Wiltshire Pension Fund

Actuarial valuation at 31 March 2022

Initial results

Barry Dodds

Catherine McFadyen

10 October 2022
For and on behalf of Hymans Robertson LLP

Use the menu bar above to navigate to each section.

Contents

In this report:

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

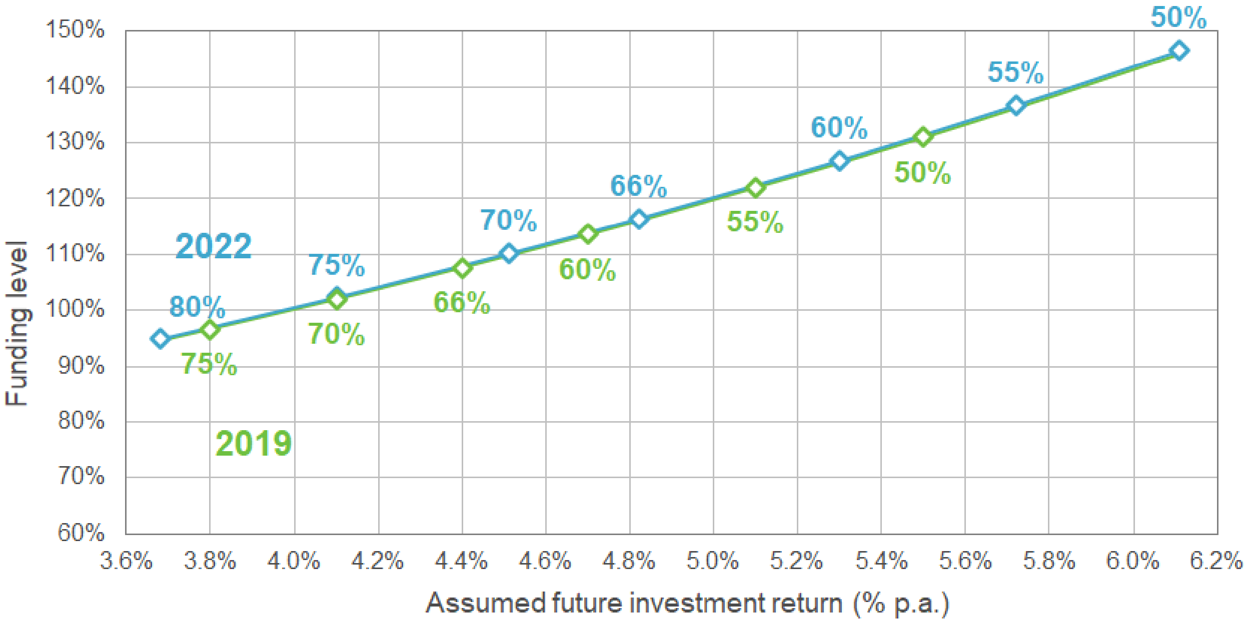
Executive summary

Funding position as at 31 March 2022

- The reported funding position has improved from last valuation (at the 75% likelihood of success) from 97% to 102%.

Changes since the last valuation

- The main factor driving the funding position improvement is stronger than expected investment returns.
- Going forward, there is a sharp increase in assumed short term inflation but this is partially offset by higher long-term expected investment returns.
- Despite the Covid-19 pandemic, the funding impact of mortality experience has not been significantly different from expectations.



The valuation process

The valuation process

1. Assumptions advice
   Q4 2021/Q1 2022 ✓
2. Employer risk management
   Q4 2021/Q1 2022 ✓
3. Contribution rate modelling
   Q2 2022 ✓
4. Data provision
   Summer 2022 ✓
5. **Initial results**
   October 2022
6. Funding Strategy Statement
   November 2022
7. Employer results
   November 2022
8. Employer discussions
   Q1 2023
9. Valuation sign off
   March 2023

Initial results

This report:

- presents the funding position of the Wiltshire 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
- 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

