Investment Strategy Statement (June 2018)

Introduction and background

This is the Investment Strategy Statement ("ISS") of the Tyne and Wear Pension Fund ("the Fund"), which is administered by South Tyneside Council ("the Administering Authority"). The ISS is made in accordance with Regulation 7 of the Local Government Pension Scheme (Management and Investment of Funds) Regulations 2016 ("the Regulations").

The ISS has been prepared by the Fund's Pension Committee ("the Committee") having taken advice from the Fund's investment adviser, Hymans Robertson LLP. The Committee acts on the delegated authority of the Administering Authority.

The ISS, which was approved by the Committee on 12 June 2018, is subject to periodic review at least every three years and without delay after any significant change in investment policy. The Committee has consulted on the contents of the Fund's investment strategy with such persons it considers appropriate.

The Committee seeks to invest, in accordance with the ISS, any Fund money that is not needed immediately to make payments from the Fund. The ISS should be read in conjunction with the Fund's Funding Strategy Statement (dated 25 November 2016).

The suitability of particular investments and types of investments

The primary objective of the Fund is to provide pension and lump sum benefits for members on their retirement and/or benefits on death for their dependants, on a defined benefits basis. This funding position will be reviewed at each triennial actuarial valuation, or more frequently as required.

The Committee aims to fund the Fund in such a manner that, in normal market conditions, all accrued benefits are fully covered by the value of the Fund's assets and that an appropriate level of contributions is agreed by the employer to meet the cost of future benefits accruing. For employee members, benefits will be based on service completed but will take account of future salary and/or inflation increases.

The investment objective is:

- To invest the Fund money in assets of appropriate liquidity to produce income and capital growth that, together with employer and employee contributions, will meet the cost of benefits
- To keep contributions as low and as stable as possible through effective management of the assets.

The Committee has translated its objectives into a suitable strategic asset allocation benchmark for the Fund. This benchmark is consistent with the Committee's views on the appropriate balance between generating a satisfactory long-term return on investments whilst taking account of market volatility and risk and the nature of the Fund's liabilities.

It is intended that the Fund's investment strategy will be reviewed at least every three years following actuarial valuations of the Fund.

The Fund has recently carried out an asset liability modelling exercise in conjunction with the 2016 actuarial valuation. The Fund's liability data from the valuation was used in the modelling, and the implications of adopting a range of alternative contribution and investment strategies were assessed. The implications for the future evolution of the Fund were considered under a wide range of different scenarios.

The Committee assessed the likelihood of achieving their long term funding target – which was defined as achieving a fully funded position within the next 20 years. They also considered the level of downside risk associated with different strategies by identifying the low funding levels which might emerge in the event of adverse experience.

A summary of the expected returns and volatility for each asset class included in the modelling is included in Appendix 3.

This approach helps to ensure that the investment strategy takes due account of the maturity profile of the Fund (in terms of the relative proportions of liabilities in respect of pensioners, deferred and active members), together with the level of disclosed surplus or deficit (relative to the funding bases used).

The Committee has implemented a mechanism that allows tactical asset allocation decisions to be taken. The aim is to identify and benefit from valuation anomalies in asset classes that may take a number of years to correct. This operates between the long term strategic asset allocation that is set by the asset liability modelling studies and the short term positions that are adopted by the investment managers.

The detailed formal monitoring of the Fund's investments is undertaken by an Investment Panel, which is comprised of three Committee members, two of the Fund's officers and the Investment Advisor. The Panel meets quarterly to consider the investment objective and policy, opportunities to take tactical asset allocation positions and each manager's performance and process. It reports to the Committee on its findings and makes recommendations on any action that is required.

In addition, the Panel monitors the high level strategy on an ongoing basis, focusing on factors including, but not limited to:

- Suitability given the Fund's level of funding and liability profile
- The level of expected risk
- Outlook for asset returns

The Committee monitors the Fund's actual allocation on a regular basis to ensure it does not notably deviate from the target allocation. They have also employed Legal and General to carry out a rebalancing role across the Fund's allocations to liquid equity and bond classes, which they implement by using their range of passive index funds.

The performance of the Total Fund and the individual managers is measured independently by Portfolio Evaluation.

The Committee have developed a set of Investment Beliefs underlying their approach to choosing investments. These beliefs, set out in Appendix 1, are reviewed on a regular basis and in conjunction with any potential changes to the investment arrangements.

