



Government
Actuary's
Department

Local Government Pension Scheme England and Wales

Funding Analysis Report in conjunction with the review of
LGPS fund valuations as at 31 March 2022 under
Section 13

Fiona Dunsire FIA and Aidan Smith FIA

14 August 2024

The Government Actuary's Department is proud to be accredited under
the Institute and Faculty of Actuaries' [Quality Assurance Scheme](#).
Our website describes [the standards we apply](#).

Funding levels

The aggregate scheme funding level using the local funding bases (outlined in section 5) has increased from 98% in 2019 to 106% at 2022. Over this period assets have generally performed well.

There is considerable variation in funding levels across individual funds. Around 30% of funds have a funding level below 100% (so the value of their assets is less than the value of their liabilities).

Assumptions (local funding bases)

Past service discount rates and inflation assumptions have both increased on average between 2019 and 2022 (see section 3).

Life expectancy assumptions have remained broadly unchanged on average between 2019 and 2022 (see section 4).

Investments

On average there has been a small shift from defensive assets to return seeking assets between 2019 and 2022 (see section 7).

Membership

The number of members in the LGPS has increased by 300,000 since 2019 (section 2). The 10 largest funds have 35% of all members.

Employer contribution rates

The average primary contribution rate to cover future benefit accruals has increased from 18.6% to 19.8% pay following the 2022 valuations (section 6). Secondary contribution rates in respect of surplus or deficit have decreased on average reflecting the better overall funding position.

Contents

1. Introduction.....	4
2. Membership Data.....	5
3. Financial Assumptions	7
4. Post Retirement Mortality	9
5. Funding levels	12
6. Employer contribution rates	14
7. Investments.....	16
8. Net cashflow position.....	19
9. Further information	21

1. Introduction

- 1.1 The Government Actuary has been appointed by the Ministry of Housing, Communities and Local Government (MHCLG) to report under section 13 of the Public Service Pensions Act 2013 in connection with the actuarial valuations of the 87 funds in the Local Government Pension Scheme in England and Wales (LGPS).
- 1.2 This report contains our analysis of information from the actuarial valuations of the funds in the LGPS as at 31 March 2022. It is largely factual, background information and is intended to supplement the analysis in our main section 13 report published on 14 August 2024. It may be read in conjunction with that report or as a standalone paper.
- 1.3 This paper will be of relevance to LGPS stakeholders including MHCLG, administering authorities and other employers, actuaries performing valuations for the funds within the LGPS, the LGPS Scheme Advisory Board (SAB), HM Treasury (HMT) and the Chartered Institute of Public Finance and Accountancy (CIPFA).
- 1.4 The 2022 data used in this report comes from three sources:
- Data available from individual funds' 2022 valuation reports
 - Additional data from the 2022 actuarial valuations provided by funds and their actuarial advisors

- Data published annually by MHCLG in their "Local government pension scheme funds local authority data"; commonly referred to as SF3 statistics

We have used data from the 2019 section 13 report published in 2021 as a comparator.

- 1.5 Most of our analysis is based on all 87 funds in the LGPS. However, in some cases one or both of the Environment Agency Funds have been excluded, either because the Environment Agency Closed Fund does not have any active members or where data is not available. We have noted where this is the case.

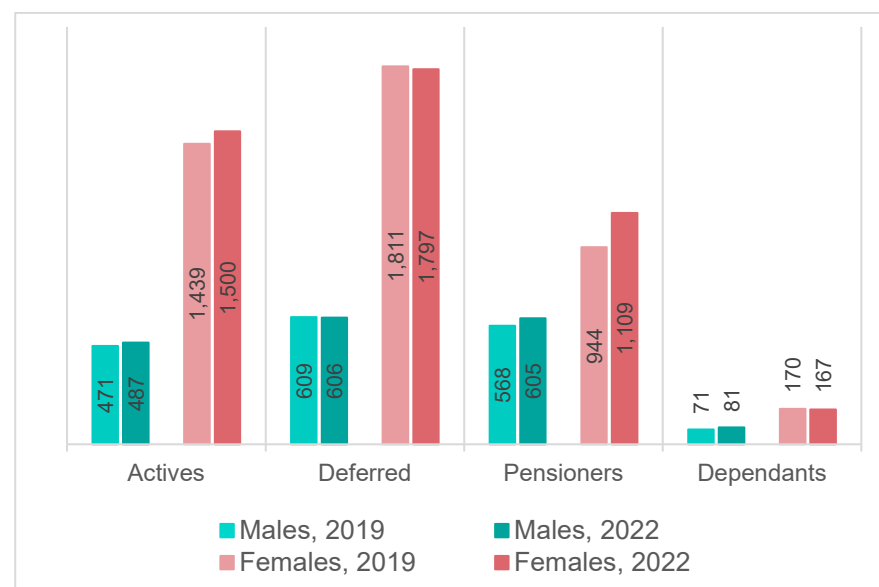
Compliance

- 1.6 This report has been prepared in accordance with the applicable Technical Actuarial Standard: TAS 100 issued by the Financial Reporting Council (FRC). The FRC sets technical standards for actuarial work in the UK.
- 1.7 Any checks that GAD has made on the data used in this report do not represent a full independent audit of the data supplied. In particular, GAD has relied on the general completeness and accuracy of the information without independent verification.
- 1.8 GAD has no liability to any person or third party for any act or omission taken, either in whole or in part, on the basis of this report.

2. Membership Data

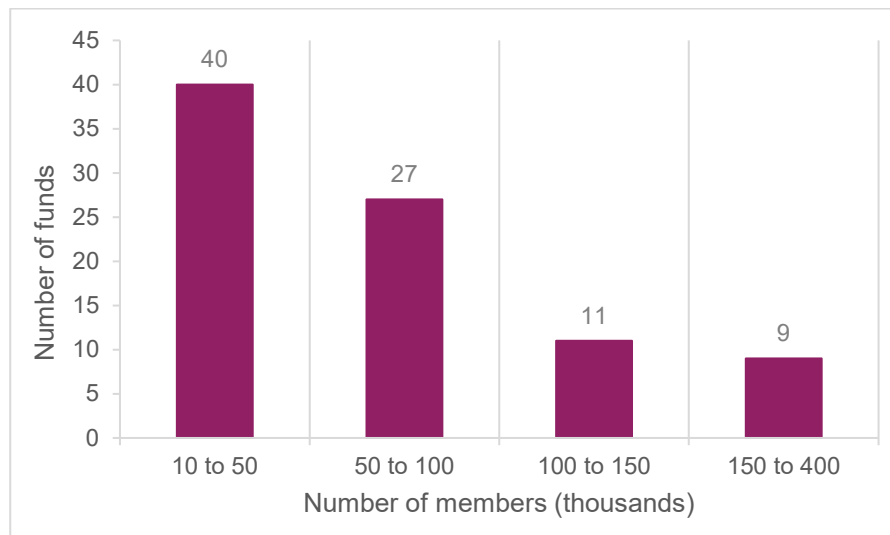
- 2.1 The total number of member records in the LGPS as at 31 March 2022 was 6.4 million which was an increase of around 300,000 from 31 March 2019. A single individual may have multiple member records in the LGPS. For example, they may have worked for different LGPS employers and not aggregated their service. Throughout this report, we analyse member records rather than individual members.
- 2.2 The following chart shows the overall member record split by gender and member type.