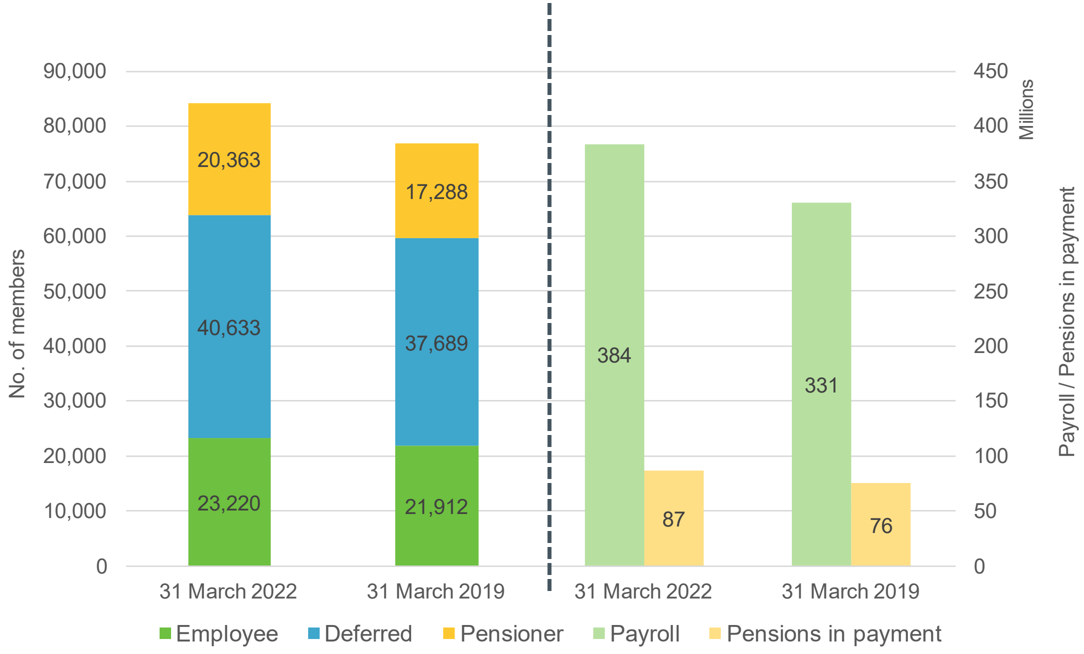
Data

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

- Membership data, uploaded to the DataPortal on 9 August 2022
- Cashflow and investment data, provided over the intervaluation period for monthly employer asset tracking

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 – '220307 Wiltshire pension Fund – 2022 Valuation Assumptions Advice'. The assumptions in this report were agreed by the Pensions Committee on 5 April 2022. 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	Purpose	31 March 2019
Discount rate	4.1% 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.	3.8% pa (based on 75% likelihood)
Benefit increases / CARE revaluation	2.7% pa	To determine the size of future benefit payments.	2.3% pa
Salary increases	3.2% pa	To determine the size of future final-salary linked benefit payments.	2.7% pa

Assumptions

Demographic assumptions

Longevity

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

	31 March 2022	31 March 2019
Male pensioner	21.9 years	21.7 years
Male non-pensioner	22.7 years	22.5 years
Female pensioner	24.6 years	24.0 years
Female non-pensioner	26.1 years	25.5 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 a member can retire with unreduced benefits
Family details	A varying proportion of members have a dependant at retirement or on earlier death eg at age 60, 90% for males and 85% for females. Beyond retirement the proportion is adjusted for assumed dependant mortality. Male members – dependant 3 years younger Female members - dependant 3 years older

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.

