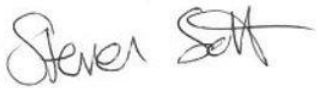# London Borough of Barnet Pension Fund

Actuarial valuation at 31 March 2022

Initial results

Steven Scott FFA   Gemma Sefton FFA

6 September 2022
For and on behalf of Hymans Robertson LLP

SUMMARY

VALUATION PROCESS

DATA AND ASSUMPTIONS

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A glossary of technical terms used in this report can be found in Appendix 5

Executive summary

Funding position

- As at 31 March 2022, the funding position has improved from the last valuation.
- The required investment return to be 100% funded is now 4.9% pa (5.4% pa at 2019).
- The likelihood of the Fund's investment strategy achieving the required return is 71% (60% at 2019).
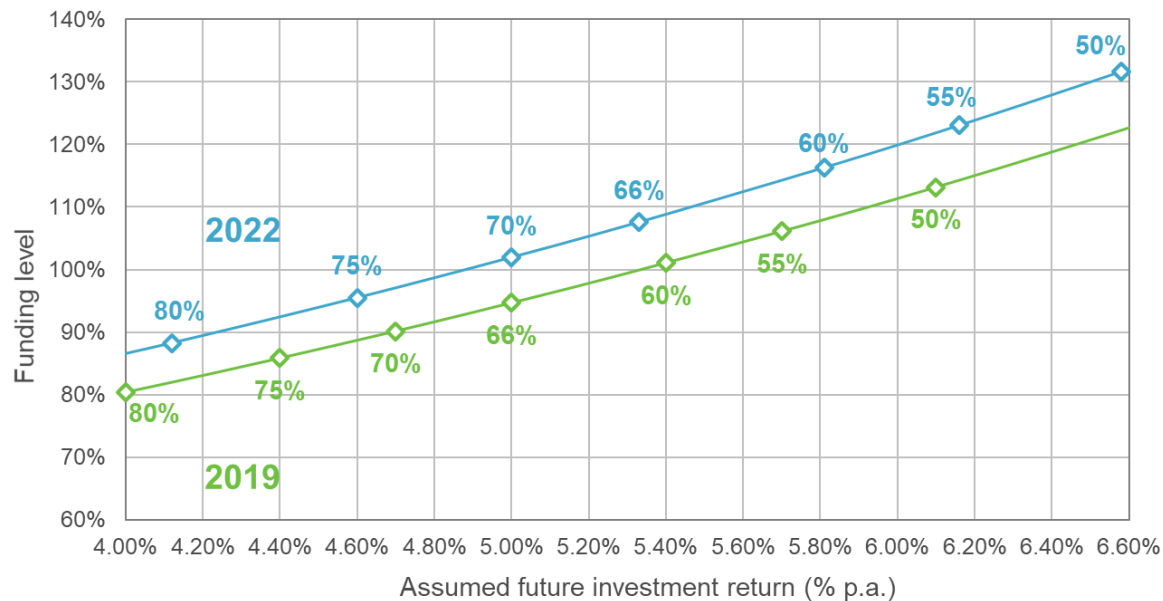
Changes since the last valuation

The main factor driving the funding position improvement is stronger than expected investment returns.

These have more than offset the increase in short to medium-term inflation expectations.

The Covid-19 pandemic has seen a higher level of mortality in the membership than expected. However, the funding impact on liabilities has not been significant.

	Expected	Actual	Difference	Impact on funding surplus (deficit)
Pre-retirement				
Early Leavers	2,083	3,799	1716	+£0m
Ill-health retirements	44	43	-1	+£1m
Salary increases	3.5% pa	2.1% pa	-1.4% pa	+£9m
Post-retirement				
Benefit increases	2.3% pa	1.8% pa	-0.6% pa	+£21m
Pension ceasing	£3.6m	£3.4m	-£0.1m	-£3m

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The valuation process

The valuation process

Assumptions advice
Q4 2021/Q1 2022

Contribution rate modelling
Q2 2022

Initial results
Q3 2022

Employer results
October 2022

Valuation sign off
March 2023

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Employer risk management
Q4 2021/Q1 2022

Data provision
Summer 2022

Funding Strategy Statement
Summer 2022

Employer discussions
Q4 2022

Initial results

This report:

- presents the funding position of the London Borough of Barnet Pension Fund ("the Fund") on the valuation date of 31 March 2022,
- explains why the funding position has changed since the last valuation in 2019, and
- shows the sensitivity of the funding position.

There are two main actions:

1 Understand the fund-level funding position, noting this does not directly drive individual employer contribution rates.

2 Identify risks to explore and consider options for management.

Data and assumptions

Data

We have used the below data provided by the Administering Authority:

Membership data uploaded to the DataPortal on 21 July 2022

Cashflow data uploaded to the DataPortal on 15 June 2022

• Investment data, provided over the intervaluation period

Accurate results depend on good data quality. Based on the Data Portal's validations, we believe the membership data is fit for purpose for these initial results. The data will be reviewed again when we prepare employer-level results at the next valuation stage.

Membership summary
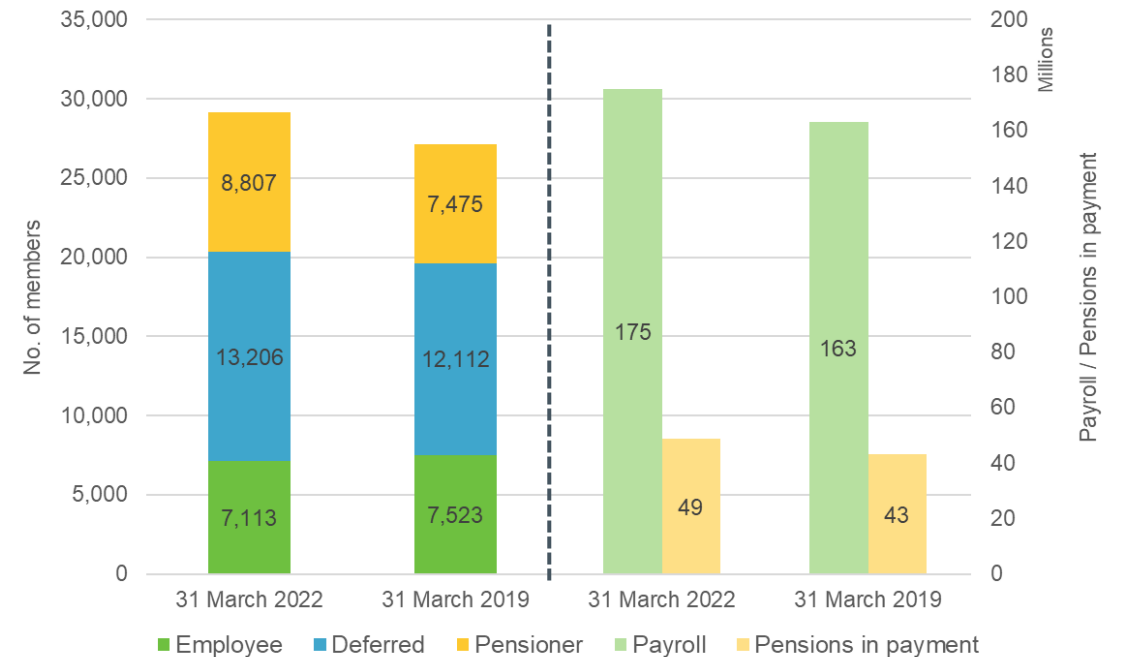
The figures in this report are based on our understanding of the benefit structure of the LGPS in England and Wales as at 31 March 2022. Details can be found at http://www.lgpsregs.org/.

