and the continuing uncertainty surrounding the US-China trade negotiations. Furthermore, the on-going political uncertainty in the United Kingdom, in particular with regard to the General Election in December 2019 and the scheduled departure from the European Union on 31 January 2020, is likely to weigh on investor sentiment over the next few months. Attractively priced opportunities in private markets continue to be difficult to source.

Against this background, the IIMT recommends a defensive cash allocation of 5.6%. Furthermore, it should be noted that the cash weighting will reduce as private market commitments are drawn down.

3 Other Considerations

In preparing this report the relevance of the following factors has been considered: financial, legal and human rights, human resources, equality and diversity, health, environmental, transport, property and prevention of crime and disorder.

4 Background Papers

Files held by the Investment Section.

5 Officer's Recommendations

5.1 That the report of the external adviser, Mr Fletcher, be noted.

5.2 That the asset allocations, total assets and long term performance analysis in this report be noted.

5.3 That the strategy outlined in the report be approved.

PETER HANDFORD

Director of Finance & ICT

Third Quarter 2019 Investment Report

PREPARED FOR:

Derbyshire County Council Pension Fund: Pensions and Investment Committee Meeting

DECEMBER 2019

MJ HUDSON
Allenbridge

Investment Report for Derbyshire County Council Pension Fund

This report has been prepared by Anthony Fletcher "External Investment Advisor" of Derbyshire County Council Pension Fund (the Fund). At the request of the Pension and Investment Committee the purpose of the report is to fulfil the following aims: -

- Provide an overview of market returns by asset class over the last quarter and 12 months.
- An analysis of the Fund's performance by asset class versus the Fund specific benchmark for the last quarter and the last 12 months.
- An overview of the economic and market outlook by major region, including consideration of the potential impact on the Fund's asset classes
- An overview of the outlook for each of the Funds asset classes for the next two years; and recommend asset class weightings for the next quarter together with supporting rationale.

The report is expected to lead to discussions with the in-house team on findings and recommendations as required. The advisor is expected to attend quarterly meetings of the Pensions and Investment Committee to present his views and actively advise committee members.

Meeting date 11th December 2019
Date of paper 15th November 2019

1. Market Background (Third quarter 2019)

The third quarter saw a continuation of the themes established earlier in the year. After a difficult July and August, investors returned from their holidays in bullish mood and drove the equity markets higher in September, as a result the quarter ended with more modest returns than we had seen in previous quarters. Bond markets enjoyed broadly stronger returns, especially the long duration government bond markets. Economic data continued to weaken but this was offset by monetary easing in the US and Europe.

Responding to weaker jobs data, lower aggregate hours worked and falling consumer confidence the Fed responded by cutting interest rates by 0.25% in July and again in September. In Europe the ECB’s response to weaker growth and inflation was to cut its refinancing rate to zero and its deposit rate to -0.5%. The ECB also restarted it’s QE programme, committing itself to continue asset purchases until it achieves its 2% inflation target.

Global equity markets were volatile over the quarter mainly because of Mr Trump’s unilateral announcement of tariffs on Chinese electrical goods, but markets still managed to end the quarter higher helped by lower interest rates. The S&P 500 ended the quarter up 1.7%, in local currency terms. European stocks did slightly better, with the MSCI Europe ex UK index gaining 2.5% in local currency terms over the course of the quarter. The ongoing trade talks and weaker Chinese growth caused emerging equity markets to underperform over the quarter.

In the UK, the FTSE 100 made gains of 1.0% and the FTSE All Share 1.3%. Once again politics dominated the quarter, Boris Johnson succeeded Teresa May as Prime Minister. Parliament passed legislation forcing the government to ask for an extension if no deal with Europe can be reached by the end of October and Boris Johnson illegally Prorogued Parliament. This caused the currency to be volatile, but over the quarter Sterling was slightly stronger as the markets believe a deal is still a more likely outcome.

Helped by central bank easing and rising concerns about the global growth outlook, government bonds outperformed most equity markets with long duration UK government bonds delivering some of the strongest returns. Non-government bond yield spreads were broadly unchanged over the quarter and remain below their long run averages. Global investment grade credit delivered 1.2%, global high yield and emerging market debt each returned a much more modest 1.3%.

House prices in the UK rose by 0.2% (seasonally adjusted), and commercial property returns recovered from the previous quarter’s weakness posting a 0.5% gain. The sector is struggling with significant skills shortages but over 230,000 new homes have been built in the UK in the last year.

The US dollar and the Euro were slightly weaker over the quarter as central banks cut rates, Sterling was volatile on Brexit news but finished the quarter stronger against most of the major currencies. According to Mr Trump, the Chinese opened a new front in the trade war with the US by allowing it’s currency to weaken below 7RMB to the Dollar.

Weaker global growth caused most commodity prices to fall again, Oil prices were nearly 9% lower over the quarter, but the weakness of the US dollar, lower interest rates and the continuing trade tensions helped Gold rally by a further 3.7% over the quarter.

Table 1, below shows the total investment return in pound Sterling for the major asset classes, using FTSE indices except where noted; for the month of October and the 3 and 12 months to the end of September 2019.

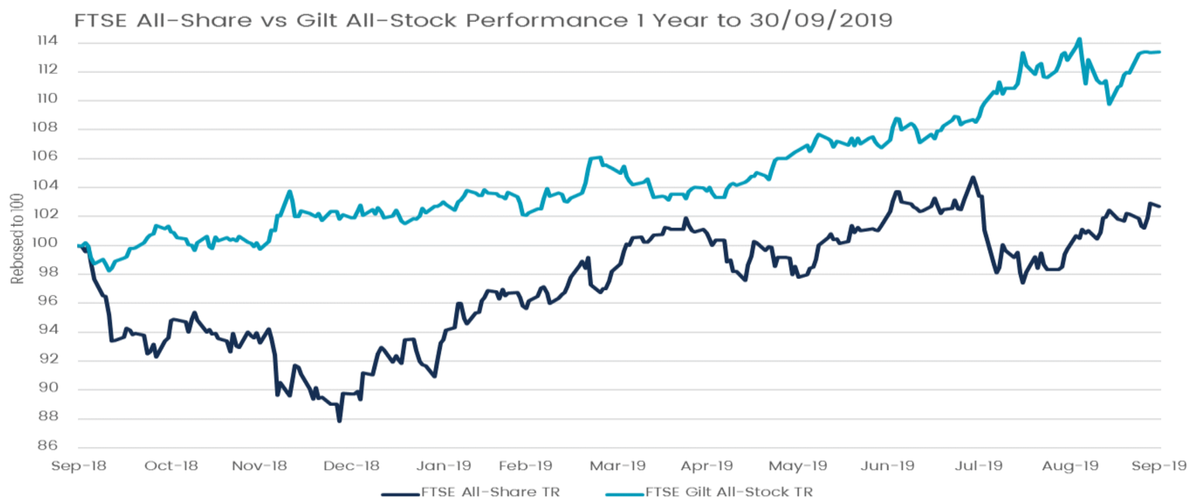
% TOTAL RETURN DIVIDENDS REINVESTED

MARKET RETURNS

		Period end 30th September 2019	
	October 2019	**3 months**	**12 months**
Global equity ACWI^	-2.3	4.0	8.4
Regional indices			
UK All Share	-1.4	1.3	2.7
North America	-2.8	4.9	10.4
Europe ex UK	-1.4	1.6	6.4
Japan	-0.1	6.6	0.3
Pacific Basin	-1.0	-0.0	3.9
Emerging Equity Markets	-0.8	-0.5	7.1
UK Gilts - Conventional All Stocks	-1.8	6.2	13.4
UK Gilts - Index Linked All Stocks	-5.3	7.8	18.4
UK Corporate bonds*	-0.2	3.7	11.0
Overseas Bonds**	-0.4	2.5	9.6
UK Property quarterly^	-	0.4	2.3
Sterling 7 day LIBID	0.06	0.18	0.7

^ MSCI indices * iBoxx £ Corporate Bond; **Citigroup WGBI ex UK hedged

Chart 1: - UK bond and equity market returns - 12 months to 30th September 2019



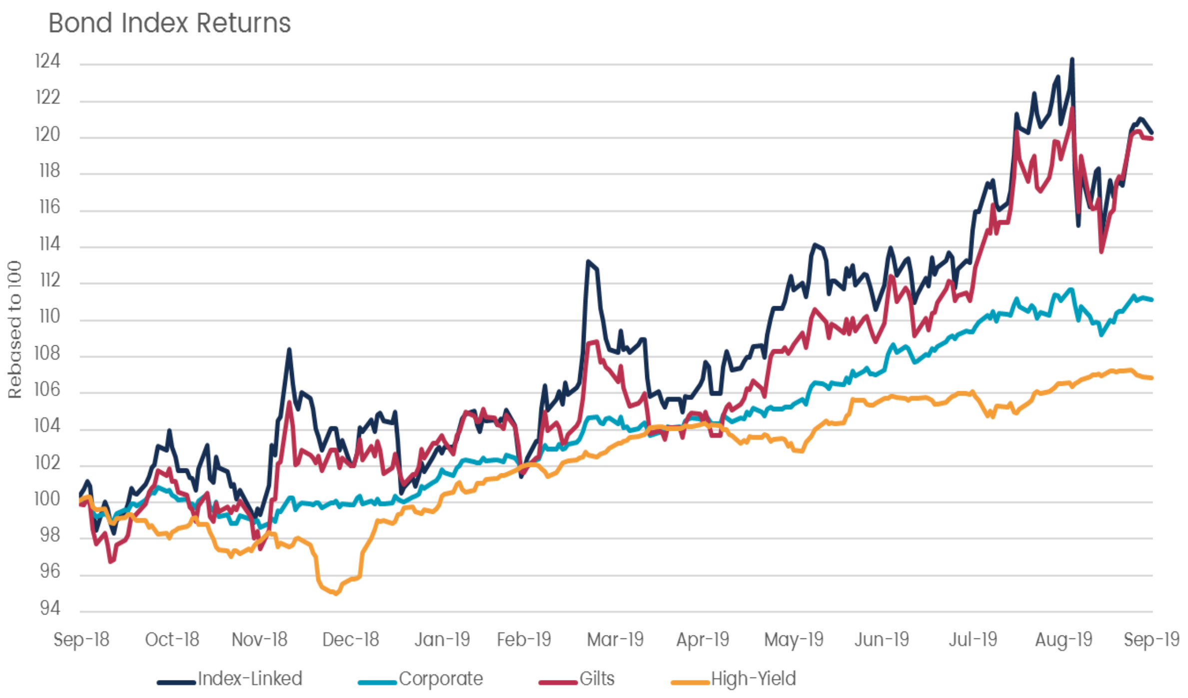
Source: - Bloomberg

Table 2: - Change in Bond Market yields over the quarter and 12 months.

BOND MARKET % YIELD TO MATURITY	30th June 2019	30th September 2019	Quarterly Change	30th September 2018	Current 15th November 2019
UK GOVERNMENT BONDS (GILTS)					
10 year	0.83	0.49	**-0.34**	1.57	0.73
30 year	1.47	0.97	**-0.50**	1.92	1.26
Over 15y Index linked	-1.88	-2.22	**-0.34**	-1.50	-1.84
OVERSEAS 10 YEAR GOVERNMENT BONDS					
US Treasury	2.01	1.66	**-0.35**	3.06	1.83
Germany	-0.33	-0.57	**-0.24**	0.53	-0.33
Japan	-0.16	-0.21	**-0.05**	0.13	-0.07
NON-GOVERNMENT BOND INDICES					
UK corporates	2.37	2.05	**-0.34**	2.85	2.17
Global High yield	5.59	5.48	**-0.11**	6.06	5.48
Emerging markets	4.36	4.45	**+0.09**	5.04	4.56

Source: - Bloomberg, G8LI, UC00, HW00, EMGB, ICE indices 15th November 2019.

Chart 2: - Bond index returns in Sterling terms, since 30th June 2018.



Source: - Bloomberg

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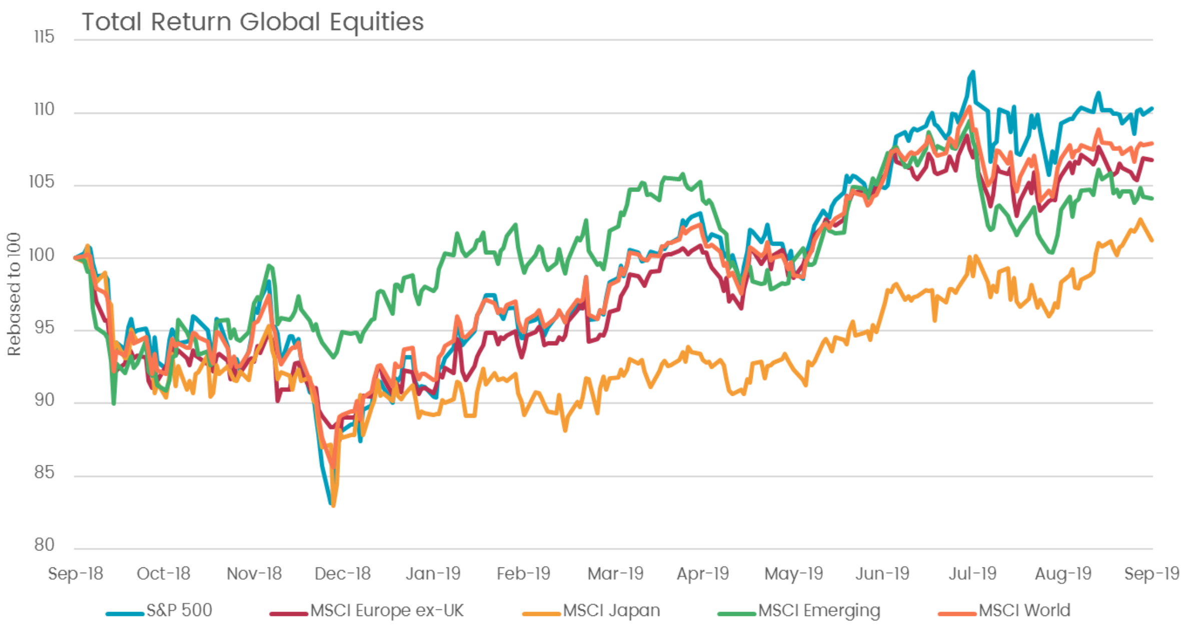
Chart 3: **-** Total return of overseas equity markets in Sterling terms, last 12 months.



Source: - Bloomberg

Recent developments (October to the 15th November 2019)

Capital markets responded to signs of agreement between the US and China on trade with a return to "risk on". Emerging equity outperformed developed markets in local currency terms and bonds markets produced negative returns. How much of the unexpected announcement of a Phase one Trade deal by Mr Trump was an attempt to distract from the Impeachment hearings is a matter of some debate. But it is notable how cautious China has been since the announcement, maybe because they feel they now have the stronger hand, or because we have been here before and all could be undone by the next presidential tweet.

Meanwhile the global economy continues to lose momentum, Manufacturing is in recession in Europe and now the US, and the slowdown is showing signs of broadening out with consumer confidence and jobs growth lower, having said that third quarter GDP data has been slightly better than expected with US GDP reported at 1.9 and the UK and Germany narrowly avoiding a second quarter of negative growth. The loss of growth momentum and a falling rate of inflation has allowed central banks to maintain their easing policy, the Fed cut rates for the third time this year in October but did say they would now be in a wait and see mode. Mr Draghi gave his last ECB press conference as President, before handing over to Christine Lagarde. With the ECB deposit rate at -0.5% and QE at Euro 20 billion a month until inflation hits 2%, it is difficult to see what she can do to further ease monetary policy, given her background at the IMF it is widely anticipated that she will push for a Fiscal Policy response from Germany in particular.

To the surprise of markets, Prime Minister Boris Johnson was able to agree a new Brexit deal with the European Union (EU). This was made possible by agreeing to a customs border in the Irish Sea and for Northern Ireland to remain more closely tied to the EU than the rest of the UK, thus avoiding the need for a hard border on the island of Ireland. The new deal gained more support in the House of Commons; but MP's refused to pass enabling legislation because of the lack of time available to allow for an appropriate level of scrutiny. Hence the 31st October deadline was missed and an extension to the 31st January 2020 has been agreed. Once the 31st October was out of the way Parliament agreed to hold a general election 12th December.

Notwithstanding the unknown outcome of the General Election the markets have taken the view that some sort of deal will be agreed, whichever government we have. As a result, Sterling has rallied by about 5% which means that the return on global equity investments in sterling terms has fallen by 2.3%.

2. Investment Performance

Table 3 shows the performance of the Derbyshire Pension Fund versus the new fund specific benchmark for the 3 months to the end of September 2019 and compared to a combination of the New and Old benchmarks over 12 months. The Fund underperformed its benchmark over both 3 and 12 months. Measured against longer time horizons, more appropriate for Pension Fund performance, the Fund continues to deliver positive returns and has outperformed the strategic benchmark on rolling 3,5,10 years and since inception on a net of fees basis. Over 10 years the Fund has achieved a total return of 8.8% per annum. Over 3 months the PEL attribution data suggests Stock Selection was the main contributor to the underperformance whereas asset allocation was responsible over 12 months.

Table 3: - Derbyshire Pension Fund and Benchmark returns

% TOTAL RETURN (NET) 30TH SEPTEMBER 2019	3 MONTHS		12 MONTHS	
	Derbyshire Pension Fund	**Benchmark**	**Derbyshire Pension Fund**	**Benchmark**
Total Growth Assets	**1.8**	**2.4**	**4.7**	**5.1**
UK Equity	1.0	1.3	1.6	2.7
Total Overseas Equity	**1.8**	**2.9**	**5.6**	**6.4**
North America	3.7	4.9	8.5	10.4
Europe	1.6	1.5	6.1	6.0
Japan	4.6	6.6	-2.4	0.3
Pacific Basin	-1.5	-0.8	7.4	4.1
Emerging markets	-1.3	-0.5	9.2	7.1
Global Sustainable Equity	0.0	3.5		
Global Private Equity	5.2	1.5	11.5	3.7
Total Protection Assets	**4.7**	**6.0**	**12.5**	**13.4**
UK Gilts	3.9	6.2	10.7	12.9
UK & Overseas Inflation Linked	6.6	7.8	16.7	18.4
UK Corporate bonds	3.7	4.0	10.5	11.5
Total Income Assets	**2.0**	**0.6**	**6.3**	**3.2**
Multi-asset Credit	0.8	0.9	4.3	3.8
Infrastructure	5.0	1.2	11.4	2.8
Property (all sectors)	0.5	1.3	4.2	5.9
Internal Cash	0.0	0.1	0.2	0.6
Total Fund	**2.3**	**2.6**	**5.7**	**5.8**

Total fund value at 30th September 2019 £5,206 million

The third quarter saw more modest returns for equity and income assets with outsize performance coming from protection assets as the bond markets priced in a recession and more rate cuts.

Local currency overseas equity returns in the third quarter were higher than reported above. In sterling terms as shown above total returns were lower due to a recovery in the value of the Pound. This has continued to impact Fund returns into the fourth quarter as clearly markets now believe that the UK will get a deal rather no deal from Brexit. Unusually with the exception of Pacific basin and Emerging equity over 12 months, all our active managers underperformed their respective equity indices.

Growth assets – Equity performance

Over the quarter UK direct equity exposure was reduced to broadly in line with the benchmark allocation of 16%. This part of the Fund which is managed by LGPS Central performed in-line with the market over the last 3 months but underperformed slightly over 12 months. The fund still has a small exposure to listed investment companies and this is where most of the underperformance seems to have been generated in both periods.

As can be seen in the table above absolute returns from overseas equities were stronger than UK equities over 3 and 12 months despite the renewed strength of the Pound but, relative returns were negative to their respective benchmarks.

North American equity actively managed in a segregated portfolio (by Wellington) unperformed over the quarter and 12 months. The Fund has reduced its allocation taking profits, but stock selection seems to be the main driver of underperformance. As a result, 3 year returns at 14.3% pa, have slipped behind the benchmark. Over 5 and 10 years, Wellington remains 0.9% and 1.3% ahead of benchmark.

The continental European equity portfolio is passively managed by UBS. The 3 and 12 month returns are slightly ahead of benchmark due to the overweight allocation. The allocation was reduced over the quarter to bring it more in line with the benchmark.

The other equity assets are invested in Japan, the Pacific Basin and Emerging Markets equities, via pooled funds selected by the in-house team, there were no significant changes in allocation. The performance of Japanese and Pacific ex Japan equity remains volatile over the short term but over longer periods, both allocations have delivered above benchmark returns over 3, 5 and 10 years. The allocation to emerging equity has delivered more modest absolute returns but again over the longer term it is ahead of benchmark in all periods except rolling 5 years.

Private equity continues to deliver strong positive returns and has outperformed its benchmark over all periods.

As yet no allocation has been made to Sustainable Global Equity, which is causing a drag on overall growth asset performance.

Protection assets - Fixed Income Performance

In the third quarter the bond portfolio delivered strong positive absolute returns but because the Fund is slightly underweight relative to the strategic allocation and the Fund's assets have lower aggregate duration (interest rate sensitivity) compared to the benchmark, performance was behind benchmark, over 3 and 12 months. The allocation Index Linked Gilts was increased slightly over the quarter.

Income assets – Property, MAC and Infrastructure

Over the quarter and the year, the total allocation to all property produced positive returns that were ahead of benchmark. Over the longer-term direct property investments have helped the allocation outperform the benchmark whereas indirect property returns have been more mixed.

Over all periods Infrastructure allocations produced positive returns well ahead of the benchmark.

The Multi-Asset Credit (MAC) allocation a combination of private debt, high yield and emerging market debt has outperformed in all periods. The 3y returns are 5% pa compared to 3.6% for the LIBOR based benchmark.

Over the quarter the allocation to both Infrastructure and MAC were increased, the Fund now has a neutral allocation to MAC but remains underweight Infrastructure and Property.

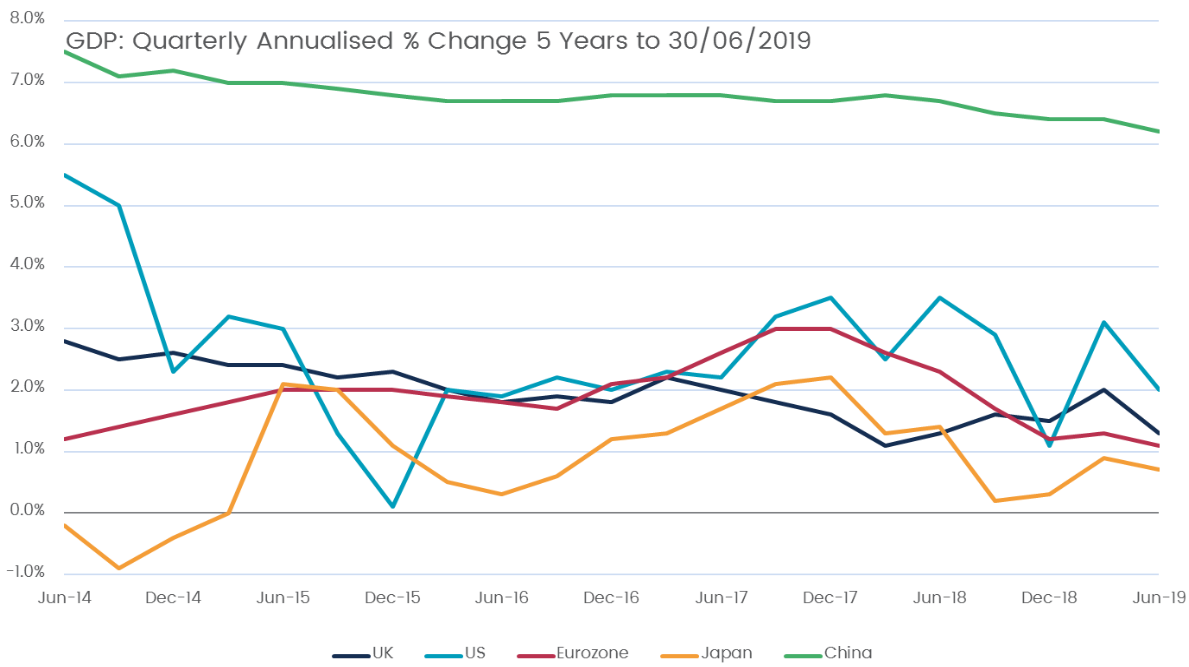
Asset Allocation

At the asset allocation level, the DPF's in-house team has made some excellent long term decisions. In general, over the medium to long term, being overweight "growth" assets like equities at the expense of "protection" assets like bonds, has been a good decision as would be expected given the higher levels of risk. In the last year the increased volatility of equity markets due to the slowing economy, increased political uncertainty and the change from tighter to easier monetary policy by the central banks has shown the benefits of having a diversified portfolio, with a mix of assets where the drivers of return are different.

3. Economic and Market outlook

Economic outlook

The global economy slowed in the third quarter and has lost more momentum as we have moved into the fourth quarter. It would appear that the global economy will avoid going into recession, but the risks have increased. Global manufacturing and trade are in recession but consumption that makes up a large part of developed market aggregate growth appears to be holding up despite the broadening of weakness into the consumer and services sectors. The trade negotiations between the US and China remain a potential source of uncertainty that could increase the risk of an unintended outcome. The longer the negotiations take the more corrosive they become for the economic outlook and the more likely they are to threaten growth. As chart 4 below shows reported annualised growth in the second quarter slowed and advance data for the third quarter and the consensus forecasts in table 4 below confirm this trend.



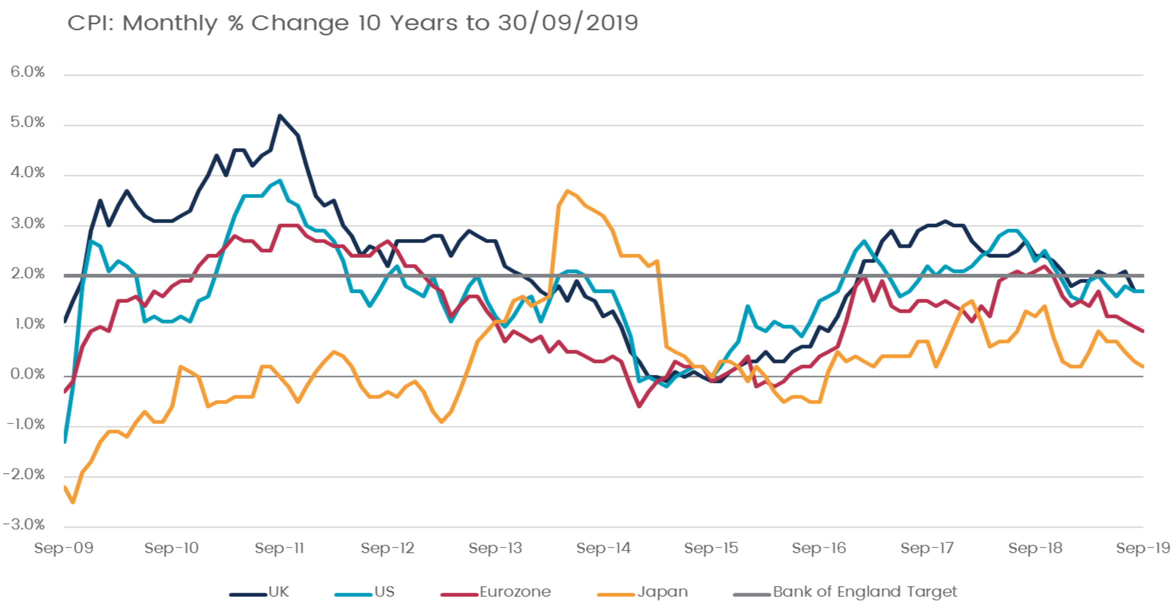
Source: - Bloomberg

The prompt action of central banks by cutting rates, returning to QE and forward guidance indicating that interest rates will remain lower for longer appears to have reduced the chance of recession. The central banks have also been helped by lower than expected inflation outcomes. What seems to be clear is that there is a growing global consensus that Monetary Policy is fully played out and expansionary Fiscal Policy will be required to keep the global economy growing.