Investment of money in a wide variety of investments

Asset classes

The Fund may invest in quoted and unquoted securities of UK and overseas markets including equities and fixed interest and index linked bonds, cash and property either directly or through pooled funds. The Fund may also make use of contracts for differences and other derivatives either directly or in pooled funds investing in these products for the purpose of efficient portfolio management or to hedge specific risks.

The Committee reviews the nature of Fund investments on a regular basis, with particular reference to suitability and diversification. The Committee seeks and considers advice from a suitably qualified person in undertaking such a review. If, at any time, investment in a security or product not previously known to the Committee is proposed, appropriate advice is sought and considered to ensure its suitability and diversification.

The Committee completed a review of the investment strategy and asset allocation in March 2017. The conclusion was that they were both broadly appropriate but that a small change was required. A 3% allocation to Private Debt would be introduced, with the allocation to UK equities being reduced accordingly. This was subsequently increased to 3.5% following the removal of Trade Finance from the asset allocation strategy. In addition, Index Linked Gilts was reduced by 0.2% to reflect the reduction in the value of orphan liabilities. Emerging Market Debt was correspondingly increased.

The Fund's current investment strategy is set out below. In line with the Regulations, the authority's investment strategy does not permit more than 5% of the total value of all investments of fund money to be invested in entities which are connected with that authority within the meaning of section 212 of the Local Government and Public Involvement in Health Act 2007.

Table 1: Fund asset allocation

Asset class	Current benchmark %
Return-seeking assets - Growth	
UK equities	18.25
Overseas equities	37.25
Private Equity	7.5
Return-seeking assets - Income	
Infrastructure	2.5
UK Commercial Property	6.0
UK Residential Property	1.0
Global Property	5.0
Emerging Market Debt	1.0
Private Debt	3.5
Low risk assets	
Gilts	1.0
Index Linked Gilts	2.0
Corporate bonds	11.5
Absolute Return Bonds	3.5
Total	**100.0**

The expected return on the current portfolio is 5.1%p.a.

Further details on the Fund's risks, including the approach to mitigating risks, is provided in the following section.

Restrictions on investment

The Regulations have removed the previous restrictions that applied under the Local Government Pension Scheme (Management and Investment of Funds) Regulations 2009. The Committee's approach to setting its investment strategy and assessing the suitability of different types of investment takes account of the various risks involved and a rebalancing policy is applied to maintain the asset split close to the agreed asset allocation target. Therefore it is not felt necessary to set additional restrictions on investments.

Managers

The Committee has appointed a number of investment managers all of whom are authorised under the Financial Services and Markets Act 2000 to undertake investment business.

The Committee, after seeking appropriate investment advice, has agreed specific benchmarks with each manager so that, in aggregate, they are consistent with the overall asset allocation for the Fund. The Fund's investment managers will hold a mix of investments which reflects their views relative to their respective benchmarks. Within each major market and asset class, the managers will maintain diversified portfolios through direct investment or pooled vehicles. The manager of the passive funds in which the Fund invests holds a mix of investments within each pooled fund that reflects that of their respective benchmark indices.

Following consideration of the efficiency, liquidity and level of transaction costs likely to prevail within each market, the Committee has determined that a proportion of the Fund should be managed on a passive basis.

The current target allocation is to have 33.5% of the Fund's assets managed on a passive basis, with a control range of 28.5% to 38.5%. This target allocation will be reviewed in light of the BCPP funds to be made available under pooling.

The Committee's expectations in respect of returns from the Fund's investments are expressed through achievable and prudent objectives and restrictions that have been set for each mandate. The objectives and restrictions have been discussed and agreed with each manager to allow them to implement their natural investment style and process. The use of any financial instruments is not prohibited, except where such prohibition is required by legislation or where it has been agreed with a manager that its use is inappropriate.

When the appointment of investment managers is under consideration, the Fund requests and considers fees quotations on a range of structures, for example ad valorem, performance based and flat fees. The fees that have been accepted are those that the Fund considers will be the most economically advantageous to it over the life of the mandate.

Details of the investment managers employed by the Fund and the nature of their mandates are included in Appendix 2.

The approach to risk, including the ways in which risks are to be measured and managed

The Committee is aware that the Fund has a need to take risk (e.g. investing in growth assets) to help it achieve its funding objectives. It has an active risk management programme in place that aims to help it identify the risks being taken and put in place processes to manage, measure, monitor and (where possible) mitigate the risks being taken.