Assumptions

To set and agree assumptions for the valuation, the Administering Authority commissioned an assumption setting paper – '220622 LB Barnet 2022 Valuation assumptions advice'. The assumptions in this report were agreed by the Pensions Committee on 11 July 2019. The assumptions represent the 'best estimate' of future expectations – that means we estimate there is a 50% chance that future events will be better or worse than the assumption. The discount rate is the exception, as it includes the margin of prudence required by the LGPS Regulations.

Financial assumptions

Summary of assumptions used for measuring the funding level, compared to last valuation on 31 March 2019

Assumption	31 March 2022	Required for	31 March 2019
Discount rate	4.6% pa	To place a present value on all the benefits promised to scheme members at the valuation date. The Fund's assets are estimated to have a 75% likelihood of returning above the discount rate.	4.4% pa (based on a 75% likelihood)
Benefit increases/CARE revaluation	2.7% pa	To determine the size of future benefit payments.	2.3% pa
Salary increases	3.7% pa	To determine the size of future final-salary linked benefit payments.	3.0% pa

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Assumptions

Demographic assumptions

Longevity

Whole fund average life expectancies from age 65, with 2019 comparison.

	31 March 2022	31 March 2019
Male pensioner	21.9 years	21.7 years
Male non-pensioner	23.1 years	22.9 years
Female pensioner	24.7 years	24.0 years
Female non-pensioner	26.2 years	25.7 years

Pensioners are assumed to be aged 65 at the respective valuation date and non-pensioners are assumed to be aged 45.

Other demographic assumptions

Death in service	See sample rates in Appendix 2
Retirements in ill health	See sample rates in Appendix 2
Withdrawals	See sample rates in Appendix 2
Promotional salary increases	See sample rates in Appendix 2
Commutation	50% of future retirements elect to exchange pension for additional tax free cash up to HMRC limits
50:50 option	1.0% of members (uniformly distributed across the age, service and salary range) will choose the 50:50 option
Retirement age	The earliest age at which a member can retire with their benefits unreduced
Family details	A varying proportion of members are assumed to have a dependant at retirement or on earlier death. For example, at age 60 this is assumed to be 90% for males and 85% for females. The dependant of a male member is assumed to be 3 years younger than him and the dependent of a female member is assumed to be 3 years older than her.

Further information on these assumptions can be provided upon request.

Assumptions

Benefit structure

Results are based on our understanding of the benefit structure of the LGPS in England and Wales on 31 March 2022 – see www.lgpsregs.org. However, there are areas of uncertainty and potential change.

McCloud

Benefits accrued by certain members between 2014 and 2022 may increase following the McCloud case, which ruled that transitional protections introduced in 2014 for older members were discriminatory. We've made an allowance for the cost of these potential improvements, based on the guidance issued by Department of Levelling Up, Housing and Communities on 22 March 2022. We expect minimal impact for most employers.

Cost sharing mechanism

Benefits could change because of the 2020 cost cap valuation; the outcome is currently unknown. There is also an ongoing legal challenge to the 2016 cost cap valuation. We have assumed that there will be no changes required to the benefit structure due to cost cap.

Guaranteed Minimum Pension equalisation and revaluation

We have assumed the Fund will pay all increases on GMP for members with a State Pension retirement date after 5 April 2016, as we did in the 2019 valuation.

Other legal cases

Benefits could change as a result of other legal challenges (eg the Goodwin case affecting partner pensions). Given the lack of information about possible benefit changes and their relatively small impact, we have made no allowance for these changes.

Fund-level results

Projected future benefit payments

Combining membership data and the assumptions allows us to project future benefit payments for all benefits accrued up to 31 March 2022.

The projection will be different from the last valuation due to:

1. Events between 2019 and 2022 which were different from expectations – reflected in the updated membership data.

2. Estimates of the future which have changed – reflected in the updated assumptions.
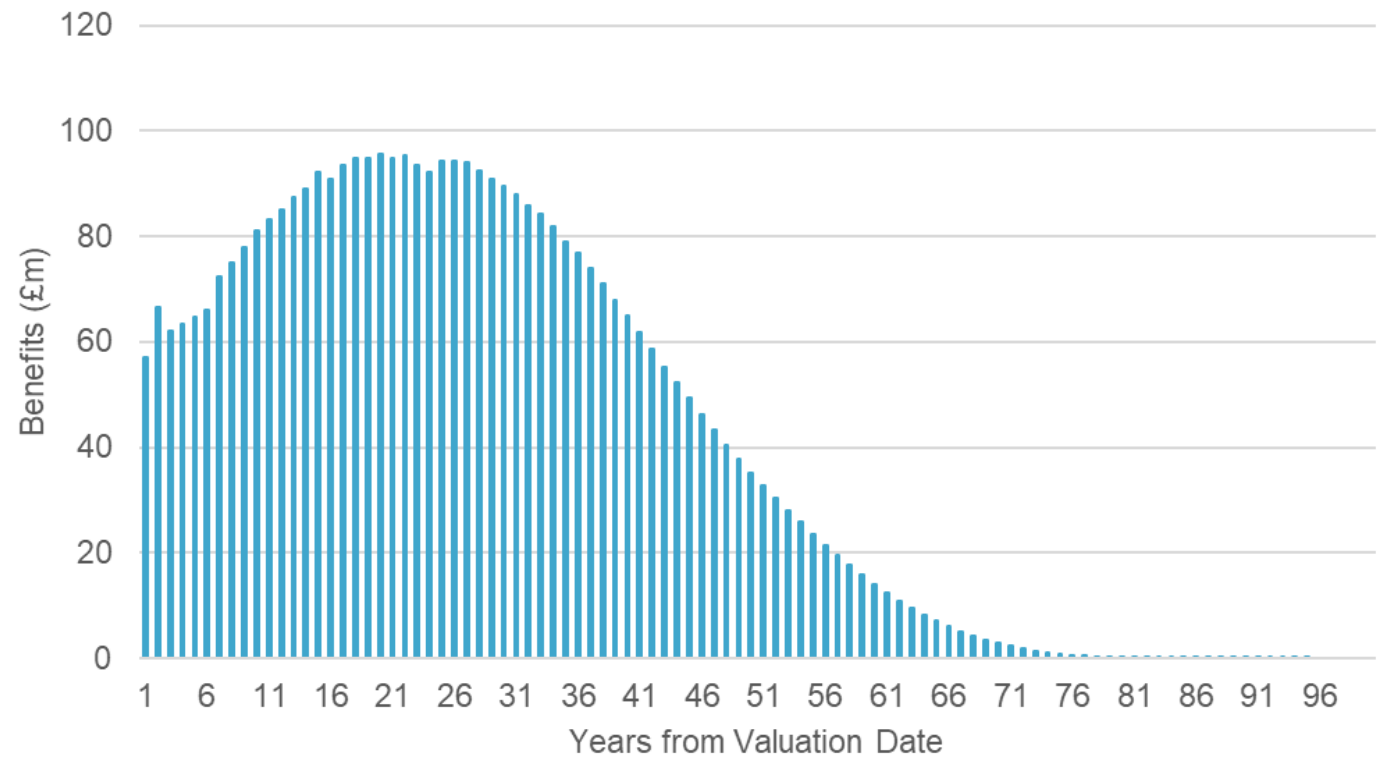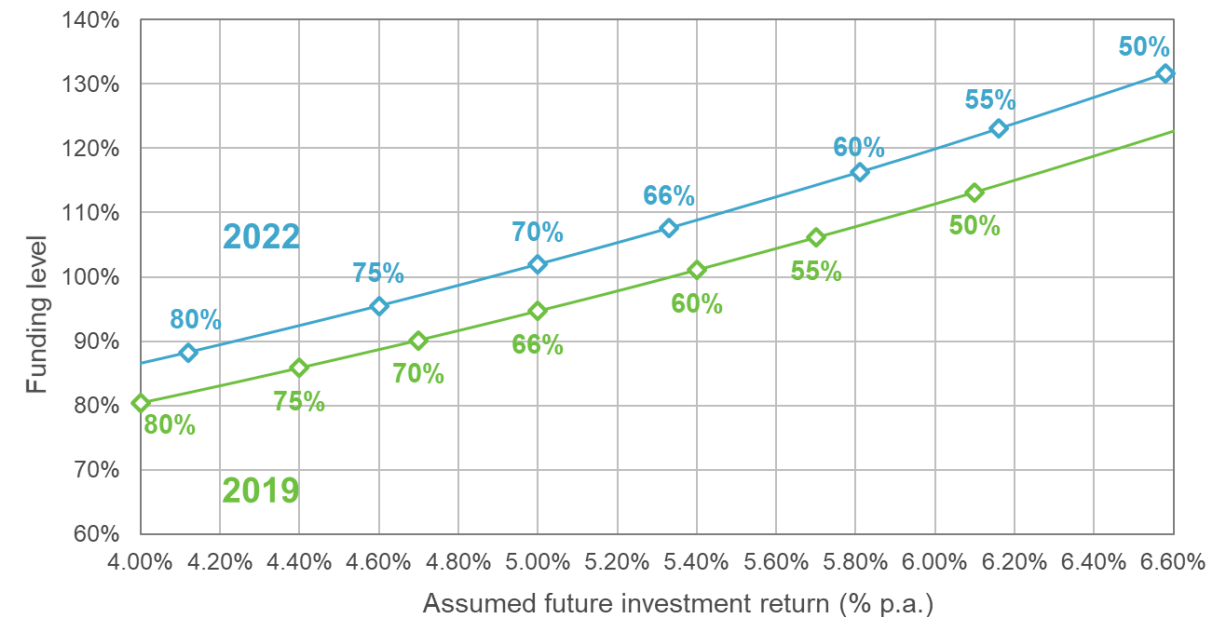
Funding position as at 31 March 2022

We can place a single value on all the future projected benefit payments for current members, called the liabilities. Comparing the liabilities to the market value of the Fund's assets at the valuation date provides the funding level (assets divided by liabilities).

To calculate the liabilities, we discount the benefit payments with an assumed future investment return (the 'discount rate'). Future investment returns are uncertain, so we calculate the liabilities and funding level across a range of future investment returns.

To help stakeholders better understand funding risk, we also calculate the likelihood of the Fund's investment strategy achieving certain levels of return.

- The funding level is 100% if future investment returns are c.4.9% pa
- The likelihood of the Fund's assets yielding at least this return is around 71%.
- The comparator at 2019 was a return of 5.4% pa which had a likelihood of 60%.
- The funding position at 2022 is stronger than 2019.
- There is a 50% likelihood of an investment return of 6.6% pa. So the best-estimate funding level is 132% at 31 March 2022 (112% at 2019).

Funding level across a range of future investment returns

Figures on each line show the likelihood of the Fund's assets exceeding that return at the valuation date

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Single funding position as at 31 March 2022

The chart on the previous page provides stakeholders with a better understanding of the funding position. However, we are still required to report a single funding position at 31 March 2022.

To report a single funding level and funding surplus/deficit for the 2022 valuation, a discount rate of 4.6% pa has been used. There is a 75% likelihood associated with a future investment return of 4.6% pa.

This table details the liabilities, split by member status and the market value of assets at the valuation date. The results at the 2019 formal valuation are shown for comparison.

The funding level and surplus/deficit figures provide a high-level snapshot of the funding position on 31 March 2022. There are limitations:

- The liabilities are calculated using a single set of assumptions about the future, so are very sensitive to the choice of assumptions.

- The market value of assets changes daily

Valuation Date	31 March 2022	31 March 2019
Past Service Liabilities	**(£m)**	**(£m)**
Employees	445	372
Deferred Pensioners	405	326
Pensioners	721	645
Total Liabilities	**1,572**	**1,342**
Assets	**1,501**	**1,152**
Surplus/(Deficit)	**(71)**	**(190)**
Funding Level	**96%**	**86%**

Important: the reported funding level does not directly drive employers' contribution rates. Contribution rates consider how assets and liabilities will evolve over time in different economic scenarios and reflect each employer's funding profile and covenant.