In the UK the issue of Brexit still dominates the economy, investment spending continues to fall and employment growth that had been supporting domestic consumption has stalled and gone into reverse. In August and September employment fell, the unemployment rate increased and the number of vacancies fell. For those in work falling inflation and an increase in wages has helped maintain the level of retail sales but consumer confidence has fallen. The Bank of England has stated that the uncertainty around the Brexit outcome remains the biggest source of uncertainty for the economy. In data released by the Treasury the economy is expected to shrink over the medium term by at least 6% even if there is a deal with the EU.

As can be seen in chart 5 below, despite the late stage nature of the business cycle, which is exhibiting less slack in the major economies and an increase in real wages, the medium-term trend for inflation remains lower and central banks seem unable to achieve normalisation around their stated target inflation rates of 2%.

Chart 5: **-** Inflation – Annual rate versus Central Bank Target



Source: - Bloomberg

Central Banks

In my last report I mentioned that the US had cuts rates and ended their QT programme, so far this year they have cut rates by 0.75% to a range of 1.5% to 1.75%, at their last meeting in October the Fed said they were now on hold, which is understandable while inflation is lower, growth is still around trend at 2% pa. In response the widespread weakness of growth and inflation in Europe the ECB cut the repo rate back to zero and reduced their deposit rate to -0.5% at the same time they announced Euro 20billion of asset purchases per month (QE), it is difficult to see what else they could do to stimulate growth and inflation. Christine Lagarde the incoming President of the ECB is expected to put pressure on European governments, most notably Germany to end fiscal austerity and expand fiscal policy in order to stimulate growth. The bank of Japan decided not to join in by leaving rates and QE policy unchanged, they have decided to wait and see what effect a sales tax increase will have. Elsewhere across the world, 43 central banks have cut interest rates a total of 67 times in Q3, as global economic growth has weakened.

In November the BoE's Inflation Report was renamed the Monetary Policy Report, other than the name change it was pretty much a repeat of the August meeting. The Bank Rate was maintained at 0.75% and Brexit was cited as the main source of uncertainty for the UK economy.

Politics

The US-China trade war negotiations took a significant change to a more constructive outlook in October, with the announcement of what President Trump has called a "Phase One Trade Deal". The deal involves China committing to significantly increase purchases of US agricultural products, accelerate the opening up of its financial sector, and more transparency regarding the currency markets. While this announcement of the first phase of a deal between China and the US is a small breakthrough, it is unlikely to lead to a resolution of the trade war for two key reasons: first, polls suggest that US voters across all political parties remain sceptical about the relative fairness of Chinese trade practices; and second, both sides harbour ambitions to be the number one player in global technology. It is just as likely that if Mr Trump needed in the short term to distract attention from the Impeachment hearings or in support of his presidential election campaign, he could decide to ramp up anti-China rhetoric to boost support.

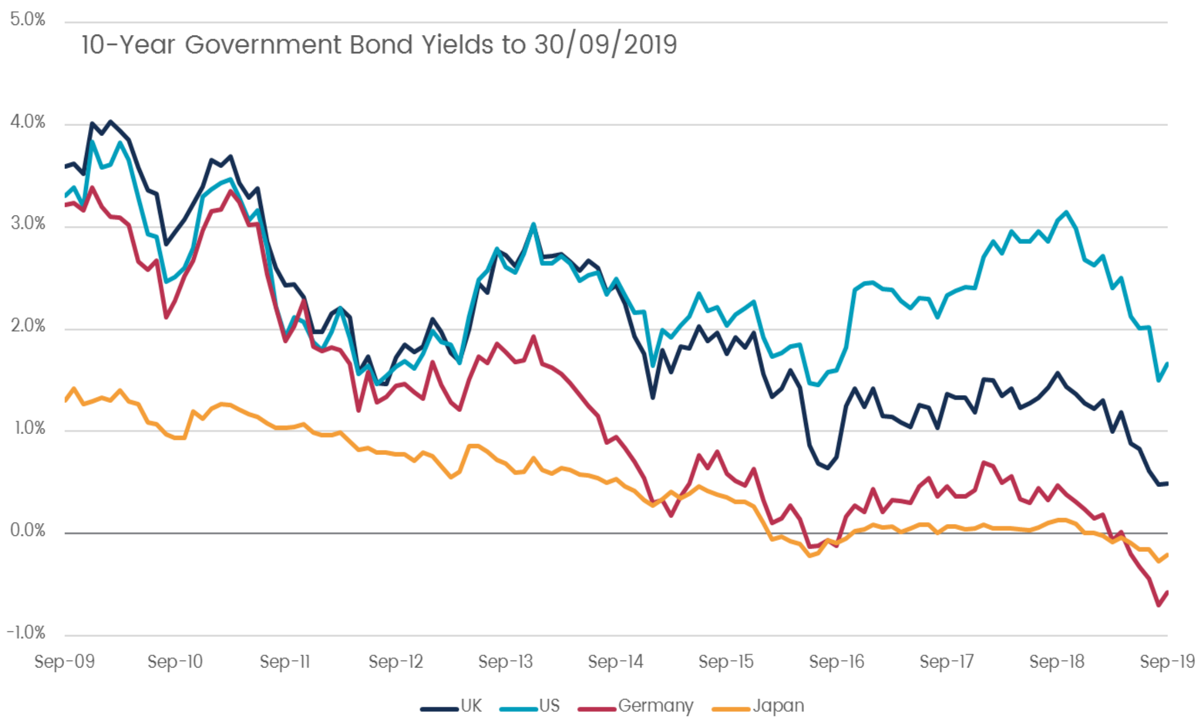
UK politics dissolved in farce in September and October, as the conservative government tried and failed to get its new deal over the line before the 31st October. After withdrawing the Whip from a number of eminent but remain leaning conservative colleagues and various other failed manoeuvres the Prime Minister was forced into asking for an extension of the deadline for confirming the Withdrawal Agreement to the end of January 2020. We are now in the middle of a General Election campaign, which is just as likely to lead to another "hung parliament" as a clear outcome. One thing that all parties seem to agree on is Fiscal Policy is going to be expanded whatever the shape of the next government.

Government bonds

As can be seen in chart 6 below, 10 year government bond yields have made new all-time lows in September as the prospects for growth looked at their bleakest and central banks were most active in cutting rates. Since the end of the quarter government bond yields have risen as growth data has turned out to be better than expected and the turnaround in the trade talks. Government yield curves are no longer inverted with 10 year yields now above 2 year yields in all major markets, but cash interest rates are still higher than 10 year bond yields. After its decision to cut rates for the third time in October the Fed announced it would "wait and see" before making any further changes to monetary policy. They still characterise their recent moves as a "mid-course correction / insurance cut to rates" in response to a temporary weakening of growth. If the Fed is right and this is just a temporary slowdown then their timely action will have increased the likelihood of a soft landing and an extension of the current 10 year long US economic expansion. In which case government bond yields should continue to rise, leading to negative returns for investors. Either way I view the current level of government yields, especially outside the US as an extreme and expect yields to rise in both the short and medium term.

The main risk to this outcome remains the US – China trade negotiations; the protracted nature of the talks has caused the global economy to become much weaker and potentially more vulnerable. While the consumer appears OK for now, trade and manufacturing are in recession and outside the US there is not much more room for monetary policy action to stimulate growth, while a recession looks less likely the risks remain high.

Chart 6: **-** Government bond yields, last 10 years.



Source: - Bloomberg

Non-government bonds

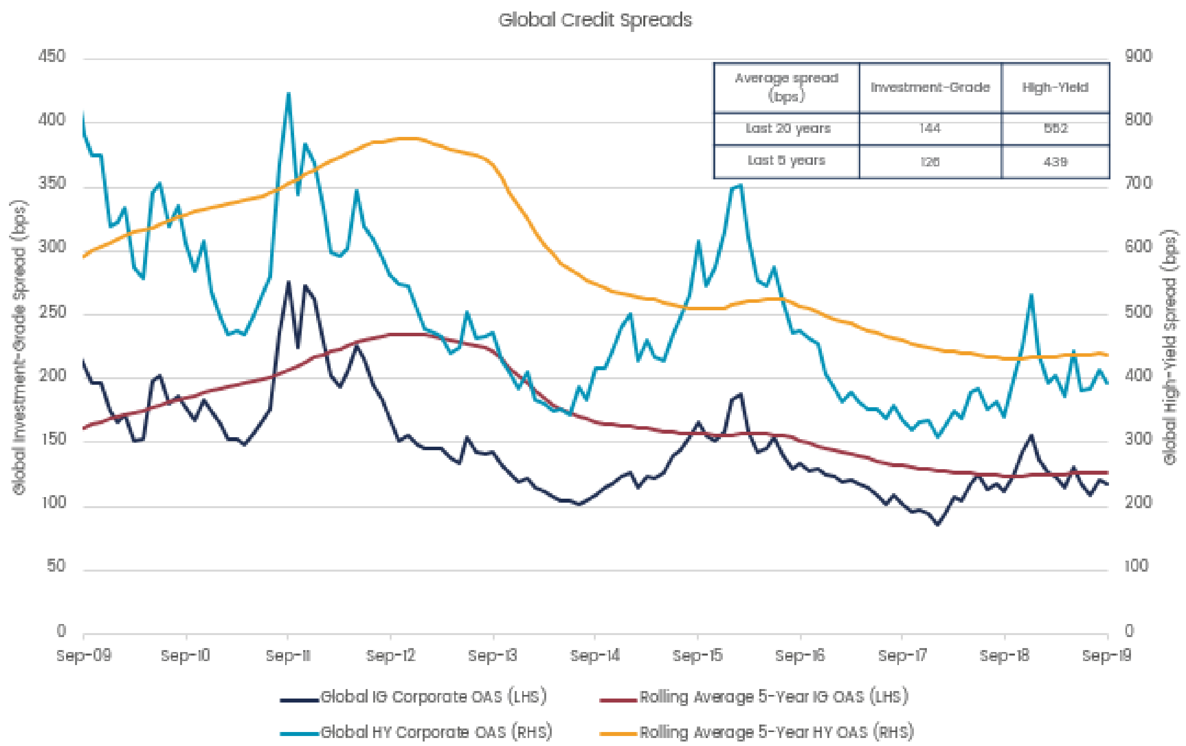
As can be seen in Chart 7 below, the excess yield spread for both investment grade non-government and high yield bonds has fallen significantly since the beginning of the year. The current yield spread in both markets is lower than the long run 20 year and 5 year average shown on the chart.

Since the end of the quarter spreads have remained broadly unchanged as yields have been driven by changes in government yields and not the result of a worsening of the outlook for credit. The cuts in interest rates and return of QE should mean borrowing conditions for corporates have improved, thereby further extending the period of low aggregate default rates.

As mentioned in my last report, the fears of increased corporate leverage (particularly in the US) and the lower average credit quality have been dissipated by the change in monetary policy. I don't believe that spreads can narrow much from their current levels unless it is the result of an increase in government yields.

Just as for Government bonds there is also the chance that total returns from investment grade credit could be flat or even negative. But. I haven't changed my mind on holding high yield bonds, because of their higher yield and lower duration they can deliver reasonable returns. For the time being the higher the coupon or yield, the higher the return, albeit with increased credit risk. See Table 7 below for an estimate of the impact of rising bond yields on UK Government and non-government bond markets.

Chart 7: **-** Credit spreads, extra yield over government bonds.



Source: - Bloomberg

Equities

After the dip in August caused by Mr Trump's announcement of new tariffs on Chinese goods to be implemented in September. Equity markets moved sideways to finish the quarter little changed. Since the end of the quarter equity markets have performed reasonably well in local currency terms especially following announcement of the "Phase one Trade deal" with China. Just as with bond markets the main source of volatility remains the trade negotiations.

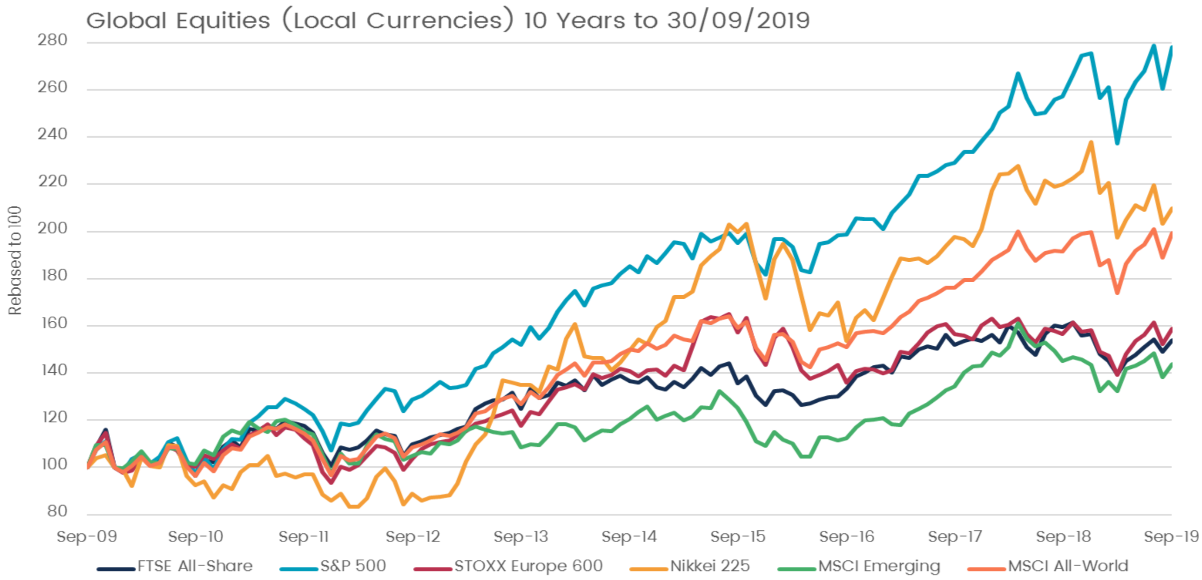
Away from the trade talks growth is slowing and the weakness is broadening out into the services and consumer sectors. While 3rd quarter earnings are holding up company forward guidance is suggesting that profit growth in 2020 will be lower than in 2019.

For now, at least the Fed is on hold but clearly the equity markets believe that central banks will respond to a further slowdown in growth with easier monetary policy. An environment of relatively easy monetary policy, moderate growth and low inflation is not bad for equity markets, but with the uncertainty around the trade talks it may not be an argument for being overweight in the short term.

While it may not be prudent to be overweight the asset class there are opportunities to vary the regional allocation, that could lead to a relatively stronger return. As chart 8 below shows the US has had the strongest performance over the last 10 years and as global equity is composed of about 60% US equity, it may be worth looking elsewhere for excess returns. As I have mentioned before the relative growth rates of developed versus developing markets favours emerging equity markets. Not only are the growth rates better but the underlying long term fundamentals of demographics and low levels of debt means there is more scope to use either monetary or fiscal policy to stimulate activity. The forward looking estimates of risk and return for various asset classes are set out on chart 9 this shows that while the volatility of returns from emerging equity is higher so are the expected returns.

In the short to medium term I believe much of the good news is in the price and global equity returns could be volatile and lacklustre. Having said that over the long term I remain positive on equity markets expecting them to outperform overvalued government bond markets in particular.

Chart 8: **-** Global equity indices, last 10 years.



Source: - Bloomberg

UK equity

I mentioned above that it is the returns of equity markets in local terms that has been positive in October. When these returns are looked at from the perspective of a Sterling based investor, they have been slightly negative (see table 1), this is because Sterling has risen in value by about 5% versus the US dollar. For instance, the MSCI World index was up 2.6% in US dollar and Japanese yen terms and in the local currency of each of the components up 1.9%, but for a Sterling based investor the total return was -2.3% due only to the change in the value of the currency. Because most of the earnings of companies in the main UK equity indices come from overseas, they were also negative; the FTSE 100 index, where over 70% of earnings are from overseas, returned -1.9%; the FTSE All share, less than 60% overseas -1.4% and the FTSE Mid 250 which lists a greater value of companies that derive their earnings from the UK domestic economy +0.6%, but it should be noted that these returns are better than from global equity.

In recent years Sterling has been weak which means investing outside the UK has delivered an extra positive contribution to total return. If Sterling continues to strengthen it will reduce the return from investing outside the UK and while the component of overseas earners in the UK indices is high, the total return from investing in UK equity markets could be higher. Add to this the view of some asset managers that the UK equity market is cheap on a relative basis, as evidenced by chart 8 above which clearly shows that since the referendum the FTSE All share has underperformed the MSCI All World index, and finally because pensions need to be paid in Sterling it may not be worth reducing the UK equity exposure any further, despite the level of political uncertainty at the moment.

Table 4 shows the consensus forecasts for GDP growth in calendar 2019 and 2020 and my expectations in July and October 2019.

Table 4: - GDP forecasts - Consensus versus Advisor expectations.

% CHANGE YOY	2019				2020			
	JULY 2019		OCTOBER 2019		JULY 2019		OCTOBER 2019	
	Consensus	AF	Consensus	AF	Consensus	AF	Consensus	AF
US	2.5	**2.5**	2.3	**2.3**	1.9	**1.9**	1.8	**1.8**
UK	1.3	**1.2**	1.2	**1.0**	1.3	**1.2**	1.0	**1.0**
Japan	0.7	**0.7**	1.0	**0.7**	0.3	**0.3**	0.2	**0.2**
EU 28	1.4	**1.3**	1.3	**1.2**	1.4	**1.3**	1.2	**1.2**

Source: - Consensus Economics October 2019

Consensus estimates for growth in 2019 have, with the exception of Japan been revised down and for 2020 they have all been revised lower again. I believe they now reflect the increased risk posed by the manufacturing and trade slowdown caused by the uncertainty around the result of the US trade negotiations with China. The distraction of the Impeachment hearings against Mr Trump and a harder line being adopted by the Chinese suggests that the process of reaching deal will be more drawn out. Mr Trump would like to be able to announce a positive outcome for the US as we start the presidential election campaign, hence the noise around the so called “Phase one Trade deal”. The longer the trade talks take the more the risks rise of the manufacturing slowdown impacting the currently more resilient consumer and service sectors. At the moment the US Fed believes that it has done enough reduce the risk of a US recession and has announced a pause in rate cuts. I have not revised my expectations for GDP as I think the consensus is now closer to my more cautious outlook and because of the increased potential of a deal on trade tariffs. In the UK third quarter growth was reported at +0.3% thereby avoiding a technical recession. Brexit and now General Election uncertainty has dramatically increased and is impacting UK investment. The recession in global manufacturing and Trade is making life very difficult for the German economy. Chinese growth is also being impacted but as mentioned before they have plenty of scope to ease fiscal and monetary policy, whereas the major developed economies do not.

In the US, first quarter 2019 growth was confirmed at 3.1% annualised. The estimate of second quarter growth was revised down from 2.1%, to 2% and the advance estimate of third quarter growth was a better than expected 1.9%. The economy was supported by continued strength in personal consumption and government expenditure, but the growth rates of these components were lower than in the second quarter. Business investment was negative despite a further increase in inventory accumulation.

UK GDP data confirmed the -0.2% contraction in the second quarter of 2019, however the preliminary estimate of third quarter growth was +0.3%. This means the annual rate of growth at 1.0%, was lower than market expectations. While the consumer, construction and service sectors remain resilient, manufacturing and business investment remain negative, partly the result of the global slowdown but mainly the result of Brexit uncertainty. I anticipate that growth in the UK will be lower over the rest of the year weighed down by the general election campaign and uncertainty over Brexit.

The Japanese economy grew by 0.1% in the third quarter, when added to the revised higher second quarter growth rate of 0.4% this brings the annual growth rate up to 1.4% for the year to the end of September. In the third quarter capital expenditure increased but all other components of growth were weaker.

Euro Area GDP was confirmed at 0.2% in the second quarter and growth in the third quarter was an equally weak 0.2%, confirming the previous quarters annual growth rate of only 1.1%. The German economy grew by 0.1% narrowly avoiding a recession after the -0.2% growth rate seen in the second quarter. In the third quarter all Euro area member countries saw a similar or a slight improvement in growth except Finland and Portugal.

Consumer Price Inflation

Table 5 shows the consensus forecasts for Consumer Price Inflation in calendar 2019 and 2020 and my expectations in July and October 2019.

Table 5: - Consumer Price Inflation forecasts - Consensus versus Advisor expectations

% CHANGE YOY								
	2019				2020			
	JULY 2019		OCTOBER 2019		JULY 2019		OCTOBER 2019	
	Consensus	**AF**	Consensus	**AF**	Consensus	**AF**	Consensus	**AF**
US	1.9	**2.5**	1.8	**2.0**	2.1	**2.3**	2.1	**2.0**
UK	1.9	**2.5**	1.9	**2.0**	2.0	**2.2**	2.1	**2.0**
Japan	0.6	**1.1**	0.6	**1.1**	0.8	**1.1**	0.7	**0.6**
EU 28	1.5	**1.9**	1.5	**1.9**	1.4	**1.9**	1.6	**1.5**

Source: - Consensus Economics October 2019

The consensus forecasts for inflation in 2019 have been nudged lower which at this point of the year probably reflects a more complete sample set than anything else. The consensus also points to a lower outcome for 2020. I have been surprised by the low level of inflation given the very low levels of unemployment and with wages rising at a pace ahead of inflation in most of the developed economies. As I mentioned last quarter there would appear to be two factors keeping inflation lower than expected in the current environment; increased employment costs are being absorbed by company margins and profits and reduced investment may also be keeping prices down. Lower inflation outcomes are good news for Central Banks helping them remain accommodative.

Over the 3 months to October US headline inflation has been stable at 1.8% whereas, ex food and energy US core inflation moved lower from 2.4% to 2.3%.

Since July the UK headline inflation rate (CPI) has fallen from 2.1% to 1.5% mainly due to a slowdown in housing & utilities prices as the regulator's tariff cap pushed down electricity and gas cost increases. Core inflation which excludes food, energy, alcohol and tobacco in the UK, was also lower at 1.7% p.a. CPIH a measure that includes housing costs and could become more important in the future if the Chancellor accepts the suggested abandonment of RPI also increased at a rate of 1.5% compared to RPI that increased at 2.1%.

Inflation in the Euro Area that peaked in April at 1.7% p.a. has collapsed to 0.7% in October, a 3 year low! Core inflation, which like the UK excludes food, energy, alcohol and tobacco, nudged higher to 1.1% from a previously reported rate of 1%. This has been cited by the ECB as a major concern given the amount of monetary easing over the last 8 years.

The Japanese inflation rate also peaked in April at 0.9%, despite an increase in sales tax the rate of inflation fell to 0.2% in October due to falling energy and transportation costs. Core inflation is currently subject to a periodic calculation revision and was not reported but it is likely that the core inflation rate was also lower.

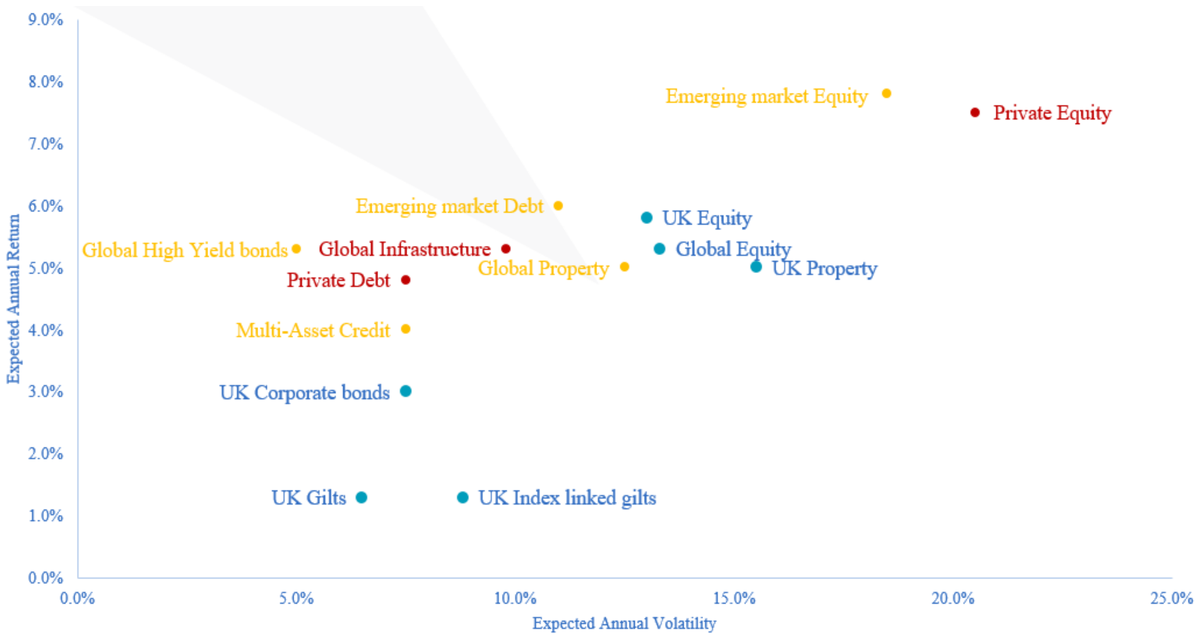
4. The outlook for the securities markets

In my last report I highlighted the worsening outlook for markets mainly because of the worsening outlook for growth and the increasing political uncertainty. Four months on and very little has changed. I have therefore decided to leave my recommendations for the next 12 the 18 months unchanged, see table 9 below. Over the medium to long term (more than 5 years), I believe equity markets especially emerging equity will probably deliver better returns than government bond markets, I also believe private markets can also deliver stronger returns.

The allocation to Growth assets remains at neutral, I have also decided to keep the regional allocations unchanged, neutral for UK, Europe, Japan and Asia-pacific; 1% underweight the US and 1% overweight emerging. As I expected in my last report bond markets have sold off and government bond yields are now somewhat higher. The extremely low yields we saw in the summer reflected the extreme optimism of the bond markets over the direction of interest rates and QE. The Fed's recent announcement that it will shift to a wait and see approach should lead to further increases in yields over the coming months. Therefore, I would suggest remaining 2% underweight Protection assets and 2% overweight cash. As I suggested last time the near-term risks for the securities markets remain to the downside from here as the markets have overly discounted the ability of the Central Banks to stimulate growth through further increases in easy monetary policy. At their current extremely low levels of yield and high interest rate sensitivity, government bonds and Index Linked Gilts in particular look extremely poor value. While they may fulfil their role of protecting the Fund during an equity sell off, they will not provide the Fund with reasonable level of income. I believe the priority for the Fund remains increasing the allocation to Income assets, therefore I continue to recommend a neutral allocation.