The principal risks affecting the Fund are set out below, we also discuss the Fund's approach to managing these risks and the contingency plans that are in place:

Funding risks

- Financial mismatch – The risk that Fund assets fail to grow in line with the developing cost of meeting the liabilities.

- Changing demographics –The risk that longevity improves and other demographic factors change, increasing the cost of Fund benefits.

- Systemic risk - The possibility of an interlinked and simultaneous failure of several asset classes and/or investment managers, possibly compounded by financial ‘contagion’, resulting in an increase in the cost of meeting the Fund’s liabilities.

The Committee measures and manages financial mismatch in two ways. As indicated above, the Committee has set a strategic asset allocation benchmark for the Fund. This benchmark was set taking into account asset liability modelling which focused on the probability of ‘success’, defined as achieving the funding objective, and assessing the level of downside risk. This analysis will be revisited as part of the 2019 valuation process. The Committee assesses risk relative to the strategic benchmark by monitoring the Fund’s asset allocation and investment returns relative to the benchmark. The Committee also assesses risk relative to liabilities by monitoring the delivery of benchmark returns relative to liabilities.

The Committee also seeks to understand the assumptions used in any analysis and modelling so they can be compared to their own views and the level of risks associated with these assumptions to be assessed.

The Committee seeks to mitigate systemic risk through a diversified portfolio but it is not possible to make specific provision for all possible eventualities that may arise under this heading.

Asset risks

- Concentration - The risk that a significant allocation to any single asset category and its underperformance relative to expectation would result in difficulties in achieving funding objectives.
- Illiquidity - The risk that the Fund cannot meet its immediate liabilities because it has insufficient liquid assets.
- Currency risk – The risk that the currency of the Fund’s assets underperforms relative to Sterling (i.e. the currency of the liabilities).
- Environmental, social and governance (“ESG”) – The risk that ESG related factors reduce the Fund’s ability to generate the long-term returns.
- Manager underperformance - The failure by the fund managers to achieve the rate of investment return assumed in setting their mandates.

The Committee measure and manage asset risks as follows.

The Fund’s strategic asset allocation benchmark invests in a diversified range of asset classes. The Committee has put in place rebalancing arrangements to ensure the Fund’s actual allocation does not deviate substantially from its target. The Fund invests in a range of investment mandates each of which has a defined objective, performance benchmark and manager process which, taken in aggregate, help reduce the Fund’s asset concentration risk.

By investing across a range of assets, including liquid quoted equities and bonds, as well as property, the Committee has recognised the need for access to liquidity in the short term. Liquidity risk is also controlled by estimating the net benefit outgo or inflow and ensuring that sufficient cash balances are available.

The Fund invests in a range of overseas markets which provides a diversified approach to currency markets; the Committee also assess the Fund’s currency risk during their risk analysis. Details of the Fund’s approach to managing ESG risks is set out later in this document.

The Committee has considered the risk of underperformance by any single investment manager and have attempted to reduce this risk by appointing more than one manager and having a proportion of the Fund's assets managed on a passive basis. The Committee assess the Fund's managers' performance on a regular basis, and will take steps, including potentially replacing one or more of their managers, if underperformance persists.

Other provider risk

- Transition risk - The risk of incurring unexpected costs in relation to the transition of assets among managers. When carrying out significant transitions, the Committee seeks suitable professional advice.

- Custody risk - The risk of losing economic rights to Fund assets, when held in custody or when being traded.

- Credit default - The possibility of default of a counterparty in meeting its obligations.

- Stock-lending – The possibility of default and loss of economic rights to Fund assets.

The Committee monitors and manages risks in these areas through a process of regular scrutiny of its providers, and audit of the operations it conducts for the Fund, or has delegated such monitoring and management of risk to the appointed investment managers as appropriate (e.g. custody risk in relation to pooled funds).

Custodian risk is controlled through the restrictions set out in the custodian's agreement and through the ongoing monitoring of the custodial arrangements.

Counterparty risk is controlled through the restrictions followed by the managers with respect to the trading of securities and cash management.

The Fund participates in low risk stock lending programmes run by:

- Northern Trust, its custodian, and

- Legal and General, its passive manager, where the exposure is through lending programmes in certain of the pooled investment vehicles

A separate schedule of risks that the Fund monitors is set out in the Fund's Funding Strategy Statement.