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Changes since the last valuation

Events between 2019 and 2022

Financial

	Expected	Actual	Difference	Impact on funding surplus (deficit)
Investment returns				
3 year period	13.8%	27.9%	14.1%	+£169m
Annual	4.4% pa	8.5% pa	4.1% pa	

The Fund's expenses (in relation to non-investment activities) over the last 3 years have totalled £5.5m. This figure is equivalent to 1.0% of the Fund's total pensionable pay. This is in line with the allowance included in contribution rates at the last valuation (1.0%).

Unless otherwise instructed, we will make allowance for the Fund's expenses by adding an allowance of 1.0% of pay to employer contribution rates from 1 April 2023.

Membership

	Expected	Actual	Difference	Impact on funding surplus (deficit)
Pre-retirement				
Early leavers	2,083	3,799	1,716	+£0m
Ill-health retirements	44	43	-1	+£1m
Salary increases	3.5% pa	2.1% pa	-1.4% pa	+£9m
Post-retirement				
Benefit increases	2.3% pa	1.8% pa	-0.6% pa	+£21m
Pension ceasing	£3,585m	£3,437m	-£148m	-£3m

The most significant external event since the last valuation was the Covid-19 pandemic. The experience analysis shows that sadly, there were a higher than expected number of deaths. However, the impact on the funding position has been small, likely due to the age profile of the excess deaths and the level of pension. Further information on the Fund's mortality experience can be found in the latest Club Vita reports.

Changes since the last valuation

Future expectations

Factor	What does it affect?	What's changed?	Impact on liabilities
Future investment returns	The rate at which future benefit payments are discounted back, ie the discount rate assumption	Future investment returns slightly higher at 2022 than at 2019. The required return is now 4.6% pa vs. 4.4% pa at 2019.	Decrease of £49m
Inflation	The rate at which pensions in payment and deferment and CARE pots increase	Significant increase in short-term future inflation expectations.	Increase of £100m
Salary increases	The rate at which future salaries increase. This affects benefits that are still linked to final salary, ie accrued before 1 April 2014	No material change since last valuation given competing factors e.g. tighter budgetary conditions vs. strong job market and pressure from National Living Wage increases.	Increase of £3m
Current life expectancy	How long we expect people to live for based on today's current observed mortality rates.	Slight reduction in life expectancy based on current observed data (not allowing for Covid-related excess deaths)	Decrease of £1m
Future improvements in life expectancy	How we expect life expectancies to change (increase) in the future.	Uncertainty about effectiveness of mitigations against life expectancy increases in the LGPS i.e. State Pension Age increases and Cost Cap. Need to better reflect wider pension and insurance industry long-term expectations.	Increase of £8m

Reconciling the overall change in funding position

The tables below provide insight into the funding position changes between 31 March 2019 and 31 March 2022.

Firstly, the changes we expect to happen, which relate mostly to items on the asset side.

Then the impact of actual experience, which mainly affects the liabilities.

Expected development

Change in the surplus/deficit position	Assets	Liabilities	Surplus / Deficit
	£m	£m	£m
Last valuation at 31 March 2019	**1,152**	**1,342**	**(190)**
Cashflows			
Employer contributions paid in	167	0	156
Employee contributions paid in	37	0	37
Benefits paid out	(180)	(180)	0
Net transfers into / out of the Fund	0	0	0
Other cashflows (e.g. Fund expenses)	(5)	0	(5)
Expected changes			
Expected investment returns	161	0	161
Interest on benefits already accrued	0	183	(183)
Accrual of new benefits	0	145	(145)
Expected position at 31 March 2022	**1,332**	**1,490**	**(158)**

Impact of actual events

Change in the surplus/deficit position	Assets	Liabilities	Surplus / Deficit
	£m	£m	£m
Expected position at 31 March 2022	**1,332**	**1,490**	**(158)**
Events between 2019 and 2022			
Salary increases lower than expected	0	(9)	9
Benefit increases lower than expected	0	(21)	21
Ill health retirement strain	0	(1)	1
Early leavers less than expected	0	0	0
Commutation less than expected	0	0	0
McCloud remedy	0	3	(3)
Other membership experience	0	47	(47)
Higher than expected investment returns	169	0	169
Changes in future expectations			
Investment returns	0	(49)	49
Inflation	0	100	(100)
Salary increases	0	3	(3)
Longevity	0	7	(7)
Other demographic assumptions	0	2	(2)
Actual position at 31 March 2022	**1,501**	**1,572**	**(71)**

* We have insufficient data to value the impact on the liabilities as a result of transfers in/out

Numbers may not sum due to rounding

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Sensitivity and risk analysis

Valuation results depend on actuarial assumptions made about the future. By their nature, these assumptions are uncertain which means it's important to understand their sensitivity and risk levels.

Financial assumptions

How results vary with the assumed future investment return is set out on page 14. Future inflation is currently very uncertain, the impact of varying levels is set out below.

CPI Assumption	Surplus/ (Deficit)	Funding Level
% pa	(£m)	%
2.5%	(24)	98%
2.7%	(71)	96%
2.9%	(119)	93%

Regulatory, Administration and Governance risks

Potential risks include changes in central government legislation which may affect the future cost of the LGPS; failures in administration processes leading to incorrect data; and inaccuracies in actuarial calculations. These risks should be included in the Fund's risk register and monitored and managed as part of its ongoing risk management framework.

Demographic assumptions

The main demographic risk is that people live longer than expected. The table below shows the impact of longevity rates improving at a faster rate (1.75% pa vs 1.5% pa used in the results).

Long term rate of improvement	Surplus/ (Deficit)	Funding Level
% pa	(£m)	%
1.5%	(71)	96%
1.75%	(82)	95%

Climate change risk

Results may materially change due to the impact of climate change, because of transition and physical risks.