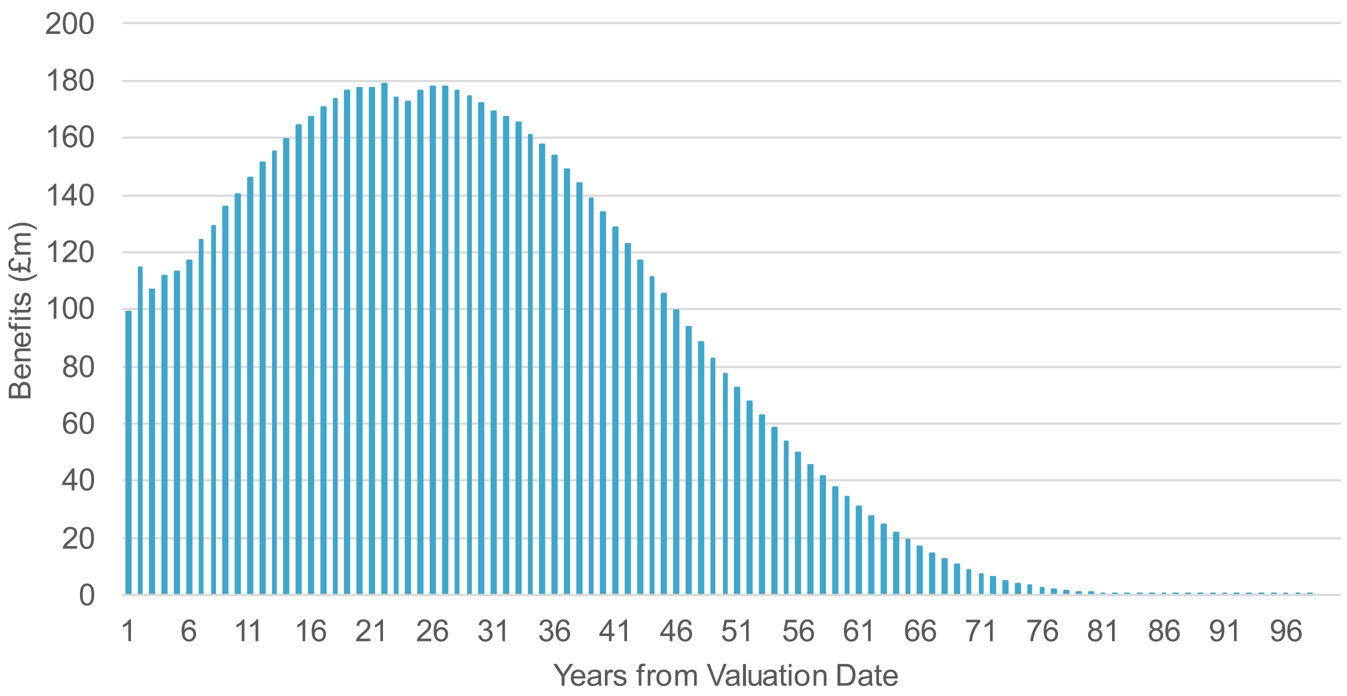
Fund-level results

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 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.

Funding position as at 31 March 2022

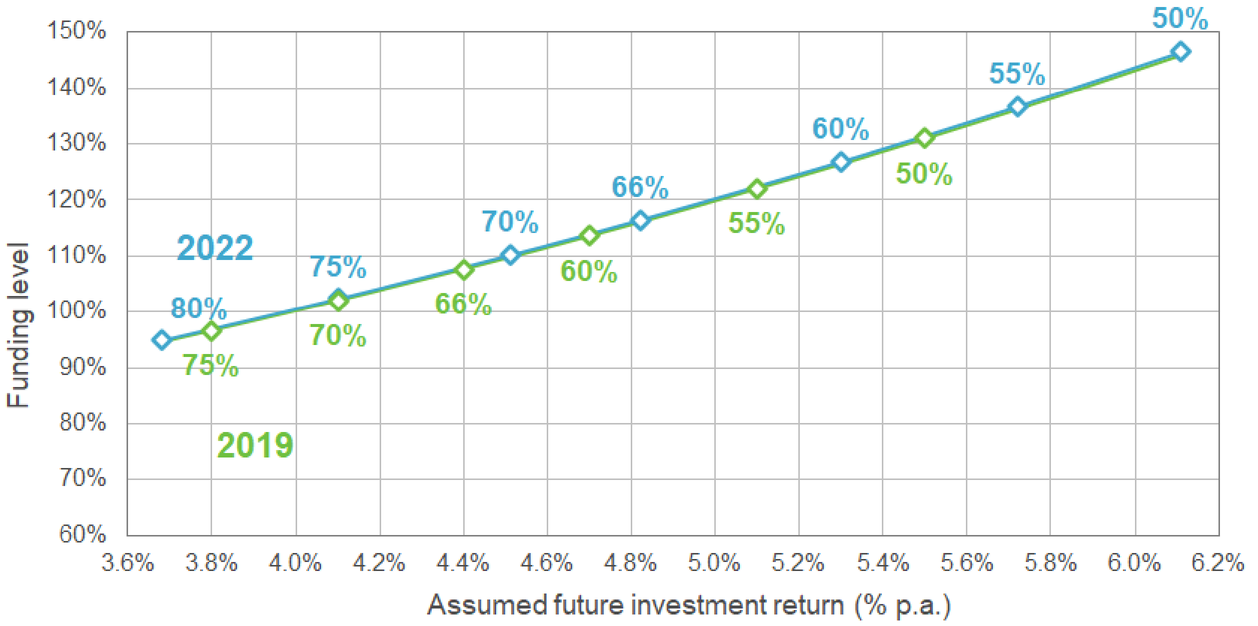
We can place a single value on all the future projected benefit payments for current members, called the liabilities. Comparing the liabilities to the market value of the Fund's assets at the valuation date provides the funding level (assets divided by liabilities).