The approach to pooling investments, including the use of collective investment vehicles and shared services

The Fund is a participating scheme in the Border to Coast Pensions Partnership (BCPP). The proposed structure and basis on which the BCPP pool will operate was set out in the July 2016 submission to Government.

Assets to be invested in the Pool

The Fund's intention is to invest its assets through the BCPP pool as and when suitable investment solutions become available. An indicative timetable for investing through the Pool was set out in the July 2016 submission to Government. The key criteria for assessment of Pool solutions will be as follows:

1 That the Pool enables access to an appropriate solution that meets the objectives and benchmark criteria set by the Fund

2 That there is financial benefit to the Fund in investing in the solution offered by the Pool.

At the time of preparing this statement, the detailed parameters and objectives of the BCPP fund range are still being determined.

The Fund is intending to retain the following assets outside of the BCPP pool:

- Passive investments with Legal and General are currently held through life policies and these will remain assets of the Fund. However, the Fund benefits from joint procurement arrangements by BCPP for these services. Future monitoring of the manager and any retendering exercises will be managed by BCPP.
- The Fund has investments in a large number of closed end funds as part of its private markets programme. These funds invest in underlying private equity, infrastructure, global property, trade finance and private debt investments. Each of the individual funds has a fixed life with all assets being returned to investors within a specified period. There is no liquid secondary market for these types of investment – and there is a risk that sales would only be possible at material discounts to net asset value. Therefore, the Committee believes that it is in the best interests of the Fund to retain these investments. New allocations to these asset classes will be made through BCPP once suitable funds have been established.

Any assets not invested in the BCPP pool will be reviewed at least every three years to determine whether the rationale remains appropriate, and whether it continues to demonstrate value for money. The next such review will take place no later than 2020.

The Fund is permitted to directly invest locally, subject to suitable risk/return caracteristics and there being clear value for money benefit, should this not be available through the pool.

Structure and governance of the BCPP Pool

The July 2016 submission to Government of the BCPP Pool provided a statement addressing the structure and governance of the Pool, the mechanisms by which the Fund can hold the Pool to account and the services that will be shared or jointly procured. Government approved this approach on 12 December 2016. The Fund has been working with the BCPP to progress arrangements on this basis.

These arrangements include establishing a Financial Conduct Authority regulated company to manage the assets of BCPP Funds. Based on legal advice describing the options on holding shares in this company, BCPP Limited, the Fund will hold all voting and non-voting shares rather than the Council. This is because the purpose of the company is to meet the needs of the BCPP Funds in complying with the regulations on pooling, rather than for a Council specific purpose.

As the Pool develops and the structure and governance of the Pool are established, information will be available on BCPP's website https://www.bordertocoast.org.uk/ and the Fund will include information in future iterations of the ISS.

The six principles of investment decision making for occupational pension schemes

The Fund is compliant with the six principles on investment decision making for occupational pension schemes, as set out in the guidance published by the Chartered Institute of Public Finance and Accountancy in December 2009 called "Investment Decision Making and Disclosure in the Local Government Pension Scheme: A Guide to the Application of the Myners Principles".

How social, environmental or corporate governance considerations are taken into account in the selection, non-selection, retention and realisation of investments

It is recognised that ESG factors can influence long term investment performance and the ability to achieve long term sustainable returns. The Committee consider the Fund's approach to responsible investment in two key areas:

- **Sustainable investment / ESG factors** – considering the financial impact of environmental, social and governance (ESG) factors on its investments.
- **Stewardship and governance** – acting as responsible and active investors/owners, through considered voting of shares, and engaging with investee company management as part of the investment process.

The Committee takes ESG matters including climate change very seriously and each year it conducts a review of its policies in this area and its investment managers' approach to ESG.

The Committee has developed a specific policy which can be summarised as follows:-

- The Fund believes that good corporate governance and the informed use of voting rights are an integral part of the investment process that will improve the performance of the companies in which the Fund is invested.
- It is important that the process is carried out in an informed manner. For this reason, it is believed that the investment managers are best placed to undertake it.
- The process through which the Fund appoints a manager includes an assessment of each candidate's approach to corporate governance.
- Each manager is required to prepare a policy on corporate governance and on the use of voting rights. The Fund will review each policy and agree with the manager how it may be applied on its behalf.
- The policy towards UK quoted companies must take account of the principles contained in the UK Corporate Governance Code and the Stewardship Code that are issued by the Financial Reporting Council.
- A manager should use its best efforts to apply the principles of the UK Stewardship Code to overseas holdings. Other national or international standards must also be taken into account.
- The policy towards unquoted companies should be consistent with the approach adopted for quoted companies, to the extent that this is practicable.
- Each manager must continue to develop its policy and report changes to the Fund for approval.
- Each manager must provide a quarterly report that sets out how its policy has been implemented.
- The Fund retains the right to direct a manager in respect of any issue.