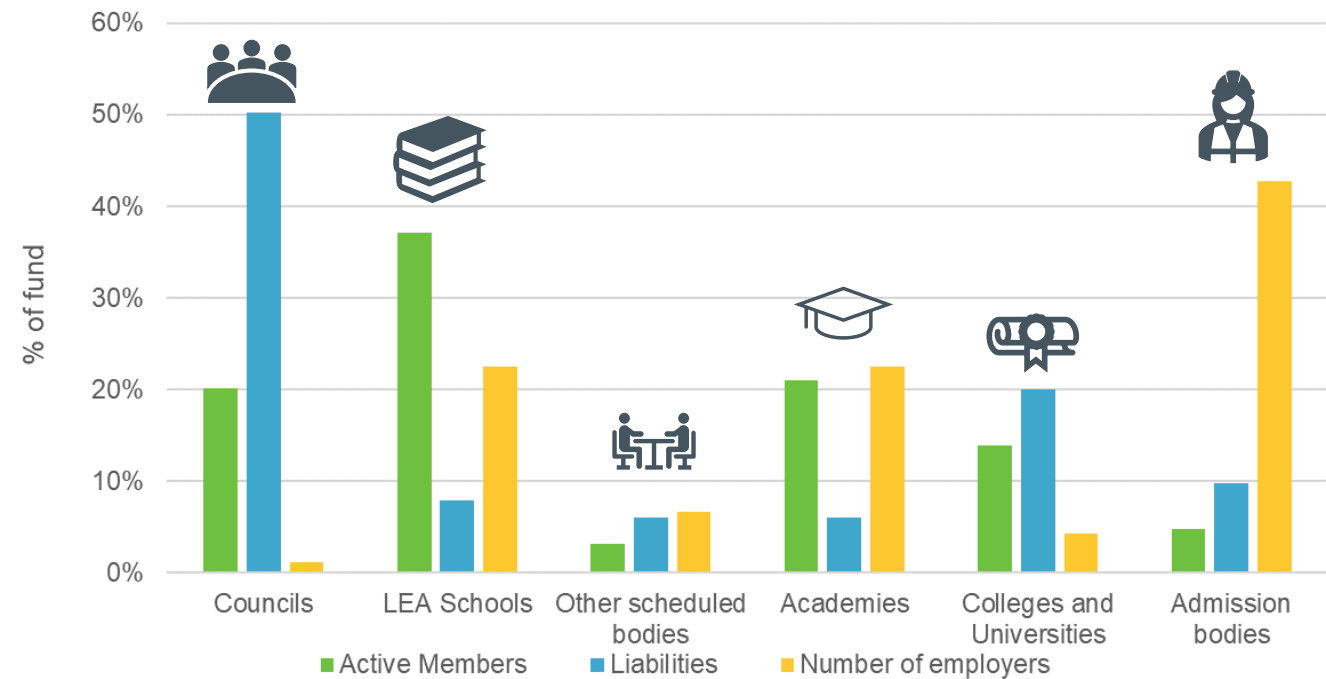HYMANS ROBERTSON

Initial employer results

Focusing on employers

Whole-fund level results give a useful overview of the Fund's health but are not the valuation's most important output.

In reality, the Fund is funded at individual employer level. Each employer is responsible for funding the benefits earned by their current and ex-staff. As at 31 March 2022 there are around 164 individual employers in the Fund.

The next stage of the valuation is to prepare funding positions and review contribution rates for each individual employer in the Fund. There is a significant range and diversity of employers, so we will work with the Fund to make sure the funding strategy recognises this diversity and is flexible enough to cater for employers' differences.

Fund employers by type

Results are based on initial draft employer results. These may change during the employer results preparation stage of the valuation.

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Capturing the diversity in funding calculations

Employer diversity is not restricted to type and size – even for smaller employers, there are significant differences in funding positions and contribution rates. This may be due to previous decisions, for example early retirement experience, pay awards, level of contributions paid, or because the membership varies.

Life expectancy is a good example of the diversity of membership. Studies show it can vary between members due to factors like socio-economic status and retirement health. Using Club Vita to set a baseline life expectancy assumption captures this individual member variation. That means the liabilities and contribution rates better reflect the Fund's, and each employer's, membership.

Difference in average life expectancy (from fund average) at employer level

Women (difference from fund average, years)

Men (difference from fund average, years)
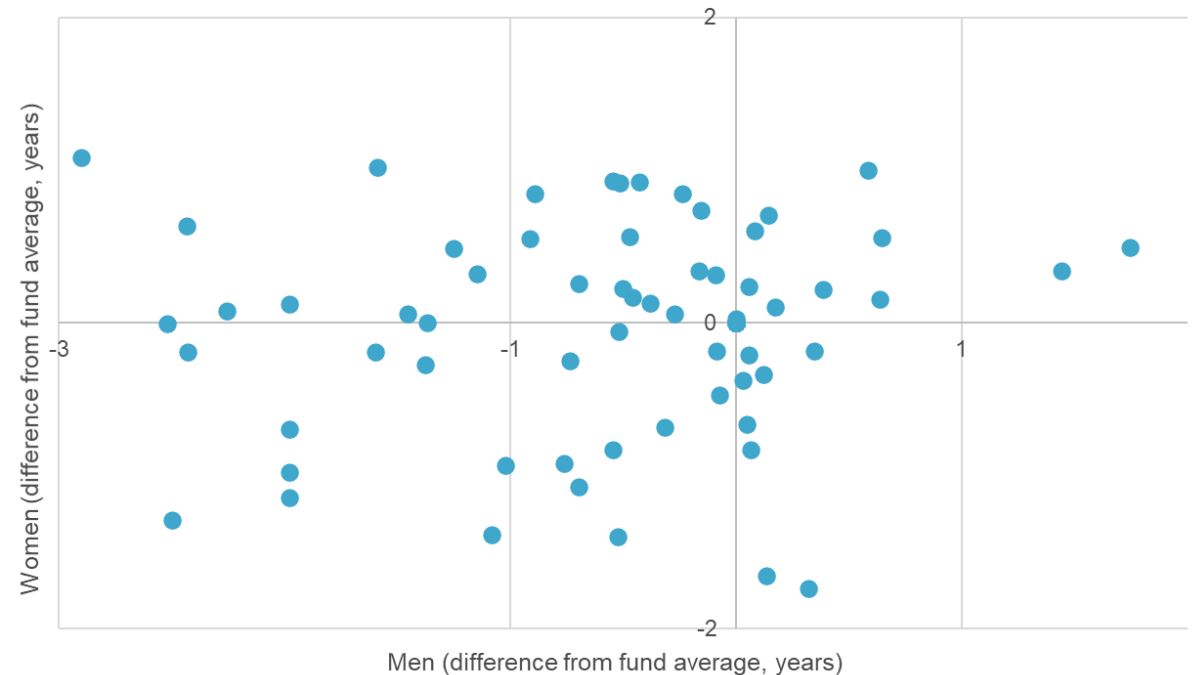
Most employers are grouped around a central cluster; outliers will have a relatively larger proportion of members in higher/lower socio-economic groups.