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.4.0% pa. The likelihood of the Fund's assets yielding at least this return is around 77%.
- The comparator at 2019 was a return of 4.0% 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 6.1% pa. So the best-estimate funding level is 147% at 31 March 2022 (130% 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

HYMANS ROBERTSON

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.

We use a discount rate of 4.1% pa to report a single funding level and funding surplus/deficit for the 2022 valuation. There is a 75% likelihood associated with a future investment return of 4.1% 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 75% 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	961	777
Deferred Pensioners	806	688
Pensioners	1,391	1,215
Total Liabilities	3,157	2,680
Assets	3,230	2,589
Surplus/(Deficit)	**74**	**(92)**
Funding Level	102%	97%

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.*

Changes since the last valuation

Events between 2019 and 2022

Financial

	Expected	Actual	Difference	Impact on funding position
Investment returns				
3 year period	11.8%	21.5%	9.7%	+£262m
Annual	3.8% pa	6.7% pa	2.9% pa	

The Fund's expenses for non-investment activities over the last 3 years have totalled £7.9m. This is equivalent to 0.7% of the Fund's total pensionable pay and is slightly lower than last valuation (0.8%). We will make allowance for the Fund's expenses by adding 0.7% of pay to employer contribution rates from 1 April 2023.

Membership

	Expected	Actual	Difference	Impact on funding position
Pre-retirement				
Early leavers	9,730	9,422	-308	<£1m
Ill-health retirements	114	191	77	-£4m
Salary increases	3.4% pa	4.1% pa	0.7% pa	-£9m
Post-retirement				
Benefit increases	2.3% pa	1.8% pa	-0.6% pa	+£41m
Pension ceasing	£6.1m	£6.1m	£0.0m	+£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 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 return achievable with a 75% likelihood is now 4.1% pa vs. 3.8% pa at 2019.	Decrease of £178m
Inflation	The rate at which pensions in payment and deferment and CARE pots increase	Significant increase in short-term future inflation expectations.	Increase of £228m
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 £2m
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 £5m
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 £20m

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	**2,589**	**2,680**	**(92)**
Cashflows			
Employer contributions paid in	285	0	285
Employee contributions paid in	72	0	72
Benefits paid out	(299)	(299)	0
Other cashflows (e.g. Fund expenses)	(6)	0	(6)
Expected changes			
Expected investment returns	322	0	322
Interest on benefits already accrued	0	320	(320)
Accrual of new benefits	0	356	(356)
Expected position at 31 March 2022	**2,963**	**3,057**	**(95)**

Impact of actual events

Change in the surplus/deficit position	Assets	Liabilities	Surplus / Deficit
	£m	£m	£m
Expected position at 31 March 2022	**2,963**	**3,057**	**(95)**
Events between 2019 and 2022			
Salary increases greater than expected	0	9	(9)
Benefit increases lower than expected	0	(41)	41
Early retirement strain (and contributions)	6	7	(2)
Ill health retirement strain	0	4	(4)
Early leavers less than expected	0	0	0
Commutation less than expected	0	10	(10)
McCloud remedy	0	3	(3)
Other membership experience	0	20	(20)
Higher than expected investment returns	262	0	262
Changes in future expectations			
Investment returns	0	(178)	178
Inflation	0	228	(228)
Salary increases	0	2	(2)
Longevity	0	15	(15)
Other demographic assumptions	0	20	(20)
Actual position at 31 March 2022	**3,230**	**3,157**	**74**

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. Note that these levels refer to small changes to inflation in the long term. The impact of a single year of high inflation would be less.