The Committee takes into account non-financial factors when selecting, retaining, or realising its investments. However financial factors take priority given that the primary responsibility of the Committee is to invest the Fund's assets to meet its pension obligations.

To date, the Fund's approach to social investments has largely been to delegate this to their underlying investment managers as part of their overall ESG duties.

The Fund does not hold any assets which it deems to be social investments.

The exercise of rights (including voting rights) attaching to investments

Voting rights

The Committee has delegated the exercise of voting rights to the investment manager(s) on the basis that voting power will be exercised by them with the objective of preserving and enhancing long term shareholder value. Accordingly, the Fund's managers have produced written guidelines of their process and practice in this regard. The managers are strongly encouraged to vote in line with their guidelines in respect of all resolutions at annual and extraordinary general meetings of companies under Regulation 7(2)(f). The Committee monitor the voting decisions made by all its investment managers on a regular basis.

Stewardship

The Committee has formally agreed to adhere to the Stewardship Code as published by the Financial Reporting Council (FRC). The Committee also expects both the BCPP pool and any directly appointed fund managers to also comply with the Stewardship Code and this is monitored on an annual basis. A copy of the Fund's Statement of Compliance with the Stewardship Code can be found on the Fund's website. This Statement has been assessed by the FRC as 'Tier 1' which is the highest rating, providing "a good quality and transparent description of the approach to stewardship and explanations of alternative approaches where necessary".

In addition to the Fund's compliance with the Stewardship Code, the Fund believes in collective engagement and is a member of the Local Authority Pension Fund Forum (LAPFF), through which it collectively exercises a voice across a range of corporate governance issues.

Appendices

Appendix 1 Investment Beliefs

Appendix 2 Investment Manager Arrangements

Appendix 3 Long term expected returns

Appendix 1 Investment Beliefs

1. The Fund’s investment objective is:

    - To invest the Fund money in assets of appropriate liquidity to produce income and capital growth that, together with employer and employee contributions, will meet the cost of benefits

    - To keep contributions as low and as stable as possible through effective management of the assets.

2. The Fund's strategic objective and asset allocation should be set by asset liability modelling in conjunction with each actuarial valuation.

3. As there is a strong covenant overall for the Fund, and it remains open to new members, it is appropriate to take a long term view when setting the investment strategy.

4. The asset return assumptions in the actuarial valuation should be consistent with the assumptions used in the asset liability monitoring, with an appropriate margin of comfort between the two.

5. There will be an ongoing approach to linking the level of risk in the investment strategy relative to liabilities. Different levels of risk may be taken at different funding levels. The Fund will only take enough investment risk to meets its high level objectives.

6. There is a long term risk premium to be earned for investing in equities, credit, property and illiquid assets, relative to gilts.

7. In the long term, equities will outperform investment grade credit and government bonds.

8. In the long term, credit will outperform government bonds.

9. Diversification will produce a better risk adjusted return over the long term. This applies at asset class and manager level.

10. It is important to understand the different benchmarks within each asset class and how they may influence investment outcomes.

11. Active management can provide higher returns, net of fees, in the long term.

12. The performance of active managers should be assessed over suitably long periods.

13. Passive management should be used for a proportion of the assets to produce more stable returns and reduce fees.

14. There is a focus on returns after fees and costs.

15. Well run companies will produce superior returns for shareholders over the long term. There should be a focus on governance and engagement over disposal.

16. Currency is assumed to be a zero sum game in the long term. Although we do not expect the Fund to be rewarded for taking currency risk, based on the current level of UK and overseas allocations, it is not believed that there is a benefit from managing this exposure due to the operational challenges of managing a hedging programme.

17. There is scope for both global and regional mandates in the structure. Global managers have a greater opportunity set whilst regional mandates offer the opportunity to invest in best in class managers.
18. Our belief in the illiquidity premium leads us to have an allocation to private markets. This should be achieved through a diversified approach.
19. Markets can become over and under valued. This can lead to occasions when markets move materially out of line with expectations and can provide scope to take occasional tactical positions.

