



Government
Actuary's
Department

Local Government Pension Scheme (Scotland)

Valuation Results

Actuarial valuation as at 31 March 2020


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1 March 2024



Highlights

Core and Economic Cost Cap Costs



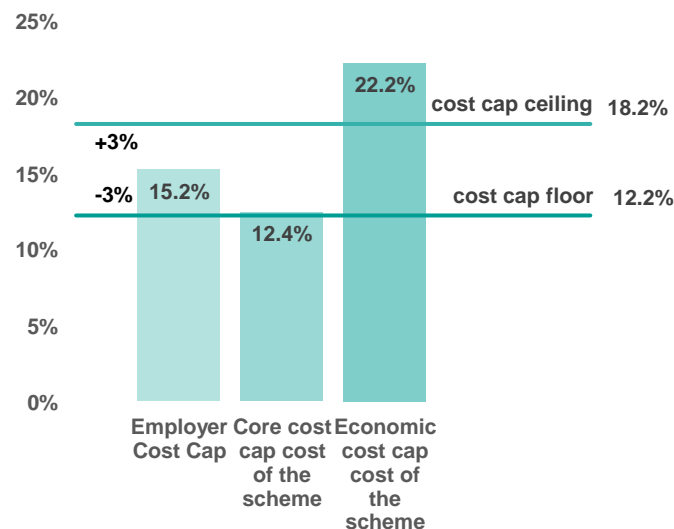
<p>Core 12.4% of pensionable pay which is 2.8% below the 15.2% <u>employer cost cap</u></p>	<p>Economic 22.2% of pensionable pay which is 7.0% above</p>
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The core cost cap cost of the scheme lies within the 3% cost cap corridor.

As there is **no breach of the cost control mechanism**, there is no requirement for the Scottish Ministers to consult on changes to the scheme.

Position within cost cap corridor

The chart below illustrates the position of the core cost cap cost of the scheme and the economic cost cap cost of the scheme against the cost cap corridor.



* In the same direction as the core cost cap cost breach.

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Any terms that are described in the Glossaries are underlined the first time they appear on a page within this report.

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Introduction

Who is this report for?

This report is addressed to, and was commissioned by, Scottish Ministers. It sets out the results of the actuarial valuation of the Local Government Pension Scheme (Scotland) (the 'scheme') as at 31 March 2020.

What are the outcomes of the valuation?

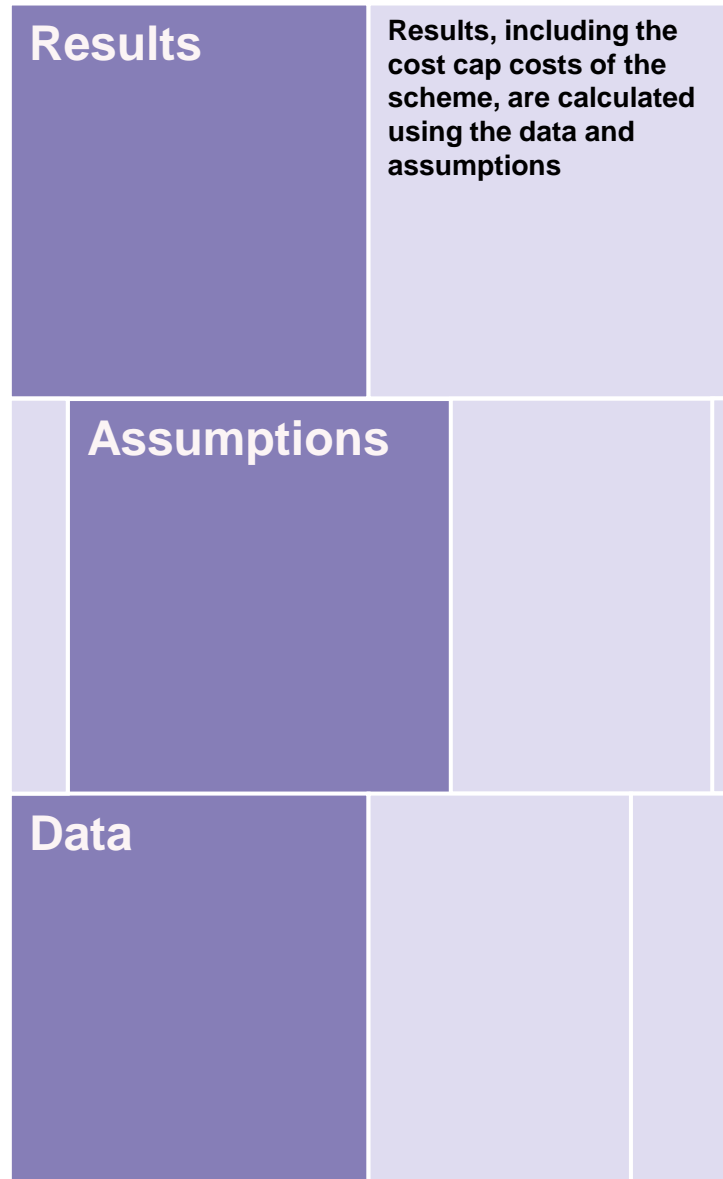
The key results of the valuation relate to the cost control mechanism. This shows:

