# London Borough of Tower Hamlets Pension Fund

Actuarial valuation at 31 March 2022

Initial results

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**13 January 2023**
**For and on behalf of Hymans Robertson LLP**

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## In this report:

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 3.3% pa (3.9% pa at 2019).
- The likelihood of the Fund's investment strategy achieving the required return is 78% (71% at 2019).
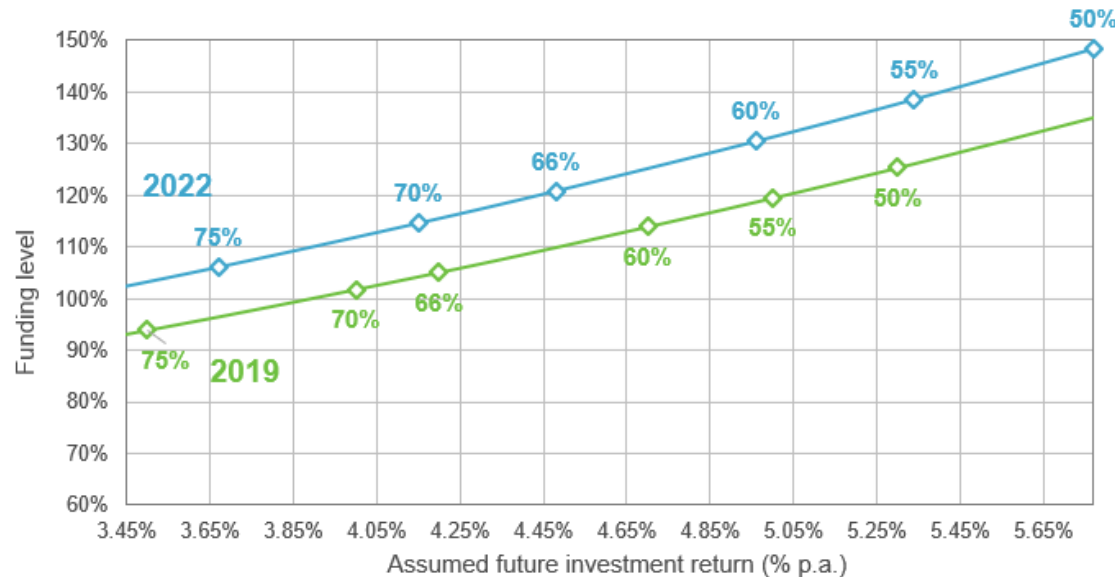


## Changes since the last valuation

The main factor driving the funding position improvement was stronger than expected investment returns. These have more than offset the increase in short to medium-term inflation expectations.

The Covid-19 pandemic has clearly had a terrible human impact, however it has not had a significant effect on funding at whole Fund level.

|  | Expected | Actual | Difference | Impact on funding position |
|---|---|---|---|---|
| **Pre-retirement** |  |  |  |  |
| Early Leavers | 2,134 | 2,998 | 864 | <£1m |
| Ill-health retirements | 38 | 37 | -1 | +£2m |
| Salary increases | 3.1% pa | 4.5% pa | 1.4% pa | -£13m |
| **Post-retirement** |  |  |  |  |
| Benefit increases | 2.3% pa | 1.8% pa | -0.6% pa | +£23m |
| Pension ceasing | £3.5m | £3.3m | -£0.2m | <£1m |

# The valuation process

# The valuation process

# Initial results

This report:

- presents the funding position of the London Borough of Tower Hamlets 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