CPI Assumption	Surplus/ (Deficit)	Funding Level
p.a.	£m	%
2.5%	176	106%
2.7%	74	102%
2.9%	(33)	99%

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
p.a.	£m	%
1.50%	74	102%
1.75%	47	101%

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

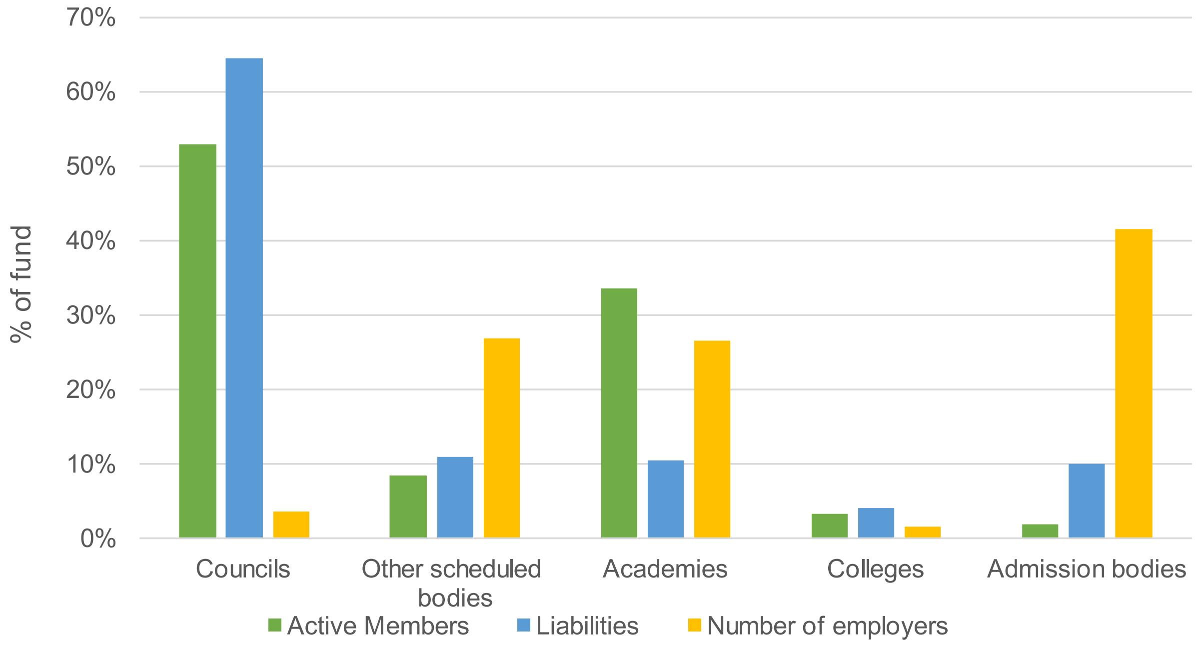
Focusing on employers

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

The Fund is funded at individual employer level, which means each employer is responsible for funding the benefits earned by their current and ex-staff. On 31 March 2022, there are around 350 employers in the Fund (including those who have ceased and those pooled with other employers).

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



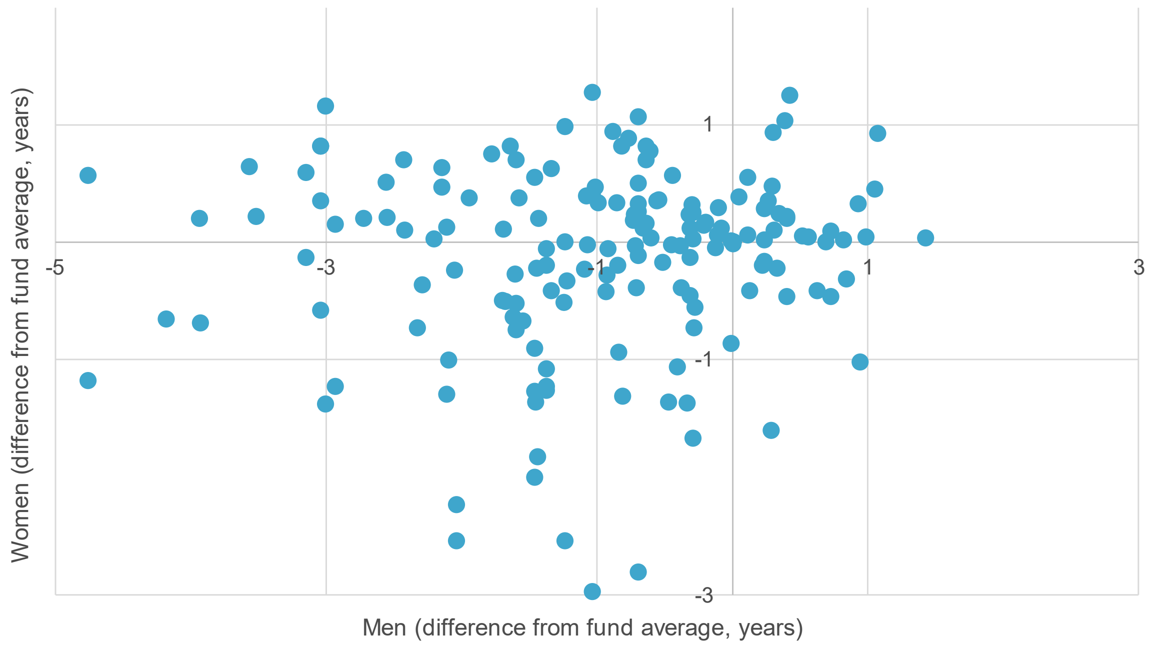
Results are based on initial draft employer results. These may change during the employer results preparation stage of the valuation.