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Individual employer funding levels

The Fund is composed of around 164 employers, each of which has its own funding position and contribution plan. The Fund's overall funding position is the combination of all these employers' results.
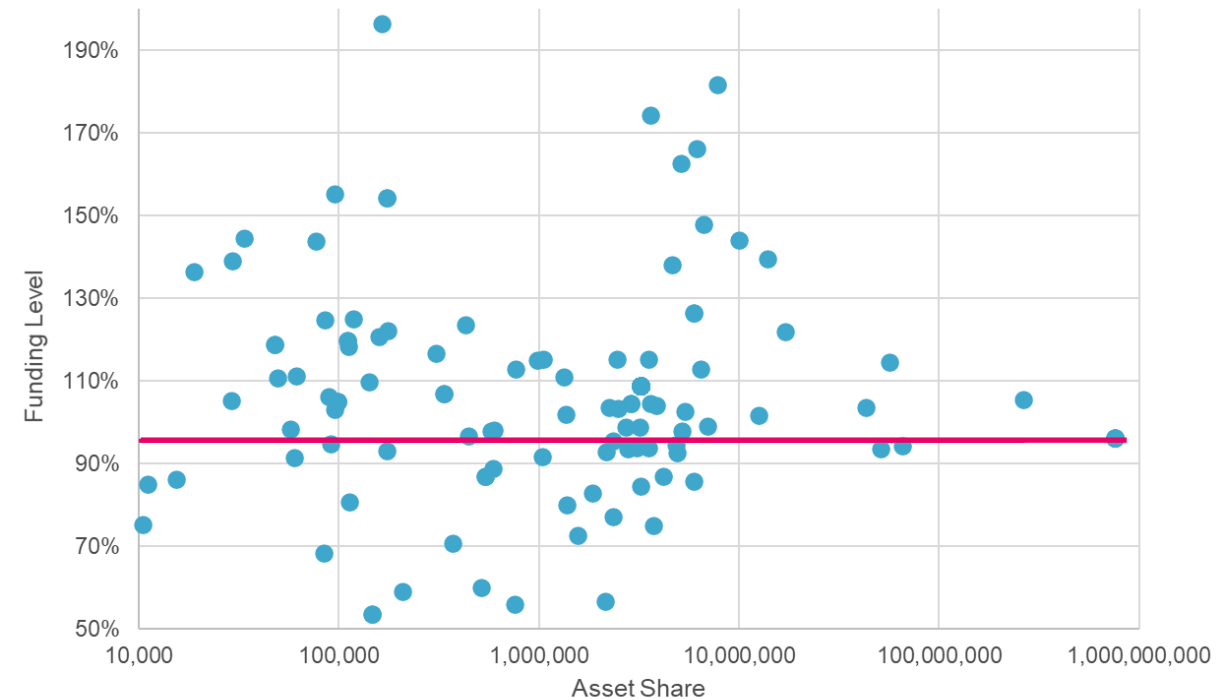
This chart shows the range of employer funding positions. Each dot represents an employer and shows:

- The employer's share of the Fund assets, horizontal scale (NB this is a logarithmic scale, to accommodate the great range in size of employer from smallest to largest).

- The employer's funding level on 31 March 2022, vertical scale.

The red line is the Fund's overall funding level and shows that it does **not** relate to the average of the employer results. Instead, the whole Fund position is driven by the largest employers (right-hand side of the chart).

This shows the importance of considering individual employer results as well as the whole Fund position.

Employer funding level vs asset share

Results are based on initial draft employer results. These may change during the employer results preparation stage of the valuation.

Decisions and next steps

Decisions and next steps

1 Discuss funding risks and agree any further exploration or consideration.

2 Confirm that no changes are needed to valuation data or assumptions.

3 Prepare individual employer valuation results for discussion with Officers.
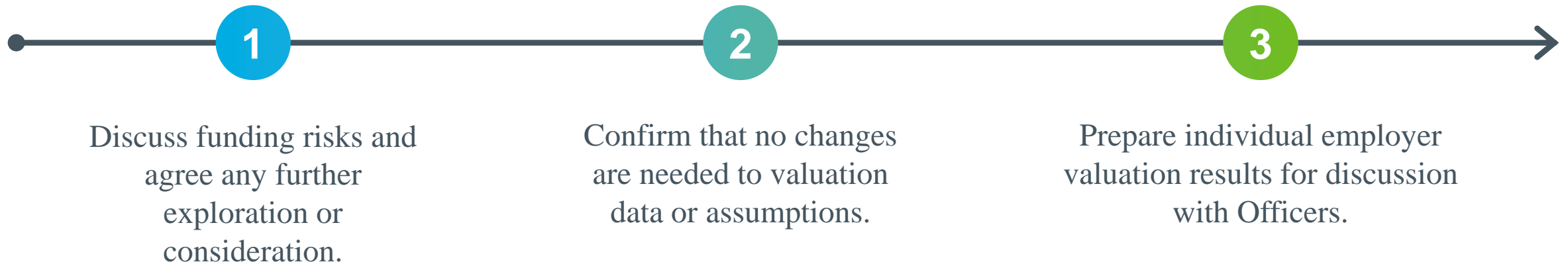
Appendices

APPENDIX 1

Deriving future investment return likelihoods

To derive the distribution of future investment returns and obtain associated likelihoods, we use the Fund's long-term investment strategy and our Economic Scenario Service (ESS) model. The ESS uses statistical models to generate a future distribution of year-on-year returns for each asset class, eg UK equities. The ESS reflects correlations between asset classes and wider economic variables (eg inflation). In the short-term (first few years), the models are fitted with current financial market expectations. Over the longer-term, models are built around our views of fundamental economic parameters, for example equity risk premium, credit-spreads and long-term inflation.

Fund's long-term investment strategy

Asset class	Allocation
Global Equities	40.0%
Emerging Market Equities	5.0%
Property	6.0%
Private Equity	5.0%
Infrastructure Equity	8.0%
Corporate bonds	10.0%
Asset backed securities	6.0%
Private lending	13.0%
MAC	7.0%
Total	100.0%

APPENDIX 1

Economic Scenario Service (ESS)

The ESS is calibrated every month with updated current market expectations (a minor calibration). Every so often (annually at most), the ESS is updated to reflect any changes in the fundamental economic parameters as a result of change in macro-level long-term expectations (a major calibration). The following table shows the calibration at 31 March 2022.