- show 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.
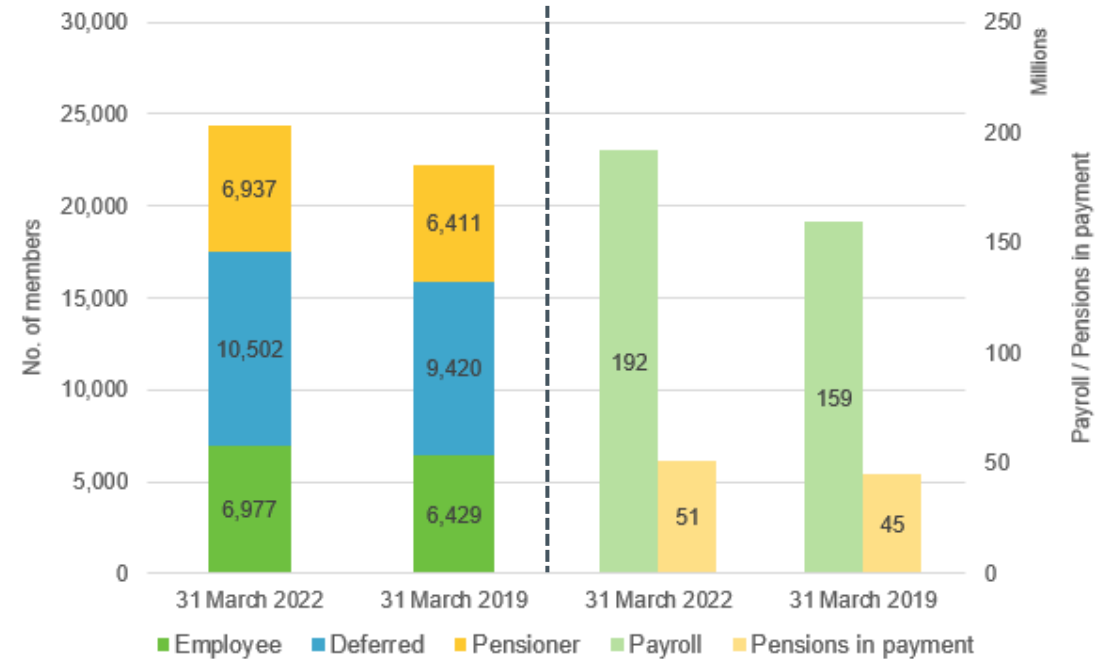
# Data and assumptions

# Data

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

- Membership data uploaded to the DataPortal on 00 January 1900

- Cashflow data uploaded to the DataPortal on 06 October 2022

- Investment data, provided over the intervaluation period

Accurate results depend on good data quality. Based on the DataPortal'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 and the assumptions in that paper were agreed by the Pensions Committee on 27 June 2022. The assumptions represent the 'best estimate' of future expectations – that means we estimate there is a 50% likelihood 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 65% likelihood of returning at least this discount rate. | 4.0% pa (based on a 70% likelihood) |
| Benefit increases/CARE revaluation | 2.7% pa | To determine the size of future benefit payments. | 2.3% pa |
| Salary increases | 2.7% pa | To determine the size of future final-salary linked benefit payments. | 2.5% pa |

# Assumptions

## Demographic assumptions

**Longevity**

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

|  | 31 March 2022 | 31 March 2019 |
|---|---|---|
| Male pensioner | 21.8 years | 21.5 years |
| Male non-pensioner | 23.3 years | 22.6 years |
| Female pensioner | 24.4 years | 23.5 years |
| Female non-pensioner | 26.2 years | 25.0 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 | 60% of future retirements elect to exchange pension for additional tax free cash up to HMRC limits |
| 50:50 option | 0.5% 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.

Notes about the model:

The cashflow peak in Year 2 is a feature of the cashflow model, which assumes all active members older than their retirement age retire 1 year after the valuation date. The dips in cashflow in years 22 and 23 correspond with changes in state pension age.
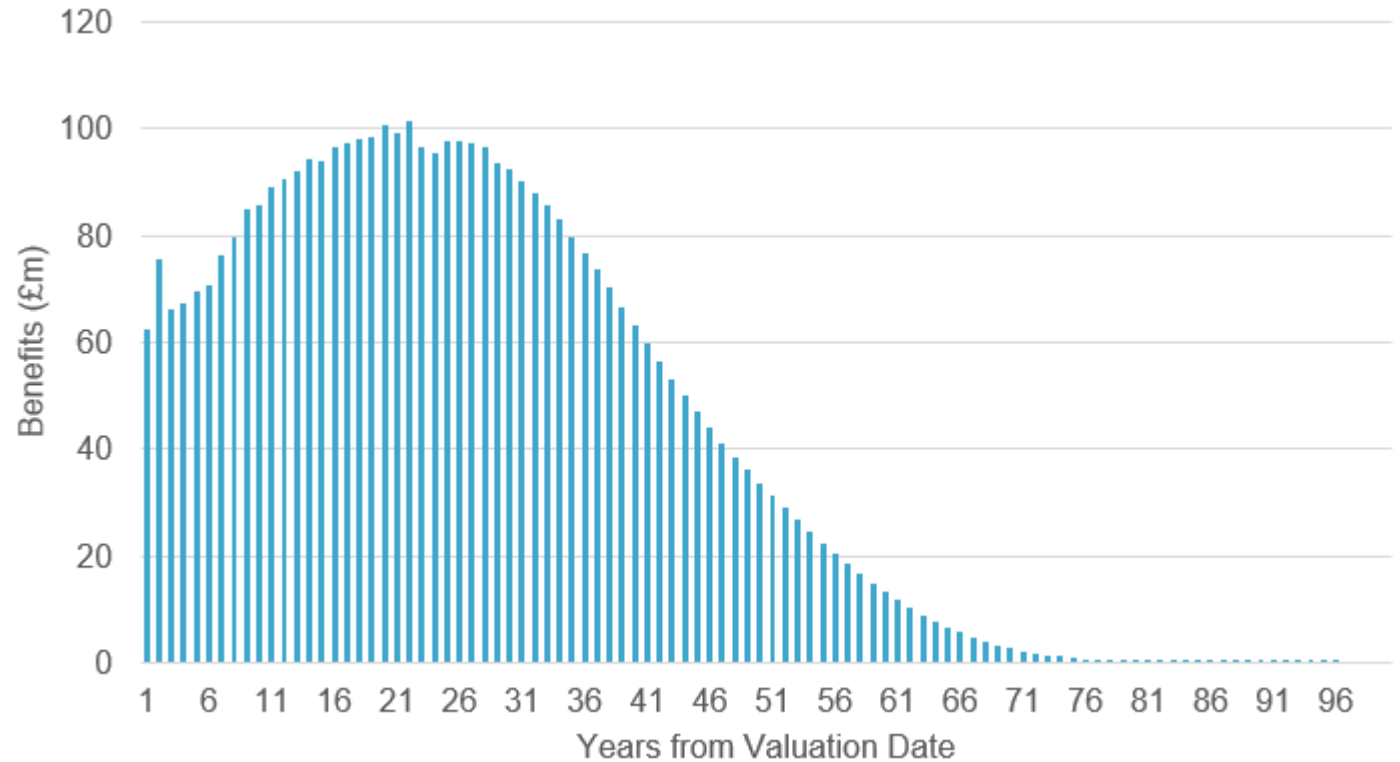