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



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 350 employers, each with 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 code and shows:

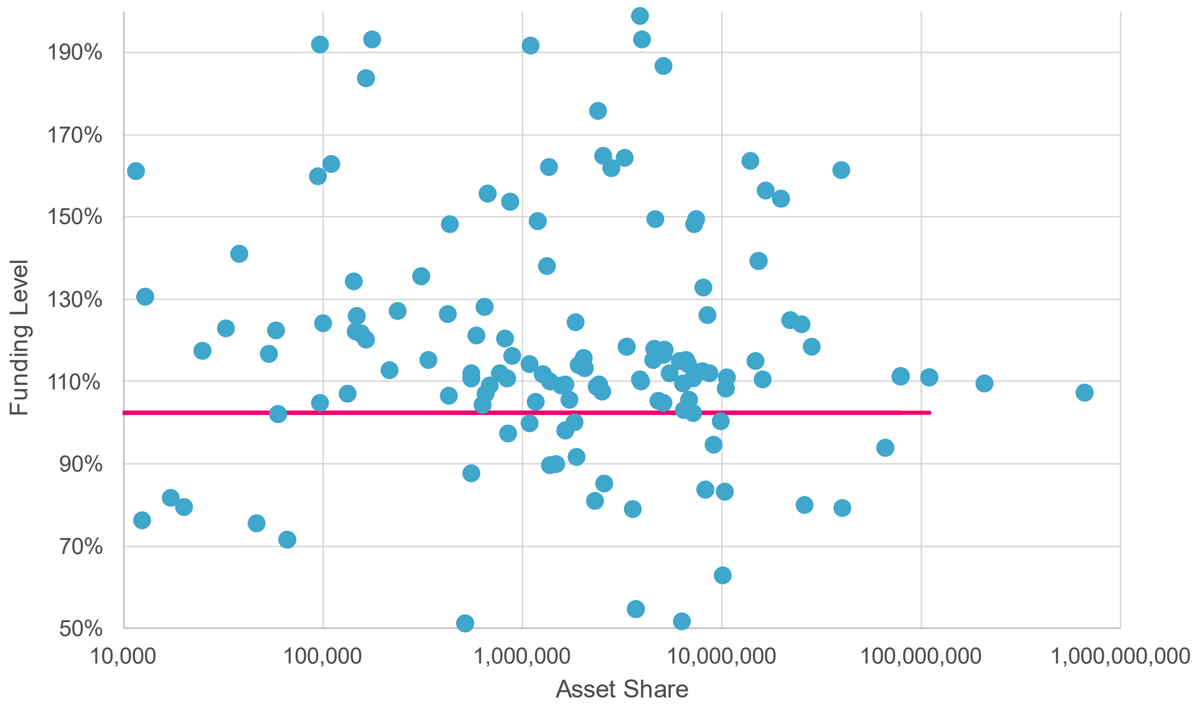
- The employer's share of the Fund assets, horizontal scale (NB this is a logarithmic scale, to accommodate the great range in size of employer from smallest to largest).
- The employer's funding level on 31 March 2022, vertical scale.

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.