- **No cost control mechanism breach.**

How have the results been prepared?

The results have been prepared in accordance with the:

- Benefits as set out in the scheme regulations.
- Methodology as described in the Public Service Pensions (Valuation and Employer Cost Cap) Directions 2023 ('the Directions').
- Data received from or on behalf of LGPS Scotland administering authorities as described in our Membership data report dated 1 March 2024. This is summarised on page 11.
- Assumptions, some of which are set by Scottish Ministers, as described in our Advice on assumptions report dated 1 March 2024 (the 'scheme-set assumptions'); and some of which are specified by the Directions (the 'directed assumptions'). These are summarised on pages 12 and 13.



Testing the cost control mechanism

What is the process?

The diagram to the right illustrates the steps of the valuation process.

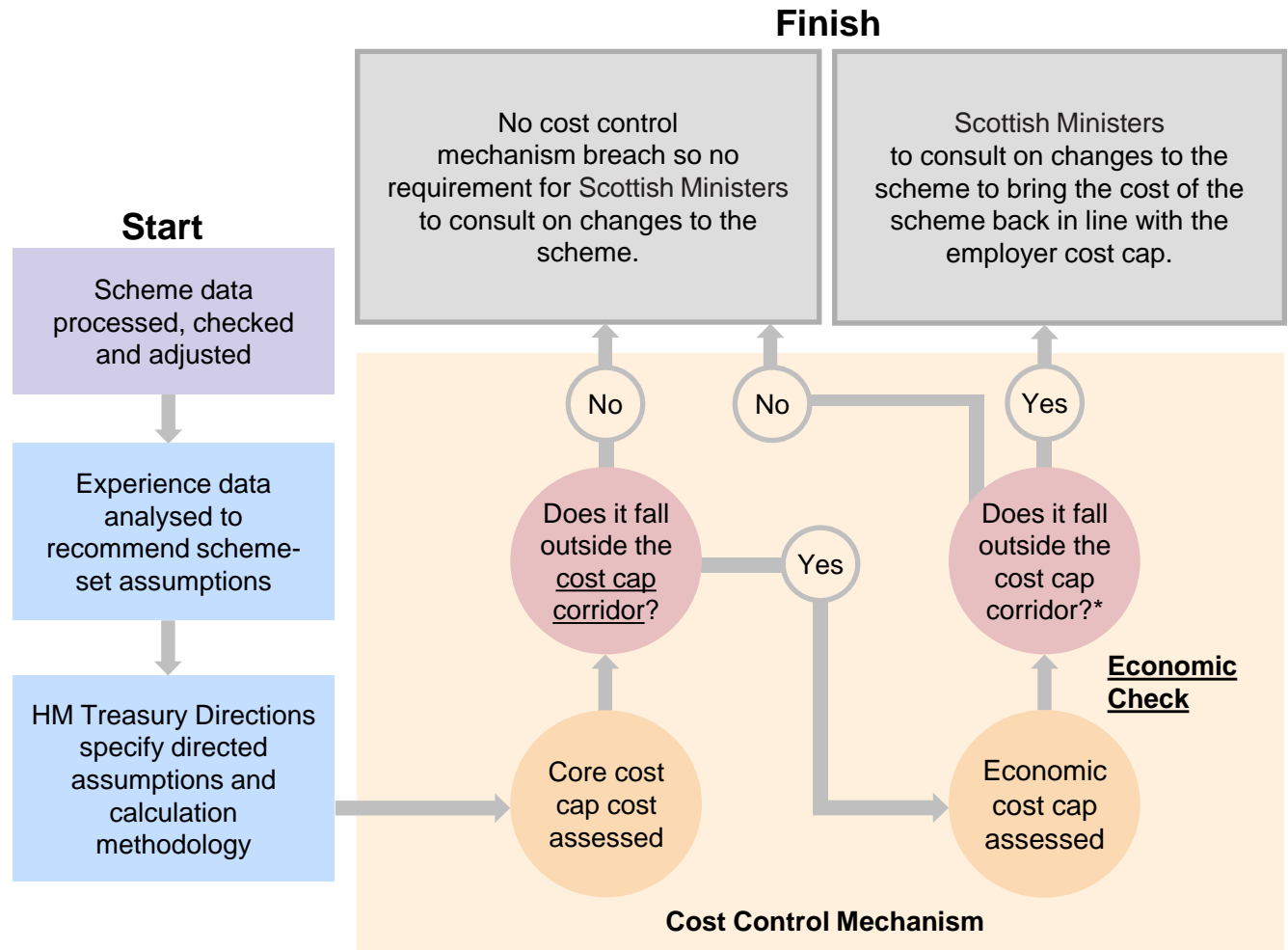
This begins with the receipt of scheme data as at 31 March 2020, followed by assumption setting.