The 'spike' in year 2 is due to a simplifying assumption that all active members over retirement age will retire after 1 year. The dip in years 23-24 coincides with the change in State Pension Age from 67 to 68. We assume that members retire at age 67 or 68 when in reality the change is more gradual.
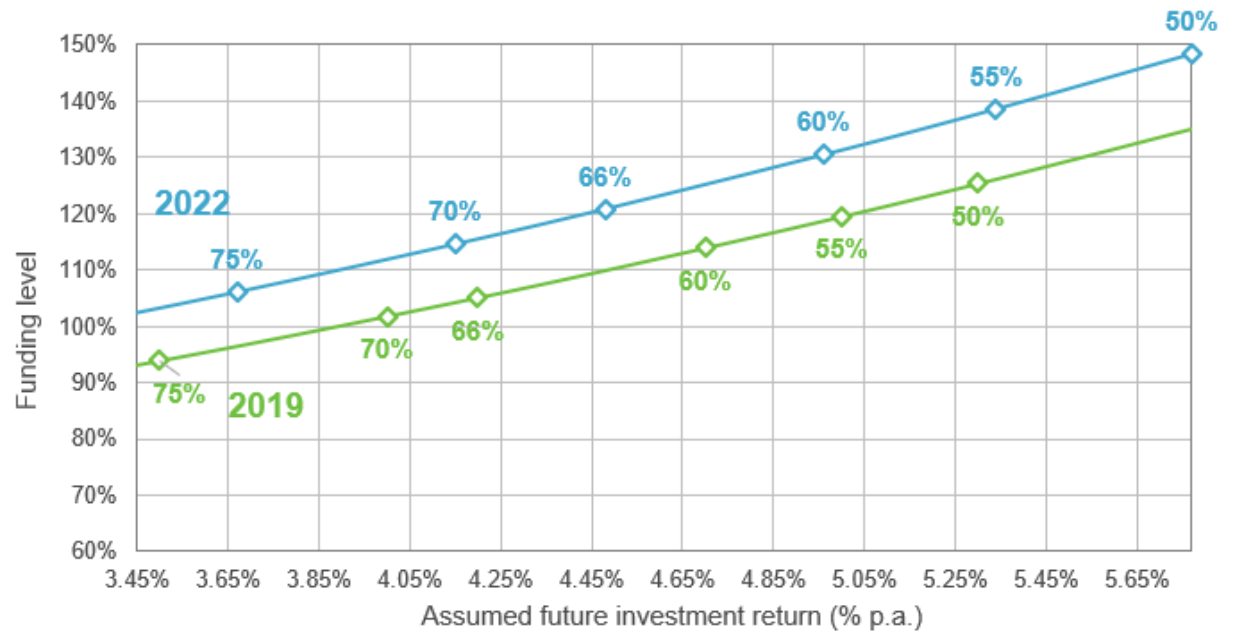
# Funding position as at 31 March 2022

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.3.3% pa
- The likelihood of the Fund's assets yielding at least this return is around 78%.
- The comparator at 2019 was a return of 3.9% pa which had a likelihood of 71%.
- The funding position at 2022 is stronger than 2019.
- There is a 50% likelihood of an investment return of 5.8% pa. So the best-estimate funding level is 148% at 31 March 2022 (126% 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*

# 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 65% 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 (NB at 2019 the reported position used a discount rate with a 70% associated likelihood).