Chart 1: Number of active, deferred, pensioner and dependent member records split by gender in 2022 and 2019 (thousands)



- 2.3 Member records were not provided separately for male and female members by the 13 pension funds advised by Mercer. Chart 1 assumes that the gender distribution for these 13 funds is the same as the gender distribution across the other LGPS funds. The same approach is adopted for the average ages in table 1 below.
- 2.4 In chart 1, 'Pensioners' refers to former members and 'Dependants' to the partners and children of former members currently in receipt of a LGPS pension.
- 2.5 In aggregate, there is a greater increase in the number of female members than male members across all scheme categories.
- 2.6 The average number of member records for an individual fund in 2022 is 73,000 (compared to 69,100 in 2019). There is significant variance in member records between funds, with the smallest open fund having a total membership of 13,000 records and the largest fund having a total membership of 379,600 records. Chart 2 illustrates this variance.
- 2.7 As in 2019, the 10 largest funds in the LGPS comprise about 35% of the total membership.

Chart 2: Funds split by number of member records in 2022



Average ages

2.8 The average age of all member categories has increased apart from dependants which decreased by 0.2 years. The overall average age of members increased by **0.8 years**.

Table 1: Average age of active, deferred, pensioner and dependent member records in 2019 and 2022

Member category	Average age (years)	
	2019	2022
Actives	45.9	46.0
Deferred	47.0	47.6
Pensioners	71.1	71.4
Dependants	73.1	72.9
Overall	53.7	54.5

2.9 The average age of an individual LGPS member record in each of the four member categories is shown in table 1. The overall figure shows the average unweighted age across all member categories based on data for all funds.

3. Financial Assumptions

3.1 Financial assumptions are a key driver of funding levels in the LGPS. There is variation between the financial assumptions used by individual funds to value their past service liabilities. Some variation is to be expected and may reflect differences in circumstances (for example, different investment strategies, types of employers and attitudes to risk) and differences in views of unknown future experience (for example future investment returns). The range of assumptions, excluding the Environment Agency Closed Fund, is given below:

Table 2: Minimum, maximum and average rates (% a year) for key financial assumptions in 2022 and 2019 (excluding Environment Agency Closed Fund)

	Minimum		Maximum		Average*	
	2019	2022	2019	2022	2019	2022
Past service discount rate	3.1%	3.1%	5.3%	5.4%	4.1%	4.3%
Earnings inflation	2.3%	2.7%	3.9%	4.6%	3.2%	3.7%
CPI inflation	2.0%	2.3%	2.6%	3.1%	2.4%	2.8%
Past service discount rate net of CPI	0.7%	0.6%	2.6%	2.4%	1.8%	1.5%

* Average weighted by funds' past service liabilities.

3.2 Many funds used the same financial assumptions when calculating past service liabilities and future contribution rates, although this was not the case for funds advised by Mercer. Mercer's approach allows for contributions

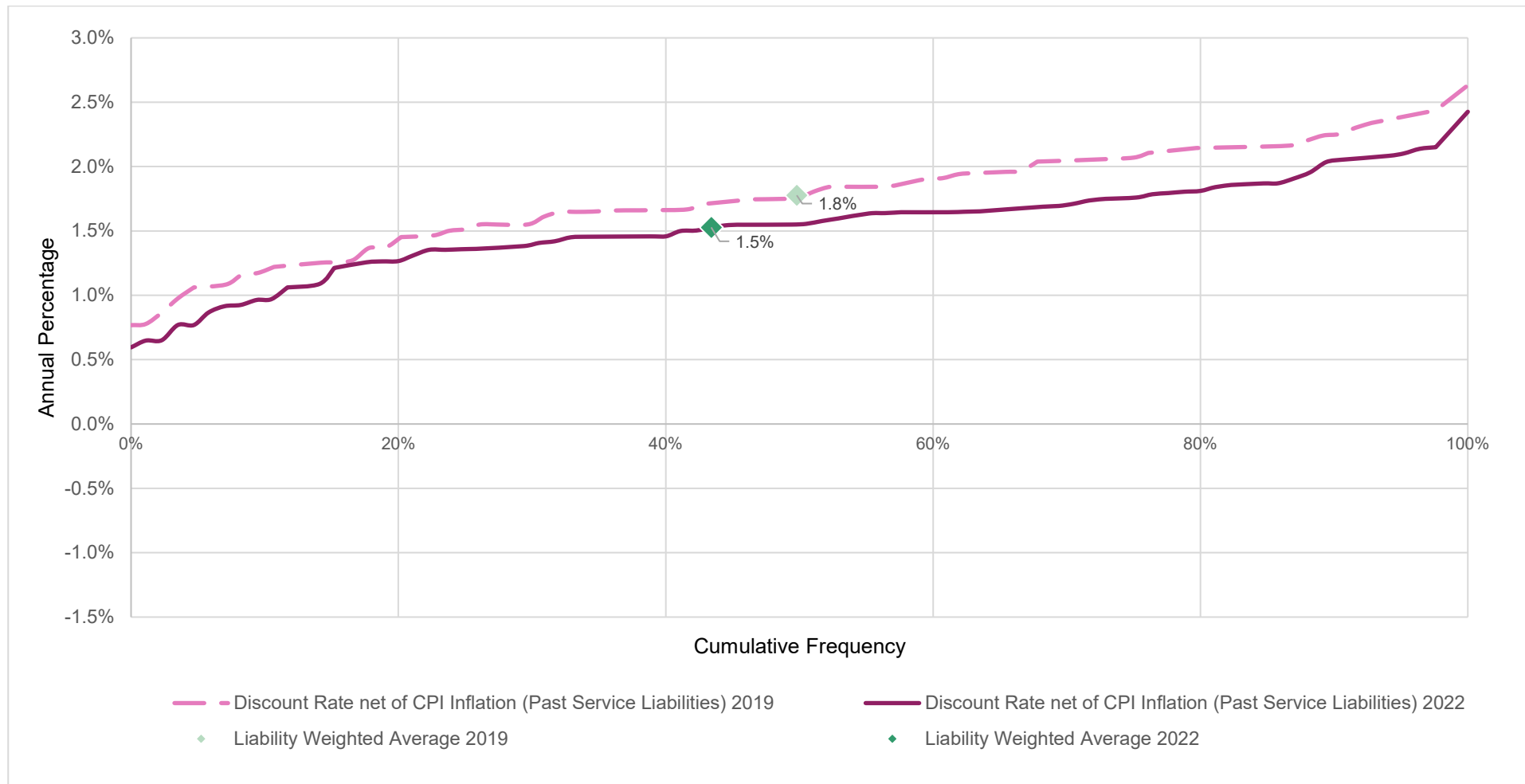
made after the valuation date receiving a future investment return that is not directly linked to market conditions at the valuation date. This resulted in a higher discount rate assumption for setting future contribution rates than used to value past service liabilities in the 2022 valuations. Hymans Robertson use an asset liability model to set contribution rates by analysing the probability of success over a projection period. Therefore, future contribution rates are not set deterministically using a discount rate, although projected liabilities are valued consistently with past service liabilities.