It then details the various steps involved in the implementation of the cost control mechanism.

If there has been a breach of the cost control mechanism*, the Scottish Ministers need to consult on changes to the scheme to rectify this.

If there is no breach, then no consultation is required.

The Directions also require us to calculate an Employer Contribution Rate. Further details of this process are provided on the next page.



* A breach of the cost control mechanism occurs only if both the core and economic cost caps lie outside the cost cap corridor and in the same direction.

The Employer Contribution Rate

What is the requirement?

For the unfunded public service pension schemes, the valuation also sets the Employer Contribution Rate. This is the rate of contributions that participating employers pay into those schemes, in respect of their employees who are accruing benefits in the arrangements.

The Local Government Pension Scheme (Scotland) is different. The scheme is comprised of a number of individual local funds, each of which holds assets that are intended to meet the future costs of pensions from that fund. Each local fund therefore carries out regular valuations of its assets and liabilities, in order that it can set contribution rates that are appropriate for each participating employer in that fund.

The Directions also require us to carry out Employer Contribution Rate calculations in line with those that are required for the other public service pension schemes.

However, in the case of LGPS the resulting Employer Contribution Rate is not used to set contributions to be paid by participating employers in each fund.

The required Employer Contribution Rate disclosures are shown in Appendix B to this report. These results are only intended to provide compliance with the Directions, and our internal processes have been framed around ensuring the results are appropriate for this purpose. The results of this assessment should not be used for any other purpose.

The discount rate used in this valuation is set by the Directions; it reflects the long-term expectations of GDP growth. It does not directly reflect the return that might be expected from actual assets invested by the funds.

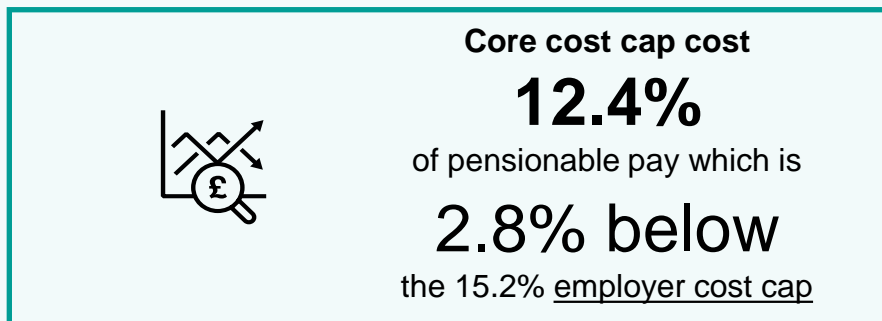
Key Results



Testing the cost control mechanism

What are the key results

The results of the assessments of the core and economic cost cap costs of the scheme are summarised on this page. Their values are assessed to identify whether both breach the cost cap corridor in the same direction. This would result in a requirement for the Scottish Ministers to consult on rectifying the breach through changes to benefits or member contribution rates.