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 | 505 | 452 |
| Deferred Pensioners | 352 | 350 |
| Pensioners | 794 | 723 |
| **Total Liabilities** | **1,651** | **1,525** |
| **Assets** | **2,023** | **1,552** |
| **Surplus/(Deficit)** | **373** | **27** |
| **Funding Level** | **123%** | **102%** |

*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.*

*NB figures in table may not sum due to rounding.*

# Changes since the last valuation

## Events between 2019 and 2022

**Financial**

| | Expected | Actual | Difference | Impact on funding position |
|---|---|---|---|---|
| **Investment returns** | | | | |
| 3 year period | 12.5% | 30.6% | 18.1% | +£279m |
| Annual | 4.0% pa | 9.3% pa | 5.3% pa | |

The Fund's expenses (in relation to non-investment activities) over the last 3 years have totalled £5.4m. This figure is equivalent to 1.0% of the Fund's total pensionable pay. This is higher than last valuation (0.5%). Unless otherwise instructed, we will make allowance for the Fund's expenses by including an allowance of 1.0% of pay to employer contribution rates from 1 April 2023.

**Membership**

| | Expected | Actual | Difference | Impact on funding position |
|---|---|---|---|---|
| **Pre-retirement** | | | | |
| Early leavers | 2,134 | 2,998 | 864 | <£1m |
| Ill-health retirements | 38 | 37 | -1 | +£2m |
| Salary increases | 3.1% pa | 4.5% pa | 1.4% pa | -£13m |
| **Post-retirement** | | | | |
| Benefit increases | 2.3% pa | 1.8% pa | -0.6% pa | +£23m |
| Pension ceasing | £3.5m | £3.3m | -£0.2m | <£1m |

The most significant external event since the last valuation was the Covid-19 pandemic. The experience analysis shows that the impact on the funding position has been small, likely due to the age profile of the 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 expected return is now 4.6% pa vs. 4.0% pa at 2019. | Decrease of £162m |
| Inflation | The rate at which pensions in payment and deferment and CARE pots increase | Significant increase in short-term future inflation expectations. | Increase of £113m |
| 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. | Decrease 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 £4m |
| 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 £10m |

# 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** | **1,552** | **1,525** | **27** |
| **Cashflows** | | | |
| Employer contributions paid in | 146 | 0 | 146 |
| Employee contributions paid in | 38 | 0 | 38 |
| Benefits paid out | (186) | (186) | 0 |
| Net transfers into / out of the Fund | | | |
| Other cashflows (e.g. Fund expenses) | 0 | 0 | 0 |
| **Expected changes** | | | |
| Expected investment returns | 193 | 0 | 193 |
| Interest on benefits already accrued | 0 | 188 | (188) |
| Accrual of new benefits | 0 | 156 | (156) |
| **Expected position at 31 March 2022** | **1,743** | **1,683** | **60** |

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

## Impact of actual events

| Change in the surplus/deficit position | Assets | Liabilities | Surplus / Deficit |
|---|---|---|---|
| | £m | £m | £m |
| **Expected position at 31 March 2022** | **1,743** | **1,683** | **60** |
| **Events between 2019 and 2022** | | | |
| Salary increases greater than expected | 0 | 13 | (13) |
| Benefit increases lower than expected | 0 | (23) | 23 |
| Early retirement strain (and contributions) | 0 | 8 | (8) |
| Ill health retirement impact | 0 | (2) | 2 |
| Early leavers more than expected | 0 | 0 | 0 |
| Commutation less than expected | 0 | 0 | 0 |
| McCloud remedy | 0 | 1 | (1) |
| Other membership experience | 0 | 20 | (20) |
| Higher than expected investment returns | 279 | 0 | 279 |
| **Changes in future expectations** | | | |
| Investment returns | 0 | (162) | 162 |
| Inflation | 0 | 113 | (113) |
| Salary increases | 0 | (3) | 3 |
| Longevity | 0 | 6 | (6) |
| Other demographic assumptions | 0 | (5) | 5 |
| **Actual position at 31 March 2022** | **2,023** | **1,651** | **373** |