To enable a comparison of the possible risk and return of various securities / asset classes, in chart 9 below I have shown JP Morgan Asset Management's forecasts of expected annual returns and volatility over the next 10 to 15 years.

Chart 9: **-** Asset class expected returns and volatility over the next 10 to 15 years.



Source: S&P, Bloomberg, JPMorgan Asset Management of September 2019

Bond Markets

In table 6, below I have set out my expectations for 3 month LIBOR interest rates and benchmark 10 year government bond yields, over the next 3 and 12 months. They are not meant to be accurate point forecasts, more an indication of the possible direction of yields from November 2019.

Table 6: - Interest rate and Bond yield forecasts

%	CURRENT	JUNE 2020	DECEMBER 2020
UNITED STATES			
3month LIBOR	1.91	1.75	1.75
10 year bond yield	1.83	1.75	2.00
UNITED KINGDOM			
3month LIBOR	0.79	0.75	0.75
10 year bond yield	0.73	1.0	1.25
JAPAN			
3month LIBOR	-0.11	-0.10	-0.10
10 year bond yield	-0.09	0.10	0.10
GERMANY			
3month EURIBOR	-0.41	-0.25	-0.25
10 year bond yield	-0.34	0.0	0.0

Source: - Bloomberg, Trading Economics; 15th November 2019

Since the summer, the global economy has seen slightly stronger but nonetheless levels of growth are low and inflation data has also remained benign. Government bond yields remain below cash rates in most of the developed economies. As can be seen in table 2 above yields have risen by between 10 and 25bps since the end of the quarter but I believe they remain unsustainably low. The decision by the Fed to signal a pause in the easing cycle after it's October rate cut, suggests to me that government bond yields can continue to rise from here. I therefore expect government bond markets to potentially produce negative returns over the next couple of quarters unless the economy weakens sufficiently for the Fed to start cutting rates again. A neutral monetary policy outlook in the US is supportive of high yield bond markets, as it reduces the possibility of defaults caused by higher borrowing costs, while spreads may not narrow by much the higher the yield, the higher the potential return.

Bond Market (Protection Assets) Recommendations

The bond markets have over the last few months fully priced in the decision by the world's major central banks to return to monetary accommodation. Recently yields have started to rise as some of the "irrational exuberance" over the level of yields has dissipated. In my opinion government bond yields are still too low and I expect them to continue to rise, I therefore propose remaining underweight government bonds.

Since the end of September government bonds yields have risen but investment grade non-government bond yields have risen by less, hence they have outperformed. This is because performance is being driven by a change in the direction of yields (interest rate sensitivity / duration) and is not related to a worsening of credit conditions. Spreads have broadly moved sideways for both investment grade and high yield bond markets. If I am right that government bond yields continue to rise, I believe investment grade non-government bonds are likely to start to match that increase and deliver a similar level of negative return, equally if the economy slows, spreads could widen resulting in even higher negative returns. Investment grade credit is also vulnerable because of the high leverage, low interest cover particularly in the US and falling liquidity in all markets. The high yield bond market may continue to deliver reasonable returns because duration risk is lower and ironically compared to history, leverage is lower and interest cover higher. In an environment where government bond yields are rising the lower the yield and the longer the duration the lower the total return conversely the higher the yield and the lower the duration the better the result will be provided defaults do not increase.

As usual in table 7 below I have updated the data and recalculated my estimates of the total return impact of rising yields for government and non-government bond indices based on their yield and interest rate sensitivity (Duration) over 3 and 12 months. The estimates do not take into consideration any widening of spread over the holding period.

Table 7: - Total returns from representative bond indices

INDEX	YIELD TO MATURITY %	DURATION	YIELD INCREASE %	% TOTAL RETURN, HOLDING PERIOD	
				3 MONTH	12 MONTHS
All Stock Gilts	0.89	13.1	0.5	-6.3	-5.6
UK Corporate Bonds	2.17	8.4	0.5	-3.6	-2.0
Global High Yield	5.48	3.4	0.5	-0.3	+3.8

Source: - BofA Merrill Lynch Indices 15th November 2019

Despite my reservations about the level of yield expressed above I still believe corporate bonds should be held at neutral in the Fund, mainly because I believe the biggest risk is in longer duration, lower yielding government bonds especially index linked gilts, as can be seen in table 7 above gilts provide little protection in a rising yield environment. In terms of the allocation to index linked gilts I would prefer to remain underweight by holding US TIPS and seeking index linked returns from investments in other asset classes like infrastructure and real assets.

I have in the past mentioned why I believe the index linked market may be overvalued. Recently inflation expectations have fallen resulting in sharp negative returns in October see table 1 above.

Also, in September the Chancellor announced that the UK Statistics Authority (UKSA) had passed on guidance that changes should be made to the indexation of Index Linked Gilts changing it from RPI to CPIH. The UKSA only has responsibility for the integrity of the statistic and it believes RPI is not a good measure of inflation. If the Chancellor accepts the recommendation this could lead to major disruption in the price of bonds with a maturity beyond 2030. Some fund managers believe that the change could lead to a major re-valuation lower of the order of 10%, it is estimated that less than 1% has been priced into the market at current levels. A consultation on the change will begin in January 2020, and the Government and UKSA will publish a response before the Spring Statement and the end of the financial year.

Equity Markets

Table 8 below, shows the dividend yield, earnings growth and price / earnings ratio forecasts, for 2019 and 2020 provided by Citi Research.

Table 8: - Dividend yield, Earnings growth and Price/Earnings Ratios

COUNTRY	DIVIDEND YIELD %	EARNINGS GROWTH		PRICE/EARNINGS RATIO	
FORECAST PERIOD	2019	2019	2020	2019	2020
United Kingdom	4.9	2.8	8.4	13.1	12.1
United States	1.9	2.1	10.9	18.8	17.0
Europe ex UK	3.4	5.5	9.8	15.3	13.9
Japan	2.3	-2.7	5.1	13.8	13.1

Source: - Citi Research, Global Equity Strategist, October 2019

Earnings growth estimates for 2019 have been revised down as have estimates for 2020. The estimates for 2019 look much more realistic, but despite the downward revisions for 2020 still look overly optimistic. In the US third quarter earnings growth results followed the pattern of the last 2 quarters, with most companies outperforming the low forecast expectations, however now companies are suggesting that profits growth in 2020 will lower than in 2019. The main theme driving down outcomes as well as future estimates is the trade negotiations between the US and China. While Mr Trump hailed the agreement of a "Phase one Trade deal" this has yet to be signed off by both parties, suggesting that the Chinese may have the upper hand at the moment and speaks volumes about the need for Mr Trump to distract attention from the Impeachment hearings. The weakness of manufacturing caused by the slowdown in global trade seems to have stabilised, but the weakness in activity has broadened out into services and consumer consumption. The recent reduction in US interest rates should go some way to reducing the risks of a further slowdown and a recession but the risks have increased. The UK and Germany narrowly avoided a technical recession with 3rd quarter growth coming in just above zero after a negative report in the 2nd quarter but the same pattern of weaker manufacturing activity spreading out into the services and consumer sectors can be seen. With economic growth in the developed economies showing no signs of improvement it is difficult to see a continuation of the strong performance of equity markets we have seen in the last few years.

Equity Market (Growth Assets), Recommendations

I suggest keeping the allocation to growth assets neutral to the strategic benchmark.

Looking regionally, the US continues to have a higher growth rate and the direct benefit of actual interest rate cuts, but this is more than fully priced into the current level of valuations therefore, I believe the Fund should maintain an underweight position. The slowdown in global trade and industrial production caused by the US, China trade negotiations has led to a fall in the growth rate of manufacturing worldwide, this is having a marked impact on Europe, Japan and Asia pacific. As a result, I believe Europe should be held at neutral and Japan and Asia Pacific reduced from 1% overweight to neutral. I continue to have confidence in the long-term growth prospects of the emerging economies, so I recommend that the Fund should have an overweight allocation. The prolonged uncertainty over Brexit has caused the UK market to underperform the rest of the world as a result the equity market has become “cheap” to the rest of the world on a relative valuation basis, therefore I would be more cautious about a further reduction in the allocation unless there is a compelling opportunity to invest elsewhere.

As the asset allocation to Private Equity remains underweight relative to benchmark, I continue to recommend that investments are sought to increase the allocation to neutral.

The Fund has had a 3% benchmark allocation to Global Sustainable Equity since the beginning of the year, this is a topical area of investment currently and an opportunity that should not be missed, I suggest a 3% neutral allocation should be seen as an initial investment.

Income Assets

In the last year the allocation to Income Assets has been increased from 18% to 23%. The allocation to both Infrastructure and Multi-Asset Credit has been increased over the quarter as the in-house team have found managers to invest an increasing amount of Derbyshire’s allocated capital.

The Property market continues to provide diversified returns for the Fund and the direct property manager has outperformed. I continue to recommend that a neutral overall weight to property be maintained and express a preference for being 1% overweight direct, against being 1% underweight indirect property.

The cash balance in the new strategic benchmark is set at 2%, because of the extremely low level of government bond yields cash has a higher yield, equally as the risks to growth assets have increased therefore, I remain of the opinion that cash is held temporarily at +2% overweight. Should bond yields continue to rise from their current extremely low level then this cash could be deployed to the bond market if the prospects for the equity markets do not improve.

The asset allocation set out in table 9 below, shows the new Strategic benchmark allocations for the Derbyshire Pension Fund and my recommended relative weights as of 9th of August and he 15th November 2019. My suggested asset allocation weights are relative to the classification of assets and strategic benchmark ranges. These allocations represent an ideal objective for the Fund based on my expectations for economic growth and market performance, but they do not take into consideration the difficulty in reallocating between asset classes and the time needed by the In-house Team and their investment managers to find correctly priced assets for inclusion in the Fund.

Table 9: - Recommended asset allocation against the new Strategic Benchmark that came into effect on the 1st January 2019.

% ASSET CATEGORY	DERBYSHIRE STRATEGIC WEIGHT 1ST JANUARY 2019	ANTHONY FLETCHER 9TH AUGUST 2019	DERBYSHIRE STRATEGIC WEIGHT 1ST JANUARY 2019	ANTHONY FLETCHER 15TH NOVEMBER 2019
Growth Assets	57	**0**	**57**	**0**
UK Equity	16	**0**	**16**	**0**
Overseas Equity	41	**0**	**41**	**0**
North America	12	**-1**	12	**-1**
Europe ex UK	8	**0**	8	**0**
Japan	5	**0**	5	**0**
Pacific ex Japan	4	**0**	4	**0**
Emerging markets	5	+1	5	+1
Global Sustainable	3	**0**	3	**0**
Private Equity	4	**0**	4	**0**
Income Assets	23	**0**	**23**	**0**
Property	9	**0**	9	**0**
Infrastructure	8	**0**	8	**0**
Multi-asset Credit	6	**0**	6	**0**
Protection Assets	18	**-2.0**	**18**	**-2.0**
Conventional Gilts	6	**-1.0**	6	**-1.0**
UK index Linked	6	**-2.0**	6	**-2.0**
US TIPS	0	+1	0	+1
UK corporate bond	6	**0**	6	**0**
Cash	2	+2	**2**	+2

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Appendix

References

Source material was provided by, including but not limited to, the following suppliers:-

- Derbyshire Pension Fund, PEL and WM performance services
- Citi Research,
- FTSE, Citigroup, IPD, Barclay's Global and ICE Indices
- Kames, Blackrock, M&G and JP Morgan, Asset Management
- Bank of England, UK Debt Management Office, UK OBR, UK Treasury, ONS
- US Bureau of Labour Statistics, US Commerce Dept. Executive office of the President of the United States.
- Bank of Japan, Japan MITI
- ECB, Eurostat
- Bloomberg, Markit, Trading Economics, DataStream and S&P
- Financial Times, Daily Telegraph, Wall Street Journal, New York Times, Washington Post

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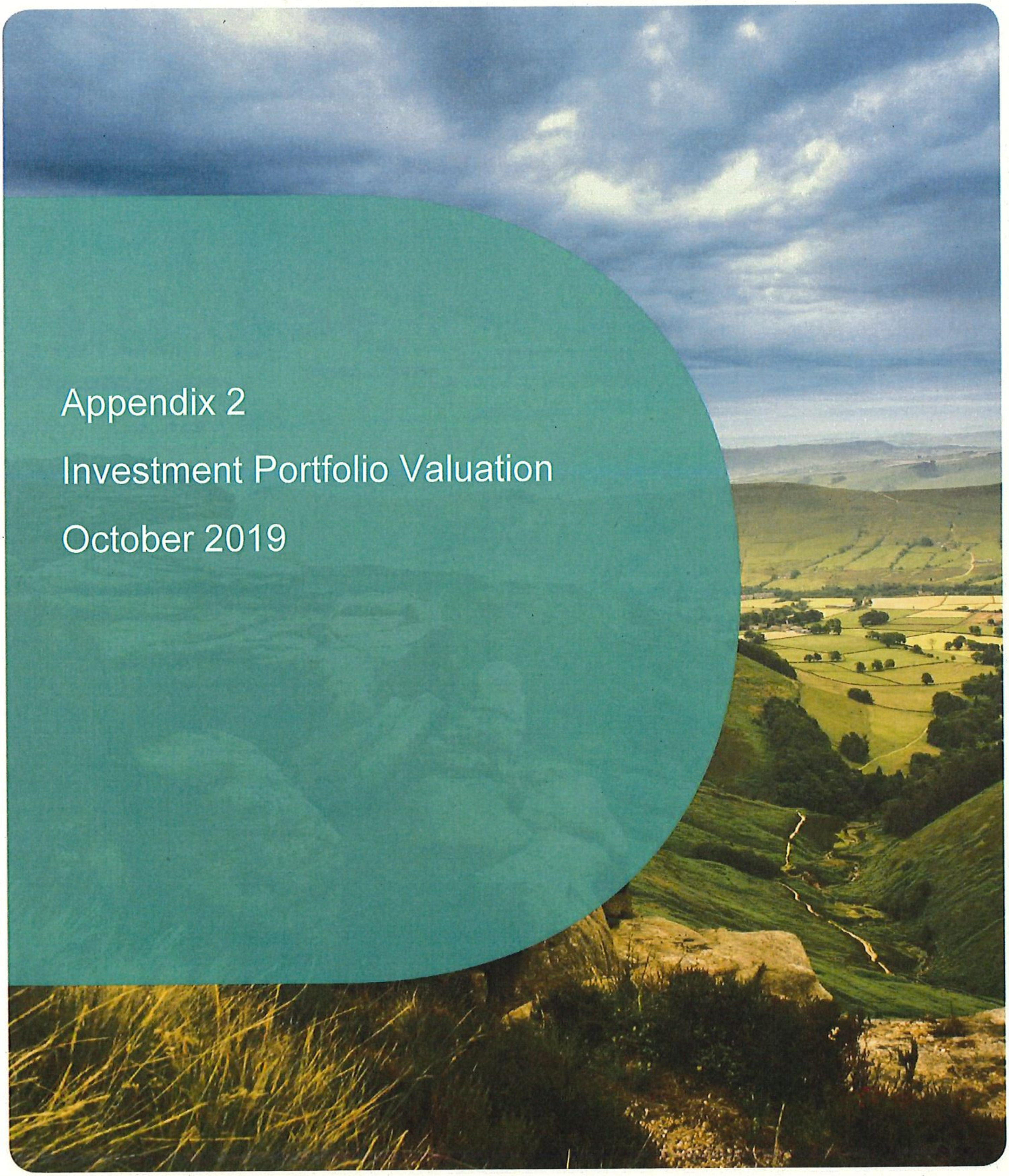

Appendix 2
Investment Portfolio Valuation
October 2019

County Hall, Matlock, Derbyshire, DE4 3AH
Administered by Derbyshire County Council

lgps

DERBYSHIRE PENSION FUND

	DCC 31/10/2019 £m
Growth Assets	**2859.0**
UK	888.1
US	541.5
Europe	434.8
Japan	337.3
Pacific (ex Japan)	255.0
Emerging Markets	247.3
Global Sustainable	0.0
Private Equity	155.0
Income Assets	**1049.4**
Infrastructure	326.6
Property	411.7
Direct	240.2
Indirect	171.5
Multi-Asset Credit	311.1
Protection Assets	**889.5**
Government	282.7
UK	238.0
Overseas	44.7
Index Linked	294.0
UK	
Overseas	
Non Government	312.8
Cash	**333.5**
LGPSC Regulatory Capital	**2.0**
Total	**5133.5**

DERBYSHIRE PENSION FUND
OCTOBER 2019 PORTFOLIO VALUATION - BID
NEW SECTORS
UK EQUITIES

Sector	Company Name	Number held	Mkt Price Pence	Total £
OIL & GAS PRODUCERS				
UK Oil & Gas	BP PLC USD$0.25	8,560,000	489.30	41,884,080
UK Oil & Gas	Diversified Gas & Oil PLC	4,748,553	107.00	5,080,952
UK Oil & Gas	ROYAL DUTCH SHELL A' SHARES	536,000	2232.50	11,966,200
UK Oil & Gas	ROYAL DUTCH SHELL 'B' SHARES	2,434,000	2218.00	53,986,120
UK Oil & Gas	TULLOW OIL PLC	2,425,000	205.90	4,993,075
UK Oil & Gas Producers Total				**117,910,427**
OIL & GAS SERVICES				
UK Const Build Ma	WOOD GROUP (JOHN) PLC	1,030,000	338.20	3,483,460
UK Oil & Gas Services Total				**3,483,460**
CHEMICALS				
UK Chemicals	JOHNSON MAT ORD£1	245,750	3069.00	7,542,068
UK Chemicals Total				**7,542,068**
MINING				
UK Mining	ANGLO AMER US$0.50	377,000	1981.20	7,469,124
UK Mining	BHP BILLITON PLC	856,000	1634.60	13,992,176
UK Mining	GLENCORE PLC	6,671,000	232.60	15,516,746
UK Mining	RIO TINTO 10P	343,000	4014.00	13,768,020
UK Mining Total				**50,746,066**
CONSTRUCTION				
UK Engin Mach	BREEDON GROUP PLC	3,175,000	66.00	2,095,500
UK Engin Mach	MELROSE INDUSTRIES PLC	1,900,000	213.10	4,048,900
UK Construction Total				**6,144,400**
AEROSPACE				
UK Aero defence	BAE ORD 2.5P	1,323,000	576.20	7,623,126
UK Aero defence	BABCOCK INTL GROUP PLC	1,391,000	553.40	7,697,794
UK Aero defence	ROLLS ROYCE 20P	660,000	708.80	4,678,080
UK Aerospace Total				**19,999,000**
GENERAL INDUSTRIAL				
UK General Industr	DS SMITH PLC	1,527,000	357.20	5,454,444
UK General Industrial Total				**5,454,444**
ELECTRONIC EQUIPMENT				
UK Electronic equi	HALMA PLC	145,000	1873.50	2,716,575
UK Eelectronic Equipment Total				**2,716,575**
INDUSTRIAL ENGINEERING				
UK Engin Mach	HILL & SMITH HOLDINGS PLC	283,000	1310.00	3,707,300
UK General Industr	ROTORK PLC	1,385,000	301.40	4,174,390
UK Engin Mach	SPIRAX-SARCO 25P	65,000	7920.00	5,148,000
UK Industrial Engineering Total				**13,029,690**
SUPPORT SERVICES				

UK Support Servic	BUNZL PLC	131,000	2008.00	2,630,480
UK Support Servic	ESSENTRA PLC	1,261,000	381.40	4,809,454
UK Const Build Ma	FERGUSON PLC	93,000	6580.00	6,119,400
UK Support Servic	G4S PLC	3,350,000	206.60	6,921,100
UK Support Servic	HOWDEN JOINERY GROUP PLC	805,000	577.40	4,648,070
UK Support Servic	KEYWORDS STUDIOS PLC	200,000	1109.00	2,218,000
UK Support Services Total				**27,346,504**
BEVERAGES				
UKBeverages	DIAGEO 28 101/108P	1,100,000	3164.50	34,809,500
UK Beverages Total				**34,809,500**
FOOD PRODUCERS				
UKFoods	ASSOCIATED BRITISH FOODS PLC	300,000	2226.00	6,678,000
UK Food Producers Total				**6,678,000**
HOUSEHOLD GOODS				
UK Housebuilders	BARRATT DEVELOPMENTS PLC	945,000	631.20	5,964,840
UK Housebuilders	BELLWAY PLC	247,500	3160.00	7,821,000
UK Hous Gds Txtil	PETER GEESON 2nd PREFERRED OF	16,487	0.00	-
UK Personal Care ,	RECKITT BENCKISER	302,000	5963.00	18,008,260
UK Household Goods Total				**31,794,100**
PERSONAL GOODS				
UK Retailers Gen	TED BAKER PLC	326,000	406.60	1,325,516
UK Food Prod & Pr	UNILEVER ORD 1.4P	326,000	4622.00	15,067,720
UK Personal Goods Total				**16,393,236**
TOBACCO				
UK Tobacco	BRIT AMER TOBC 25P	896,000	2702.00	24,209,920
UK Tobacco	IMPERIAL BRANDS PLC	591,000	1692.40	10,002,084
UK Tobacco Total				**34,212,004**
PHARMACEUTICAL & BIOTECH				
UK Pharm, Biotech	ASTRAZENECA ORD	630,000	7501.00	47,256,300
UK Pharm, Biotech	GLAXOSMITHKLINE25P	2,323,000	1768.60	41,084,578
UK Pharmaceutical & Biotech Total				**88,340,878**
FOOD RETAIL				
UK Retail Food & D	TESCO ORD 5P	5,725,000	235.20	13,465,200
UK Food Retail Total				**13,465,200**
GENERAL RETAIL				
UK Retailers Gen	JD SPORTS FASHION PLC	597,000	768.40	4,587,348
UK Retailers Gen	NEXT PLC	87,500	6582.00	5,759,250
UK General Retail Total				**10,346,598**
MEDIA				
UK Media & Photo	INFORMA PLC	1,100,000	775.00	8,525,000
UK Media & Photo	ITV ORD	6,859,000	133.70	9,170,483
UK Media & Photo	WPP GRP ORD 10P	500,000	963.00	4,815,000
UK Media Total				**22,510,483**
TRAVEL & LEISURE				
UK Travel & Leisur	CINEWORLD GROUP PLC	2,210,000	222.70	4,921,670
UK Travel & Leisur	COMPASS GRP ORD10P	807,976	2056.00	16,611,987
UK Travel & Leisur	GVC HOLDINGS PLC	1,195,000	889.80	10,633,110
UK Travel & Leisur	INTERCONTINENTAL HOTELS GRP	75,000	4660.00	3,495,000

UK Travel & Leisure Total				**35,661,767**
TELECOMS				
UK Fixed-Line Tele	BT ORD GBP 5P	6,200,000	204.70	12,691,400
UK Mobile Telecon	VODAFONE GRP COM	13,314,000	157.40	20,956,236
UK Telecoms Total				**33,647,636**
ELECTRICITY				
UK Electricity	SCOT & SOUTH 50P	748,000	1283.50	9,600,580
UK Electricity Total				**9,600,580**
GAS & WATER				
UK Electricity	NAT GRID PLC ORD 10P	2,234,000	901.30	20,135,042
UK Water	PENNON GP ORD £1	447,000	898.00	4,014,060
UK Water	SEVERN TR 65 5/19P	211,000	2255.00	4,758,050
UK Water	UNITED UTILITIES GROUP PLC	591,000	870.00	5,141,700
UK Gas & Water Total				**34,048,852**
BANKS, RETAIL				
UK Banks Retail	BARCLAYS ORD 25P	5,976,000	167.80	10,027,728
UK Banks Retail	HSBC HLDG $0.50	6,025,000	583.00	35,125,750
UK Banks Retail	LLOYDS BANKING GROUP PLC	39,950,000	56.79	22,687,605
UK Banks Retail	ROYAL BANK OF SCOTLAND GROUP	4,465,000	212.70	9,497,055
UK Banks Retail	STANDARD CHARTERED ORD	2,581,000	700.60	18,082,486
UK Banks - Retail Total				**95,420,624**
NON-LIFE INSURANCE				
UK Insurance	BEAZLEY PLC	885,000	586.50	5,190,525
UK Insurance	HISCOX	358,000	1488.00	5,327,040
UK Insurance	RSA INSURANCE GROUP	1,020,000	522.00	5,324,400
UK Non-Life Insurance Total				**15,841,965**
LIFE INSURANCE				
UK Insurance Life	AVIVA ORD 25P	1,734,000	415.10	7,197,834
UK Insurance Life	LEGAL&GEN GRP 2.5P	4,163,000	263.60	10,973,668
UK Insurance Life	M&G PLC	1,457,000	213.60	3,112,152
UK Insurance Life	PRUDENTIAL PLC	1,457,000	1348.00	19,640,360
UK Insurance Life	ST JAMES'S PLACE PLC	640,000	1040.50	6,659,200
UK Life Insurance Total				**47,583,214**
REAL ESTATE INVESTMENT TRUSTS				
UK Real Estate	LAND SECS ORD £1	443,000	940.00	4,164,200
UK Real Estate	LONDONMETRIC PROPERTY PLC	1,788,000	231.80	4,144,584
UK Real Estate	SEGRO PLC	793,000	844.20	6,694,506
UK Real Estate	SHAFTESBURY PLC	268,000	944.50	2,531,260
UK Real Estate Total				**17,534,550**
FINANCIAL SERVICES				
UK Special Financ	STANDARD LIFE ABERDEEN PLC	1,690,000	303.50	5,129,150
UK Special Financ	LONDON STOCK EXCHANGE GROUP	74,000	6954.00	5,145,960
UK Special Financ	SCHRODERS ORD GBP1	120,000	3095.00	3,714,000
UK General Financial Total				**13,989,110**
EQUITY INVESTMENT COMPANIES				
UK Investment Co's	ABERFORTH SML 1P	939,000	1300.00	12,207,000
UK Investment Co's	BLACKROCK SMALLER COMPANIES	830,000	1462.00	12,134,600
UK Investment Co's	LOW CARBON ACCELERATOR LTD	3,868,000	0.00	-
UK Investment Co's	MONTANARO UK SMALLER CO'S 10P	11,996,285	111.00	13,315,876