3.3 Table 2 opposite summarises the minimum, maximum and average of four key financial assumptions for the LGPS and includes comparison with the corresponding assumptions for the 2019 valuations. Chart 3 shows the cumulative frequency of the discount rate net of CPI.

3.4 The key financial measure in valuing pension scheme liabilities is the excess of the discount rate above the inflation assumption. This relationship reflects the amount by which the return on assets held by a fund is expected to exceed increases in benefits, which generally increase by earnings inflation before retirement or deferment and CPI inflation afterwards. In general, a higher discount rate net of CPI inflation will lead to a lower value of liabilities.

3.5 Since 2019 discount rates used to value past service liabilities net of CPI inflation have decreased by 0.3% on average. In isolation this would increase the value of past service liabilities and, where the same discount rate is adopted for future service, the contributions required for future service.

Chart 3: Cumulative frequency of funds' assumptions for the discount rate net of CPI inflation for past service liabilities (% a year, excluding Environment Agency Closed Fund)



4. Post Retirement Mortality

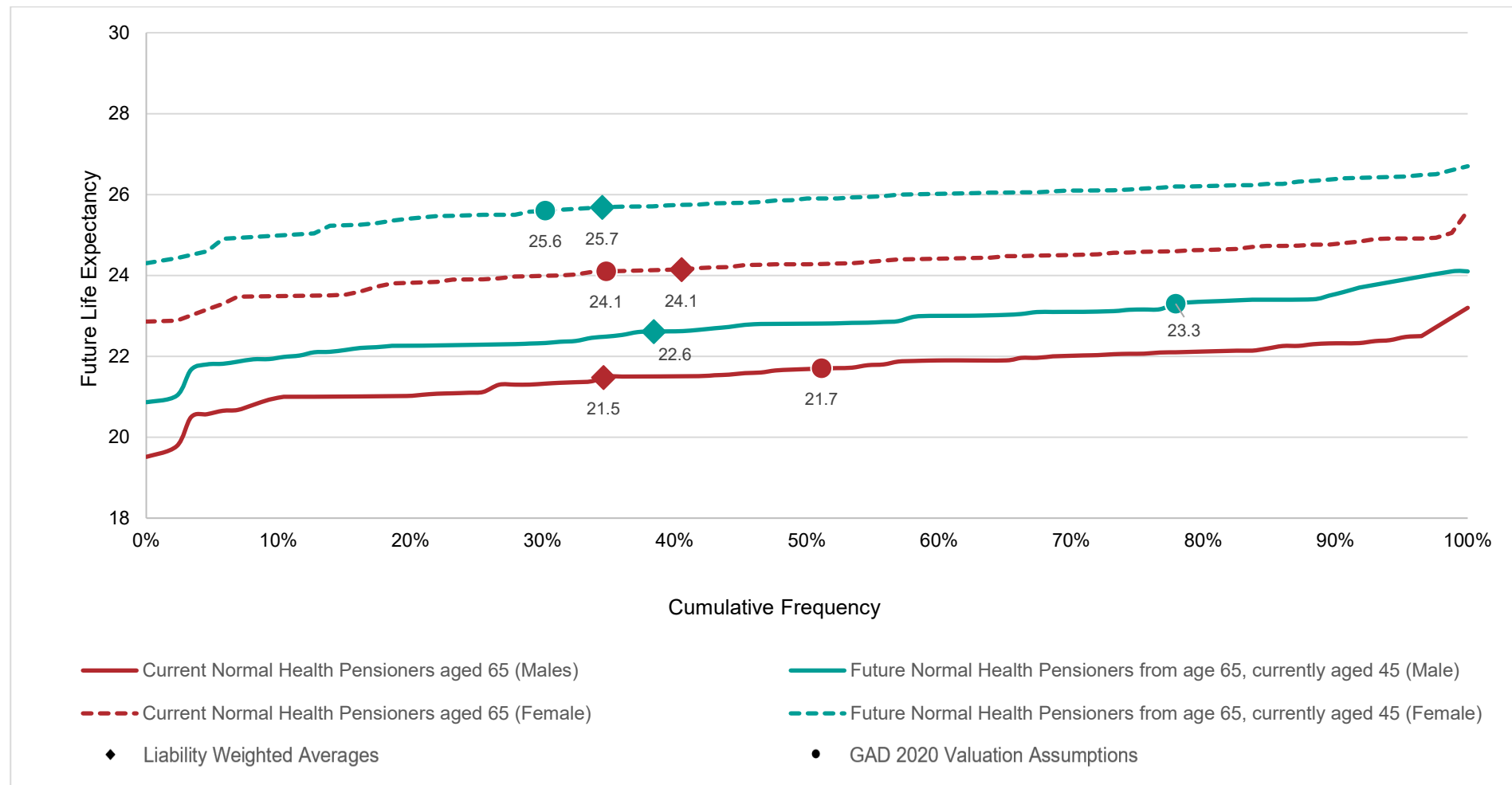
Table 3: Average life expectancy (years) for current and future normal health pensioners split by gender, assumed by funds in local valuations in 2019 and 2022 and by GAD in the 2020 scheme valuation

	2019 average local*	2022 average local*	GAD 2020 valuation
Current normal health pensioners aged 65 (male)	21.7	21.5	21.7
Future normal health pensioners from age 65, currently aged 45 (male)	23.0	22.6	23.3
Current normal health pensioners aged 65 (female)	24.1	24.1	24.1
Future normal health pensioners from age 65, currently aged 45 (female)	25.7	25.7	25.6

*weighted by valuation liabilities

- 4.1 Table 3 summarises the average life expectancy assumptions used for funds' 2019 and 2022 actuarial valuations and the [GAD's scheme-wide LGPS valuation as at 31 March 2020](#) (the latest whole scheme valuation, where the cost of LGPS benefits are evaluated and assessed against the agreed cost control mechanism, under directions set by HM Treasury). The average life expectancy assumptions used in the local 2022 valuations are overall similar to those used in the 2019 fund valuations and GAD's 2020 scheme valuation.
- 4.2 However we note that there is variation between assumptions adopted by funds. This is shown in the cumulative frequency chart, chart 4, below. The cumulative frequency chart shows the different life expectancies assumed by the individual funds. Diamonds represent liability weighted averages and circles represent the assumptions used by GAD for the 2020 whole scheme valuation, as detailed in table 3.