Numbers may not sum due to rounding

# 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% | 419 | 126% |
| 2.7% | 373 | 123% |
| 2.9% | 324 | 119% |

## 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% | 373 | 123% |
| 1.75% | 361 | 122% |

## Climate change risk

Results may materially change due to the impact of climate change, because of transition and physical risks. We have not quantified the risk exposure here as the Fund has carried out analysis when considering its funding and investment strategy via an in-depth asset-liability modelling exercise.
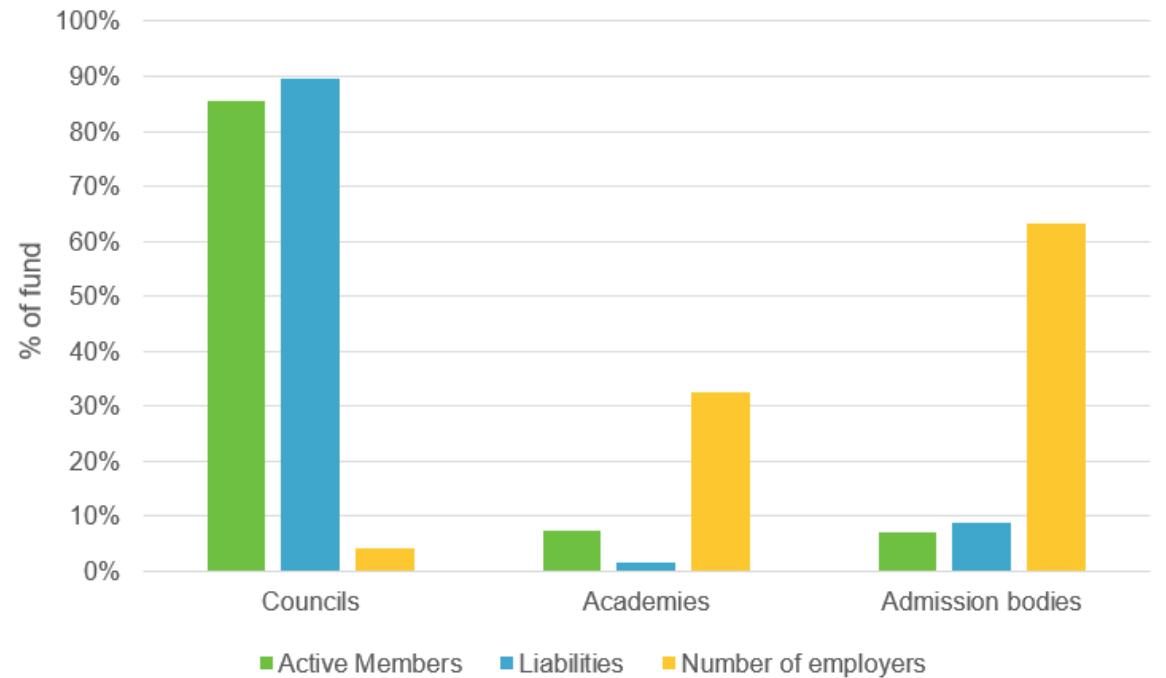
# Initial employer results

# 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 45 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**

Legend: ■ Active Members   ■ Liabilities   ■ Number of employers

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**



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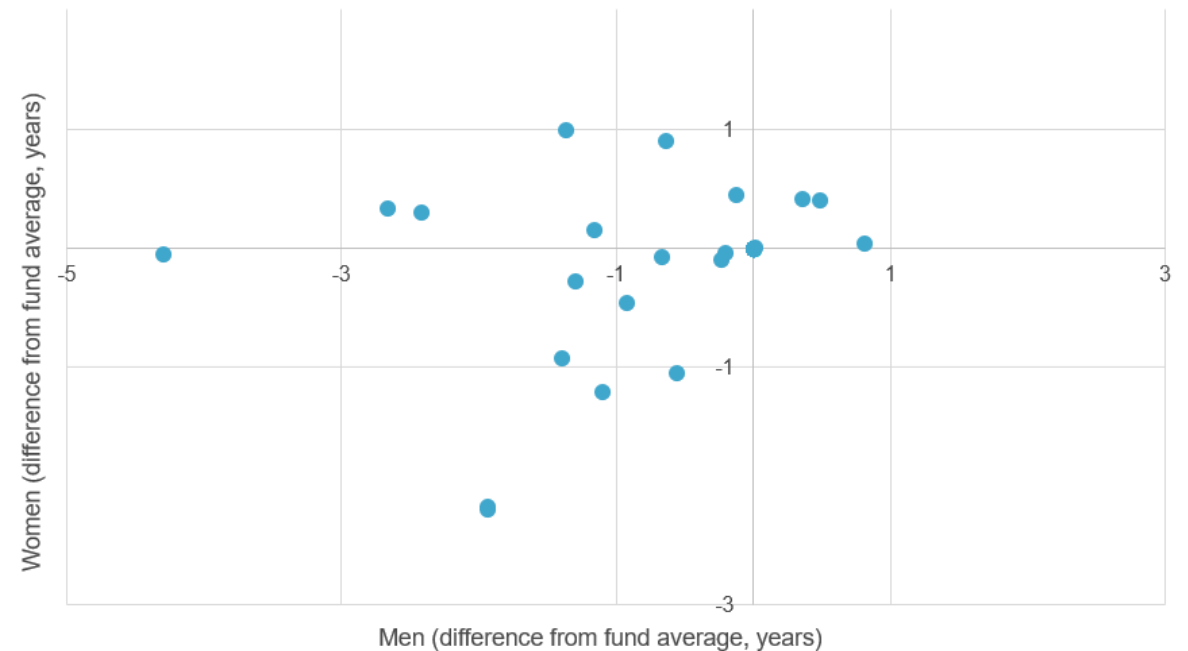
*Most employers are grouped around a central cluster; outliers will have a relatively larger proportion of members in higher/lower socio-economic groups.*