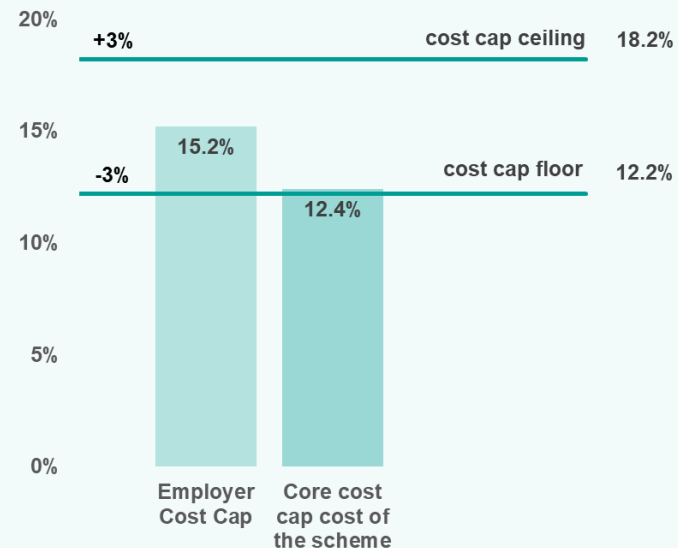
As the core cost cap cost of the scheme lies within the 3% cost cap corridor, **the economic check* does not apply.**

As there is no breach of the cost control mechanism, there is no requirement for Scottish Ministers to consult on changes to the scheme.

Position within cost cap corridor

The chart below illustrates the position of the core cost cap of the scheme within the cost cap corridor.

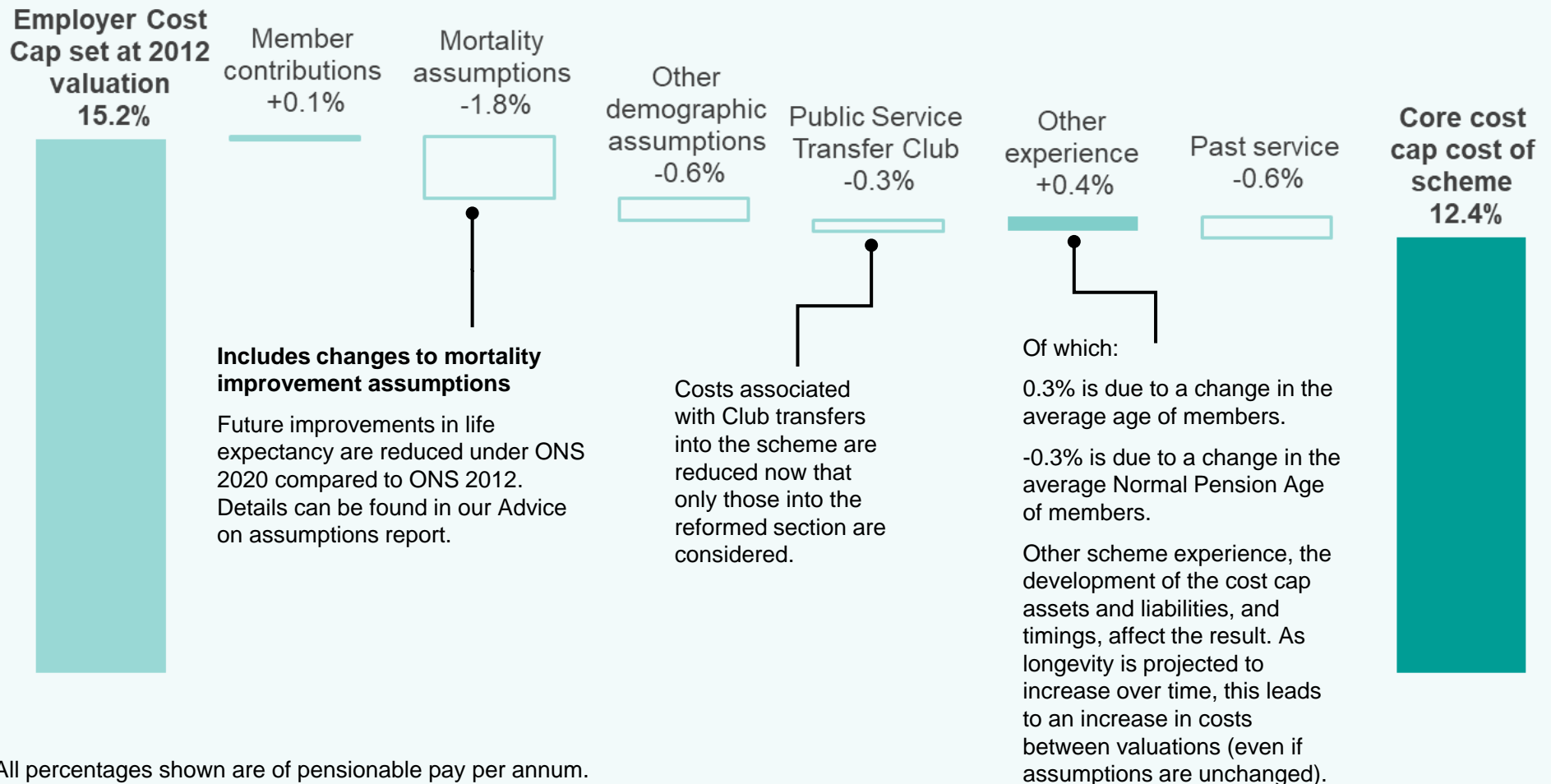
Because it lies within the corridor, the economic check* does not apply. However, the economic cost cap cost of the scheme still needs to be assessed and part of that calculation informs future valuations. It is assessed to be 22.2%, which is 7.0% above the employer cost cap of 15.2% and above the top of the 3% cost cap corridor.