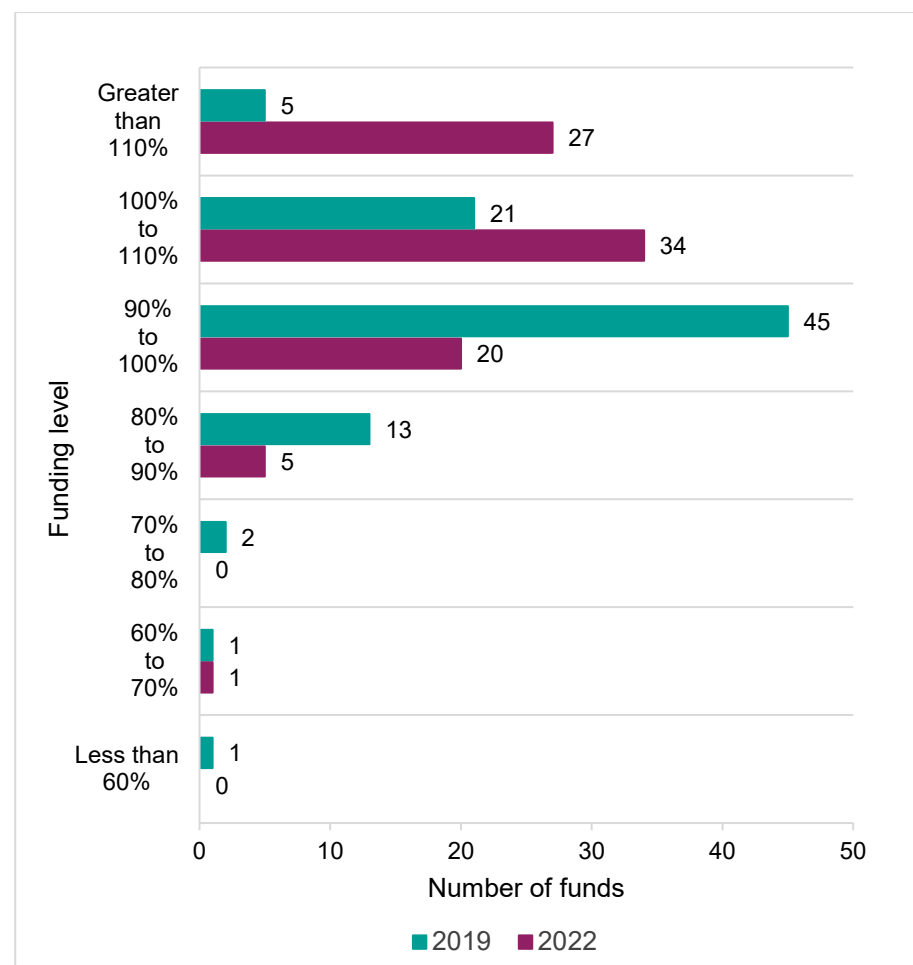
Chart 4: Cumulative frequency of life expectancy (years) assumed by funds in local valuations in 2022 and by GAD in the 2020 scheme valuation, for current and future normal health pensioners split by gender



- 4.3 Life expectancies are calculated using post retirement mortality rates. The assumed post retirement mortality rates in the 2022 actuarial valuations have a direct impact on each fund's liabilities. A high mortality assumption (i.e. a low life expectancy) will result in a lower value being placed on the liabilities as benefits are expected to be paid for a shorter period of time. Life expectancies for the younger active or deferred members are higher than for current pensioners, as they allow for mortality improvements over time.
- 4.4 Some of the differences in the life expectancies will also be due to the projection methodology used when allowing for future mortality improvements and the assumed long term future trend. All funds have based their future assumptions on a standard actuarial model produced by the CMI, the CMI 2021 projection model, but with different parameters used. The CMI 2021 projection model requires users to select certain parameters, for example the long term rate of mortality improvement.