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

# Individual employer funding levels

The Fund is composed of around 45 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.
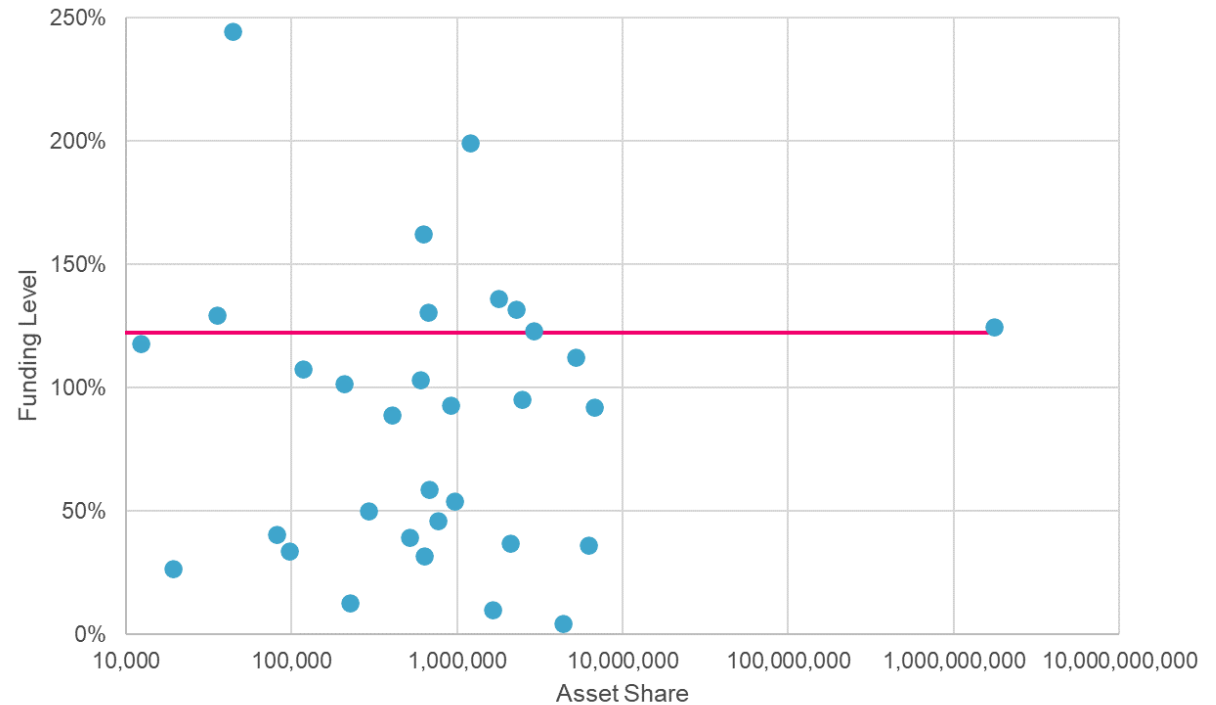
This chart shows the range of employer funding positions. Each dot represents an employer (some employers included in pools are not shown) and shows:

- 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 employer (the Council, at the 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.