		Annualised total returns																			
		Cash	Index Linked Gilts (medium)	Fixed Interest Gilts (medium)	Developed World ex UK Equity	Private Equity	Property	Emerging Markets Equity	Unlisted Infrastructure Equity	Multi Asset Credit (sub inv grade)	Asset Backed Securities (AA rated) GBP	Asset Backed Securities (BBB rated) GBP	Direct Lending (private debt) GBP Hedged	CorpShort A	CorpMedium A	CorpShort BBB	CorpMedium BBB	Inflation (RPI)	Inflation (CPI)	17 year real yield (CPI)	17 year yield
10 years	16th %'ile	0.8%	-1.9%	-0.3%	-0.7%	-1.2%	-0.6%	-2.5%	0.7%	1.7%	1.1%	1.3%	2.7%	1.4%	-0.1%	1.3%	0.0%	2.4%	1.6%	-1.7%	1.1%
	50th %'ile	1.8%	0.2%	1.1%	5.6%	9.4%	4.4%	5.8%	5.9%	3.5%	2.3%	2.9%	6.0%	2.4%	1.6%	2.7%	1.9%	4.1%	3.3%	-0.5%	2.5%
	84th %'ile	2.9%	2.4%	2.4%	11.7%	20.1%	9.5%	14.4%	11.2%	5.2%	3.6%	4.5%	9.2%	3.4%	3.2%	3.9%	3.6%	5.7%	4.9%	0.7%	4.3%
20 years	16th %'ile	1.0%	-1.5%	0.7%	1.5%	2.4%	1.4%	0.1%	2.6%	2.8%	1.5%	1.9%	4.3%	2.0%	1.1%	2.2%	1.3%	1.6%	1.2%	-0.7%	1.3%
	50th %'ile	2.4%	0.1%	1.5%	6.1%	10.0%	5.0%	6.3%	6.5%	4.4%	3.0%	3.5%	6.8%	3.2%	2.1%	3.5%	2.5%	3.1%	2.7%	1.1%	3.2%
	84th %'ile	4.0%	1.9%	2.2%	10.8%	17.6%	8.9%	12.8%	10.6%	6.0%	4.7%	5.4%	9.2%	4.6%	3.2%	5.0%	3.6%	4.7%	4.3%	2.7%	5.7%
40 years	16th %'ile	1.2%	-0.3%	1.5%	3.1%	4.7%	2.6%	2.1%	3.9%	3.6%	1.8%	2.3%	5.5%	2.4%	2.0%	2.6%	2.3%	1.1%	0.9%	-0.6%	1.1%
	50th %'ile	2.9%	1.2%	2.3%	6.5%	10.3%	5.5%	6.8%	7.0%	5.3%	3.5%	4.0%	7.7%	3.9%	3.1%	4.2%	3.4%	2.4%	2.2%	1.3%	3.3%
	84th %'ile	4.9%	3.1%	3.5%	10.2%	16.1%	8.8%	11.7%	10.3%	7.1%	5.6%	6.3%	10.0%	5.8%	4.4%	6.2%	4.9%	3.9%	3.7%	3.2%	6.1%
Volatility (Disp) (5 yr)		2%	7%	6%	19%	30%	15%	26%	15%	6%	3%	4%	10%	3%	7%	4%	7%	3%	3%		

The current calibration of the model indicates that a period of outward yield movement is expected. For example, over the next 40 years our model expects the 17 year maturity annualised real (nominal) interest rate to rise from -2.2% (1.9%) to 1.3% (3.3%).

APPENDIX 2

Sample rates for demographic assumptions

Males

Age	Salary Scale	Death Before Retirement	Withdrawals		Ill Health Tier 1		Ill Health Tier 2	
		FT & PT	FT	PT	FT	PT	FT	PT
20	105	0.17	404.31	813.01	0	0	0	0
25	117	0.17	267.06	537.03	0	0	0	0
30	131	0.2	189.49	380.97	0	0	0	0
35	144	0.24	148.05	297.63	0.1	0.07	0.02	0.01
40	150	0.41	119.2	239.55	0.16	0.12	0.03	0.02
45	157	0.68	111.96	224.96	0.35	0.27	0.07	0.05
50	162	1.09	92.29	185.23	0.9	0.68	0.23	0.17
55	162	1.7	72.68	145.94	3.54	2.65	0.51	0.38
60	162	3.06	64.78	130.02	6.23	4.67	0.44	0.33
65	162	5.1	0	0	11.83	8.87	0	0

Females

Age	Salary Scale	Death Before Retirement	Withdrawals		Ill Health Tier 1		Ill Health Tier 2	
		FT & PT	FT	PT	FT	PT	FT	PT
20	105	0.1	352.42	467.37	0	0	0	0
25	117	0.1	237.14	314.44	0.1	0.07	0.02	0.01
30	131	0.14	198.78	263.54	0.13	0.1	0.03	0.02
35	144	0.24	171.57	227.38	0.26	0.19	0.05	0.04
40	150	0.38	142.79	189.18	0.39	0.29	0.08	0.06
45	157	0.62	133.25	176.51	0.52	0.39	0.1	0.08
50	162	0.9	112.34	148.65	0.97	0.73	0.24	0.18
55	162	1.19	83.83	111.03	3.59	2.69	0.52	0.39
60	162	1.52	67.55	89.37	5.71	4.28	0.54	0.4
65	162	1.95	0	0	10.26	7.69	0	0

APPENDIX 3

Inflation expectations

Current inflation is significantly above the Bank of England target (2% pa) and recent norms. It is likely this will mean a high 2023 pension increase (based on September 2022 CPI inflation).

Current expectations are that inflation pressures will be short-term and move back to normal in the longer-term. The inflation assumption we have used reflects this pattern and allows for the short-term spike – see the blue line on the chart.

The assumption noted in this report is an average of the blue line over the approximate duration of the Fund's liabilities.