UK Investment Co's	RIVER & MERCANTILE UK MICRO	2,902,170	165.00	4,788,581
UK Investment Co's	STRATHDON INVESTMENTS PLC	20	1000.00	20,000
UK Equity Investment Companies Total				**42,466,057**
SOFTWARE & COMPUTER SERVICES				
UK Elect electron	MICRO FOCUS INTERNATIONAL	263,800	1060.00	2,796,280
UK Elect electron	NCC GROUP PLC	947,000	187.20	1,772,784
UK Software & Cor	SAGE GROUP ORD 1P	1,020,000	719.80	7,341,960
UK Software & Computer Services Total				**11,911,024**
UNIT TRUSTS & OEICs				
UK Unit Trusts	LIONTRUST UK SMALLER COMPANIE	1,201,544.47	1457.95	17,517,918
UK Unit Trusts & OEICs Total				**17,517,918**
TOTAL UNITED KINGDOM				**888,145,928**

DERBYSHIRE PENSION FUND					
OCTOBER 2019 PORTFOLIO VALUATION - BID					
US EQUITIES					
Sector	**Company Name**	**Number held**	**Mkt price USD/ CAN$**	**Mkt Price GBP**	**Value in Sterling £**
OIL & GAS PRODUCERS					
US Oil & Gas	BP PLC-SPONS ADR	47689	37.91	29.30	1,397,137
US Oil & Gas	CHEVRON CORP	45628	116.12	89.74	4,094,544
US Oil & Gas	CONCHO RESOURCES INC	14114	67.52	52.18	736,461
US Oil & Gas	DIAMONDBACK ENERGY INC	16685	85.77	66.28	1,105,933
US Oil & Gas	ENCANA CORP	279378	3.93	3.04	848,500
US Oil & Gas	EXXON MOBILE CORP	156444	67.57	52.22	8,169,208
US Oil & Gas	MARATHON PETROLEUM CORP	64414	64.00	49.46	3,185,865
US Oil & Gas	NOBLE ENERGY INC	73061	19.26	14.88	1,087,449
US Oil & Gas	PIONEER NATURAL RESOURCES CO	8691	123.02	95.07	826,252
US Oil & Gas	TC ENERGY CORP	79600	50.34	38.90	3,096,659
US Oil & Gas Producers Total					**24,548,009**
OIL & GAS SERVICES					
US Oil & Gas Services	SCHLUMBERGER LTD	93701	32.68	25.26	2,366,428
US Forestry & Paper Total					**2,366,428**
CHEMICALS					
US Chemicals	CABOT CORP	56994	43.59	33.69	1,919,920
US Chemicals	CELANESE CORP	16777	121.15	93.62	1,570,742
US Chemicals	FMC CORP	29051	91.49	70.70	2,054,007
US Chemicals	INGEVITY CORP	22124	84.21	65.08	1,439,774
US Chemicals	LINDE PLC	20882	198.33	153.27	3,200,572
US Chemicals	PPG INDUSTRIES INC	28919	125.12	96.69	2,796,257
US Chemicals Total					**12,981,272**
FORESTRY & PAPER					
US Industrial Metals	INTERNATIONAL PAPER CO	43957	43.68	33.76	1,483,808
US Forestry & Paper Total					**1,483,808**
INDUSTRIAL METALS					
US Industrial Metals	LIVENT CORP	42162	6.85	5.29	223,192
US Industrial Metals Total					**223,192**
AEROSPACE					
US Aero defence	BOEING CO/THE	18255	339.96	262.72	4,795,973
US Aero defence	LOCKHEED MARTIN CORP COM	23390	376.54	290.99	6,806,259
US Aero defence	UNITED TECHNOLOGIES CORP	74270	143.51	110.90	8,236,879
US Aerospace Total					**19,839,111**
GENERAL INDUSTRIAL					
US Div Ind	BALL CORP	57253	69.97	54.07	3,095,831
US Div Ind	CATERPILLAR INC	513	137.77	106.47	54,618
US Div Ind	DANAHER CORP	37150	137.85	106.53	3,957,607
US Div Ind	DOVER CORP	5786	103.88	80.28	464,491
US Div Ind	DYCOM INDUSTRIES INC	21691	45.58	35.22	764,049
US Div Ind	GARDNER DENVER HOLDINGS INC	121755	31.83	24.60	2,994,957
US Div Ind	GREENBRIER COMPANIES INC	18280	29.27	22.62	413,491
US Div Ind	ILLINOIS TOOL WORKS INC	17766	168.49	130.21	2,313,294
US Div Ind	INGERSOLL-RAND PLC	29614	126.80	97.99	2,901,907
US Div Ind	PACCAR INC	19009	76.05	58.77	1,117,186
US Div Ind	REXNORD CORP	11869	28.24	21.82	259,028
US Div Ind	TRITON INTERNATIONAL LTD/BER	28181	36.67	28.34	798,609
US Div Ind	WABTEC CORP	16459	69.37	53.61	882,353
US General Industrial Total					**20,017,421**

Sector	Company Name	Number held	Mkt price USD/ CAN$	Mkt Price GBP	Value in Sterling £
ELECTRONIC EQUIPMENT					
US Electricity	3M CO	1912	164.96	127.48	243,744
US Electricity	AMETEK INC	8387	91.64	70.82	593,962
US Electricity	FORTIVE CORP	53487	68.96	53.29	2,850,445
US Electricity	GENERAL ELECTRIC CO	127432	9.98	7.71	982,825
US Electricity	NVENT ELECTRIC PLC	87782	23.05	17.81	1,563,664
US Electronic Equipment Total					**6,234,640**
INDUSTRIAL TRANSPORT					
US Transportation	FEDEX CORP	7777	152.66	117.98	917,497
US Transportation	HUNT (JB) TRANSPORT SERVICES	4526	117.53	90.83	411,084
US Transportation	NORFOLK SOUTHERN CORP	20365	182.01	140.66	2,864,486
US Transportation	SCHNEIDER NATIONAL INC-CL B	10613	22.85	17.66	187,409
US Transportation	UBER TECHNOLOGIES INC	102944	31.47	24.32	2,503,600
US Industrial Transport Total					**6,884,076**
SUPPORT SERVICES					
US Support Services	CERIDIAN HCM HOLDING INC	6321	48.24	37.28	235,646
US Support Services	GENPACT LTD	54404	39.16	30.26	1,646,420
US Support Services	TRANSUNION	13005	82.65	63.87	830,654
US Support Services	TRINET GROUP INC	32219	53.00	40.96	1,319,639
US Support Services Total					**4,032,359**
BEVERAGES					
US Beverages	COCA-COLA CO/THE	282332	54.42	42.06	11,873,691
US Beverages Total					**11,873,691**
FOOD PRODUCTION/PROCESS					
US Food Prod & Proce	MONDELEZ INTERNATIONAL INC-A	165418	52.47	40.55	6,707,504
US Food Production & Processing Total					**6,707,504**
HOUSEHOLD GOODS					
US Hous Gds Txtiles	UNDER ARMOUR INC-CLASS A	262223	20.65	15.96	4,184,639
US Hous Gds Txtiles	UNDER ARMOUR INC-CLASS C	208537	18.50	14.30	2,981,412
US Household Goods Total					**7,166,050**
PERSONAL GOODS					
US Personal Care / Hc	PROCTOR & GAMBLE CO/THE	122461	124.51	96.22	11,783,360
US Personal Goods Total					**11,783,360**
HEALTHCARE EQUIPMENT & SERVICES					
US Healthcare Equipm	ANTHEM INC	40372	269.10	207.96	8,395,780
US Healthcare Equipm	EDWARDS LIFESCIENCES CORP	21137	238.33	184.18	3,893,043
US Healthcare Equipm	ELANCO ANIMAL HEALTH INC	18278	27.02	20.88	381,664
US Healthcare Equipm	HCA HOLDINGS INC	24203	133.49	103.16	2,496,807
US Healthcare Equipm	NUVASIVE INC	55895	70.54	54.51	3,047,022
US Healthcare Equipm	THERMO FISHER SCIENTIFIC	26128	302.12	233.48	6,100,322
US Healthcare Equipment & ServicesTotal					**24,314,638**
PHARMACEUTICAL, BIOTECH					
US Healthcare	ABBOTT LABORATORIES	134274	83.61	64.61	8,675,954
US Healthcare	AERIE PHARMACEUTICALS INC	11723	22.18	17.14	200,940
US Healthcare	ALNYLAM PHARMACEUTICALS INC	3253	86.73	67.02	218,032
US Healthcare	APELLIS PHARMACEUTICALS INC	2400	29.39	22.71	54,510
US Pharm, Biotech	ASSEMBLY BIOSCIENCES INC	7199	16.46	12.72	91,573
US Pharm, Biotech	ATRECA INC-A	9538	11.22	8.67	82,702
US Pharm, Biotech	ASTRAZENECA PLC-SPONS ADR	179432	49.03	37.89	6,798,747
US Pharm, Biotech	AUDENTES THERAPEUTICS INC	6588	26.91	20.80	137,004
US Healthcare	BAXTER INTERNATIONAL INC	54471	76.70	59.27	3,228,701
US Healthcare	BIOGEN INC	2048	298.71	230.84	472,767

Sector	Company Name	Number held	Mkt price USD/ CAN$	Mkt Price GBP	Value in Sterling £
US Healthcare	BIOHAVEN PHARMACEUTICAL HOLD	13673	45.91	35.48	485,108
US Healthcare	BLUEBIRD BIO INC	5011	81.01	62.60	313,711
US Healthcare	BRISTOL-MYERS SQUIBB CO	102329	57.38	44.34	4,537,602
US Healthcare	COHERUS BIOSCIENCES INC	33106	17.35	13.41	443,888
US Pharm, Biotech	DERMIRA INC	65058	6.69	5.17	336,352
US Pharm, Biotech	ELI LILLY & CO	37135	113.97	88.08	3,270,703
US Pharm, Biotech	FORTY SEVEN INC	28766	6.91	5.34	153,612
US Pharm, Biotech	GLOBAL BLOOD THERAPEUTICS IN	8786	47.91	37.02	325,300
US Pharm, Biotech	GLYCOMIMETICS INC	18311	5.27	4.07	74,574
US Pharm, Biotech	G1 THERAPEUTICS INC	16294	21.15	16.34	266,321
US Pharm, Biotech	HERON THERAPEUTICS INC	10636	21.24	16.41	174,582
US Pharm, Biotech	INCYTE CORP	6262	83.94	64.87	406,209
US Healthcare	MEDICINES COMPANY	21797	52.51	40.58	884,516
US Healthcare	MADRIGAL PHARMACEUTICALS INC	3085	92.43	71.43	220,361
US Healthcare	MOMENTA PHARMACEUTICALS INC	16300	15.47	11.96	194,870
US Healthcare	MYOKARDIA INC	11431	57.31	44.29	506,269
US Healthcare	MYOVANT SCIENCES LTD	23146	5.45	4.21	97,485
US Healthcare	NEKTAR THERAPEUTICS	27826	17.12	13.23	368,147
US Healthcare	ODONATE THERAPEUTICS INC	12709	31.76	24.54	311,931
US Pharm, Biotech	PFIZER INC	273846	38.39	29.67	8,124,406
US Pharm, Biotech	PHASEBIO PHARMACEUTICALS INC	7900	4.11	3.18	25,092
US Pharm, Biotech	PORTOLA PHARMACEUTICALS INC	24881	28.90	22.33	555,690
US Pharm, Biotech	RADIUS HEALTH INC	11904	28.41	21.96	261,355
US Pharm, Biotech	REATA PHARMACEUTICALS INC-A	1782	206.15	159.31	283,895
US Pharm, Biotech	REVANCE THERAPEUTICS INC	26757	15.68	12.12	324,228
US Pharm, Biotech	RIGEL PHARMACEUTICALS INC	37337	2.04	1.58	58,862
US Pharm, Biotech	SATSUMA PHARMACEUTICALS INC	5500	11.18	8.64	47,519
US Pharm, Biotech	SEATTLE GENETICS INC	12321	107.30	82.92	1,021,675
US Pharm, Biotech	SYNDAX PHARMACEUTICALS	24029	6.71	5.19	124,602
US Pharm, Biotech	TRICIDA INC	13578	37.37	28.88	392,126
US Healthcare	VERTEX PHARMACEUTICALS INC	5738	195.40	151.01	866,467
US Healthcare	WAVE LIFE SCIENCES LTD	7997	25.29	19.54	156,294
US Healthcare	UNITEDHEALTH GROUP INC	12367	252.66	195.26	2,414,727
US Pharmaceutical, Biotech Total					**47,989,416**
FOOD RETAIL					
US Retail Food & Drug	HOUGHTON MIFFLIN HARCOURT CO	102894	6.45	4.98	512,881
US Retail Food & Drug	HYATT HOTELS CORP-CL A	45991	74.71	57.74	2,655,331
US Retail Food & Drug	MCDONALD'S CORP	87712	196.63	151.96	13,328,335
US Retail Food & Drug	MGM RESORTS INTERNATIONAL	38486	28.49	22.02	847,349
US Food Retail Total					**17,343,897**
RETAILERS - GENERAL					
US Retailers Gen	AMAZON.COM INC	14067	1,776.83	1,373.13	19,315,879
US Retailers Gen	BURLINGTON STORES INC	28220	192.17	148.51	4,190,923
US Retailers Gen	EXPEDIA INC	41244	136.66	105.61	4,355,814
US Retailers Gen	LOWE'S COS INC	47674	111.57	86.22	4,110,514
US Retailers Gen	TJX COMPANIES INC	163022	57.66	44.56	7,264,203
US Retailers - General Total					**39,237,333**
MEDIA					
US Media & Photo	CHARTER COMMUNICATIONS INC-A	12898	467.73	361.46	4,662,134
US Media & Photo	COMCAST CORP CL A	268920	44.82	34.64	9,314,554
US Media & Photo	ELECTRONIC ARTS INC	39287	96.42	74.51	2,927,407
US Media & Photo	FACEBOOK INC	78167	191.68	148.13	11,578,901
US Media & Photo	LIBERTY MEDIA CORP-MEDIA C	37174	42.50	32.84	1,220,943
US Media & Photo	NETFLIX INC	12550	287.43	222.13	2,787,680
US Media & Photo	NEW YORK TIMES CO-A	21175	30.90	23.88	505,649
US Media & Photo	PINTEREST INC-CLASS A	24373	25.11	19.41	472,958
US Media & Photo	WALT DISNEY COMPANY	18433	129.92	100.40	1,850,713

Sector	Company Name	Number held	Mkt price USD/ CAN$	Mkt Price GBP	Value in Sterling £
US Media Total					**35,320,939**
TELECOMS					
Telecoms	VERIZON COMMUNICATIONS INC	206655	60.48	46.74	9,658,836
US Telecoms Total					**9,658,836**
ELECTRICITY					
US Electricity	AVANGRID INC	25800	50.04	38.67	997,710
US Electricity	DUKE ENERGY CORP	34548	94.23	72.82	2,515,818
US Electricity	EDISON INTERNATIONAL	22194	62.90	48.61	1,078,831
US Electricity	EXELON CORP	138237	45.49	35.15	4,859,676
US Electricity	NATIONAL GRID PLC-SP ADR	31230	58.37	45.11	1,408,733
US Electricity	NRG ENERGY INC	124435	40.12	31.00	3,858,074
US Electricity	PPL CORP	85769	33.48	25.87	2,219,131
US Electricity Total					**16,937,973**
GAS & WATER					
Gas	SEMPRA ENERGY	46713	144.50	111.67	5,216,422
Gas	UGI CORP	36367	47.67	36.84	1,339,738
US Gas & Water Total					**6,556,160**
BANKS, RETAIL					
US Banks Retail	BANK OF AMERICA CORP	528918	31.27	24.17	12,781,545
US Banks Retail	MGIC INVESTMENT CORP	95949	13.71	10.60	1,016,588
US Banks Retail	SVB FINANCIAL GROUP	7338	221.41	171.11	1,255,573
US Banks - Retail Total					**15,053,706**
NON-LIFE INSURANCE					
US Insurance	AMERICAN INTERNATIONAL GROUP	91038	53.00	40.96	3,728,771
US Insurance	ASSURANT INC	34249	126.03	97.40	3,335,715
US Insurance	ASSURED GUARANTY LTD	94809	46.91	36.25	3,437,020
US Insurance	ATHENE HOLDING LTD-CLASS A	68759	43.34	33.49	2,302,956
US Insurance	HARTFORD FINANCIAL SVCS GRP	81167	57.06	44.10	3,579,137
US Insurance	MARSH & MCLENNAN COS INC COM	46655	103.61	80.07	3,735,657
US Insurance	PROGRESSIVE CORP	31255	69.70	53.86	1,683,524
US Insurance	PRUDENTIAL FINANCIAL INC	20785	91.11	70.41	1,463,468
US Insurance	TRUPANION INC	38711	23.71	18.32	709,305
US Non-Life Insurance Total					**23,975,553**
REAL ESTATE					
US Real Estate	AMERICAN TOWER CORP	36638	218.08	168.53	6,174,684
US Real Estate	ALEXANDRIA REAL ESTATE EQUIT	21966	158.66	122.61	2,693,305
US Real Estate	CAMDEN PROPERTY TRUST	24781	114.49	88.48	2,192,570
US Real Estate	EQUINIX INC	11787	566.78	438.01	5,162,795
US Real Estate	HEALTHPEAK PROPERTIES INC	57622	37.62	29.07	1,675,229
US Real Estate	STORE CAPITAL CORP	37995	40.50	31.30	1,189,183
US Real Estate Total					**19,087,766**
GENERAL FINANCIAL					
US Special Finance	AMERICAN EXPRESS CO	33748	117.29	90.64	3,058,976
US Special Finance	ARES MANAGEMENT CORP - A	100637	29.59	22.87	2,301,282
US Special Finance	THE BLACKSTONE GROUP INC-A	100788	53.16	41.08	4,140,577
US Special Finance	EQUIFAX INC	9250	136.73	105.66	977,401
US Special Finance	FLEETCOR TECHNOLOGIES INC	14456	294.16	227.33	3,286,237
US Special Finance	GLOBAL PAYMENTS INC	50526	169.26	130.80	6,609,009
US Special Finance	HAMILTON LANE INC-CLASS A	35785	59.61	46.07	1,648,494
US Special Finance	IHS MARKIT LTD	71210	69.99	54.09	3,851,626
US Special Finance	ONEMAIN HOLDINGS INC	57648	39.99	30.90	1,781,569
US Special Finance	PAYPAL HOLDINGS INC	37681	104.10	80.45	3,031,379

Sector	Company Name	Number held	Mkt price USD/ CAN$	Mkt Price GBP	Value in Sterling £
US Special Finance	RAYMOND JAMES FINANCIAL INC	18742	83.49	64.52	1,209,254
US Special Finance	S&P GLOBAL INC	12905	257.93	199.33	2,572,332
US Special Finance	TD AMERITRADE HOLDING CORP	90100	38.37	29.65	2,671,675
US Special Finance	VISA INC CL A SHS	53411	178.83	138.20	7,381,391
US Special Finance	VOYA FINANCIAL INC	43061	53.95	41.69	1,795,323
US Special Finance	WEX INC	10536	189.35	146.33	1,541,730
US General Financial Total					**47,858,255**
SOFTWARE					
US Software & Comp S	ADOBE SYSTEMS INC	7706	277.95	214.80	1,655,247
US Software & Comp S	ALPHABET INC - CL A SHARES	21622	1,258.81	972.81	21,034,063
US Software & Comp S	BLUCORA INC	100778	21.60	16.69	1,682,235
US Software & Comp S	GODADDY INC - CLASS A	63447	65.04	50.26	3,189,031
US Software & Comp S	GUIDEWIRE SOFTWARE INC	8923	112.74	87.13	777,421
US Software & Comp S	MICROSOFT CORP	210067	143.39	110.81	23,277,901
US Software & Comp S	SALESFORCE.COM INC	31876	156.49	120.94	3,854,939
US Software & Comp S	SERVICENOW INC	4509	247.26	191.08	861,591
US Software & Comp S	SLACK TECHNOLOGIES INC-CL A	26302	21.99	16.99	446,973
US Software & Comp S	SPLUNK INC	7199	119.92	92.67	667,161
US Software & Comp S	SPOTIFY TECHNOLOGY SA	6881	144.19	111.43	766,750
US Software & Comp S	SS&C TECHNOLOGIES HOLDINGS	113817	52.03	40.21	4,576,443
US Software & Comp S	SVMK INC	129518	18.40	14.22	1,841,684
US Software & Comp S	TAKE-TWO INTERACTIVE SOFTWARE	8517	120.37	93.02	792,268
US Software & Comp S	WORKDAY INC-CLASS A	12867	162.11	125.28	1,611,960
US Software Total					**67,035,666**
TECHNOLOGY HARDWARE					
US IT Hardware	ADVANCED MICRO DEVICES	167711	33.95	26.24	4,400,160
US IT Hardware	APPLE INC	64452	248.81	192.28	12,392,854
US IT Hardware	FIRST SOLAR INC	8934	51.79	40.02	357,568
US IT Hardware	INTEL CORP	43203	56.54	43.69	1,887,717
US IT Hardware	KLA-TENCOR CORP	12255	169.05	130.64	1,601,016
US IT Hardware	LATTICE SEMICONDUCTOR CORP	111384	19.57	15.12	1,684,538
US IT Hardware	MARVELL TECHNOLOGY GROUP LTD	98772	24.38	18.84	1,860,950
US IT Hardware	MICRON TECHNOLOGY INC	75209	47.55	36.75	2,763,678
US IT Hardware	TAIWAN SEMICONDUCTOR-SP ADR	41745	51.61	39.88	1,664,966
US IT Hardware	TERADYNE INC	20048	61.21	47.30	948,332
US IT Hardware	TEXAS INSTRUMENTS INC	32743	118.01	91.20	2,986,100
US IT Hardware	WESTERN DIGITAL CORP	61272	51.64	39.91	2,445,206
US Technology Hardware Total					**34,993,085**
TOTAL UNITED STATES					**541,504,147**

DERBYSHIRE PENSION FUND
OCTOBER 2019 PORTFOLIO VALUATION - BID

EUROPEAN EQUITIES Company name		Number held	Mkt price in local currency	Mkt Price GBP	Value in Sterling £
EUROPEAN					
PASSIVE TRACKER FUND					
EUROPEAN	UBS LIFE EUROPE EX-UK EQUITY T	127,335,613	**341.46**	**3.41**	434,800,184
EUROPEAN EQUITIES TOTAL					**434,800,184**

DERBYSHIRE PENSION FUND
OCTOBER 2019 PORTFOLIO VALUATION - BID

OTHER EQUITIES	Company name	Number held	Mkt price in local currency	Mkt Price GBP	Value in Sterling £
JAPAN					
Investment Companies					
Japan	CC Japan Income & Growth Trust	5,000,000	149.00	149.00	7,450,000
Japan	JPMorgan JAP IT 25P	7,730,000	444.00	444.00	34,321,200
Japan	JPMF japs smoc	2,250,000	408.00	408.00	9,180,000
Japan	Schroder Japan Growth Fund 10p ords	11,300,000	190.50	190.50	21,526,500
J Investment Companies Total					**72,477,700**
Unit Trusts & OEICs					
Japan	Baillie Gifford OGF - Japanese B Acc Shares	4,521,496.91	1,727.00	1,727.00	78,086,252
Japan	Baring Japan Growth Trust	5,500,000.00	225.00	225.00	12,375,000
Japan	Invesco Japan FD-UKNTACC	4,559,533.10	203.11	203.11	9,260,868
Japan	JPMorgan Jap Fd A Acc	3,000,000.00	498.70	498.70	14,961,000
Japan	Schroder UT Tokyo Ac	11,000,000.00	361.00	361.00	39,710,000
J Unit Trusts Total					**154,393,119**
Life Policies					
Internatioı	LGIM Japan Equity Index Fund	26,144,067.250	2.04	2.04	53,300,956
International Life Policies					**53,300,956**
Investment Entities					
Japan	Aberdeen Global - JAP Smaller Cos Fund D£	1,662,639.78	12.04	12.04	20,025,499
Japan	JO Hambro - Japan Fd GBP-A	15,000,000.00	2.47	2.47	37,080,000
J Investment Entities Total					**57,105,499**
JAPAN TOTAL					**337,277,274**
OTHER ASIA					
Investment Companies					
Asian	ABERDEEN ASIAN INCOME FUND ORDS	3,000,000	208.00	208.00	6,240,000
Asian	ABERDEEN NDIT 25P	7,780,000	244.00	244.00	18,983,200
Asian	ASIA DRAGON TRUST 20P	8,610,000	398.00	398.00	34,267,800
Asian	INVESCO ASIA TRUST 10P	6,358,000	266.00	266.00	16,912,280
OA Investment Companies Total					**76,403,280**
Unit Trusts & OEICs					
Asian	Stewart Investors Asia Pacific Fund (First State As	5,250,000	1,455.13	1,455.13	76,394,325
Asian	JPMorgan Asia Fund A Ac	20,000,000	229.90	229.90	45,980,000
Asian	Schroder Instl PAC Fd Ac	2,000,000	1,666.00	1,666.00	33,320,000
OA Unit Trusts Total					**155,694,325**
Investment Entities					
Asian	Baring Int'l Australia $	130,000.000	118.51	91.58	11,905,989
Asian	Legg Mason-Martin Currie Greater China Fund-AA	423,709.979	33.63	25.99	11,011,911
OA Investment Entities Total					**22,917,899**
OTHER ASIA TOTAL					**255,015,504**
EMERGING MARKETS					
Investment Companies					
Internatioı	ABERDEEN EMERGING MARKETS	2,788,425	556.00	556.00	15,503,643
Internatioı	ABERDEEN FRONTIER MARKETS	4,250,000	46.00	46.00	1,955,000
Internatioı	BLACKROCK FRONTIERS INV TRUST	3,200,000	126.00	126.00	4,032,000
Latin Ame	Blackrock Latin American Investment Trust plc	862,529	450.00	450.00	3,881,381
Internatioı	JP Morgan EMER IT25P	3,700,000	964.00	964.00	35,668,000
Int'l Investment Companies Total					**61,040,024**
Unit Trusts & OEICs					
Internatioı	Stewart Investors Global Emerging Markets Funf	3,000,000	882.83	882.83	26,484,900
Latin Ame	Thd ndle Lnamer Gwth	3,500,000	300.07	300.07	10,502,450
Int'l Unit Trusts Total					**36,987,350**
Life Policies					
Internatioı	LGIM World Emerging Markets Index Fund	29,006,553.890	3.50	3.50	101,484,070
International Life Policies					**101,484,070**
Investment Entities					
Internatioı	FPP GLOBAL EMERGING MKTS	82,057.980	99.17	76.64	6,288,807
Latin Ame	JPMorgan LNAMER A U$	86,085.904	49.02	37.88	3,261,163
Internatioı	POLUNIN FUNDS-DEVEL CNTY-B	47,502.659	1,042.53	805.67	38,271,334
LatAm Investment Entities Total					**47,821,303**
EMERGING MARKETS TOTAL					**247,332,747**
OTHER EQUITIES TOTAL					**839,625,524**