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# 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

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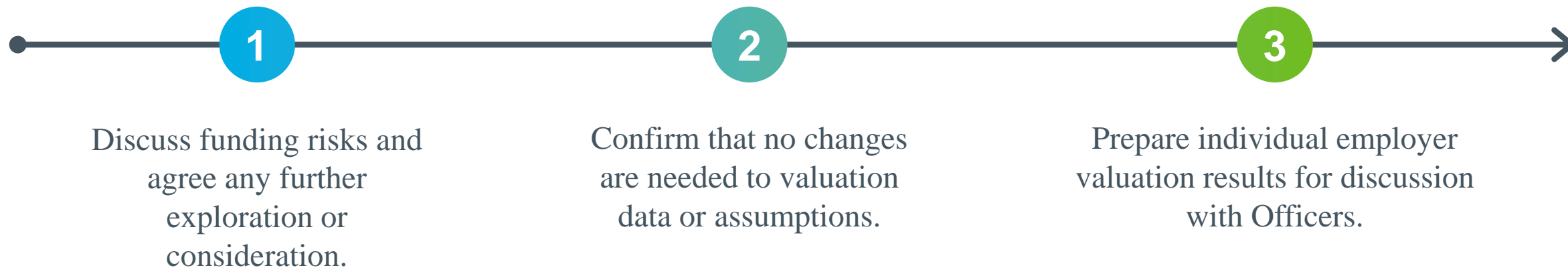
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**APPENDIX 1**

# 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 |
|---|---|
| Overseas equities | 47.5% |
| UK equities | 2.5% |
| Infrastructure equities | 3.0% |
| Private equity | 3.0% |
| Property | 12.0% |
| Diversified Growth Fund | 20.0% |
| Multi Asset Credit | 6.0% |
| Long Index Linked Gilts | 6.0% |
| Total | 100.0% |

**ESS individual asset class return distributions at 31 March 2022**

| | | Annualised total returns | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Index Linked Gilts (long) | UK Equity | Private Equity | Property | Listed Infrastructure Equity | Diversified Growth Fund (low equity beta) | All World ex UK Equity in GBP Unhedged | Multi Asset Credit (sub inv grade) | Inflation (CPI) |
| 10 years | 16th %'ile | -3.1% | -0.4% | -1.2% | -0.6% | -1.1% | 1.4% | -0.4% | 1.7% | 1.6% |
| | 50th %'ile | -0.7% | 5.7% | 9.4% | 4.4% | 4.9% | 3.2% | 5.8% | 3.5% | 3.3% |
| | 84th %'ile | 2.0% | 11.6% | 20.1% | 9.5% | 10.9% | 5.1% | 11.9% | 5.2% | 4.9% |
| 20 years | 16th %'ile | -2.6% | 1.7% | 2.4% | 1.4% | 1.2% | 2.1% | 1.8% | 2.8% | 1.2% |
| | 50th %'ile | -0.9% | 6.2% | 10.0% | 5.0% | 5.6% | 3.8% | 6.3% | 4.4% | 2.7% |
| | 84th %'ile | 0.8% | 10.6% | 17.6% | 8.9% | 10.1% | 5.7% | 11.1% | 6.0% | 4.3% |
| 40 years | 16th %'ile | -1.1% | 3.2% | 4.7% | 2.6% | 2.6% | 2.5% | 3.4% | 3.6% | 0.9% |
| | 50th %'ile | 0.3% | 6.7% | 10.3% | 5.5% | 6.1% | 4.4% | 6.8% | 5.3% | 2.2% |
| | 84th %'ile | 1.9% | 10.2% | 16.1% | 8.8% | 9.8% | 6.5% | 10.4% | 7.1% | 3.7% |
| Volatility (Disp) (1 yr) | | 9% | 18% | 30% | 15% | 18% | 5% | 18% | 6% | 3% |