* Assessment of the economic cost cap cost of the scheme against the cost cap corridor
All percentages shown are of pensionable pay per annum.
See Appendix A and Glossaries for cost control definitions and explanations.

Changes since 2014

The chart below shows the main factors contributing to the difference between the core cost cap cost of the scheme and the employer cost cap, which was set at the 2014 valuation.



All percentages shown are of pensionable pay per annum.

Data & Assumptions



Scheme data as at 31 March 2020

The results in this report have been based on the data described in our Membership data report dated 1 March 2024 and summarised below. Appendix F describes the checks, adjustments and reconciliations carried out in preparing this data as well as the approximate impact of any data uncertainty which may still exist.

Summary statistics



590k

Scheme members

+6.2% vs. 2017



34 : 66

Male : Female

vs. 35 : 65 in 2017



£5.2bn

Total actual pay

+15.5% vs. 2017



£0.3bn

Deferred pension

+18.3% vs. 2017



£1.1bn

Total pension

+18.2% vs. 2017

Pension amounts include the April 2020 pension increase.

Membership over time (000's)



Scheme-set assumptions

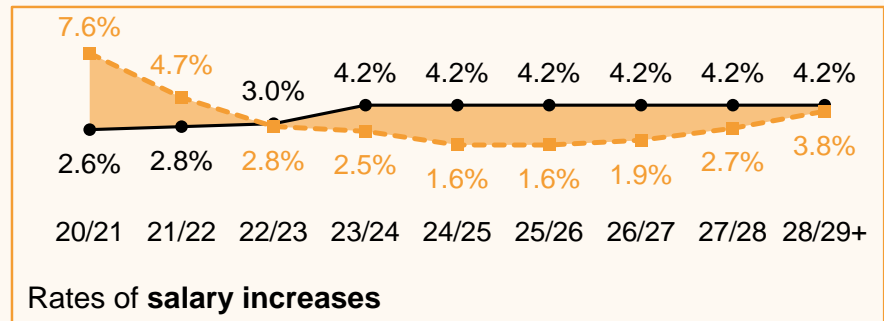
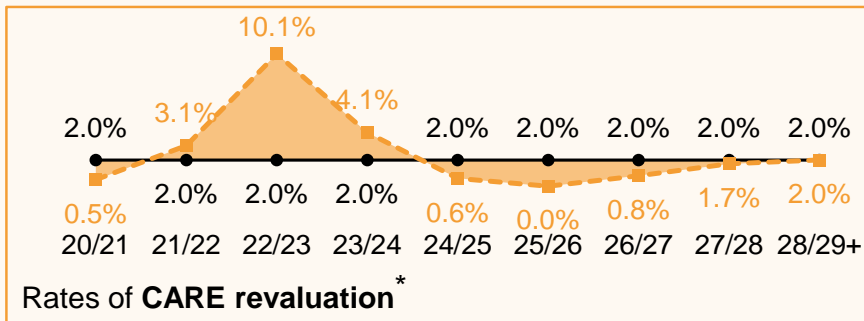
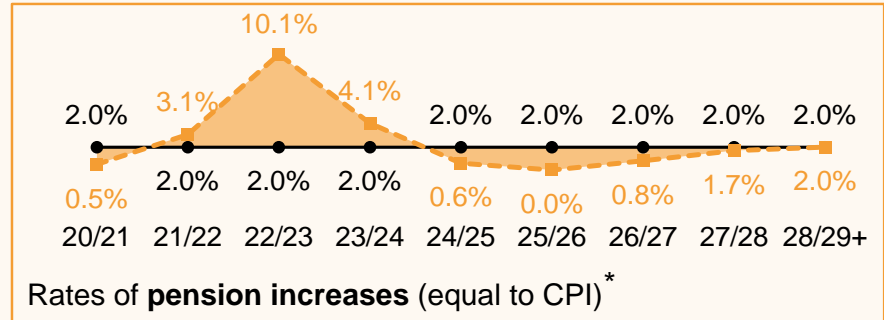
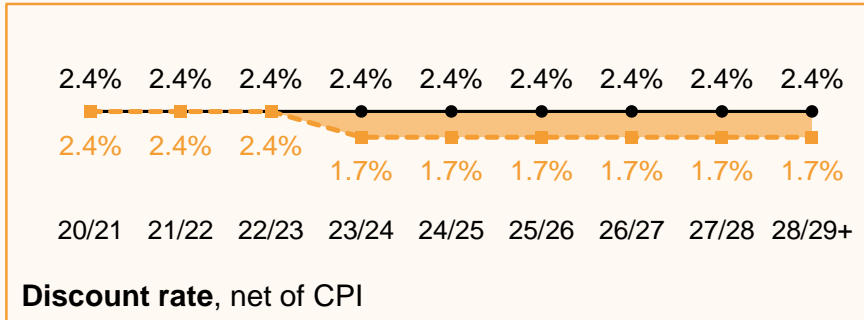
The results in this report have been based on assumptions, some of which are 'scheme-set' as described in our Advice on assumptions report dated 1 March 2024 and some of which are 'directed', as summarised on page 13.