DERBYSHIRE PENSION FUND
OCTOBER 2019 PORTFOLIO VALUATION - BID

OTHER EQUITIES Company name	Number held	Mkt price in local currency	Value in Sterling £
PRIVATE EQUITY			
Quoted Private Equity			
UK Invesl APAX GLOBAL ALPHA LTD	3,000,000	161.50	4,845,000
UK Invesl HARBOURVEST GLOBAL PRIVATE	925,000	1660.00	15,355,000
UK Invesl HGCAPITAL TRUST PLC	7,053,150	240.50	16,962,826
UK Invesl ICG ENTERPRISE TRUST PLC	181,795	932.00	1,694,329
UK Invesl NB PRIVATE EQUITY PARTNERS Ltd (A)	1,500,000	14.20	16,460,640
UK Invesl PANTHEON INTERNATIONAL PLC	345,000	2260.00	7,797,000
UK Invesl PRINCESS PRIVATE EQUITY HOLDING LTD	500,000	10.05	4,329,992
UK Invesl STANDARD LIFE PRIVATE EQUUITY	900,000	348.00	3,132,000
UK Invesl WOODFORD PATIENT CAPITAL TRUST	5,000,000	37.00	1,850,000
UK Quoted Private Equity Total			**72,426,787**
Unquoted Private Equity			
UK Uncla ADAM STREET PARTNERS (FEEDER) 2017 FI	30,000,000	0.43	9,986,846
UK Uncla BAIRD CAPITAL PARTNERS EUROPE FUND I	4,300,000	0.03	124,559
UK Uncla CAPITAL DYNAMICS GLOBAL SECONDARIES	20,000,000	0.75	11,626,565
UK Uncla CAPITAL DYNAMICS MID-MARKET DIRECT FI	25,000,000	0.86	18,615,955
UK Uncla CAPITAL DYNAMICS LGPS COLLECTIVE PE \	20,000,000	0.31	6,261,771
UK Uncla CATAPULT GROWTH FUND UNITS	3,000,000	0.07	210,807
UK Uncla EAST MIDLANDS VENTURE	3,000,000	0.07	197,722
UK Uncla EPIRIS FUND II	25,000,000	0.36	8,880,337
UK Uncla GRAPHITE CAPITAL PARTNERS FUND 1X A	11,250,000	0.02	193,881
UK Uncla GRAPHITE CAPITAL PARTNERS FUND 1X C	11,250,000	0.02	193,881
UK Uncla MOBEUS EQUITY PARTNERS IV LP	10,000,000	0.55	5,477,042
UK Invesl PANORAMIC ENTERPRISE CAPITAL UNITS	1,428,486	1.17	1,678,199
UK Invesl PANORAMIC GROWTH FUND 2 LP	10,000,000	0.47	4,748,046
UK Invesl PARTNERS GROUP GLOBAL VALUE 2008	7,500,000	0.48	3,118,742
UK Invesl STAR CAPITAL STRATEGIC ASSETS III LP	12,500,000	0.46	5,004,418
UK Uncla VESPA CAPITAL II LLP	10,000,000	0.62	6,223,415
UK Unquoted Private Equity Total			**82,542,188**
PRIVATE EQUITY TOTAL			**154,968,975**
INFRASTRUCTURE			
UK Infrastructure Quoted			
Closed-er FORESIGHT SOLAR FUND LTD	4,000,000	117.00	4,680,000
Closed-er GREENCOAT UK WIND PLC	11,875,000	145.80	17,313,750
Closed-er HICL INFRASTRUCUTRE CO LTD	6,060,872	171.20	10,376,213
Closed-e INTERNATIONAL PUBLIC PARTNERSHIP LTI	20,462,823.00	157.80	32,290,334.69
Closed-e 3I INFRASTRUCTURE PLC	2,249,999.00	286.50	6,446,247.14
Closed-e RENEWABLES INFRASTRUCTURE GR	8,111,111.00	130.80	10,609,333.19
UK Infrastructure Quoted Total			**81,715,878**
UK Infrastructure Unquoted			
UK Uncla DALMORE CAPITAL 3 LP	25,000,000	0.96	23,989,390
UK Uncla EQUITIX FUND 1 LTD P'SHIP	7,500,000	1.68	12,571,857
UK Uncla Equitix Fund IV Ltd P'ship	25,000,000	1.12	27,946,291
UK Uncla FIRST STATE EDIF II	20,000,000	0.83	14,332,579
UK Uncla IMPAX NEW ENERGY INVESTORS II UNITS	10,000,000	0.00	41,281
UK Uncla JP Morgan Infrastructure Investment Fund UK L	110,000,000	1.00	85,161,065
UK Uncla MEIF 5 Co-Invest LP	12,600,000	0.61	6,597,213
UK Uncla MEIF 6 Co-Invest LP	28,000,000	0.00	-
UK Uncla Macquarie European Infrastructure Fund 5 LP	14,400,000	0.90	11,212,345
UK Uncla Macquarie European Infrastructure Fund 6 SCS|	56,000,000	0.18	8,818,905
UK Uncla PIP Multi Strategy Infrastructure LP	25,000,000	0.85	21,146,800
UK Uncla SL CAPITAL INFRASTRUCTURE 1LP	15,000,000	1.12	16,845,009
UK Uncla SL Capital Infratructure II SCSP	25,000,000	0.75	16,195,714
UK Infrastructure Total			**244,858,449**
INFRASTRUCTURE TOTAL			**326,574,327**
ALTERNATIVES TOTAL			**481,543,302**

DERBYSHIRE PENSION FUND					31/10/2019
OCTOBER 2019 PORTFOLIO VALUATION - BID					**Value**
Real Property					**£**
Property		Southampton Property			6,500,000
Property		Retail Unit Tamworth			8,750,000
Property		15-17 Jockeys Field London			11,700,000
Property		D'Arblay House, London			16,900,000
Property		Bristol Odeon Development			5,250,000
Property		Quintins Centre, Hailsham			6,000,000
Property		Caledonia House, London			24,000,000
Property		Chelsea Fields Ind Est, London			13,800,000
Property		Planet Centre, Feltham			13,800,000
Property		Hill St, Mayfair			15,350,000
Property		Birmingham - Travelodge developm't			17,200,000
Property		Saxmundham, Tesco developm't			9,900,000
Property		Roundhay Road, Leeds			6,900,000
Property		Premier Inn, Rubery, Birmingham			6,200,000
Property		South Normanton Warehouse, Alfreton			15,600,000
Property		Loddon Centre, Basingstoke			13,700,000
Property		Parkway, Bury St Edmunds			11,700,000
Property		Waitrose, York			13,550,000
Property		Link 95, Haywood Manchester			10,650,000
Property		Car Park, Welford Rd Leicester			12,750,000
Total Real Property					**240,200,000**
Property Managed Funds			**Number held**	**Mkt price**	
Property	**Pence**	Assura PLC	6,000,000	74.7000	4,482,000
Property	**GBP**	Aviva Pooled Property Fund - cla	609,181	16.4475	10,019,517
Property	**GBP**	Aviva Pooled Property Fund - cla	529,748	16.5672	8,776,456
Property	**GBP**	Bridges Property Alternatives Fu	10,000,000	0.7479	7,479,180
Property	**GBP**	Bridges Property Alternatives Fu	10,000,000	0.2238	2,238,003
Property	**EUR**	Fidelity Eurozone Select Real Es	4,486	5965.2876	23,060,556
Property	**GBP**	Hearthstone Residential Fund 1 I	25,000,000	0.6493	16,231,632
Property	**GBP**	Igloo Regeneration P'ship Propei	4,644,493	0.0419	194,641
Property	**EUR**	Invesco Real Estate-European F	44,569	117.9430	4,529,545
Property	**Pence**	Target Healthcare REIT Ltd	4,085,000	112.0000	4,575,200
Property	**GBP**	M&G PP UK Property Fund (Inc)	27,124	745.2100	20,213,076
Property	**EUR**	M&G European Property Fund S	25,000,000	1.0120	21,799,748
Property	**GBP**	Threadneedle Pensions Property	1,647,730	6.5545	10,800,049
Property	**Pence**	Tritax Big Box Indirect Pooled Fu	10,000,000	150.3000	15,030,000
Property	**GBP**	Unite UK Student Accommodatic	15,584,567	1.4161	22,069,774
Total Property Funds					**171,499,377**
Regulatory Capital		LGPS Central			2,000,000
			Mellon		
Cash		***Updated to 31 October 2019***	**USD**		
Cash		Mellon UBS - Core	*DCOF10030002*		392
Cash		Mellon UBS - Sat	*DCOF10040002*		0
Cash					
Cash		Northern Trust	*UK*		20,000,607
Cash			*Wellington*		9,010,964
Cash		Northern Trust	*LGPS Cent-Capital & Income*		2,912,207
Cash		Cash - Lloyds bank Superfund			11,191,000
Cash		Adjustments for timing differences *-Greene King Buyout Trade 31.10.19 & Settled 13.11.19*			1,360,000
Cash		Cash Temporary Loans	189,000,000		
		Lloyds 95 Day Notice	10,008,744		
		Santander 180 Day Notice	10,000,000		
		Rotherham City Council 14 D/N	20,000,000		
		Federated Prime Rate	30,000,000		
		Insight MMF	30,000,000		
		Certs of Deposit	0		
		Treasury Bills	0		289,008,744
Total Cash				Total Cash	**333,483,915**

DERBYSHIRE PENSION FUND
OCTOBER 2019 PORTFOLIO VALUATION - BID

	Number held	Mkt Price in local currenc (Clean) use Calc & IL Valuation	Mkt Price in local currency (Dirty) use for Non IL Valuation	Mkt Price pence GBP	Total £ GBP
UK GILTS					
TSY 3.75% 7/9/2020	10,322,000	102.60	103.17	103.17	10,649,271
TSY 4.75% 7/3/2020	10,000,000	101.39	102.11	102.11	10,210,572
TSY 1.75% 7/9/2022	13,490,000	103.70	103.96	103.96	14,024,666
TSY 4% 7/3/2022	10,995,000	108.29	108.89	108.89	11,972,939
TSY 2.25% 7/9/2023	15,400,000	106.94	107.28	107.28	16,520,962
TSY 5% 7/3/2025	5,500,000	124.22	124.97	124.97	6,873,597
TSY 2% 7/9/2025	7,000,000	109.35	109.66	109.66	7,675,864
TSY 1.5% 7/22/2026	5,650,000	107.21	107.62	107.62	6,080,686
TSY 4.25% 7/12/2027	18,000,000	130.21	131.92	131.92	23,745,594
TSY 4.75% 7/12/2030	13,162,000	144.05	145.96	145.96	19,211,096
TSY 4.25% 7/6/2032	12,370,000	141.97	143.68	143.68	17,772,841
TSY 4.5% 7/9/2034	16,373,000	150.61	151.29	151.29	24,771,194
TSY 4.25% 7/3/2036	11,400,000	150.06	150.70	150.70	17,179,591
TSY 1.75% 7/9/2037	11,800,000	111.75	112.01	112.01	13,217,112
TSY 4.75% 7/12/2038	7,934,000	165.10	167.00	167.00	13,250,160
TSY 4.25% 7/9/2039	4,050,000	157.60	158.24	158.24	6,408,848
TSY 3.25% 1/22/2044	8,000,000	144.91	145.81	145.81	11,664,705
TSY 4.25% 7/12/2046	3,900,000	172.82	174.53	174.53	6,806,513
001 UKGB Total					**238,036,211**
US GOVERNMENT BONDS					
T 2.75% 31/8/2023	26,191,000	104.53	105.00	81.14	21,252,356
T 2.25% 15/11/2024	21,000,000	103.39	104.43	80.70	16,947,740
T 2.75% 15/11/2042	7,500,000	110.80	112.07	86.61	6,495,418
004 USGB Total					**44,695,514**
NON GOVERNMENT BONDS					
Kames UK Corp Bond Fund	48,216,874	317.41	317.41	317.41	153,045,181
Royal London UK Corporate Bond F	57,530,371	277.74	277.74	277.74	159,787,154
Non Govt Bonds Total					**312,832,335**
MULTI ASSET CREDIT					
AMP Capital Infrastructure Debt Fur	17,000,000	0.92	0.92	0.92	13,512,554
Barings Global Private Loan Fund	40,000,000	0.61	0.61	0.61	24,324,929
Barings Global Private Loan Fund 2	40,000,000	0.92	0.92	0.92	36,755,102
Barings Global Private Loan Fund 3	50,000,000	0.27	0.27	0.27	13,465,709
CQS Credit Multi Asset Fund Class	105,489	1,054.45	1,054.45	1,054.45	111,233,321
CVC Credit PARTNERS European I	76,000,000	0.08	0.08	0.08	4,997,346
Janus Henderson Multi Asset Credit	98,083,098	1.09	1.09	1.09	106,826,520
Multi Asset Credit Total					**311,115,480**
UK INDEX LINKED					
TREAS 4.125% IL STK 22/7/2030	6,510,000	383.71	386.15	386.15	25,138,589
TREAS 2% IL STK 26/1/2035	8,000,000	293.07	293.96	293.96	23,516,662
002 UKGIL Total					**48,655,251**

INDEX LINKED (3 monthers)

UK INDEX LINKED (3monthers)	Number held	Clean Price	Index Ratio	Gross	Accrued Interest	Total
TREAS 0.125% IL STK 22/3/2024	9,230,000	112.0870	1.203290	12,448,793.24	1,267.86	12,450,061
TREAS 1.25% IL STK 22/11/2027	7,400,000	134.4410	1.503090	14,953,692.28	40,971.47	14,994,664
TREAS 0.125% IL STK 22/3/2029	5,325,000	128.0590	1.228620	8,378,133.94	731.46	8,378,865
TREAS 1.25% IL STK 22/11/2032	2,777,000	156.6880	1.343420	5,845,523.71	15,375.37	5,860,899
TREAS 0.75% IL STK 22/3/2034	11,465,000	152.4810	1.256090	21,958,898.37	9,449.18	21,968,348
TREAS 1.125% IL STK 22/11/2037	5,580,000	174.2680	1.442330	14,025,439.62	27,805.23	14,053,245
TREAS 0.625% IL STK 22/3/2040	5,600,000	169.0220	1.347200	12,751,560.55	3,846.15	12,755,407
TREAS 0.625% IL STK 22/11/2042	5,950,000	178.6060	1.372940	14,590,311.64	16,471.64	14,606,783
TREAS 0.125% IL STK 22/3/2044	11,470,000	166.0840	1.203270	22,922,094.72	1,575.55	22,923,670
TREAS 0.125% IL STK 22/3/2046	8,730,000	171.1630	1.131540	16,908,070.28	1,199.18	16,909,269
TREAS 0.75% IL STK 22/11/2047	6,500,000	199.9300	1.403980	18,245,351.89	21,593.07	18,266,945
TREAS 0.125% IL STK 10/08/2048	5,300,000	177.7710	1.061530	10,001,590.23	1,494.23	10,003,084
TREAS 0.5% IL STK 22/3/2050	5,000,000	198.1120	1.366920	13,540,162.75	2,747.25	13,542,910
UK INDEX LINKED (3monthers) TOTAL						**186,714,151**

US INDEX LINKED	Number held	Clean Price	Index Ratio	Gross $	Accrued Interest $	Total $	Total £
TII0.125% 15/1/2023	7,000,000	99.398438	1.111500	7,733,695.43	2,591.71	7,736,287	5,978,602.70
TII3.625% 15/4/2028	4,045,000	128.320313	1.586240	8,233,468.57	6,810.74	8,240,279	6,368,087.85
TII1.750% 15/1/2028	5,550,000	112.460938	1.224640	7,643,691.02	28,768.00	7,672,459	5,929,276.33
TII2.5% 15/1/2029	7,000,000	120.867188	1.194960	10,110,201.81	51,834.24	10,162,036	7,853,221.46
TII2.125% 15/2/2040	4,095,000	131.796875	1.187000	6,406,336.37	18,444.19	6,424,781	4,965,070.42
TII0.75% 15/2/2042	20,300,000	104.843750	1.135410	24,165,250.36	32,270.38	24,197,521	18,699,844.03
TII0.625% 15/2/2043	10,000,000	102.015625	1.115900	11,383,923.59	13,247.28	11,397,171	8,807,733.65
0045 USGB IL Total							**58,601,836**

TOTAL BONDS	**1,200,650,778**
Index linked-total	**293,971,238**
Conventional-total	**282,731,725**
Non gov-total	**623,947,815**

Agenda Item No. 4 (b)

DERBYSHIRE COUNTY COUNCIL

PENSIONS AND INVESTMENTS COMMITTEE

11 December 2019

Report of the Director of Finance & ICT

VOTING ACTIVITY

1 Purpose of the Report

To review Derbyshire Pension Fund's (the Fund) voting activity for the period 21 August 2019 to 15 November 2019.

2 Information and Analysis

Details of the Fund's voting activity for the period 21 August 2019 to 15 November 2019 are shown in Appendix 1. The Fund voted against management proposal as shown in Appendix 2 and total shareholder votes for the proposal are set out below. The resolution was passed.

Resolution	Votes For	Votes Against
Greene King Plc: Resolution 2	67.5%	32.5%

3 Other Considerations

In preparing this report the relevance of the following factors has been considered: financial, legal and human rights, human resources, equality and diversity, health, environmental, transport, property and prevention of crime and disorder considerations.

4 Officer's Recommendation

That the report be noted.

PETER HANDFORD

Director of Finance & ICT

PHR – 1026

Voting Activity 21 August 2019 to 15 November 2019 **Appendix 1**

Company	Meeting Date	Meeting Type
DS Smith Plc	03-Sep-19	Annual
Merlin Entertainments Plc	03-Sep-19	Court
Merlin Entertainments Plc	03-Sep-19	Special
Aberdeen New Dawn Investment Trust Plc	04-Sep-19	Annual
Invesco Asia Trust Plc	05-Sep-19	Annual
Greene King Plc	06-Sep-19	Annual
Breedon Group Plc	09-Sep-19	Special
Diageo Plc	19-Sep-19	Annual
NB Private Equity Partners Ltd.	23-Sep-19	Annual
NCC Group Plc	25-Sep-19	Annual
Greene King Plc	09-Oct-19	Court
Greene King Plc	09-Oct-19	Special
Prudential Plc	15-Oct-19	Special
Barratt Developments Plc	16-Oct-19	Annual
BHP Group Plc	17-Oct-19	Annual
The Renewables Infrastructure Group Ltd.	17-Oct-19	Special
WPP Plc	24-Oct-19	Special
Pantheon International Plc	30-Oct-19	Annual
Schroder Japan Growth Fund Plc	06-Nov-19	Annual
JPMorgan Emerging Markets Investment Trust Plc	13-Nov-19	Annual

Reporting Period: 08/21/2019 to 11/15/2019

Greene King Plc

Meeting Date: 09/06/2019 **Country:** United Kingdom

Meeting Type: Annual

Voting Policy: ISS

Proposal Number	Proposal Text	Mgmt Rec	ISS Rec	Voting Policy Rec	Vote Instruction
2	Approve Remuneration Report	For	Against	Against	Against

Voting Policy Rationale: A vote AGAINST this proposal is warranted: As announced in May 2019, a payment of GBP 850,000 has been agreed with former CEO Rooney Anand in connection with his departure, which is said to be broadly equivalent to one year's fixed pay. This is considered a significant cost of severance, especially since the CEO initiated discussions about his intention to stand down one year earlier, in May 2018.*

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Agenda Item No. 4 (c)

DERBYSHIRE COUNTY COUNCIL

PENSIONS AND INVESTMENTS COMMITTEE

11 December 2019

Report of the Director of Finance & ICT

DERBYSHIRE PENSION FUND 2019 ACTUARIAL VALUATION

1 Purpose of the Report

To inform the Pensions and Investments Committee (the Committee) of the initial whole fund results of the actuarial valuation (the Valuation) of Derbyshire Pension Fund (the Fund/Pension Fund) as at 31 March 2019 and of progress in the formulation of the Pension Fund's updated Funding Strategy Statement.

2 Information and Analysis

The Regulations

Under Regulation 62 of the Local Government Pension Scheme (LGPS) Regulations 2013, administering authorities of LGPS pension funds are required to obtain an actuarial valuation of the assets and liabilities of the pension fund on 31st March every three years.

In May 2019, MHCLG issued a consultation seeking views on proposals to amend the LGPS valuation cycle in England and Wales from a three year cycle to a four year cycle. The outcome of that consultation is not yet know, however, MHCLG has confirmed to Hymans Robertson, the Fund's actuary, that the next round of valuations for English and Welsh LGPS funds will be 31 March 2022 regardless of the ongoing consultation. Hymans Robertson will, therefore, certify contribution rates for employers for the period 1 April 2020 to 31 March 2023 as part of the 2019 valuation of the Fund.

The Purpose of the Actuarial Valuation

The Valuation is a planning exercise for the Fund to determine:

- The expected cost of providing the benefits built up by members at the valuation date in today's terms (the liabilities) compared to the funds held by the Pension Fund (the assets).
- The contributions needed over an appropriate time horizon to cover the cost of the benefits that active members will build up in the future (the Primary Contribution Rate).

- An adjustment for the difference between the Primary Contribution Rate above, and the actual contribution the employer needs to pay over the time horizon, referred to as the Secondary Contribution Rate. In broad terms, payment of the Secondary Contribution Rate is in respect of benefits already accrued at the valuation date.

The actuary determines the information above for individual employers, or pools of employers, as well as for the Pension Fund as a whole in order to determine the appropriate contribution rates for each employer, or pool of employers.

The Valuation is calculated as at 31 March 2019 and will set the contribution rates payable from 1st April 2020 to 31 March 2023, which will be detailed in the Rates and Adjustments Certificate appended to the Valuation.

Experience Since the March 2016 Valuation
Since the last actuarial valuation, the Fund has achieved investment returns of 33.3% compared to an anticipated investment return over that period of 12.6%, leading to a much larger increase in the value of the assets of the Fund than expected.

Longer term expectations for Consumer Prices Index (CPI) inflation have increased slightly from 2.1% per annum in 2016 to the current forecast of 2.3% per annum. Pension benefit increases (both in payment and deferment) and the revaluation of career-average earnings are in line with CPI inflation; a higher level of CPI, therefore, results in an increase in the forecast costs of the benefits to be paid from the Fund.

Membership experience, including a larger than expected number of early leavers (pre-retirement) has had a positive effect on the Fund's forecast liabilities.

In line with advice issued the LGPS Scheme Advisory Board, Hymans Robertson has based its valuation calculations on the benefits as currently set out in LGPS Regulations. No allowance has been made for the possible outcome of the cost cap mechanism or the McCloud case, although an extra level of prudence has been introduced in the setting of employer contribution rates to allow for the potential impact of the McCloud case.

Overall, the investment and membership experience since the March 2016 valuation has had a positive impact on the funding position of the Pension Fund, with a particularly beneficial impact from investment returns.

Initial Whole Fund Results
There has been an improvement in the funding level of the Fund from 87% in March 2016 to 97% at March 2019, with a reduction in the deficit from £564m to £163m.

The funding level of the Pension Fund is the ratio of assets to liabilities at the valuation date. The market value of the Fund's assets (investments) is compared to the value placed on the Fund's accrued liabilities in today's terms. The accrued liabilities cover the expected cost of members' benefits in respect of scheme membership completed before the valuation date (past service). The funding level provides a high-level snapshot of the funding position at a particular date and could be very different the following day on a sharp move in investment markets.

Valuation Date	31 March 2016	31 March 2019
Past Service Liabilities	**(£m)**	**(£m)**
Employees	1,703	2,017
Deferred Pensioners	758	924
Pensioners	1,776	2,150
Total Liabilities	**4,236**	**5,091**
Assets	**3,672**	**4,929**
Surplus / (Deficit)	**(564)**	**(163)**
Funding Level	**87%**	**97%**

It should be noted that the actuary has adopted a risk-based approach to determine an appropriate investment return assumption for reporting the whole Fund results at this valuation. This is more in line with the approach taken at the last valuation and this valuation for setting contribution rates. On a like-for-like basis of calculation, the funding level at March 2019 would be approximately 92%.

Funding Strategy Statement

As part of the valuation process, the Fund reviews the funding strategy to ensure that an appropriate contribution plan and investment strategy is in place. The funding strategy is set out in the Funding Strategy Statement (FSS) which is the Fund's key governance document in relation to the actuarial valuation.

The FSS sets out the funding policies adopted, the actuarial assumptions used and the time horizons considered for each category of employer. The Fund's stakeholders, including scheme employers, will be consulted about the FSS as part of the actuarial valuation process.

The draft Funding Strategy Statement is attached as Appendix 1. The main changes to the FSS since the previous valuation are:

- increased likelihoods of reaching the funding target for all employers to allow for the potential impact of the McCloud judgement
- a larger increase in the likelihood of reaching the funding target, and a reduction in the time horizon, for Universities and Colleges to reflect changes in the assessment of the employer covenant for the sector

- increased clarity on risk sharing options
- the proposed treatment of exit credits
- increased clarity on pooling arrangements

The proposed method of setting contribution rates for Academies, and the funding basis to be adopted for Community Admission Bodies that are closed to new entrants, will be finalised upon consideration of the individual employer results. The Fund will then consult with scheme employers, Derbyshire Pension Board and other stakeholders on the proposed FSS.

The Valuation Timetable	**2019**
Continuing review of employer covenants	Dec
Discussion between Fund officers & Hymans Robertson on individual employer results	Early Dec
Pensions & Investment Committee -valuation results & draft FSS presented by Hymans Robertson	11 Dec
Employer results schedules & draft FSS to be issued to Employers, FSS consultation to commence	Late Dec
	2020
Employer Forum – actuarial valuation presentation by Hymans Robertson	13 Jan
Pensions & Investment Committee – consider results of FSS Consultation and finalise funding strategy	4 Mrch
Final valuation sign-off (Rates & Adjustments Certificate) by actuary	31 Mrch

3 Other Considerations

In preparing this report the relevance of the following factors have been considered: financial, legal and human rights, human resources, equality and diversity, health, environmental, transport, property, and prevention of crime and disorder.

4 Officer’s Recommendation

That Committee notes the initial whole fund results of the actuarial valuation at 31 March 2019.

That Committee notes the progress on the formulation of the updated Funding Strategy Statement (FSS) and the intention to commence a consultation with the Fund’s stakeholders on the FSS in late December.

PETER HANDFORD
Director of Finance & ICT

HYMANS ROBERTSON

Derbyshire Pension Fund

Funding Strategy Statement

XXXXX 2020

Approved by Pensions and Investments Committee XX XXXX 2020

PUBLIC SECTOR

Contents

DRAFT Funding Strategy Statement PAGE

Appendices

1 Introduction

1.1 What is this document?

This is the Funding Strategy Statement (FSS) of the Derbyshire Pension Fund ("the Fund"), which is administered by Derbyshire County Council ("the Administering Authority").

It has been prepared by the Administering Authority in collaboration with the Fund's actuary, Hymans Robertson LLP, and after consultation with the Fund's employers and investment adviser. It is effective from [DATE POST CONSULTATION].