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**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 | 606.46 | 1,000 | 0 | 0 | 0 | 0 |
| 25 | 117 | 0.17 | 400.59 | 751.84 | 0 | 0 | 0 | 0 |
| 30 | 131 | 0.2 | 284.23 | 533.36 | 0 | 0 | 0 | 0 |
| 35 | 144 | 0.24 | 222.07 | 416.68 | 0.1 | 0.07 | 0.02 | 0.01 |
| 40 | 150 | 0.41 | 178.79 | 335.37 | 0.16 | 0.12 | 0.03 | 0.02 |
| 45 | 157 | 0.68 | 167.94 | 314.94 | 0.35 | 0.27 | 0.07 | 0.05 |
| 50 | 162 | 1.09 | 138.44 | 259.32 | 0.9 | 0.68 | 0.23 | 0.17 |
| 55 | 162 | 1.7 | 109.02 | 204.31 | 3.54 | 2.65 | 0.51 | 0.38 |
| 60 | 162 | 3.06 | 97.17 | 182.02 | 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 | 563.88 | 514.11 | 0 | 0 | 0 | 0 |
| 25 | 117 | 0.1 | 379.42 | 345.88 | 0.1 | 0.07 | 0.02 | 0.01 |
| 30 | 131 | 0.14 | 318.05 | 289.9 | 0.13 | 0.1 | 0.03 | 0.02 |
| 35 | 144 | 0.24 | 274.51 | 250.12 | 0.26 | 0.19 | 0.05 | 0.04 |
| 40 | 150 | 0.38 | 228.47 | 208.09 | 0.39 | 0.29 | 0.08 | 0.06 |
| 45 | 157 | 0.62 | 213.2 | 194.16 | 0.52 | 0.39 | 0.1 | 0.08 |
| 50 | 162 | 0.9 | 179.75 | 163.52 | 0.97 | 0.73 | 0.24 | 0.18 |
| 55 | 162 | 1.19 | 134.12 | 122.13 | 3.59 | 2.69 | 0.52 | 0.39 |
| 60 | 162 | 1.52 | 108.09 | 98.31 | 5.71 | 4.28 | 0.54 | 0.4 |
| 65 | 162 | 1.95 | 0 | 0 | 10.26 | 7.69 | 0 | 0 |

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**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.
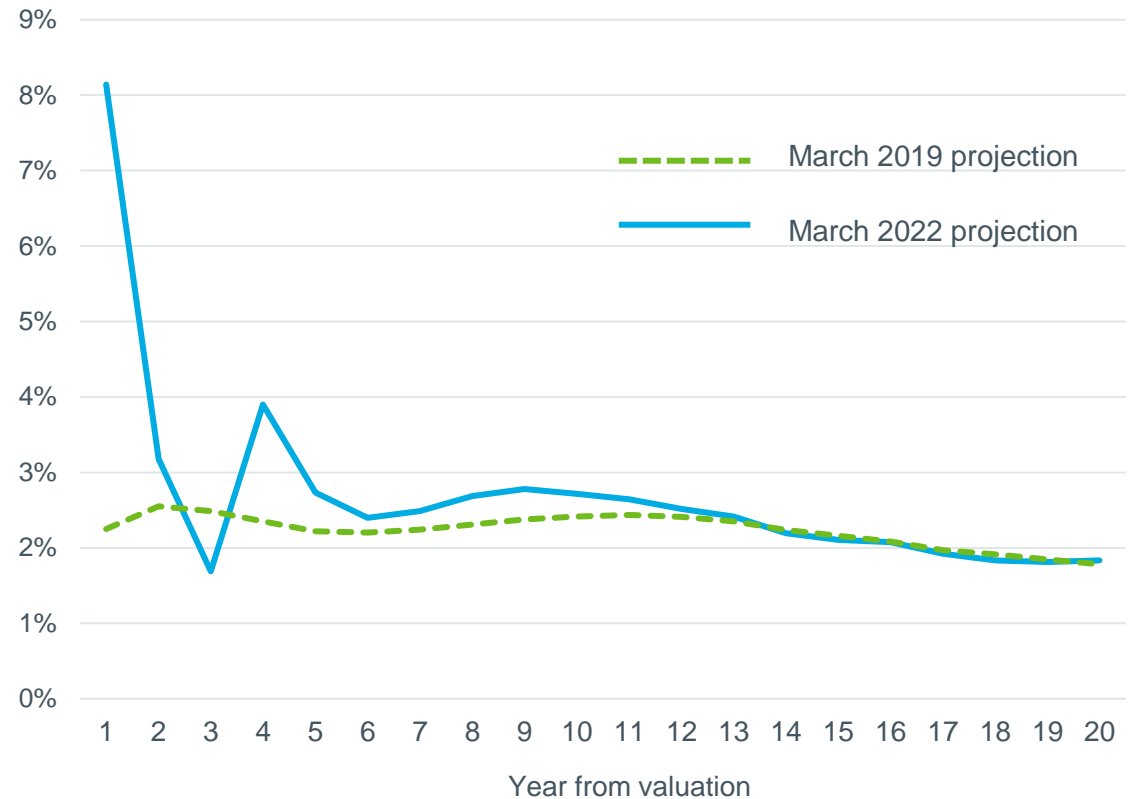
### Annual CPI inflation – 2019 vs. 2022



- - - March 2019 projection
— March 2022 projection

*Chart shows median expected annual CPI inflation from ESS model.*

◁ ⌂ ▷

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**APPENDIX 4**

# Reliances and limitations

We have been commissioned by London Borough of Tower Hamlets ("the Administering Authority") to carry out a full actuarial valuation of the London Borough of Tower Hamlets 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:<br>• the funding level - the ratio of assets to liabilities; and<br>• 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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