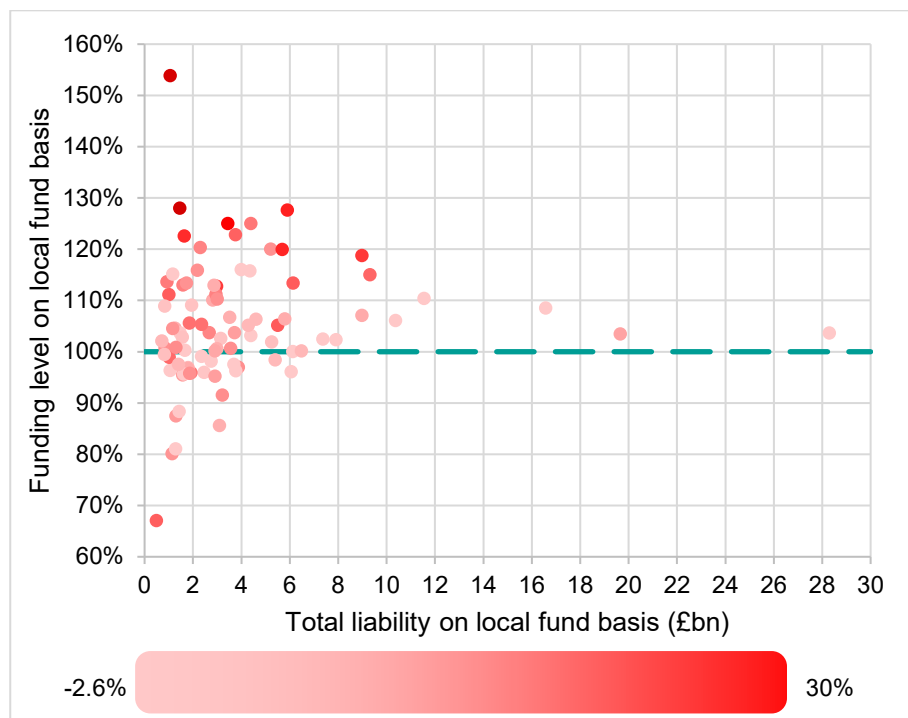
5. Funding levels

Chart 5: Number of funds by local funding level in 2019 and 2022



- 5.1 The funding level is the value of assets divided by the value of the past service liabilities (i.e. the expected value of future payments due to members which have been earned up to the valuation date). A funding level of 100% means that a fund's assets are expected to be sufficient to meet future payments to members which have been earned up to the valuation date, if the assumptions used for the valuation were to be borne out in practice.
- 5.2 The local funding bases are required to incorporate prudence, i.e. there is intended to be a greater than 50:50 likelihood of actual future experience being better than the assumptions, in the opinion of the fund actuary.
- 5.3 The aggregate funding level for the whole scheme has increased from 98% at 31 March 2019 to 106% at 31 March 2022. Chart 5 shows how the distribution of funding levels has shifted over the inter-valuation period, with fewer funds in the 80-90% and 90-100% bands and more funds in the higher funding level bands.
- 5.4 Whilst funding levels have improved overall since 2019, there remains considerable variation between funds. The highest funding level as at 31 March 2022 was **154%** and the lowest funding level was **67%**. This is a wider range than as at 31 March 2019.
- 5.5 The distribution of funding levels by the funds' total liability values as at 31 March 2022 is shown in chart 6.

Chart 6: Relationship between size of fund (using total liability value) and funding level on local bases



- 5.6 The shading in chart 6 above shows the changes in the funding level on a local basis since the 2019 valuation as indicated by the scale above. We note that on average funding levels have increased by 8% but there is considerable variation between funds with the range being around -2.6% to +30%.
- 5.7 Chart 6 shows that there is no clear trend that funds with a higher value of liabilities (i.e. larger funds) are better funded or vice versa. However there appears to be some correlation with better funded funds having greater improvements in funding level.

6. Employer contribution rates

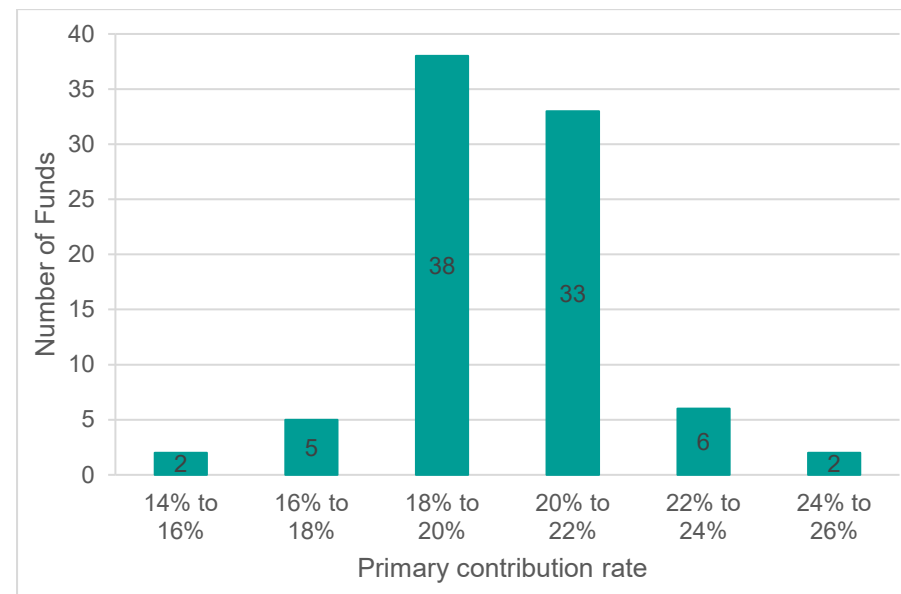
6.1 This section looks at how employer contribution rates have changed. The primary contribution rate is the average rate paid by employers to cover future benefit accrual. The secondary contribution rate is the additional contributions required to allow for a deficit or a surplus in a fund; these may be negative. In addition to employer contribution rates, members contribute to the fund but these rates are based on individual members' salary and do not vary across funds.

6.2 The rates quoted in table 4 are in respect of the three years following completion of the valuation; i.e. the agreed rates following the 2022 valuations will be payable between April 2023 and March 2026. We note that average employer rates may change in individual future years and will also differ for different employers.

Table 4: Average primary and secondary contribution rates (% of pay) following the 2016, 2019 and 2022 valuations (excluding Environment Agency Closed Fund) weighted by salary

	2016	2019	2022
Primary contribution rate	16.8%	18.6%	19.8%
Secondary contribution rate in respect of surplus or deficit	6.3%	3.7%	1.0%
Total	23.1%	22.3%	20.8%

Chart 7: Number of funds split by primary contribution rate (% of pay) following the 2022 valuations (excluding Environment Agency Closed Fund)



6.3 The average primary contribution rate (weighted by salary) has increased from the 2016 to 2022 valuations, whereas the average secondary contribution rate (again weighted by salary) has decreased. Details are shown in table 4 opposite.

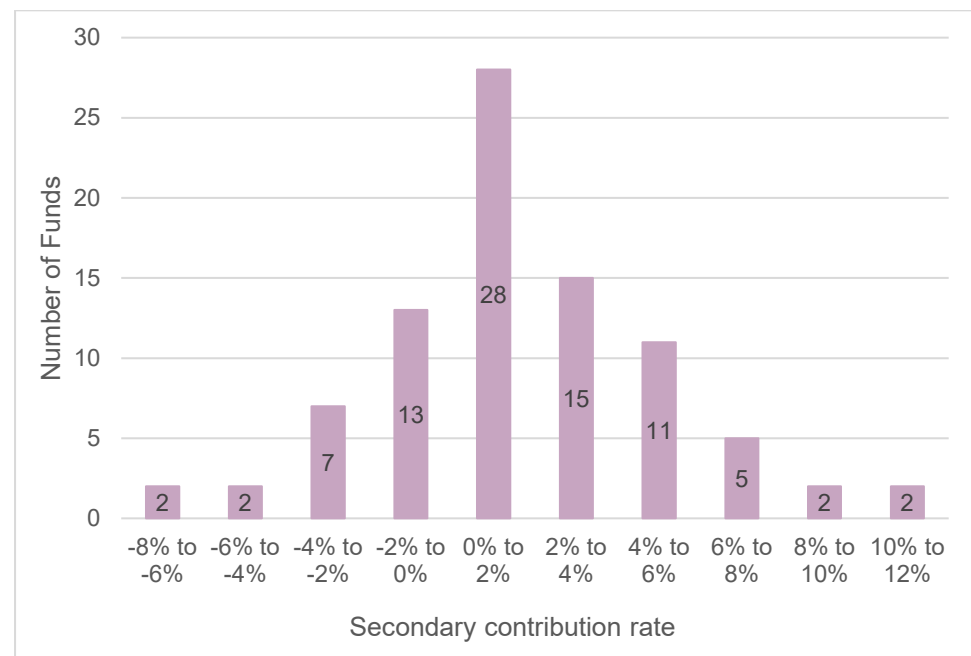
6.4 Secondary contribution rates are negative where a fund has decided to reduce its surplus through lower contributions. In such cases, the total contributions paid (being the primary rate plus the negative secondary rate) will be lower than the expected cost of future benefits (being the primary rate).