Increased uncertainty and risk

There is a lot of uncertainty around both the level of future short-term inflation and how long the period of higher inflation will last. We will continue to work with the Fund to monitor actual and future expected inflation as more information emerges.
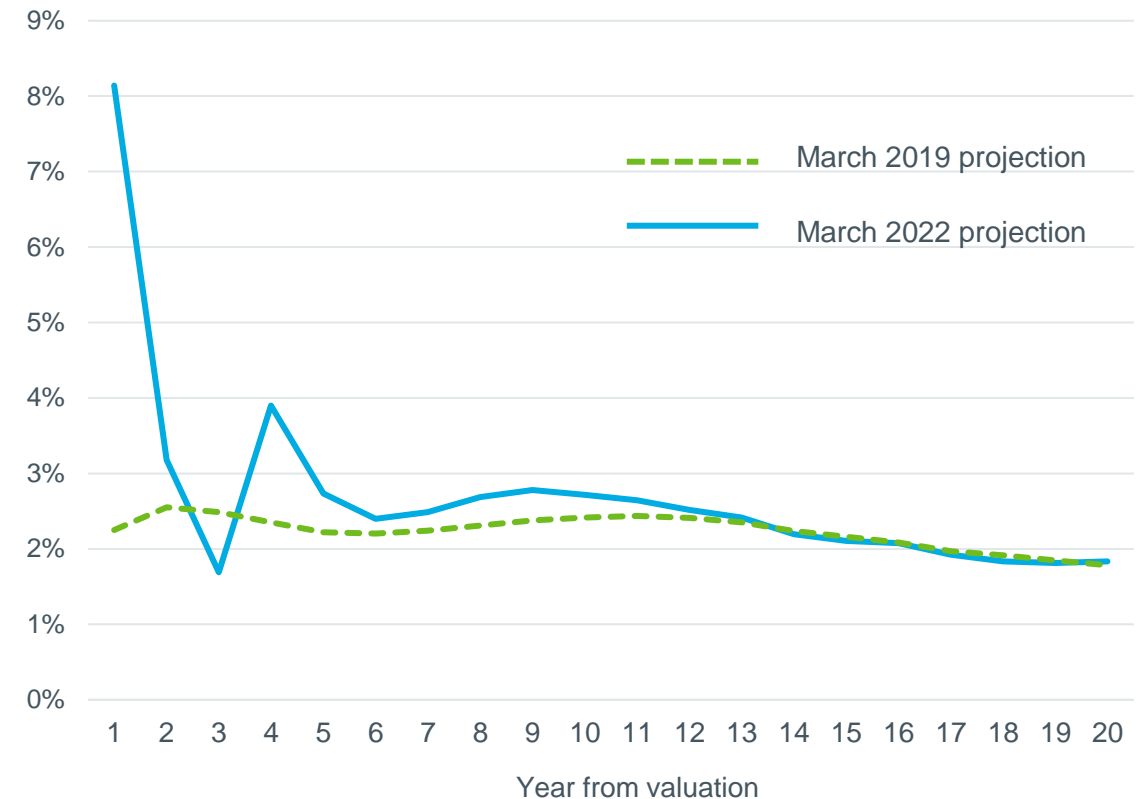
Annual CPI inflation – 2019 vs. 2022

Legend:
- March 2019 projection (green dashed)
- March 2022 projection (blue solid)

X-axis: Year from valuation (1–20)
Y-axis: 0% – 9%

Chart shows median expected annual CPI inflation from ESS model.

APPENDIX 4

Reliances and limitations

We have been commissioned by London Borough of Barnet ("the Administering Authority") to carry out a full actuarial valuation of the London Borough of Barnet Pension Fund ("the Fund") as at 31 March 2022 as required under Regulation 62 of the Local Government Pension Scheme Regulations 2013 ("the Regulations").

This paper is addressed to the Administering Authority. It has been prepared by us as actuaries to the Fund and is solely for the purpose of:

• presenting the current funding position using a range of actuarial assumptions
• explaining why the funding position has changed since the previous valuation in 2019
• showing the sensitivity of the funding position.

It has not been prepared for any other purpose and should not be used for any other purpose.

The Administering Authority is the only user of this advice. Neither we nor Hymans Robertson LLP accept any liability to any party other than the Administering Authority unless we have expressly accepted such liability in writing. The advice or any part of it must not be disclosed or released in any medium to any other third party without our prior written consent. In circumstances where disclosure is permitted, the advice may only be released or otherwise disclosed in its entirety fully disclosing the basis upon which it has been produced (including any and all limitations, caveats or qualifications).

This information can be used by the Administering Authority to support the development of the funding strategy and to identify and understand areas of potential risk that it may wish to explore or mitigate during the valuation process.

Technical Actuarial Standards apply to this advice, and have been complied with where material and to a proportionate degree. They are:
• TAS100; and
• TAS300.

Note that this report does not comply with paragraphs 12 (b) or (c) of TAS 300, regarding future projections of funding level and its volatility. The figures in this report provide a notification of the whole Fund funding position, rather than individual employer positions. Therefore, we do not believe the exclusion of the information under these paragraphs is material.

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APPENDIX 5

Glossary

Term	Explanation
50:50 option	An option for LGPS members to pay half contributions and earn half the retirement benefit (pre-retirement protection benefits are unreduced).
Baseline longevity	The rates of death (by age and sex) in a given group of people based on current observed data.
Club Vita	A firm of longevity experts we partner with for longevity analysis. They combine data from thousands of pension schemes and use it to create detailed baseline longevity assumptions at member-level, as well as insight on general longevity trends and future improvements.
Commutation	The option for members to exchange part of their annual pension for a one-off lump sum at retirement. In the LGPS, every £1 of pension exchanged gives the member £12 of lump sum. The amounts that members commute is heavily influenced by tax rules which set an upper limit on how much lump sum can be taken tax-free.
CPI inflation	The annual rate of change of the Consumer Prices Index (CPI). The CPI is the UK government's preferred measure of inflation and is the measure used to increase LGPS (and all other public sector pension scheme) benefits each year.
Demographic assumptions	Assumptions concerned with member and employer choices rather than macroeconomic or financial factors. For example, retirement age or promotional salary scales. Demographic assumptions typically determine the timing of benefit payments.
Discount rate	A number used to place a single value on a stream of future payments, allowing for expected future investment returns.
ESS	Economic Scenario Service - Hymans Robertson's proprietary economic scenario generator used to create thousands of simulations of future inflation, asset class returns and interest rates.

APPENDIX 5

Glossary

Term	Explanation
Funding position	The extent to which the assets held by the fund at 31 March 2022 cover the accrued benefits ie the liabilities. The two measures of the funding position are: • the funding level - the ratio of assets to liabilities; and • the funding surplus/deficit - the difference between the asset and liabilities values.
Inflation	Prices tend to increase over time, which is called inflation. Inflation is measured in different ways, using a different 'basket' of goods and mathematical formulas.
Liabilities	An employer's liability value is the single value at a given point in time of all the benefit payments expected to be made in future to all members. Benefit payments are projected using demographic and financial assumptions and the liability is calculated using a discount rate.
Longevity improvements	An assumption about how rates of death will change in future. Typically we assume that death rates will fall and life expectancies will improve over time, continuing the long-running trend.
Prudence	To be prudent means to err on the side of caution in the overall set of assumptions. We build prudence into the choice of discount rate by choosing an assumption with a prudence Level of more than 50%. All other assumptions aim to be best estimate.
Prudence Level	A percentage indicating the likelihood that a discount rate assumption will be achieved in practice, based on the ESS model. The higher the prudence level, the more prudent the discount rate is.
Withdrawal	Refers to members leaving the scheme before retirement. These members retain an entitlement to an LGPS pension when they retire, but are no longer earning new benefits.

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