1.2 What is the Derbyshire Pension Fund?

The Fund is part of the national Local Government Pension Scheme (LGPS). The LGPS was set up by the UK Government to provide retirement and death benefits for local government employees, and those employed in similar or related bodies, across the whole of the UK. The Administering Authority runs the Derbyshire Fund, in effect the LGPS for the Derbyshire area, to make sure it:

- receives the proper amount of contributions from employees and employers, and any transfer payments;
- invests the contributions appropriately, with the aim that the Fund's assets grow over time with investment income and capital growth; and
- uses the assets to pay Fund benefits to the members (as and when they retire, for the rest of their lives), and to their dependants (as and when members die), as defined in the LGPS Regulations. Assets are also used to pay transfer values and administration costs.

The roles and responsibilities of the key parties involved in the management of the Fund are summarised in Appendix B.

1.3 Why does the Fund need a Funding Strategy Statement?

Employees' benefits are guaranteed by the LGPS Regulations, and do not change with market values or employer contributions. Investment returns will help pay for some of the benefits, but probably not all, and certainly with no guarantee. Employees' contributions are fixed in those Regulations also, at a level which covers only part of the cost of the benefits.

Therefore, employers need to pay the balance of the cost of delivering the benefits to members and their dependants.

The FSS focuses on how employer liabilities are measured, the pace at which these liabilities are funded, and how employers or pools of employers pay for their own liabilities. This statement sets out how the Administering Authority has balanced the conflicting aims of:

- affordability of employer contributions,
- transparency of processes,
- stability of employers' contributions, and
- prudence in the funding basis.

There are also regulatory requirements for an FSS, as given in Appendix A.

The FSS is a summary of the Fund's approach to funding its liabilities, and this includes reference to the Fund's other policies; it is not an exhaustive statement of policy on all issues. The FSS forms part of a framework which includes:

- the LGPS Regulations;
- the Rates and Adjustments Certificate (confirming employer contribution rates for the next three years) which can be found in an appendix to the formal valuation report;
- the Fund's policies on admissions, cessations and bulk transfers;
- actuarial factors for valuing individual transfers, early retirement costs and the costs of buying added service; and
- the Fund's Investment Strategy Statement (see Section 4)

1.4 How does the Fund and this FSS affect me?

This depends who you are:

- a member of the Fund, i.e. a current or former employee, or a dependant: the Fund needs to be sure it is collecting and holding enough money so that your benefits are always paid in full;
- an employer in the Fund (or which is considering joining the Fund): you will want to know how your contributions are calculated from time to time, that these are fair by comparison to other employers in the Fund, in what circumstances you might need to pay more and what happens if you cease to be an employer in the Fund. Note that the FSS applies to all employers participating in the Fund;
- an Elected Member whose council participates in the Fund: you will want to be sure that the council balances the need to hold prudent reserves for members' retirement and death benefits, with the other competing demands for council money;
- a Council Tax payer: your council seeks to strike the balance above, and also to minimise cross-subsidies between different generations of taxpayers.

1.5 What does the FSS aim to do?

The FSS sets out the objectives of the Fund's funding strategy, such as:

- to ensure the long-term solvency of the Fund, using a prudent long term view. This will ensure that sufficient funds are available to meet all members'/dependants' benefits as they fall due for payment;
- to ensure that employer contribution rates are reasonably stable where appropriate;
- to minimise the long-term cash contributions which employers need to pay to the Fund, by recognising the link between assets and liabilities and adopting an investment strategy which balances risk and return (**NB** this will also minimise the costs to be borne by Council Tax payers);
- to reflect the different characteristics of different employers in determining contribution rates. This involves the Fund having a clear and transparent funding strategy to demonstrate how each employer can best meet its own liabilities over future years; and
- to use reasonable measures to reduce the risk to other employers and ultimately to the Council Tax payer from an employer defaulting on its pension obligations.

1.6 How do I find my way around this document?

In Section 2 there is a brief introduction to some of the main principles behind funding, i.e. deciding how much an employer should contribute to the Fund from time to time.

In Section 3 we outline how the Fund calculates the contributions payable by different employers in different situations.

In Section 4 we show how the funding strategy is linked with the Fund's investment strategy.

In the Appendices we cover various issues in more detail if you are interested:

A. the regulatory background, including how and when the FSS is reviewed,

B. who is responsible for what,

C. what issues the Fund needs to monitor, and how it manages its risks,

D. some more details about the actuarial calculations required,

E. the assumptions which the Fund actuary currently makes about the future,

F. a glossary explaining the technical terms occasionally used here.

If you have any other queries please contact Dawn Kinley, Head of Pension Fund in the first instance at e-mail address (dawn.kinley@derbyshire.gov.uk).

2 Basic Funding issues

(More detailed and extensive descriptions are given in Appendix D).

2.1 How does the actuary calculate the required contribution rate?

In essence this is a three-step process:

1. Calculate the funding target for that employer, i.e. the estimated amount of assets it should hold in order to be able to pay all its members' benefits. See Appendix E for more details of what assumptions we make to determine that funding target;
2. Determine the time horizon over which the employer should aim to achieve that funding target. See the table in 3.3 and Note (c) for more details;
3. Calculate the employer contribution rate such that it has at least a given likelihood of achieving that funding target over that time horizon, allowing for various possible economic outcomes over that time horizon. See 2.3 below, and the table in 3.3 Note (e) for more details.

2.2 What is each employer's contribution rate?

This is described in more detail in Appendix D. Employer contributions are normally made up of two elements:

a) the estimated cost of benefits being built up each year, after deducting the members' own contributions and including an allowance for administration expenses. This is referred to as the "*Primary rate*", and is expressed as a percentage of members' pensionable pay; plus

b) an adjustment for the difference between the Primary rate above, and the actual contribution the employer needs to pay, referred to as the "*Secondary rate*". In broad terms, payment of the Secondary rate is in respect of benefits already accrued at the valuation date. The Secondary rate may be expressed as a percentage of pay and/or a monetary amount in each year.

The rates for all employers are shown in the Fund's Rates and Adjustments Certificate, which forms part of the formal Actuarial Valuation Report. Employers' contributions are expressed as minima, with employers able to pay contributions at a higher rate. Account of any higher rate will be taken by the Fund actuary at subsequent valuations, i.e. will be reflected as a credit when next calculating the employer's contributions.

2.3 What different types of employer participate in the Fund?

Historically the LGPS was intended for local authority employees only. However over the years, with the diversification and changes to delivery of local services, many more types and numbers of employers now participate. There are currently more employers in the Fund than ever before, a significant part of this being due to new academies.

In essence, participation in the LGPS is open to public sector employers providing some form of service to the local community. Whilst the majority of members will be local authority employees (and ex-employees), the majority of participating employers are those providing services in place of (or alongside) local authority services: academy schools, contractors, housing associations, charities, etc.

The LGPS Regulations define various types of employer as follows:

Scheduled bodies - councils, and other specified employers such as academies and further education establishments. These must provide access to the LGPS in respect of their employees who are not eligible to join another public sector scheme (such as the Teachers Scheme). These employers are so-called because they are specified in a schedule to the LGPS Regulations.

It is now possible for Local Education Authority schools to convert to academy status, and for other forms of school (such as Free Schools) to be established under the academies legislation. All such **academies (or Multi Academy Trusts)**, as employers of non-teaching staff, become separate new employers in the Fund. As academies are defined in the LGPS Regulations as "Scheduled Bodies", the Administering Authority has no discretion over whether to admit them to the Fund, and the academy has no discretion whether to continue to allow its non-teaching staff to join the Fund. There has also been guidance issued by the Ministry of Housing, Communities and Local Government (MHCLG) regarding the terms of academies' membership in LGPS Funds.

Designating employers - employers such as town and parish councils are able to participate in the LGPS via resolution (and the Fund cannot refuse them entry where the resolution is passed). These employers can designate which of their employees are eligible to join the scheme.

Other employers are able to participate in the Fund via an admission agreement, and are referred to as 'admission bodies'. These employers are generally those with a "community of interest" with another scheme employer – **community admission bodies** ("CAB") or those providing a service on behalf of a scheme employer – **transferee admission bodies** ("TAB"). CABs will include housing associations and charities, TABs will generally be contractors. The Fund is able to set its criteria for participation by these employers and can refuse entry if the requirements as set out in the Fund's admissions policy are not met. (NB The terminology CAB and TAB has been dropped from recent LGPS Regulations, which instead combine both under the single term 'admission bodies'; however, we have retained the old terminology here as we consider it to be helpful in setting funding strategies for these different employers.

2.4 How does the calculated contribution rate vary for different employers?

All three steps above are considered when setting contributions (more details are given in Section 3 and Appendix D).

1. The **funding target** is based on a set of assumptions about the future, (e.g. investment returns, inflation, pensioners' life expectancies). If an employer is approaching the end of its participation in the Fund then its funding target may be set on a more prudent basis, so that its liabilities are less likely to be spread among other employers after its cessation;

2. The **time horizon** required is the period over which the funding target is achieved. Employers may be given a lower time horizon if they have a less permanent anticipated membership, or do not have tax-raising powers to increase contributions if investment returns under-perform; and

3. The **likelihood of achieving** the funding target over that time horizon will be dependent on the Fund's view of the strength of employer covenant and its funding profile. Where an employer is considered to be weaker then the required likelihood will be set higher, which in turn will increase the required contributions (and vice versa).

For some employers it may be agreed to pool contributions, see 3.4.

Any costs of non ill-health early retirements must be paid by the employer, see 3.6.

Costs of ill-health early retirements are covered in 3.7 and 3.8.

2.5 How is a funding level calculated?

An employer's "funding level" is defined as the ratio of:

- the market value of the employer's share of assets (see Appendix D, section D5, for further details of how this is calculated), to
- the value placed by the actuary on the benefits built up to date for the employer's employees and ex-employees (the "liabilities"). The Fund actuary agrees with the Administering Authority the assumptions to be used in calculating this value.

If this is less than 100% then it means the employer has a shortfall, which is the employer's "deficit"; if it is more than 100% then the employer is said to be in "surplus". The amount of deficit or shortfall is the difference between the asset value and the liabilities value.

It is important to note that the funding level and deficit/surplus are only measurements at a particular point in time, on a particular set of assumptions about the future. Whilst we recognise that various parties will take an interest in these measures, for most employers the key issue is how likely it is that their contributions will be sufficient to pay for their members' benefits (when added to their existing asset share and anticipated investment returns).

In short, funding levels and deficits are short term, high level risk measures, whereas contribution-setting is a longer term issue.

2.6 How does the Fund recognise that contribution levels can affect council and employer service provision, and council tax?

The Administering Authority and the Fund actuary are acutely aware that, all other things being equal, a higher contribution required to be paid to the Fund will mean less cash available for the employer to spend on the provision of services. For instance:

- Higher Pension Fund contributions may result in reduced council spending, which in turn could affect the resources available for council services, and/or greater pressure on council tax levels;
- Contributions which Academies pay to the Fund will therefore not be available to pay for providing education; and
- Other employers will provide various services to the local community, perhaps through housing associations, charitable work, or contracting council services. If they are required to pay more in pension contributions to the LGPS then this may affect their ability to provide the local services at a reasonable cost.

Whilst all this is true, it should also be borne in mind that:

- The Fund provides invaluable financial security to local families, whether to those who formerly worked in the service of the local community who have now retired, or to their families after their death;
- The Fund must have the assets available to meet these retirement and death benefits, which in turn means that the various employers must each pay their own way. Lower contributions today will mean higher contributions tomorrow: deferring payments does not alter the employer's ultimate obligation to the Fund in respect of its current and former employees;
- Each employer will generally only pay for its own employees and ex-employees (and their dependants), not for those of other employers in the Fund;

- The Fund strives to maintain reasonably stable employer contribution rates where appropriate and possible. However, a recent shift in regulatory focus means that solvency within each generation is considered by the Government to be a higher priority than stability of contribution rates;
- The Fund wishes to avoid the situation where an employer falls so far behind in managing its funding shortfall that its deficit becomes unmanageable in practice: such a situation may lead to employer insolvency and the resulting deficit falling on the other Fund employers. In that situation, those employers' services would in turn suffer as a result;
- Council contributions to the Fund should be at a suitable level, to protect the interests of different generations of council tax payers. For instance, underpayment of contributions for some years will need to be balanced by overpayment in other years; the council will wish to minimise the extent to which council tax payers in one period are in effect benefitting at the expense of those paying in a different period.

Overall, therefore, there is clearly a balance to be struck between the Fund's need for maintaining prudent funding levels, and the employers' need to allocate their resources appropriately. The Fund achieves this through various techniques which affect contribution increases to various degrees (see 3.1). In deciding which of these techniques to apply to any given employer, the Administering Authority takes a view on the financial standing of the employer, i.e. its ability to meet its funding commitments and the relevant time horizon.

The Administering Authority is building an employer risk assessment framework using a knowledge base which will be regularly monitored and kept up-to-date. This database will include such information as the type of employer, its membership profile and funding position, any guarantors or security provision, material changes anticipated, etc.

For instance, where the Administering Authority has reasonable confidence that an employer will be able to meet its funding commitments, then the Fund will permit options such as stabilisation (see 3.3 Note (b)), a longer time horizon relative to other employers, and/or a lower likelihood of achieving their funding target. Such options will temporarily produce lower contribution levels than would otherwise have applied. This is permitted in the expectation that the employer will still be able to meet its obligations for many years to come.

On the other hand, where there is doubt that an employer will be able to meet its funding commitments or withstand a significant change in its commitments, then a higher funding target, and/or a shorter time horizon relative to other employers, and/or a higher likelihood of achieving the target may be required.

The Fund actively seeks employer input, including to its funding arrangements, through various means: see Appendix A.

2.7 What approach has the Fund taken to dealing with uncertainty arising from the McCloud court case and its potential impact on the LGPS benefit structure?

The LGPS benefit structure from 1 April 2014 is currently under review following the Government's loss of the right to appeal the McCloud and other similar court cases. The courts have ruled that the 'transitional protections' awarded to some members of public service pension schemes when the schemes were reformed (on 1 April 2014 in the case of the LGPS) were unlawful on the grounds of age discrimination. At the time of writing, MHCLG has not provided any details of changes as a result of the case. However it is expected that benefits changes will be required and they will likely increase the value of liabilities. At present, the scale and nature of any increase in liabilities are unknown, which limits the ability of the Fund to make an accurate allowance.

The LGPS Scheme Advisory Board (SAB) issued advice to LGPS funds in May 2019. As there was no finalised outcome of the McCloud case by 31 August 2019, the Fund Actuary has acted in line with SAB's advice and valued all member benefits in line with the current LGPS Regulations.

The Fund, in line with the advice in the SAB's note, has considered how to allow for this risk in the setting of employer contribution rates. As the benefit structure changes that will arise from the McCloud judgement are uncertain, the Fund has elected to allow for the potential impact in the assessment of employer contribution rates at the 2019 valuation by increasing the required likelihood of reaching the funding target.

Once the outcome of the McCloud case is known, the Fund may revisit the contribution rates set to ensure they remain appropriate.

The Fund has also considered the McCloud judgement in its approach to cessation valuations. Please see note (j) to table 3.3 for further information.

2.8 When will the next actuarial valuation be?

On 8 May 2019 MHCLG issued a consultation seeking views on (among other things) proposals to amend the LGPS valuation cycle in England and Wales from a three year (triennial) valuation cycle to a four year (quadrennial) valuation cycle.

The Fund intends to carry out its next actuarial valuation in 2022 (3 years after the 2019 valuation date) in line with MHCLG's desired approach in the consultation. The Fund has therefore instructed the Fund Actuary to certify contribution rates for employers for the period 1 April 2020 to 31 March 2023 as part of the 2019 valuation of the Fund.

3 Calculating contributions for individual Employers

3.1 General comments

A key challenge for the Administering Authority is to balance the need for stable, affordable employer contributions with the requirement to take a prudent, longer-term view of funding and ensure the solvency of the Fund. With this in mind, the Fund's three-step process identifies the key issues:

1. What is a suitably (but not overly) prudent funding target?
2. How long should the employer be permitted to reach that target? This should be realistic but not so long that the funding target is in danger of never actually being achieved.
3. What likelihood is required to reach that funding target? This will always be less than 100% as we cannot be certain of the future. Higher likelihood "bars" can be used for employers where the Fund wishes to reduce the risk that the employer ceases leaving a deficit to be picked up by other employers.

These and associated issues are covered in this Section.

The Administering Authority recognises that there may occasionally be particular circumstances affecting individual employers that are not easily managed within the rules and policies set out in the Funding Strategy Statement. Therefore the Administering Authority reserves the right to direct the actuary to adopt alternative funding approaches on a case by case basis for specific employers.

3.2 The effect of paying lower contributions

In limited circumstances the Administering Authority may permit employers to pay contributions at a lower level than is assessed for the employer using the three-step process above. At its absolute discretion the Administering Authority may:

- extend the time horizon for targeting full funding;
- adjust the required likelihood of meeting the funding target;
- permit an employer to participate in the Fund's stabilisation mechanisms;
- permit extended phasing in of contribution rises or reductions;
- pool contributions amongst employers with similar characteristics; and/or
- accept some form of security or guarantee in lieu of a higher contribution rate than would otherwise be the case.

Employers which are permitted to use one or more of the above methods will often be paying, for a time, contributions less than required to meet their funding target, over the appropriate time horizon with the required likelihood of success. Such employers should appreciate that:

- their true long term liability (i.e. the actual eventual cost of benefits payable to their employees and ex-employees) is not affected by the pace of paying contributions;
- lower contributions in the short term will result in a lower level of future investment returns on the employer's asset share. Thus, deferring a certain amount of contribution may lead to higher contributions in the long-term; and
- it may take longer to reach their funding target, all other things being equal.

Overleaf (3.3) is a summary of how the main funding policies differ for different types of employer, followed by more detailed notes where necessary.

Section 3.4 onwards deals with various other funding issues which apply to all employers.

3.3 The different approaches used for different employers

Type of employer	Scheduled Bodies				Designating employers	Community Admission Bodies		Transferee Admission Bodies*
Sub-type	**Local Authorities**	**Police, Fire, etc**	**Academies**	**Universities and Colleges**	**Town and Parish Councils (pooled)**	**Open to new entrants**	**Closed to new entrants**	**(all)**
Funding Target Basis used	Ongoing participation basis, assumes long-term Fund participation (see Appendix E)				Ongoing participation basis, assumes long-term Fund participation (see Appendix E)	Ongoing participation basis, but may move to “gilts exit basis” - see Note (a)		Ongoing participation basis, assumes fixed contract term in the Fund (see Appendix E)
Primary rate approach	(see Appendix D – D.2)							
Stabilised contribution rate?	Yes - see Note (b)	Yes - see Note (b)	Yes - see Note (b)	No	No	No	No	No
Maximum time horizon – Note (c)	19 years	19 years	19 years	15 years**	19 years	12 years	12 years	The lower of 12 years and the outstanding contract term
Secondary rate – Note (d)	Percentage of payroll and/or Monetary amount	Percentage of payroll and/or Monetary amount	Percentage of Payroll	Percentage of payroll and/or Monetary amount	Percentage of Payroll	Percentage of payroll and/or Monetary amount	Percentage of payroll and/or Monetary amount	Percentage of payroll and/or Monetary amount
Treatment of surplus	Covered by stabilisation arrangement	Covered by stabilisation arrangement	Covered by stabilisation arrangement	Reduce contributions by spreading the surplus over 15 years	Reduce contributions by spreading the surplus over 19 years	Preferred approach: contributions kept at Primary rate. However, reductions may be permitted by the Admin. Authority		Reduce contributions by spreading the surplus over the lower of 12 years and the outstanding contract term
Likelihood of achieving target – Note (e)	70%	70%	70%	75%	70%	85%	85%	75%

Phasing of contribution changes	Covered by stabilisation arrangement	Covered by stabilisation arrangement	Covered by stabilisation arrangement	3 years	3 years	3 years	3 years	None
Review of rates – Note (f)	Administering Authority reserves the right to review contribution rates and amounts, and the level of security provided, at regular intervals between valuations							Particularly reviewed in last 3 years of contract
New employer	n/a	n/a	Note (g)	n/a	n/a	Note (h)		Notes (h) & (i)
Cessation of participation: exit debt/credit payable	Cessation is assumed not to be generally possible, as Scheduled Bodies are legally obliged to participate in the LGPS. In the rare event of cessation occurring (machinery of Government changes for example), the cessation calculation principles applied would be as per Note (j).				Can be ceased. Exit debt/credit will be calculated on a basis appropriate to the circumstances of cessation – see Note (k).	Can be ceased subject to terms of admission agreement. Exit debt/credit will be calculated on a basis appropriate to the circumstances of cessation – see Note (j).		Participation is assumed to expire at the end of the contract. Cessation debt/credit calculated on the ongoing participation basis, unless the admission agreement is terminated early by the contractor or letting employer in which case the low risk exit basis may apply. Letting employer will be liable for future deficits and contributions arising. See Note (j) for further details

* Where the Administering Authority recognises a fixed contribution rate agreement between a letting employer and a contractor, the certified employer contribution rate will be derived in line with the methodology specified in the risk sharing agreement. Additionally, in these cases, upon cessation the contractor's assets and liabilities will transfer back to the letting employer ordinarily with no crystallisation of any deficit or surplus. Further detail on fixed contribution rate agreements is set out in note (i).

** The time horizon for universities and colleges has been reduced from that used at the 31 March 2016 valuation as a means of recognising the potential shortening of these bodies' lifetimes within the Fund. In addition, the Fund reserves the right to use a different likelihood of success for these bodies than stated in the table above if there are concerns in relation to their individual circumstances.

Note (a) (Gilts exit basis for CABs and Designating Employers closed to new entrants)

In the circumstances where:

- the employer is a Designating Employer, or an Admission Body but not a Transferee Admission Body, and
- the employer has no guarantor, and
- the admission agreement is likely to terminate, or the employer is likely to lose its last active member, within a timeframe considered appropriate by the Administering Authority to prompt a change in funding,

the Administering Authority may set a higher funding target (e.g. based on the return from long-term gilt yields) by the time the agreement terminates or the last active member leaves, in order to protect other employers in the Fund. This policy will increase regular contributions and reduce, but not entirely eliminate, the possibility of a final deficit payment being required from the employer when a cessation valuation is carried out.

The Administering Authority also reserves the right to adopt the above approach in respect of those Designating Employers and Admission Bodies with no guarantor, where the strength of covenant is considered to be weak but there is no immediate expectation that the admission agreement will cease or that the Designating Employer will alter its designation.

Note (b) (Stabilisation)

Stabilisation is a mechanism where employer contribution rate variations from year to year are kept within a pre-determined range, thus allowing those employers' rates to be relatively stable. In the interests of stability and affordability of employer contributions, the Administering Authority, on the advice of the Fund Actuary, believes that stabilising contributions can still be viewed as a prudent longer-term approach. However, employers whose contribution rates have been "stabilised" (and may therefore be paying less than their theoretical contribution rate) should be aware of the risks of this approach and should consider making additional payments to the Fund if possible. This stabilisation mechanism allows short term investment market volatility to be managed so as not to cause volatility in employer contribution rates, on the basis that a long term view can be taken on net cash inflow, investment returns and strength of employer covenant.

The current stabilisation mechanism applies if:

- the employer satisfies the eligibility criteria set by the Administering Authority (see below) and;
- there are no material events which cause the employer to become ineligible, e.g. significant reductions in active membership (due to outsourcing or redundancies), or changes in the nature of the employer (perhaps due to Government restructuring), or changes in the security of the employer.

On the basis of extensive modelling carried out for the 2019 valuation exercise the stabilised details are as follows:

Type of employer	Local Authorities	Police, Fire, etc.	Academies
Max cont increase	1%	1%	1%
Max cont decrease	0%	0%	-1%

The stabilisation criteria and limits will be reviewed at the next formal valuation. However, the Administering Authority reserves the right to review the stabilisation criteria and limits at any time before then, on the basis of membership and/or employer changes as described above.

Note (c) (Maximum time horizon)

The maximum time horizon starts at the commencement of the revised contribution rate (1 April 2020 for the 2019 valuation). The Administering Authority would normally expect the same period to be used at successive triennial valuations, but would reserve the right to propose alternative time horizons, for example where there were no new entrants.

Note (d) (Secondary rate)

For some employers where stabilisation is not being applied, the Secondary contribution rate for each employer covering the period until the next formal valuation will often be set as a percentage of salaries. However, the Administering Authority reserves the right to amend these rates between formal valuations and/or to require these payments in monetary terms instead, for instance where:

- the employer is relatively mature, i.e. has a large Secondary contribution rate (e.g. above 15% of payroll), or
- there has been a significant reduction in payroll due to outsourcing or redundancy exercises, or
- the employer has closed the Fund to new entrants.

Note (e) (Likelihood of achieving funding target)

Each employer has its funding target calculated, and a relevant time horizon over which to reach that target. Contributions are set such that, combined with the employer's current asset share and anticipated market movements over the time horizon, the funding target is achieved with a given minimum likelihood. A higher required likelihood bar will give rise to higher required contributions, and vice versa.

The way in which contributions are set using these three steps, and relevant economic projections, is described in further detail in Appendix D.

Different likelihoods are set for different employers depending on their nature and circumstances: in broad terms, a higher likelihood will apply due to one or more of the following:

- the Fund believes the employer poses a greater funding risk than other employers,
- the employer does not have tax-raising powers;
- the employer does not have a guarantor or other sufficient security backing its funding position; and/or
- the employer is likely to cease participation in the Fund in the short or medium term.

The Fund reserves the right to use a different likelihood of achieving target than is specified in the table in section 3.3 for any employer, to take into account its specific circumstances.

Note (f) (Regular Reviews)

Such reviews may be triggered by significant events including but not limited to: significant reductions in payroll, altered employer circumstances, Government restructuring affecting the employer's business, or failure to pay contributions or arrange appropriate security as required by the Administering Authority.

The result of a review may be to require increased contributions (by strengthening the actuarial assumptions adopted and/or moving to monetary levels of deficit recovery contributions), and/or an increased level of security or guarantee.

Note (g) (New Academy conversions)

At the time of writing, the Fund's policies on academies' funding issues are as follows:

i. The new academy will be regarded as a separate employer in its own right and will not be pooled with other employers in the Fund. The only exception is where the academy is part of a Multi Academy Trust (MAT) in which case the academy's figures will be calculated as below but can be combined, for the purpose of setting contribution rates, with those of the other academies in the MAT;

ii. The new academy's past service liabilities on conversion will be calculated based on its active Fund members on the day before conversion. For the avoidance of doubt, these liabilities will include all past service of those members, but will exclude the liabilities relating to any ex-employees of the school who have deferred or pensioner status;

iii. The new academy will be allocated an initial asset share from the ceding council's assets in the Fund. This asset share will be calculated using the estimated funding position of the ceding council at the date of academy conversion. The share will be based on the active members' funding level, having first allocated assets in the council's share to fully fund deferred and pensioner members. The assets allocated to the academy will be limited if necessary so that its initial funding level is subject to a maximum of 100%. The asset allocation will be based on market conditions and the academy's active Fund membership on the day prior to conversion;

iv. The new academy's calculated contribution rate will be based on the time horizon and likelihood of achieving funding target outlined for Academies in the table in Section 3.3 above;

v. As an alternative to (iv), the academy will have the option to elect to pay contributions initially in line with the ceding Council instead. However, this election will not alter its asset or liability allocation as per (ii) and (iii) above. Ultimately, all academies remain responsible for their own allocated assets and liabilities;

vi. It is possible for an academy to leave one MAT and join another. If this occurs, all active, deferred and pensioner members of the academy transfer to the new MAT.