Notes about the model:
Each dot shows one employer code and some dots will represent ceased employers or legacy liabilities on an old code that will be pooled with another employer during the valuation process

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	22.0%
Private equity	7.5%
Emerging markets (equity and debt)	10.0%
Multi Asset Credit	5.0%
Private debt	7.5%
Core Infrastructure	8.0%
Renewable Infrastructure	5.0%
Secured income	8.0%
Affordable housing	5.0%
Core property	15.0%
Index linked gilts (>5 years)	7.0%
Total	**100.0%**

ESS individual asset class return distributions at 31 March 2022

		Annualised total returns																
		Cash	Index Linked Gilts (medium)	Developed World ex UK Equity	Private Equity	Property	Emerging Market Debt (hard currency)	Emerging Market Debt (local currency)	Emerging Markets Equity	Unlisted Infrastructure Equity	Developed World Equity	Multi Asset Credit (sub inv grade)	Senior Loans (sub inv grade)	Inflation (RPI)	17 year real yield (RPI)	Inflation (CPI)	17 year real yield (CPI)	17 year yield
10 years	16th %'ile	0.8%	-1.9%	-0.7%	-1.2%	-0.6%	-0.1%	-1.5%	-2.5%	0.7%	-0.6%	1.7%	1.1%	2.4%	-1.7%	1.6%	-1.7%	1.1%
	50th %'ile	1.8%	0.2%	5.6%	9.4%	4.4%	2.1%	3.4%	5.8%	5.9%	5.6%	3.5%	3.5%	4.1%	-0.5%	3.3%	-0.5%	2.5%
	84th %'ile	2.9%	2.4%	11.7%	20.1%	9.5%	4.1%	8.6%	14.4%	11.2%	11.6%	5.2%	5.6%	5.7%	0.7%	4.9%	0.7%	4.3%
20 years	16th %'ile	1.0%	-1.5%	1.5%	2.4%	1.4%	1.4%	0.5%	0.1%	2.6%	1.6%	2.8%	2.6%	1.6%	-0.7%	1.2%	-0.7%	1.3%
	50th %'ile	2.4%	0.1%	6.1%	10.0%	5.0%	2.9%	4.2%	6.3%	6.5%	6.1%	4.4%	4.3%	3.1%	1.0%	2.7%	1.1%	3.2%
	84th %'ile	4.0%	1.9%	10.8%	17.6%	8.9%	4.2%	8.1%	12.8%	10.6%	10.8%	6.0%	6.0%	4.7%	2.7%	4.3%	2.7%	5.7%
40 years	16th %'ile	1.2%	-0.3%	3.1%	4.7%	2.6%	2.5%	1.9%	2.1%	3.9%	3.2%	3.6%	3.5%	1.1%	-0.6%	0.9%	-0.6%	1.1%
	50th %'ile	2.9%	1.2%	6.5%	10.3%	5.5%	3.8%	5.0%	6.8%	7.0%	6.6%	5.3%	5.2%	2.4%	1.3%	2.2%	1.3%	3.3%
	84th %'ile	4.9%	3.1%	10.2%	16.1%	8.8%	5.3%	8.2%	11.7%	10.3%	10.2%	7.1%	7.0%	3.9%	3.2%	3.7%	3.2%	6.1%
	Volatility (Disp) (5 yr)	2%	7%	19%	30%	15%	7%	15%	26%	15%	18%	6%	7%	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	485.17	813.01	0.00	0.00	0.00	0.00
25	117	0.17	320.47	537.03	0.00	0.00	0.00	0.00
30	131	0.20	227.38	380.97	0.00	0.00	0.00	0.00
35	144	0.24	177.66	297.63	0.10	0.07	0.02	0.01
40	150	0.41	143.04	239.55	0.16	0.12	0.03	0.02
45	157	0.68	134.35	224.96	0.35	0.27	0.07	0.05
50	162	1.09	110.75	185.23	0.90	0.68	0.23	0.17
55	162	1.70	87.21	145.94	3.54	2.65	0.51	0.38
60	162	3.06	77.73	130.02	6.23	4.67	0.44	0.33
65	162	5.10	0.00	0.00	11.83	8.87	0.00	0.00