6.5 There was some variation in primary contribution rates as shown in chart 7. All funds set primary contribution

rates between 14% and 26% of pay with around 80% of funds setting contribution rates between 18% and 22% of pay.

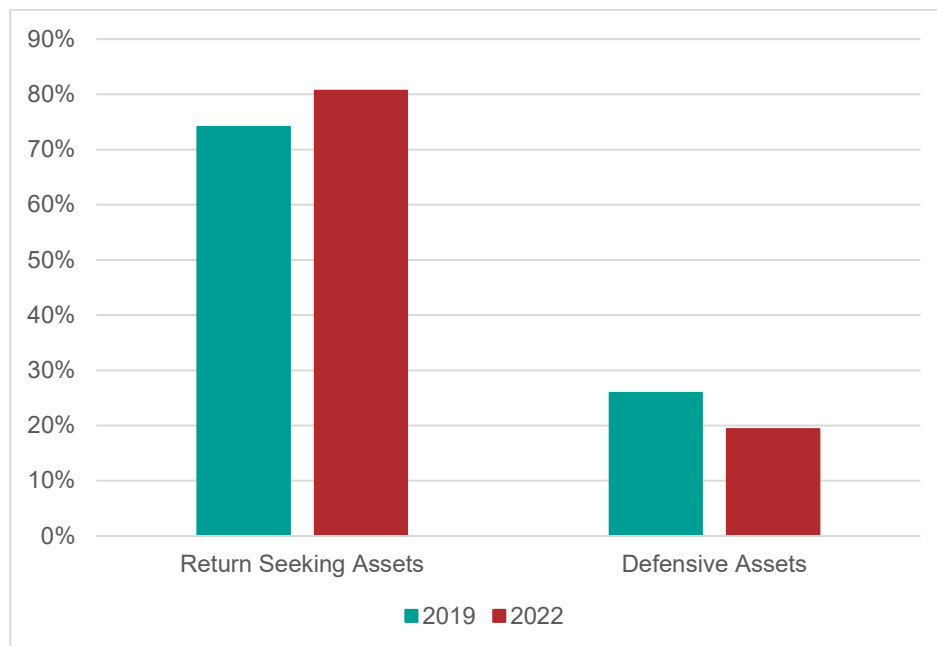
6.6 The decrease in average secondary contribution rates reflects the improvement in the scheme's overall funding position. Funding positions vary across funds, and Chart 8 shows the distribution of average secondary contribution rates for individual funds following the 2022 valuations. We note that there is more variation in the distribution of secondary contributions than primary contributions.

Chart 8: Number of funds split by average secondary contribution rate (% of pay) following the 2022 valuations



7. Investments

Chart 9: The proportion of total LGPS assets in return seeking and defensive asset classes by market value at 31 March 2019 and 2022



7.1 Chart 9 shows the total LGPS asset values split by return seeking and defensive assets as at 31 March 2019 and 31 March 2022. There has been a shift towards return seeking assets over this period, a reversal of the change seen between 2016 and 2019.

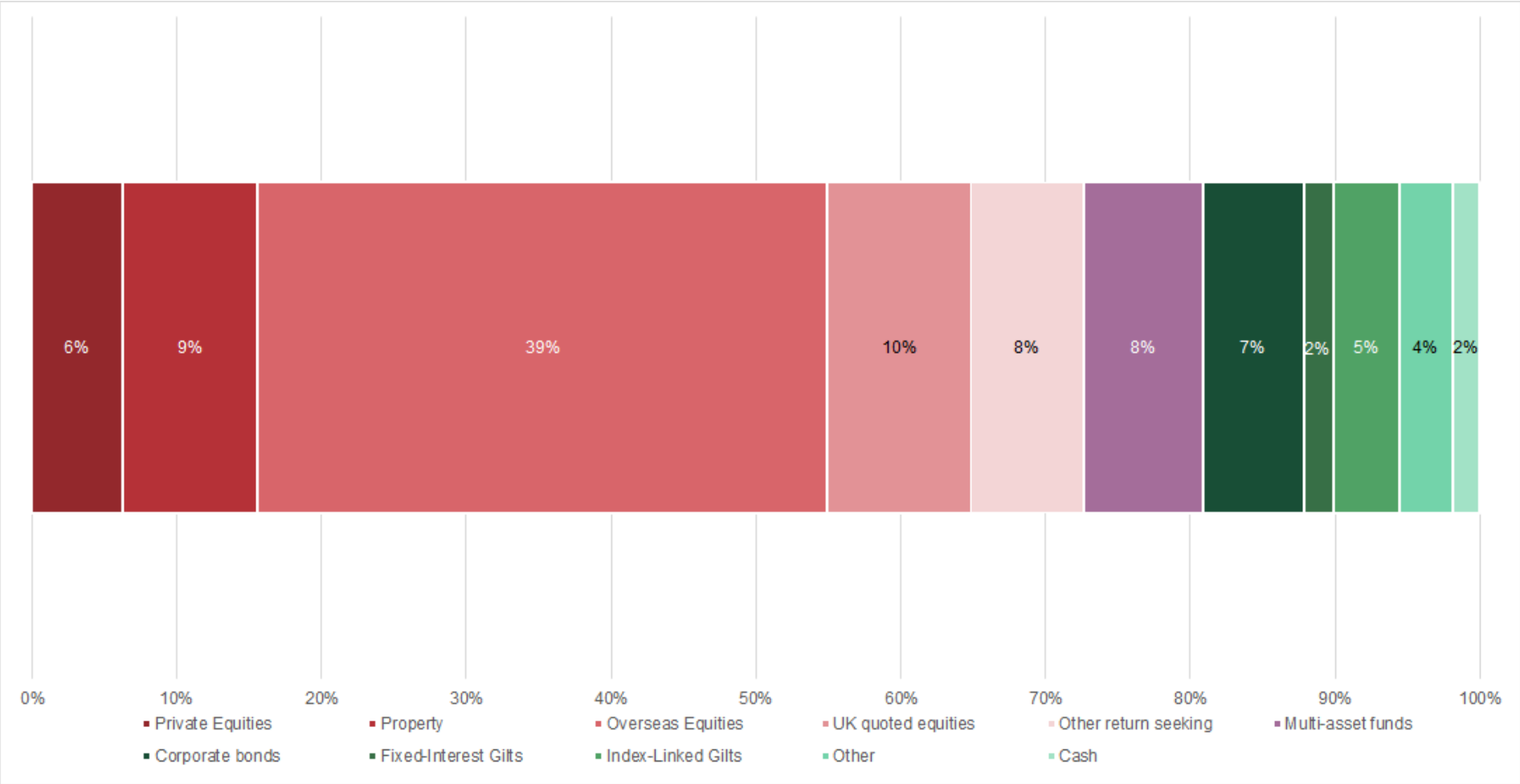
7.2 The allocation of asset classes to return seeking and defensive assets is somewhat subjective. We have classified Overseas Equities, UK Equities, Other