The Fund's policies on academies are subject to change in the light of any amendments to MHCLG and/or DfE guidance (or removal of the formal guarantee currently provided to academies by the DfE). Any changes will be notified to academies, and will be reflected in a subsequent version of this FSS. In particular, policies (iv) and (v) above will be reconsidered at each valuation.

Note (h) (New Admission Bodies)

With effect from 1 October 2012, the LGPS 2012 Miscellaneous Regulations introduced mandatory new requirements for all Admission Bodies brought into the Fund from that date. Under these Regulations, all new Admission Bodies will be required to provide some form of security, such as a guarantee from the letting employer, an indemnity or a bond. The security is required to cover some or all of the following:

- the strain cost of any redundancy early retirements resulting from the premature termination of the contract;
- allowance for the risk of asset underperformance;
- allowance for the risk of a greater than expected rise in liabilities;

- allowance for the possible non-payment of employer and member contributions to the Fund; and/or
- the current deficit.

Transferee Admission Bodies: For all TABs, the security must be to the satisfaction of the Administering Authority as well as the letting employer, and will be reassessed on a regular basis. See also Note (i) below.

Community Admission Bodies: The Administering Authority will only consider requests from CABs (or other similar bodies, such as section 75 NHS partnerships) to join the Fund if they are sponsored by a Scheduled Body with tax raising powers, who also guarantee their liabilities.

The above approaches reduce the risk, to other employers in the Fund, of potentially having to pick up any shortfall in respect of Admission Bodies ceasing with an unpaid deficit.

Note (i) (New Transferee Admission Bodies)

A new TAB usually joins the Fund as a result of the letting/outsourcing of some services from an existing employer (normally a Scheduled Body such as a council or academy) to another organisation (a "contractor"). This involves the TUPE transfer of some staff from the letting employer to the contractor. Consequently, for the duration of the contract, the contractor is a new participating employer in the Fund so that the transferring employees maintain their eligibility for LGPS membership. At the end of the contract the employees revert to the letting employer or to a replacement contractor.

Ordinarily, the TAB would be set up in the Fund as a new employer with responsibility for all the accrued benefits of the transferring employees; in this case, the contractor would usually be assigned an initial asset allocation equal to the past service liability value of the employees' Fund benefits. The quid pro quo is that the contractor is then expected to ensure that its share of the Fund is also fully funded at the end of the contract: see Note (j).

Risk Sharing

Employers which "outsource" have flexibility in the way that they can deal with the pension risk potentially taken on by the contractor. In particular there are three different routes that such employers may wish to adopt. Clearly as the risk ultimately resides with the employer letting the contract, it is for them to agree the appropriate route with the contractor:

i) Pooling

Under this option the contractor is pooled with the letting employer. In this case, the contractor pays the same rate as the letting employer, which may be under a stabilisation approach.

ii) Letting employer retains pre-contract risks

Under this option the letting employer would retain responsibility for assets and liabilities in respect of service accrued prior to the contract commencement date. The contractor would be responsible for the future liabilities that accrue in respect of transferred staff. The contractor's contribution rate could vary from one valuation to the next. It would be liable for any deficit (or entitled to any surplus) at the end of the contract term in respect of assets and liabilities attributable to service accrued during the contract term.

iii) Fixed contribution rate agreed

Under this option the contractor pays a fixed contribution rate throughout its participation in the Fund and on cessation does not pay any exit debt or receive an exit credit. In other words, the pensions risks "pass through" to the letting employer.

The Administering Authority is willing to administer any of the above options as long as the approach is documented in the Admission Agreement as well as the transfer agreement.

Alternatively, letting employers and Transferee Admission Bodies may operate any of the above options by entering into a separate Side Agreement. The Administering Authority would not necessarily be a party to this side agreement, but may treat the Admission Agreement as if it incorporates the side agreement terms where this is permitted by legislation or alternatively agreed by all parties.

Any risk sharing agreement should ensure that some element of risk transfers to the contractor where it relates to their decisions and it is unfair to burden the letting employer with that risk. For example the contractor should typically be responsible for pension costs that arise from:

- above average pay increases, including the effect in respect of service prior to contract commencement even if the letting employer takes on responsibility for the latter under (ii) above; and
- redundancy and early retirement decisions.

Note (j) (Admission Bodies Ceasing)

Notwithstanding the provisions of the Admission Agreement, the Administering Authority may consider any of the following as triggers for the cessation of an admission agreement with any type of body:

- Last active member ceasing participation in the Fund (NB recent LGPS Regulation changes mean that the Administering Authority has the discretion to defer taking action for up to three years, so that if the employer acquires one or more active Fund members during that period then cessation is not triggered. The current Fund policy is that this is left as a discretion and may or may not be applied in any given case);
- The insolvency, winding up or liquidation of the Admission Body;
- Any breach by the Admission Body of any of its obligations under the Agreement that they have failed to remedy to the satisfaction of the Fund;
- A failure by the Admission Body to pay any sums due to the Fund within the period required by the Fund; or
- The failure by the Admission Body to renew or adjust the level of the bond or indemnity, or to confirm an appropriate alternative guarantor, as required by the Fund.

On cessation, the Administering Authority will instruct the Fund actuary to carry out a cessation valuation to determine whether there is any deficit or surplus. Where there is a deficit, payment of this amount in full would normally be sought from the Admission Body; where there is a surplus, following the LGPS (Amendment) Regulations 2018 which came into effect on 14th May 2018, this will normally result in an exit credit payment to the Admission Body. If a risk-sharing agreement has been put in place (please see note (i) above) no cessation debt or exit credit may be payable, depending on the terms of the agreement.

As discussed in Section 2.7, the LGPS benefit structure from 1 April 2014 is currently under review following the Government's loss of the right to appeal the McCloud and other similar court cases. The Fund has considered how it will reflect the current uncertainty regarding the outcome of this judgement in its approach to cessation valuations. For cessation valuations that are carried out before any changes to the LGPS benefit structure (from

1 April 2014) are confirmed, the Fund's policy is that the actuary will apply a 1% uplift to the ceasing employer's total cessation liability, as an estimate of the possible impact of resulting benefit changes.

The Fund Actuary charges a fee for carrying out an employer's cessation valuation, and there will be other Fund administration expenses associated with the cessation, both of which the Fund may recharge to the employer. For the purposes of the cessation valuation, this fee will be treated as an expense incurred by the employer and will be deducted from the employer's cessation surplus or added to the employer's cessation deficit, as appropriate. This process improves administrative efficiency as it reduces the number of transactions required to be made between the employer and the Fund following an employer's cessation.

For non-Transferee Admission Bodies whose participation is voluntarily ended either by themselves or the Fund, or where a cessation event has been triggered, the Administering Authority must look to protect the interests of other ongoing employers. The actuary will therefore adopt an approach which, to the extent reasonably practicable, protects the other employers from the likelihood of any material loss emerging in future:

(a) Where a guarantor does not exist then, in order to protect other employers in the Fund, the cessation liabilities and final surplus/deficit will normally be calculated using a "gilts exit basis", which is more prudent than the ongoing participation basis. This has no allowance for potential future investment outperformance above gilt yields, and has added allowance for future improvements in life expectancy. This could give rise to significant cessation debts being required.

(b) Where there is a guarantor for future deficits and contributions, the details of the guarantee will be considered prior to the cessation valuation being carried out. In some cases the guarantor is simply guarantor of last resort and therefore the cessation valuation will be carried out consistently with the approach taken had there been no guarantor in place. Alternatively, where the guarantor is not simply guarantor of last resort, the cessation may be calculated using the ongoing participation basis as described in Appendix E;

(c) Again, depending on the nature of the guarantee, it may be possible to simply transfer the former Admission Body's liabilities and assets to the guarantor, without needing to crystallise any deficit or surplus. This approach may be adopted where the employer cannot pay the contributions due, and this is within the terms of the guarantee.

Under (a) and (c), any shortfall would usually be levied on the departing Admission Body as a single lump sum payment. If this is not possible then the Fund may spread the payment subject to there being some security in place for the employer such as a bond indemnity or guarantee.

In the event that the Fund is not able to recover the required payment in full, then the unpaid amounts fall to be shared amongst all of the other employers in the Fund. This may require an immediate revision to the Rates and Adjustments Certificate affecting other employers in the Fund, or instead be reflected in the contribution rates set at the next formal valuation following the cessation date.

As an alternative, where the ceasing Admission Body is continuing in business, the Fund at its absolute discretion reserves the right to enter into an agreement with the ceasing Admission Body. Under this agreement the Fund would accept an appropriate alternative security to be held against any deficit on the gilts exit basis, and would carry out the cessation valuation on the ongoing participation basis: Secondary contributions would be derived from this cessation debt. This approach would be monitored as part of each formal valuation and secondary contributions would be reassessed as required. The Admission Body may terminate the agreement only via payment of the outstanding debt assessed on the gilts exit basis. Furthermore, the Fund reserves the right to revert to the "gilts exit basis" and seek immediate payment of any funding shortfall identified. The Administering Authority may need to seek legal advice in such cases, as the Admission Body would have no contributing members.

3.4 Pooled contributions

From time to time, with the advice of the Actuary, the Administering Authority may set up pools for employers with similar or complementary characteristics. This will always be in line with its broader funding strategy. The current pools in place within the Fund are as follows:

- Schools generally are also pooled with their funding Council. However there may be exceptions for specialist or independent schools.
- Smaller Transferee Admission Bodies may be pooled with the letting employer, provided all parties (particularly the letting employer) agree.
- Town and Parish Councils Pre and Post 2001 Pools are generally pooled as a way of sharing experience and smoothing out the effects of costly but relatively rare events such as ill-health retirements or deaths in service.

The intention of the pool is to minimise contribution rate volatility which would otherwise occur when members join, leave, take early retirement, receive pay rises markedly different from expectations, etc. Such events can cause large changes in contribution rates for very small employers in particular, unless these are smoothed out for instance by pooling across a number of employers.

It is recognised that pooling can result in cross subsidies from one employer to another over time. This can arise from the different membership profiles of the different employers within a pool and from different experience. Over longer time periods, it would be expected that the experience will even out between employers and that each employer, will on average, pay a fair level of contributions. The pools will be reviewed at each valuation to determine if the membership remains appropriate.

On the other hand it should be noted that the employers in the pool will still have their own individual funding positions tracked by the Actuary. This may show that if they were a stand-alone employer then some employers would be much better funded, and others much more poorly funded, than the pool average. This therefore means that if any given employer was funding on a stand-alone basis, as opposed to being in the pool, then its contribution rate could be much higher or lower than the pool contribution rate.

It should also be noted that, if an employer is considering ceasing from the Fund, its required contributions would be based on its own funding position (rather than the pool average), and the cessation terms would also apply: this would mean potentially very different (and in particular possibly much higher) contributions would be required from the employer in that situation.

Those employers which have been pooled are identified in the Rates and Adjustments Certificate.

Employers who are permitted to enter (or remain in) a pool at the 2019 valuation will not normally be advised of their individual contribution rate unless agreed by the Administering Authority.

Community Admission Bodies that are deemed by the Administering Authority to have closed to new entrants are not usually permitted to participate in a pool.

3.5 Additional flexibility in return for added security

The Administering Authority may permit greater flexibility to the employer's contributions if the employer provides added security to the satisfaction of the Administering Authority.

Such flexibility includes a reduced rate of contribution, an extended time horizon, or permission to join a pool with another body (e.g. the Local Authority).

Such security may include, but is not limited to, a suitable bond, a legally-binding guarantee from an appropriate third party, or security over an employer asset of sufficient value.

The degree of flexibility given may take into account factors such as:

- the extent of the employer's deficit;
- the amount and quality of the security offered;
- the employer's financial security and business plan; and
- whether the admission agreement is likely to be open or closed to new entrants.

3.6 Non-ill health early retirement costs

It is assumed that members' benefits are payable from the earliest age that the employee could retire without incurring a reduction to their benefit (and without requiring their employer's consent to retire). (**NB** the relevant age may be different for different periods of service, following the benefit changes from April 2008 and April 2014). Employers are required to pay additional contributions ('strain') wherever an employee retires before attaining this age. The actuary's funding basis makes no allowance for premature retirement except on grounds of ill-health.

Strain costs would ordinarily be paid in full in the year in which the strain is incurred.

3.7 Ill health early retirement costs

In the event of a member's early retirement on the grounds of ill-health, a funding strain will usually arise, which can be very large. Such strains are currently met by each employer, although individual employers may elect to take external insurance (see 3.8 below).

To mitigate this risk, individual employers may elect to use external insurance, which has been made available by the Fund (see 3.8 below).

3.8 Ill health risk management

The Fund recognises ill health early retirement costs can have a significant impact on an employer's funding and contribution rate, which could ultimately jeopardise their continued operation.

The Administering Authority is currently reviewing its policy on managing ill health early retirement costs.

If an employer provides satisfactory evidence to the Administering Authority of a current external insurance policy covering ill health early retirement strains, then:

- the employer's contribution to the Fund each year is reduced by the amount of that year's insurance premium, so that the total contribution is unchanged, and
- there is no need for monitoring of ill health allowances versus experience (as typically required for some employers).

When an active member retires on ill health early retirement the claim amount will be paid directly from the insurer to the insured employer. This amount should then be paid to the Fund to allow the employer's asset share to be credited.

The employer must keep the Administering Authority notified of any changes in the insurance policy's coverage or premium terms, or if the policy is ceased.

3.9 Employers with no remaining active members

In general an employer ceasing in the Fund, due to the departure of the last active member, will pay a cessation debt or receive an exit credit on an appropriate basis (see 3.3, Note (j)) and consequently have no further obligation to the Fund. Thereafter it is expected that one of three situations will eventually arise:

a) The employer's asset share runs out before all its ex-employees' benefits have been paid. In this situation the other Fund employers will be required to contribute to pay all remaining benefits: this will be done by the Fund actuary apportioning the remaining liabilities on a pro-rata basis at successive formal valuations;

b) The last ex-employee or dependant dies before the employer's asset share has been fully utilised. In this situation the remaining assets would be apportioned pro-rata by the Fund's actuary to the other Fund employers.

c) In exceptional circumstances the Fund may permit an employer with no remaining active members and a cessation deficit to continue contributing to the Fund. This would require the provision of a suitable security or guarantee, as well as a written ongoing commitment to fund the remainder of the employer's obligations over an appropriate period. The Fund would reserve the right to invoke the cessation requirements in the future, however. The Administering Authority may need to seek legal advice in such cases, as the employer would have no contributing members.

3.10 Policies on bulk transfers

The Fund has a separate written policy which covers bulk transfer payments into, out of and within the Fund. Each case will be treated on its own merits, but in general:

- The Fund will not pay bulk transfers greater than the lesser of (a) the asset share of the transferring employer in the Fund, and (b) the value of the past service liabilities of the transferring members;
- The Fund will not grant added benefits to members bringing in entitlements from another Fund unless the asset transfer is sufficient to meet the added liabilities; and
- The Fund may permit shortfalls to arise on bulk transfers if the Fund employer has suitable strength of covenant and commits to meeting that shortfall in an appropriate period. This may require the employer's Fund contributions to increase between valuations.

3.11 Policies on intra-fund transfers

Where members transfer between employers within the Derbyshire Pension Fund, the assets that will be transferred from the transferring employer's asset share to the receiving employer's asset share will depend on the circumstances of the member(s)' transfer. In particular:

- Note (g) to Table 3.3 explains how assets will be allocated to new academy schools when members transfer from the ceding employer at the academy conversion date;
- Note (i) to Table 3.3 explains how assets will be allocated to new transferee admission bodies when services are outsourced from a scheduled body;
- If an individual member changes his/her employment from one employer in the Fund to another employer in the Fund, assets equal to the individual's cash equivalent transfer value (using standard Club factors) will be transferred from the transferring employer to the receiving employer;

- For all other cases, the Fund’s default approach will be to transfer assets equal to the transferring liabilities (assessed on the Fund’s ongoing funding basis) from the transferring employer’s asset share to the receiving employer’s asset share, unless there are specific circumstances which would merit an alternative approach.

4 Funding strategy and links to investment strategy

4.1 What is the Fund's investment strategy?

The Fund has built up assets over the years, and continues to receive contribution and other income. All of this must be invested in a suitable manner, which is the investment strategy.

Investment strategy is set by the Administering Authority, after consultation with the employers and after taking investment advice. The precise mix, manager make up and target returns are set out in the Investment Strategy Statement, which is available to members and employers.

The investment strategy is set for the long-term, but is reviewed from time to time. Normally a full review is carried out as part of each actuarial valuation, and is kept under review annually between actuarial valuations to ensure that it remains appropriate to the Fund's liability profile.

The same investment strategy is currently followed for all employers.

4.2 What is the link between funding strategy and investment strategy?

The Fund must be able to meet all benefit payments as and when they fall due. These payments will be met by contributions (resulting from the funding strategy) or asset returns and income (resulting from the investment strategy). To the extent that investment returns or income fall short, then higher cash contributions are required from employers, and vice versa

Therefore, the funding and investment strategies are inextricably linked.

4.3 How does the funding strategy reflect the Fund's investment strategy?

In the opinion of the Fund actuary, the current funding policy is consistent with the current investment strategy of the Fund. The actuary's assumptions for future investment returns (described further in Appendix E) are based on the current benchmark investment strategy of the Fund. The future investment return assumptions underlying each of the fund's three funding bases include a margin for prudence, and are therefore also considered to be consistent with the requirement to take a "prudent longer-term view" of the funding of liabilities as required by the UK Government (see Appendix A1).

In the short term – such as the three yearly assessments at formal valuations – there is the scope for considerable volatility in asset values. However, the actuary takes a long term view when assessing employer contribution rates and the contribution rate setting methodology takes into account this potential variability.

The Fund does not hold a contingency reserve to protect it against the volatility of equity investments.

4.4 Does the Fund monitor its overall funding position?

The Administering Authority will monitor the relative funding position, i.e. changes in the relationship between asset values and the liabilities value, on an annual basis. It will report this to the regular Pensions Committee meetings, and also to employers through newsletters and Employers Forums.

5 Statutory reporting and comparison to other LGPS Funds

5.1 Purpose

Under Section 13(4)(c) of the Public Service Pensions Act 2013 ("Section 13"), the Government Actuary's Department must, following each triennial actuarial valuation, report to MHCLG on each of the LGPS Funds in England & Wales. This report will cover whether, for each Fund, the rate of employer contributions are set at an appropriate level to ensure both the solvency and the long term cost efficiency of the Fund.

This additional MHCLG oversight may have an impact on the strategy for setting contribution rates at future valuations.

5.2 Solvency

For the purposes of Section 13, the rate of employer contributions shall be deemed to have been set at an appropriate level to ensure solvency if:

(a) the rate of employer contributions is set to target a funding level for the Fund of 100%, over an appropriate time period and using appropriate actuarial assumptions (where appropriateness is considered in both absolute and relative terms in comparison with other funds); and either

(b) employers collectively have the financial capacity to increase employer contributions, and/or the Fund is able to realise contingent assets should future circumstances require, in order to continue to target a funding level of 100%; or

(c) there is an appropriate plan in place should there be, or if there is expected in future to be, a material reduction in the capacity of fund employers to increase contributions as might be needed.

5.3 Long Term Cost Efficiency

The rate of employer contributions shall be deemed to have been set at an appropriate level to ensure long term cost efficiency if:

i. the rate of employer contributions is sufficient to make provision for the cost of current benefit accrual,

ii. an appropriate adjustment is made to that rate for any surplus or deficit in the Fund.

In assessing whether the above condition is met, MHCLG may have regard to various absolute and relative considerations. A relative consideration is primarily concerned with comparing LGPS pension funds with other LGPS pension funds. An absolute consideration is primarily concerned with comparing Funds with a given objective benchmark.

Relative considerations include:

1. the implied deficit recovery period; and
2. the investment return required to achieve full funding after 20 years.

Absolute considerations include:

1. the extent to which the contributions payable are sufficient to cover the cost of current benefit accrual and the interest cost on any deficit;
2. how the required investment return under "relative considerations" above compares to the estimated future return being targeted by the Fund's current investment strategy;
3. the extent to which contributions actually paid have been in line with the expected contributions based on the extant rates and adjustment certificate; and
4. the extent to which any new deficit recovery plan can be directly reconciled with, and can be demonstrated to be a continuation of, any previous deficit recovery plan, after allowing for actual Fund experience.

MHCLG may assess and compare these metrics on a suitable standardised market-related basis, for example where the local funds' actuarial bases do not make comparisons straightforward.

Appendix A – Regulatory framework

A1 Why does the Fund need an FSS?

The Ministry of Housing, Communities and Local Government (MHCLG) has stated that the purpose of the FSS is:

*"to establish a **clear and transparent fund-specific strategy** which will identify how employers' pension liabilities are best met going forward;*

*to support the regulatory framework to maintain **as nearly constant employer contribution rates as possible**; and*

*to take a **prudent longer-term view** of funding those liabilities."*

These objectives are desirable individually, but may be mutually conflicting.

The requirement to maintain and publish a FSS is contained in LGPS Regulations which are updated from time to time. In publishing the FSS the Administering Authority has to have regard to any guidance published by Chartered Institute of Public Finance and Accountancy (CIPFA) (most recently in 2016) and to its Statement of Investment Principles / Investment Strategy Statement.

This is the framework within which the Fund's actuary carries out triennial valuations to set employers' contributions and provides recommendations to the Administering Authority when other funding decisions are required, such as when employers join or leave the Fund. The FSS applies to all employers participating in the Fund.

A2 Does the Administering Authority consult anyone on the FSS?

Yes. This is required by LGPS Regulations. It is covered in more detail by the most recent CIPFA guidance, which states that the FSS must first be subject to "consultation with such persons as the authority considers appropriate", and should include "a meaningful dialogue at officer and elected member level with council tax raising authorities and with corresponding representatives of other participating employers".

In practice, for the Fund, the consultation process for this FSS was as follows:

a) A draft version of the FSS was issued to all participating employers, members of the Derbyshire Pension Board and published on the Fund's website in [DATE] for comment ;

b) Comments were requested within XX days;

c) Following the end of the consultation period the FSS was updated where required and then published, in [DATE].

A3 How is the FSS published?

The FSS is made available through the following routes:

Published on the website

A copy sent by e-mail to each participating employer in the Fund;

A copy sent to by e-mail to the members of the Derbyshire Pension Board.

A link to the FSS is included in the annual report and accounts of the Fund;

A copy sent by email to the Fund's independent investment adviser;

Copies made available on request.

A4 How often is the FSS reviewed?

The FSS is reviewed in detail at least every three years as part of the triennial valuation (which may move to every four years in future – see Section 2.8). This version is expected to remain unaltered until it is consulted upon as part of the formal process for the next valuation.

It is possible that (usually slight) amendments may be needed within the three year period. These would be needed to reflect any regulatory changes, or alterations to the way the Fund operates (e.g. to accommodate a new class of employer). Any such amendments would be consulted upon as appropriate:

- trivial amendments would be simply notified at the next round of employer communications,
- amendments affecting only one class of employer would be consulted with those employers,
- other more significant amendments would be subject to full consultation.

In any event, changes to the FSS would need agreement by the Pensions and Investments Committee and would be included in the relevant Committee Meeting minutes.

A5 How does the FSS fit into other Fund documents?

The FSS is a summary of the Fund's approach to funding liabilities. It is not an exhaustive statement of policy on all issues, for example there are a number of separate statements published by the Fund including the Investment Strategy Statement, Admissions, Cessations and Bulk Transfers policies, Governance Strategy and Communications Strategy. In addition, the Fund publishes an Annual Report and Accounts with up to date information on the Fund.

These documents can be found on the web at www.derbyshire.gov.uk/pensions

Appendix B – Responsibilities of key parties

The efficient and effective operation of the Fund needs various parties to each play their part.

B1 The Administering Authority should:-

1. operate the Fund as per the LGPS Regulations;
2. effectively manage any potential conflicts of interest arising from its dual role as Administering Authority and a Fund employer;
3. collect employer and employee contributions, and investment income and other amounts due to the Fund;
4. ensure that cash is available to meet benefit payments as and when they fall due;
5. pay from the Fund the relevant benefits and entitlements that are due;
6. invest surplus monies (i.e. contributions and other income which are not immediately needed to pay benefits) in accordance with the Fund's Investment Strategy Statement (ISS) and LGPS Regulations;
7. communicate appropriately with employers so that they fully understand their obligations to the Fund;
8. take appropriate measures to safeguard the Fund against the consequences of employer default;
9. manage the valuation process in consultation with the Fund's actuary;
10. provide data and information as required by the Government Actuary's Department to carry out their statutory obligations (see Section 5);
11. prepare and maintain a FSS and a ISS, after consultation;
12. notify the Fund's actuary of material changes which could affect funding (this is covered in a separate agreement with the actuary); and
13. monitor all aspects of the fund's performance and funding and amend the FSS and ISS as necessary and appropriate.

B2 The Individual Employer should:-

1. deduct contributions from employees' pay correctly;
2. pay all contributions, including their own as determined by the actuary, promptly by the due date;
3. have a policy and exercise discretions within the regulatory framework;
4. make additional contributions in accordance with agreed arrangements in respect of, for example, augmentation of scheme benefits, early retirement strain; and
5. notify the Administering Authority promptly of all changes to its circumstances, prospects or membership, which could affect future funding.

B3 The Fund Actuary should:-

1. prepare valuations, including the setting of employers' contribution rates. This will involve agreeing assumptions with the Administering Authority, having regard to the FSS and LGPS Regulations, and targeting each employer's solvency appropriately;
2. provide data and information as required by the Government Actuary's Department to carry out their statutory obligations (see Section 5);
3. provide advice relating to new employers in the Fund, including the level and type of bonds or other forms of security (and the monitoring of these);

4. prepare advice and calculations in connection with bulk transfers and individual benefit-related matters;
5. assist the Administering Authority in considering possible changes to employer contributions between formal valuations, where circumstances suggest this may be necessary;
6. advise on the termination of employers' participation in the Fund; and
7. fully reflect actuarial professional guidance and requirements in the advice given to the Administering Authority.

B4 Other parties:-

1. investment advisers (either internal or external) should ensure the Fund's ISS remains appropriate, and consistent with this FSS;
2. investment managers, custodians and bankers should all play their part in the effective investment (and dis-investment) of Fund assets, in line with the ISS;
3. auditors should comply with their auditing standards, ensure Fund compliance with all requirements, monitor and advise on fraud detection, and sign off annual reports and financial statements as required;
4. governance advisers may be appointed to advise the Administering Authority on efficient processes and working methods in managing the Fund;
5. legal advisers (either internal or external) should ensure the Fund's operation and management remains fully compliant with all regulations and broader local government requirements, including the Administering Authority's own procedures;
6. MHCLG (assisted by the Government Actuary's Department) and the Scheme Advisory Board, should work with LGPS Funds to meet Section 13 requirements.