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	0.10	458.15	467.37	0.00	0.00	0.00	0.00
25	117	0.10	308.28	314.44	0.10	0.07	0.02	0.01
30	131	0.14	258.41	263.54	0.13	0.10	0.03	0.02
35	144	0.24	223.04	227.38	0.26	0.19	0.05	0.04
40	150	0.38	185.63	189.18	0.39	0.29	0.08	0.06
45	157	0.62	173.23	176.51	0.52	0.39	0.10	0.08
50	162	0.90	146.05	148.65	0.97	0.73	0.24	0.18
55	162	1.19	108.97	111.03	3.59	2.69	0.52	0.39
60	162	1.52	87.82	89.37	5.71	4.28	0.54	0.40
65	162	1.95	0.00	0.00	10.26	7.69	0.00	0.00

Figures are incidence rates per 1,000 members, except salary scale

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 relatively 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.

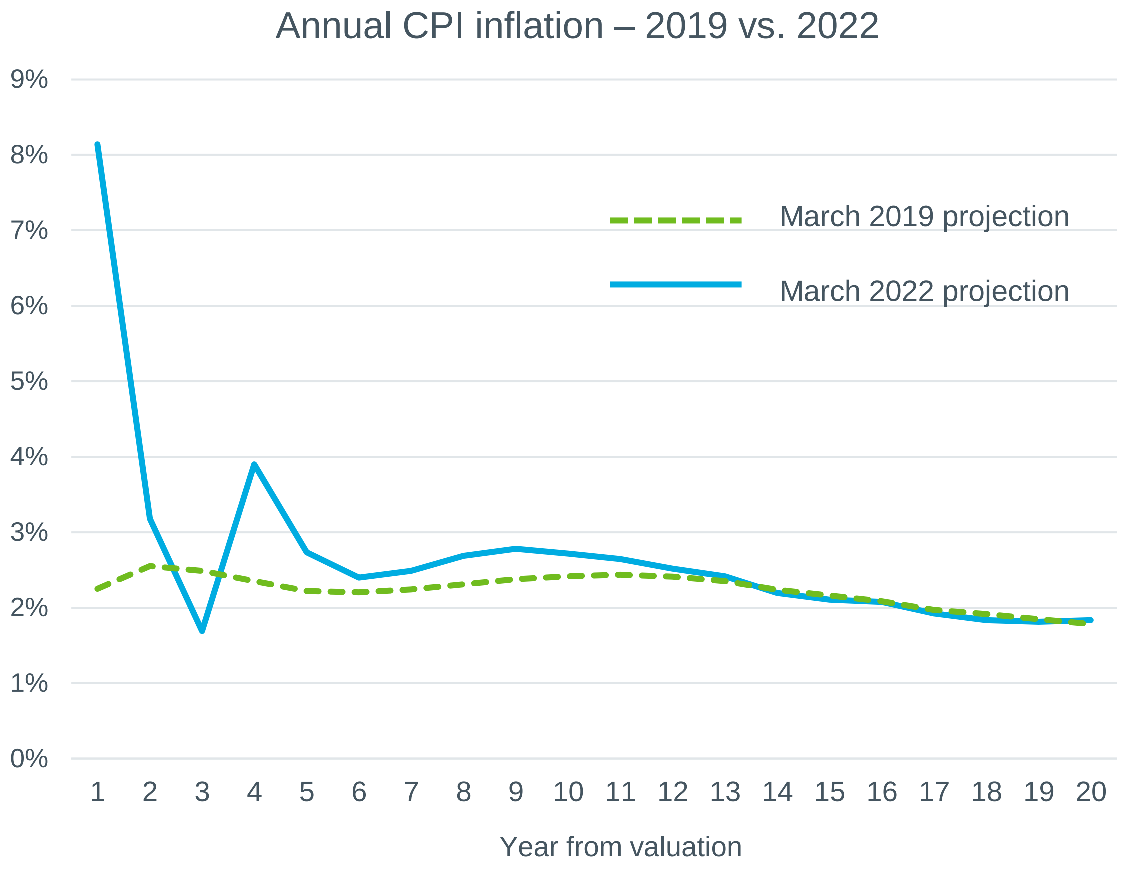


Chart shows median expected annual CPI inflation from ESS model.

APPENDIX 4

Reliances and limitations

We have been commissioned by Wiltshire Council ('the Administering Authority') to carry out a full actuarial valuation of the Wiltshire Pension Fund ('the Fund') 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.

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.