Appendix 2 Investment Manager Arrangements

Manager	Mandate	Objective
BlackRock	UK Equities	To outperform the FTSE All Share index by 4% per annum, measured over rolling three year periods. Tracking error to be in the range of 5% to 11%.
Mirabaud	UK Equities	To outperform the FTSE All Share index by 2.5% per annum over rolling three year periods. The tracking error is expected to be in the range of 4% to 9%.
J. P. Morgan	Global Equities	To outperform the FTSE All World index by 2.5% per annum over rolling three year periods. The tracking error is expected to be in the range of 3% to 6%.
J.P. Morgan	Emerging Market Equities	To provide long term capital growth. The benchmark is the MSCI Emerging Markets Index (Total Return Net).
Lazard	Japanese Equities	To outperform the Topix index by 3% per annum over rolling three year periods. The tracking error is expected to be in the range of 3% to 5%.
TT International	Asia Pacific ex Japan Equities	To outperform the MSCI AC Asia Pacific ex Japan index by 3% per annum over a rolling three year period. The tracking error is expected to be in the range of 3% and 10%.

Legal and General	UK Equities	To aim to track the sterling total return of the FTSE All Share Index to within +/- 0.25% per annum for two years in three.
Legal and General	North American Equities	To aim to track the sterling total return of the FTSE All World Developed North America Index to within +/-0.5% per annum for two years in three.
Legal and General	Europe ex UK Equities	To aim to track the sterling total return of the FTSE All World Developed Europe (ex UK) Index to within +/- 0.5% per annum for two years in three.
Legal and General	Japanese Equities	To aim to track the sterling total return of the FTSE All World Japan Index to within +/- 0.5% per annum for two years in three.
Legal and General	Asia Pacific ex Japan Equities	To aim to track the sterling total return of the FTSE All World Developed Asia Pacific (ex Japan) Index to within +/- 0.75% per annum for two years in three.
Legal and General	Emerging Market Equities	To aim to track the sterling total return of the FTSE All World All Emerging Markets Index to within +/- 1.5% per annum for two years in three.
Legal and General	UK Index-Linked	To aim to track the sterling total return on the FTSE Actuaries Index Linked Over Five Year Index to within +/-0.25% per annum for two years in three.
Legal and General	Emerging Markets Bonds	To provide diversified exposure to the constituents of the JP Morgan Government Bond Index – GBI – EM Global Diversified Index.
Legal and General	Global Equities	To aim to track the total return of the FTSE RAFI All World 3000 Equity Index Fund to within +/- 1.0% per annum for two years in three.

Various	Private Equity	Absolute Return benchmark of 8% with a 3% outperformance target, net of fees
Henderson	Corporate Bonds	To outperform the iBoxx Sterling Non Gilt All Stocks by 2% pa over three year rolling periods.
Henderson	Total Return	Absolute Return target of 4% pa
M&G Investments	Corporate Bonds	To outperform a composite benchmark by 0.75% pa over three year rolling periods with the return being no more than 2% below the Index in any one year. The benchmark is: 80% iBoxx Non Gilt All Stocks 10% FTSE - A British Government All Stocks 10% FTSE – A British Government Over Five Years Index-Linked
Aberdeen Property Investors	UK Property	To outperform the Retail Price Index by 4% pa
Partners	Global Property	Absolute Return benchmark of 8% with a 2% outperformance target, net of fees
Partners, M&G and Pantheon	Infrastructure	Absolute Return benchmark of 7% with a 1% outperformance target, net of fees
HPS and Pemberton	Private Debt	Absolute Return benchmark of 5% with a 1% outperformance target, net of fees

Appendix 3 Long term expected returns

The table below shows the absolute expected returns (20 year geometric averages), net of fees, and the absolute volatilities (first year's standard deviations) used in the 2016/17 asset liability study.

Asset Class	Expected return % p.a.	Volatility
UK Equities	5.9	16
Overseas Equities	5.6	19
Private Equity	7.0	29
UK Property	3.7	14
Corporate Bonds	2.7	11
Fixed Interest Gilts	2.0	9
Index Linked Gilts	1.2	7
Emerging Market Debt	4.2	12
Private Debt	5.0	6