Investments and Property to be return seeking assets and Corporate Bonds, Gilts and Cash to be defensive assets. We note this is a broad and subjective categorisation. The proportion of assets by market value invested in return seeking assets has increased from 74% as at 31 March 2019 to 81% as at 31 March 2022, with a corresponding decrease in the proportion invested in defensive assets. We note that whilst defensive assets are expected to generate less volatile returns overall relative to changes in liability values, they may still be expected to generate a positive return relative to the fund liabilities.

7.3 This analysis is based on the data provided by the fund actuaries. There is a wide range of investments held by LGPS funds and it is not always possible for fund actuaries to allocate all assets to the categories used for this purpose. As a result, this analysis should be treated with caution particularly in relation to the asset split between UK quoted equities and Overseas equities. For example, a global equity fund holding which includes some UK equities is likely to be recorded only as an overseas equity holding. Further, private equity is not separated between UK and overseas. It is therefore likely that the UK asset holdings are understated.

7.4 The majority of the LGPS assets are held in equities, with the bulk of this investment being recorded as overseas equities. Of the defensive asset category the largest asset class remains in corporate bonds.

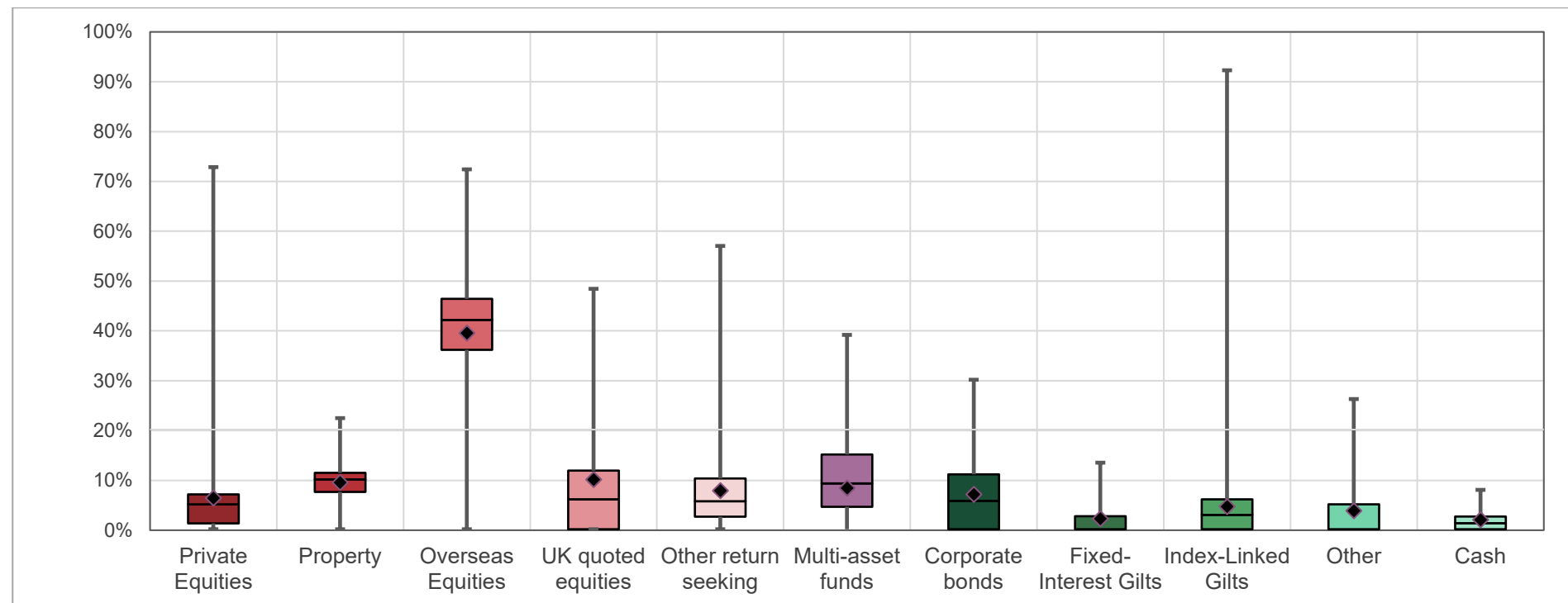
Chart 10: The proportion of total LGPS assets split by broad asset class by market value at 31 March 2022



- 7.5 There is some variance between the investment strategies of different funds. Chart 11 demonstrates this variance by asset category.
- 7.6 The coloured box in the middle represents the range of proportions within which the middle 50% of funds sit. The lower and upper lines represent the spread of proportions for the lower and upper 25% of funds such that the end points represent the minimum and

maximum proportions. (Note that where the middle coloured box includes 0% the lower black line may not be clear). The black diamonds represent the asset weighted averages as seen in chart 10 above. For the purpose of this evaluation we have deducted values less than 0% (i.e. debts or negative derivative values) from other assets.

Chart 11: Variation in asset split by broad asset class by market value at 31 March 2022 (provided by fund actuaries)



These categorisations are based on data provided by fund actuaries. We note there are some limitations in the data as explained above.