Appendix C – Key risks and controls

C1 Types of risk

The Administering Authority has an active risk management programme in place. The measures that it has in place to control key risks are summarised below under the following headings:

financial;

demographic;

regulatory; and

governance.

C2 Financial risks

Risk	Summary of Control Mechanisms
Fund assets fail to deliver returns in line with the anticipated returns underpinning the valuation of liabilities and contribution rates over the long-term.	Only anticipate long-term returns on a relatively prudent basis to reduce risk of under-performing. Assets invested on the basis of specialist advice, in a suitably diversified manner across asset classes, geographies, managers, etc. Analyse progress at three yearly valuations for all employers. Inter-valuation roll-forward of liabilities between valuations at whole Fund level.
Inappropriate long-term investment strategy.	Overall investment strategy options considered as an integral part of the funding strategy. Used asset liability modelling to measure 4 key outcomes. Chosen option considered to provide the best balance.
Active investment manager under-performance relative to benchmark.	Quarterly investment monitoring analyses market performance and active managers relative to their index benchmark.
Pay and price inflation significantly more than anticipated.	The focus of the actuarial valuation process is on real returns on assets, net of price and pay increases. Inter-valuation monitoring, as above, gives early warning. Some investment in bonds also helps to mitigate this risk. Employers pay for their own salary awards and should be mindful of the geared effect on pension liabilities of any bias in pensionable pay rises towards longer-serving employees.

Risk	Summary of Control Mechanisms
Effect of possible increase in employer's contribution rate on service delivery and admission/scheduled bodies	An explicit stabilisation mechanism has been agreed as part of the funding strategy. Other measures are also in place to limit sudden increases in contributions.
Orphaned employers give rise to added costs for the Fund	The Fund seeks a cessation debt (or security/guarantor) to minimise the risk of this happening in the future. If it occurs, the Actuary calculates the added cost spread pro-rata among all employers – (see 3.9).
Effect of possible asset underperformance as a result of climate change	Climate change risk is monitored via the Fund's risk register. The impact of climate change on long term funding has been modelled and considered as part of the formal 2019 actuarial valuation.

C3 Demographic risks

Risk	Summary of Control Mechanisms
Pensioners living longer, thus increasing cost to Fund.	Set mortality assumptions with some allowance for future increases in life expectancy. The Fund Actuary has direct access to the experience of over 50 LGPS funds which allows early identification of changes in life expectancy that might in turn affect the assumptions underpinning the valuation.
Maturing Fund – i.e. proportion of actively contributing employees declines relative to retired employees.	Continue to monitor at each valuation, consider seeking monetary amounts rather than % of pay and consider alternative investment strategies.
Deteriorating patterns of early retirements	Employers are charged the extra cost of non ill-health retirements following each individual decision. Employer ill health retirement experience is monitored as part of each formal actuarial valuation, and insurance is an option.
Reductions in payroll causing insufficient deficit recovery payments	In many cases this may not be sufficient cause for concern, and will in effect be caught at the next formal valuation. However, there are protections where there is concern, as follows:

Risk	Summary of Control Mechanisms
	Employers in the stabilisation mechanism may be brought out of that mechanism to permit appropriate contribution increases (see Note (b) to 3.3). For other employers, review of contributions is permitted in general between valuations (see Note (f) to 3.3) and may require a move in deficit contributions from a percentage of payroll to fixed monetary amounts.

C4 Regulatory risks

Risk	Summary of Control Mechanisms
Changes to national pension requirements and/or HMRC rules e.g. changes arising from public sector pensions reform.	The Administering Authority considers all consultation papers issued by the Government and comments where appropriate. The Administering Authority is monitoring the progress on the McCloud court case and will consider an interim valuation or other appropriate action once more information is known. The government's long term preferred solution to GMP indexation and equalisation - conversion of GMPs to scheme benefits - was built into the 2019 valuation.
Time, cost and/or reputational risks associated with any MHCLG intervention triggered by the Section 13 analysis (see Section 5).	Take advice from Fund Actuary on position of Fund as at prior valuation, and consideration of proposed valuation approach relative to anticipated Section 13 analysis.
Changes by Government to particular employer participation in LGPS Funds, leading to impacts on funding and/or investment strategies.	The Administering Authority considers all consultation papers issued by the Government and comments where appropriate. Take advice from Fund Actuary on impact of changes on the Fund and amend strategy as appropriate.

C5 Governance risks

Risk	Summary of Control Mechanisms
Administering Authority unaware of structural changes in an employer's membership (e.g. large fall in employee members, large number of retirements) or not advised of an employer closing to new entrants.	The Administering Authority has a close relationship with employing bodies and communicates required standards e.g. for submission of data. The Actuary may revise the rates and Adjustments certificate to increase an employer's contributions between triennial valuations Deficit contributions may be expressed as monetary amounts.
Actuarial or investment advice is not sought, or is not heeded, or proves to be insufficient in some way	The Administering Authority maintains close contact with its specialist advisers. Advice is delivered via formal meetings involving Elected Members, and recorded appropriately. Actuarial advice is subject to professional requirements such as peer review.
Administering Authority failing to commission the Fund Actuary to carry out a termination valuation for a departing Admission Body.	The Administering Authority requires employers with Best Value contractors to inform it of forthcoming changes. Community Admission Bodies' memberships are monitored and, if active membership decreases, steps will be taken to minimise the risk of the employer leaving behind an unpaid debt if it were to exit.
An employer ceasing to exist with insufficient funding or adequacy of a bond.	The Administering Authority believes that it would normally be too late to address the position if it was left to the time of departure. The risk is mitigated by: Seeking a funding guarantee from another scheme employer, or external body, where-ever possible (see Notes (h) and (j) to 3.3). Alerting the prospective employer to its obligations and encouraging it to take independent actuarial advice. Vetting prospective employers before admission. Where permitted under the regulations requiring a bond to protect the Fund from various risks. Requiring new Community Admission Bodies to have a guarantor.

Risk	Summary of Control Mechanisms
	Reviewing bond or guarantor arrangements at regular intervals (see Note (f) to 3.3). Reviewing contributions well ahead of cessation if thought appropriate (see Note (a) to 3.3).
An employer ceasing to exist resulting in an exit credit being payable	The Administering Authority regularly monitors admission bodies coming up to cessation. The Administering Authority invests in liquid assets to ensure that exit credits can be paid when required.

Appendix D – The calculation of Employer contributions

In Section 2 there was a broad description of the way in which contribution rates are calculated. This Appendix considers these calculations in much more detail.

As discussed in Section 2, the actuary calculates the required contribution rate for each employer using a three-step process:

- Calculate the funding target for that employer, i.e. the estimated amount of assets it should hold in order to be able to pay all its members' benefits. See Appendix E for more details of what assumptions we make to determine that funding target;
- Determine the time horizon over which the employer should aim to achieve that funding target. See the table in 3.3 and Note (c) for more details;
- Calculate the employer contribution rate such that it has at least a given likelihood of achieving that funding target over that time horizon, allowing for various possible economic outcomes over that time horizon. See the table in 3.3 Note (e) for more details.

The calculations involve actuarial assumptions about future experience, and these are described in detail in Appendix E.

D1 What is the difference between calculations across the whole Fund and calculations for an individual employer?

Employer contributions are normally made up of two elements:

a) the estimated cost of ongoing benefits being accrued, referred to as the "Primary contribution rate" (see D2 below); plus

b) an adjustment for the difference between the Primary rate above, and the actual contribution the employer needs to pay, referred to as the "Secondary contribution rate" (see D3 below).

The contribution rate for each employer is measured as above, appropriate for each employer's assets, liabilities and membership. The whole Fund position, including that used in reporting to MHCLG (see section 5), is calculated in effect as the sum of all the individual employer rates. MHCLG currently only regulates at whole Fund level, without monitoring individual employer positions.

D2 How is the Primary contribution rate calculated?

The Primary element of the employer contribution rate is calculated with the aim that these contributions will meet benefit payments in respect of members' **future** service in the Fund. This is based upon the cost (in excess of members' contributions) of the benefits which employee members earn from their service each year.

The Primary rate is calculated separately for all the employers, although employers within a pool will pay the contribution rate applicable to the pool as a whole. The Primary rate is calculated such that it is projected to:

1. meet the required funding target for all future years' accrual of benefits*, excluding any accrued assets,
2. within the determined time horizon (see note 3.3 Note (c) for further details),
3. with a sufficiently high likelihood, as set by the Fund's strategy for the category of employer (see 3.3 Note (e) for further details).

* The projection is for the current active membership where the employer no longer admits new entrants, or additionally allows for new entrants where this is appropriate.

The projections are carried out using an economic modeller (the "Economic Scenario Service") developed by the Fund's actuary Hymans Robertson: this allows for a wide range of outcomes as regards key factors such as asset returns (based on the Fund's investment strategy), inflation, and bond yields. Further information about this model is included in Appendix E. The measured contributions are calculated such that the proportion of outcomes meeting the employer's funding target (at the end of the time horizon) is equal to the required likelihood.

The approach includes expenses of administration to the extent that they are borne by the Fund, and includes allowances for benefits payable on death in service and on ill health retirement.

D3 How is the Secondary contribution rate calculated?

The Fund aims for the employer to have assets sufficient to meet 100% of its accrued liabilities at the end of its funding time horizon based on the employer's funding target assumptions (see Appendix E).

The Secondary rate is calculated as the balance over and above the Primary rate, such that the total contribution rate is projected to:

1. meet the required funding target relating to combined past and future service benefit accrual, including accrued asset share (see D5 below)
2. at the end of the determined time horizon (see 3.3 Note (c) for further details)
3. with a sufficiently high likelihood, as set by the Fund's strategy for the category of employer (see 3.3 Note (e) for further details).

The projections are carried out using an economic modeller (the "Economic Scenario Service") developed by the Fund Actuary Hymans Robertson: this allows for a wide range of outcomes as regards key factors such as asset returns (based on the Fund's investment strategy), inflation, and bond yields. Further information about this model is included in Appendix E. The measured contributions are calculated such that the proportion of outcomes meeting the employer's funding target (at the end of the time horizon) is equal to the required likelihood.

D4 What affects a given employer's valuation results?

The results of these calculations for a given individual employer will be affected by:

1. past contributions relative to the cost of accruals of benefits;
2. different liability profiles of employers (e.g. mix of members by age, gender, service vs. salary);
3. the effect of any differences in the funding target, i.e. the valuation basis used to value the employer's liabilities at the end of the time horizon;
4. any different time horizons;
5. the difference between actual and assumed rises in pensionable pay;
6. the difference between actual and assumed increases to pensions in payment and deferred pensions;
7. the difference between actual and assumed retirements on grounds of ill-health from active status;
8. the difference between actual and assumed amounts of pension ceasing on death;

9. the additional costs of any non ill-health retirements relative to any extra payments made; and/or

10. differences in the required likelihood of achieving the funding target.

D5 How is each employer's asset share calculated?

The Administering Authority does not operate separate bank accounts or investment mandates for each employer. Therefore it cannot account for each employer's assets separately. Instead, the Fund Actuary must apportion the assets of the whole Fund between the individual employers. There are broadly two ways to do this:

1) A technique known as "analysis of surplus" in which the Fund actuary estimates the surplus/deficit of an employer at the current valuation date by analysing movements in the surplus/deficit from the previous actuarial valuation date. The estimated surplus/deficit is compared to the employer's liability value to calculate the employer's asset value. The actuary will quantify the impact of investment, membership and other experience to analyse the movement in the surplus/deficit. This technique makes a number of simplifying assumptions due to the unavailability of certain items of information. This leads to a balancing, or miscellaneous, item in the analysis of surplus, which is split between employers in proportion to their asset shares.

2) A 'cashflow approach' in which an employer's assets are tracked over time allowing for cashflows paid in (contributions, transfers in etc.), cashflows paid out (benefit payments, transfers out etc.) and investment returns on the employer's assets.

Until 31 March 2016 the Administering Authority used the 'analysis of surplus' approach to apportion the Fund's assets between individual employers.

Since then, the Fund has adopted a cashflow approach for tracking individual employer assets.

The Fund Actuary tracks employer assets on an annual basis. Starting with each employer's assets from the previous year end, cashflows paid in/out and investment returns achieved on the Fund's assets over the course of the year are added to calculate an asset value at the year end. The approach has some simplifying assumptions in that all cashflows and investment returns are assumed to have occurred uniformly over the course of the year. As the actual timing of cashflows and investment returns are not allowed for, the sum of all employers' asset values will deviate from the whole fund asset total over time (the deviation is expected to be minor). The difference is split between employers in proportion to their asset shares at each triennial valuation.

D6 How does the Fund adjust employer asset shares when an individual member moves from one employer in the Fund to another?

Under the cashflow approach for tracking employer asset shares, the Fund has allowed for any individual members transferring from one employer in the Fund to another, via the transfer of a sum from the ceding employer's asset share to the receiving employer's asset share. This sum is equal to the member's Cash Equivalent Transfer Value (CETV) as advised by the Fund's administrators.

Appendix E – Actuarial assumptions

E1 What are the actuarial assumptions used to calculate employer contribution rates?

These are expectations of future experience used to place a value on future benefit payments ("the liabilities") and future asset values. Assumptions are made about the amount of benefit payable to members (the financial assumptions) and the likelihood or timing of payments (the demographic assumptions). For example, financial assumptions include investment returns, salary growth and pension increases; demographic assumptions include life expectancy, probabilities of ill-health early retirement, and proportions of member deaths giving rise to dependants' benefits.

Changes in assumptions will affect the funding target and required contribution rate. However, different assumptions will not of course affect the actual benefits payable by the Fund in future.

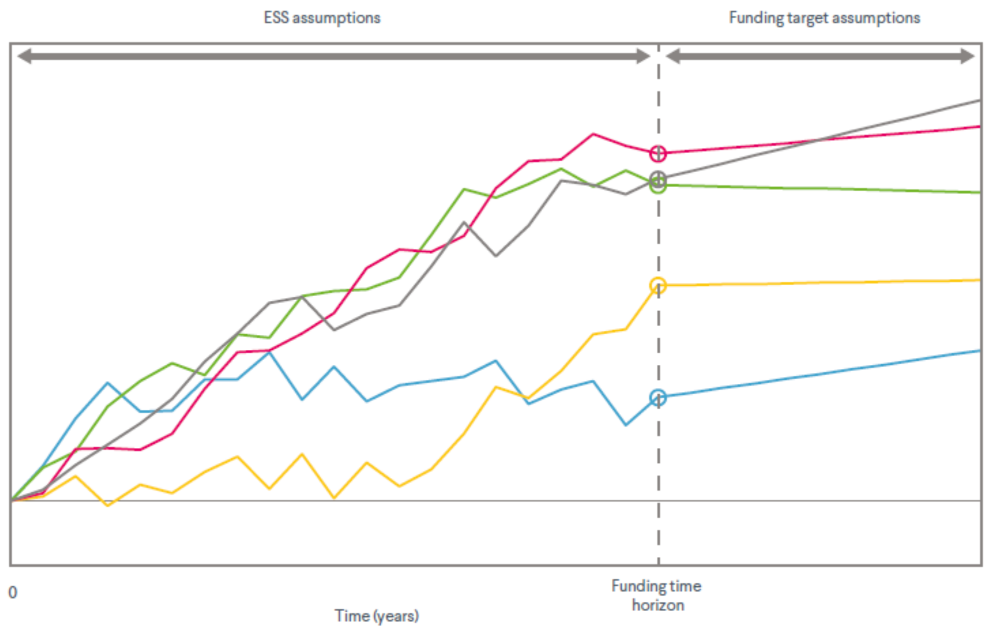
For instance, taking pension increases (which follow price inflation) as an example:

- a higher assumed rate of increase will give higher assumed costs and hence higher calculated contributions;
- the actual cost of pensions will vary by the rate of actual price inflation, not what had been assumed in the past.

The actuary's approach to calculating employer contribution rates involves the projection of each employer's future benefit payments, contributions and investment returns into the future under 5,000 possible economic scenarios. Future inflation (and therefore benefit payments) and investment returns for each asset class (and therefore employer asset values) are variables in the projections. By projecting the evolution of an employer's assets and benefit payments 5,000 times, a contribution rate can be set that results in a sufficient number of these future projections (determined by the employer's required likelihood) being successful at the end of the employer's time horizon. In this context, a successful contribution rate is one which results in the employer having met its funding target at the end of the time horizon.

Setting employer contribution rates therefore requires two types of assumptions to be made about the future:

1. Assumptions to project the employer's assets, benefits and cashflows to the end of the funding time horizon. For this purpose the actuary uses Hymans Robertson's proprietary stochastic economic model - the Economic Scenario Service ("ESS").
2. Assumptions to assess whether, for a given projection, the funding target is satisfied at the end of the time horizon. For this purpose, the Fund has two different funding bases – see E3 below.



Details on the ESS assumptions and funding target assumptions are included below (in E2 and E3 respectively).

E2 What assumptions are used in the ESS?

The actuary uses Hymans Robertson's ESS model to project a range of possible outcomes for the future behaviour of asset returns and economic variables. With this type of modelling, there is no single figure for an assumption about future inflation or investment returns. Instead, there is a range of what future inflation or returns will be which leads to likelihoods of the assumption being higher or lower than a certain value.

The ESS is a complex model to reflect the interactions and correlations between different asset classes and wider economic variables. The table below shows the calibration of the model as at 31 March 2019. All returns are shown net of fees and are the annualised total returns over 5, 10 and 20 years, except for the yields which refer to the simulated yields at that time horizon.

		Annualised total returns									
		Cash	Index Linked Gilts (medium)	Fixed Interest Gilts (medium)	UK Equity	Overseas Equity	Property	A rated corporate bonds (medium)	RPI inflation expectation	17 year real govt bond yield	17 year govt bond yield
5 years	16th %'ile	-0.4%	-2.3%	-2.9%	-4.1%	-4.1%	-3.5%	-2.7%	1.9%	-2.5%	0.8%
	50th %'ile	0.7%	0.5%	0.3%	4.0%	4.1%	2.4%	0.8%	3.3%	-1.7%	2.1%
	84th %'ile	2.0%	3.3%	3.4%	12.7%	12.5%	8.8%	4.0%	4.9%	-0.8%	3.6%
10 years	16th %'ile	-0.2%	-1.8%	-1.3%	-1.5%	-1.4%	-1.5%	-0.9%	1.9%	-2.0%	1.2%
	50th %'ile	1.3%	0.0%	0.2%	4.6%	4.7%	3.1%	0.8%	3.3%	-0.8%	2.8%
	84th %'ile	2.9%	1.9%	1.7%	10.9%	10.8%	7.8%	2.5%	4.9%	0.4%	4.8%
20 years	16th %'ile	0.7%	-1.1%	0.1%	1.2%	1.3%	0.6%	0.7%	2.0%	-0.7%	2.2%
	50th %'ile	2.4%	0.3%	1.0%	5.7%	5.8%	4.3%	1.9%	3.2%	0.8%	4.0%
	84th %'ile	4.5%	2.0%	2.0%	10.3%	10.4%	8.1%	3.0%	4.7%	2.2%	6.3%
	Volatility (Disp) (1 yr)	1%	7%	10%	17%	17%	14%	11%	1%		

E3 What assumptions are used in the funding target?

At the end of an employer's funding time horizon, an assessment will be made – for each of the 5,000 projections – of how the assets held compare to the value of assets required to meet the future benefit payments (the funding target). Valuing the cost of future benefits requires the actuary to make assumptions about the following financial factors:

- Benefit increases and CARE revaluation
- Salary growth
- Investment returns (the "discount rate")

Each of the 5,000 projections represents a different prevailing economic environment at the end of the funding time horizon and so a single, fixed value for each assumption is unlikely to be appropriate for every projection. For example, a high assumed future investment return (discount rate) would not be prudent in projections with a weak outlook for economic growth. Therefore, instead of using a fixed value for each assumption, the actuary references economic indicators to ensure the assumptions remain appropriate for the prevailing economic environment in each projection. The economic indicators the actuary uses are: future inflation expectations and the prevailing risk free rate of return (the yield on long term UK government bonds is used as a proxy for this rate).

The Fund has two funding bases which will apply to different employers depending on their type. Each funding basis has a different assumption for future investment returns when determining the employer's funding target.

Funding basis	**Ongoing participation basis**	**Low risk exit basis**
Employer type	All employers except closed Community Admission Bodies	Community Admission Bodies that are closed to new entrants
Investment return assumption underlying the employer's funding target (at the end of its time horizon)	Long term government bond yields plus an asset outperformance assumption (AOA) of 1.8% p.a.	Long term government bond yields with no allowance for outperformance on the Fund's assets

E4 What other assumptions apply?

The following assumptions are those of the most significance used in both the projection of the assets, benefits and cashflows and in the funding target.

a) Salary growth

After discussion with Fund officers, the salary increase assumption at the 2019 valuation has been set to be a blended rate combined of:

1. 2% p.a. until 31 March 2022, followed by
2. the retail prices index (RPI) thereafter.

This gives a single "blended" assumption of CPI plus 0.7%. This is a change from the previous valuation, which assumed a blended assumption of CPI plus 0.6%. The change has led to a reduction in the funding target (all other things being equal).

b) Pension increases

Since 2011 the consumer prices index (CPI), rather than RPI, has been the basis for increases to public sector pensions in deferment and in payment. Note that the basis of such increases is set by the Government, and is not under the control of the Fund or any employers.

At this valuation, we have continued to assume that CPI is 1.0% per annum lower than RPI. (Note that the reduction is applied in a geometric, not arithmetic, basis).

c) Life expectancy

The demographic assumptions are intended to be best estimates of future experience in the Fund based on past experience of LGPS funds which participate in Club Vita, the longevity analytics service used by the Fund, and endorsed by the actuary.

The longevity assumptions that have been adopted at this valuation are a bespoke set of "VitaCurves", produced by the Club Vita's detailed analysis, which are specifically tailored to fit the membership profile of the Fund. These curves are based on the data provided by the Fund for the purposes of this valuation.

Allowance has been made in the ongoing valuation basis for future improvements in line with the 2018 version of the Continuous Mortality Investigation model published by the Actuarial Profession and a 1.25% per annum minimum underpin to future reductions in mortality rates. This updated allowance for future improvements will generally result in lower life expectancy assumptions and hence a reduced funding target (all other things being equal).

d) General

The same financial assumptions are adopted for most employers (on the ongoing participation basis identified above), in deriving the funding target underpinning the Primary and Secondary rates: as described in (3.3), these calculated figures are translated in different ways into employer contributions, depending on the employer's circumstances.

The demographic assumptions, in particular the life expectancy assumption, in effect vary by type of member and so reflect the different membership profiles of employers.

Appendix F – Glossary

Administering Authority	The council with statutory responsibility for running the Fund, in effect the Fund's "trustees".
Admission Bodies	Employers where there is an Admission Agreement setting out the employer's obligations. These can be Community Admission Bodies or Transferee Admission Bodies. For more details (see 2.3).
Covenant	The assessed financial strength of the employer. A strong covenant indicates a greater ability (and willingness) to pay for pension obligations in the long run. A weaker covenant means that it appears that the employer may have difficulties meeting its pension obligations in full over the longer term.
Designating Employer	Employers such as town and parish councils that are able to participate in the LGPS via resolution. These employers can designate which of their employees are eligible to join the Fund.
Employer	An individual participating body in the Fund, which employs (or used to employ) **members** of the Fund. Normally the assets and **funding target** values for each employer are individually tracked, together with its **Primary rate** at each **valuation**.
Funding basis	The combined set of assumptions made by the actuary, regarding the future, to calculate the value of the funding target at the end of the employer's time horizon. The main assumptions will relate to the level of future investment returns, salary growth, pension increases and longevity. More prudent assumptions will give a higher funding target, whereas more optimistic assumptions will give a lower funding target.
Gilt	A UK Government bond, ie a promise by the Government to pay interest and capital as per the terms of that particular gilt, in return for an initial payment of capital by the purchaser. Gilts can be "fixed interest", where the interest payments are level throughout the gilt's term, or "index-linked" where the interest payments vary each year in line with a specified index (usually RPI). Gilts can be bought as assets by the Fund, but are also used in funding as an objective measure of a risk-free rate of return.
Guarantee / guarantor	A formal promise by a third party (the guarantor) that it will meet any pension obligations not met by a specified employer. The presence of a guarantor will mean, for instance, that the Fund can consider the employer's **covenant** to be as strong as its guarantor's.
Letting employer	An employer which outsources or transfers a part of its services and workforce to another employer (usually a contractor). The contractor will pay towards the LGPS benefits accrued by the transferring members, but ultimately the obligation to pay for these benefits will revert to the letting employer. A letting employer will usually be a local authority, but can sometimes be another type of employer such as an Academy.

LGPS
The Local Government Pension Scheme, a public sector pension arrangement put in place via Government Regulations, for workers in local government. These Regulations also dictate eligibility (particularly for Scheduled Bodies), members' contribution rates, benefit calculations and certain governance requirements. The LGPS is divided into 100 Funds which map the UK. Each LGPS Fund is autonomous to the extent not dictated by Regulations, e.g. regarding investment strategy, employer contributions and choice of advisers.

Maturity
A general term to describe a Fund (or an employer's position within a Fund) where the members are closer to retirement (or more of them already retired) and the investment time horizon is shorter. This has implications for investment strategy and, consequently, funding strategy.

Members
The individuals who have built up (and may still be building up) entitlement in the Fund. They are divided into actives (current employee members), deferreds (ex-employees who have not yet retired) and pensioners (ex-employees who have now retired, and dependants of deceased ex-employees).

Primary contribution rate
The employer contribution rate required to pay for ongoing accrual of active members' benefits (including an allowance for administrative expenses). See Appendix D for further details.

Profile
The profile of an employer's membership or liability reflects various measurements of that employer's **members**, ie current and former employees. This includes: the proportions which are active, deferred or pensioner; the average ages of each category; the varying salary or pension levels; the lengths of service of active members vs their salary levels, etc. A membership (or liability) profile might be measured for its **maturity** also.

Rates and Adjustments Certificate
A formal document required by the LGPS Regulations, which must be updated at the conclusion of the formal **valuation**. This is completed by the actuary and confirms the contributions to be paid by each employer (or pool of employers) in the Fund for the period until the next valuation is completed.

Scheduled Bodies
Types of employer explicitly defined in the LGPS Regulations, whose employees must be offered membership of their local LGPS Fund. These include Councils, colleges, universities, academies, police and fire authorities etc, other than employees who have entitlement to a different public sector pension scheme (e.g. teachers, police and fire officers, university lecturers).

Secondary contribution rate
The difference between the employer's actual and **Primary contribution rates**. See Appendix D for further details.

Stabilisation
Any method used to smooth out changes in employer contributions from one year to the next. This is very broadly required by the LGPS Regulations, but in practice is particularly employed for large stable employers in the Fund.

Valuation
A risk management exercise to review the **Primary and Secondary contribution rates**, and other statutory information for a Fund, and usually individual employers too.

By virtue of paragraph(s) 3 of Part 1 of Schedule 12A
of the Local Government Act 1972.

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