8. Net cashflow position

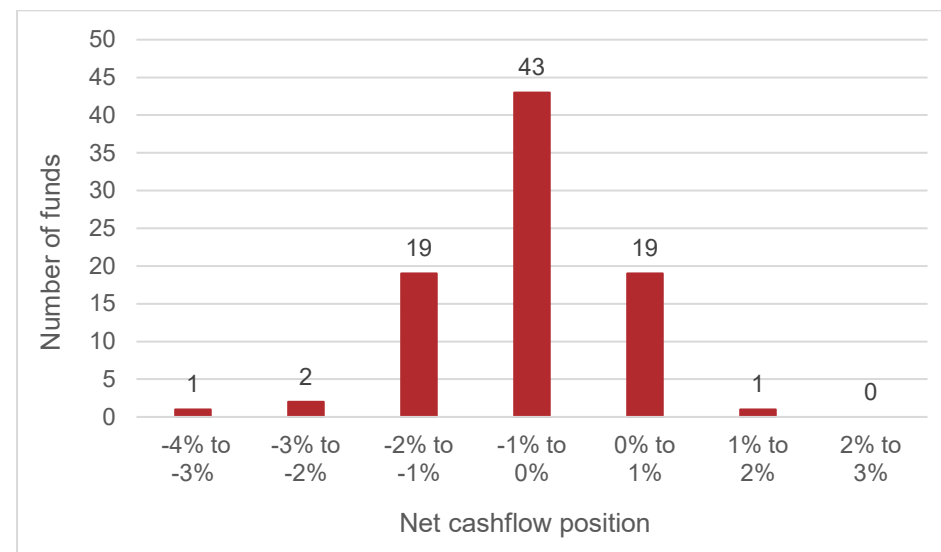
8.1 For the purpose of this analysis we have defined the net cashflow position relative to assets of the individual funds as:

$$\frac{\text{Total income over the year (excluding investment returns)} \\ \text{less Total expenditure over the year}}{\text{Market value of assets held at the beginning of the year}}$$

8.2 The higher a fund's net cashflow position, the better position it is in to meet pension payments without reliance on current investment returns. A strongly negative cashflow position (of less than -3% say) means that cashflow requirements will be a potentially material factor impacting investment strategy.

8.3 Chart 12 shows the distribution of funds by net cashflow position in 2022. It highlights that there is considerable variance within this measure. There are three funds with a net cashflow position of less than -2%.

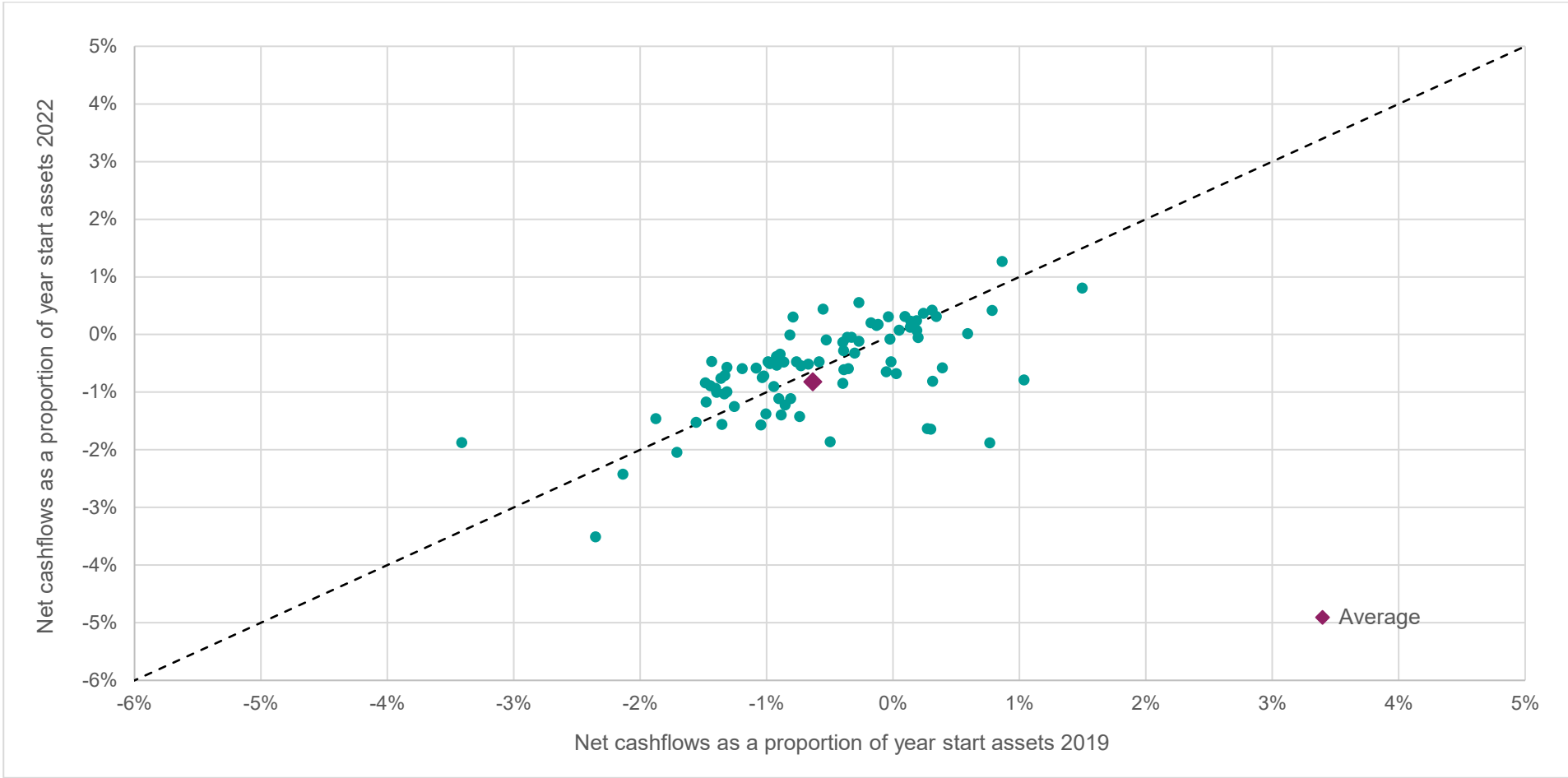
Chart 12: Number of funds by net cashflow position in 2022 (excluding Environment Agency Funds)



8.4 Chart 13 has been derived from SF3 data publicly available. The data is not available for the Environment Agency Closed and Active Funds, which have been excluded from this analysis. Funds sitting above the dotted line have seen an improvement in their net cashflow position from 2019 to 2022 and vice versa.

8.5 The average net cashflow position across all funds was -0.8% for the financial year starting April 2022. This is a small deterioration of 0.2 percentage points on the position for the financial year commencing April 2019 of -0.6%.

Chart 13: Change in net cashflow position as a proportion of assets between 2019 and 2022 (excluding Environment Agency Closed and Active Funds)



9. Further information

- 9.1 Further information and analysis can be found in:
- Review of LGPS fund valuations as at 31 March 2022 under Section 13 main report dated 14 August 2024
 - Review of LGPS fund valuations as at 31 March 2022 under Section 13 appendices dated 14 August 2024
- 9.2 This analysis was undertaken based on the data and funding positions as at 31 March 2022, see Introduction for details. Changes may have occurred since then.