The table below provides a summary of the changes in scheme-set assumptions since the last valuation in 2017. It also sets out the directional impact of the changes on the results. The Scottish Ministers and the Local Government Pension Scheme (Scotland) Scheme Advisory Board have agreed that the scheme-set assumptions are reasonable and appropriately reflect scheme experience where available.

Assumption	Change in assumption adopted	Impact of change on scheme costs
Mortality after retirement	Move to S3 tables and inclusion of 2017-2020 experience.	↓ Lower Costs
Proportion commuted	Increase to 22.5% for all post 2009 service.	↓ Lower Costs
Retirement ages	No change.	⊘ No impact
Rates of leaving service	Increased rates of withdrawals.	⊘ No impact
Promotional pay increases	No change.	⊘ No impact
Rates of ill-health retirement	No change.	⊘ No impact
Mortality before retirement	No change.	⊘ No impact
Family statistics	No change.	⊘ No impact

HM Treasury Directed Assumptions

Annual financial assumptions



2017 assumptions
 2020 assumptions (dotted line) and difference from 2017 assumptions (shaded area)

* Increases applicable at end of financial year indicated.

Other directed assumptions

	2017 assumption	2020 assumption
Deficit spreading periods		15 years
Future mortality improvements	In line with 2016-based ONS projections	In line with 2020-based ONS projections
State Pension age	As legislated for in the Pensions Act 1995, Pensions Act 2007, Pensions Act 2011 and Pensions Act 2014	

**Sensitivities &
Potential future impacts**



Sensitivities – Core cost cap cost

Which assumptions are the core cost cap cost most sensitive to?

The chart to the right shows the sensitivity of the core cost cap cost of the scheme to specified changes in a number of key directed and scheme-set assumptions.

Under each scenario the position of the resulting cost cap cost within the cost cap corridor is also illustrated.

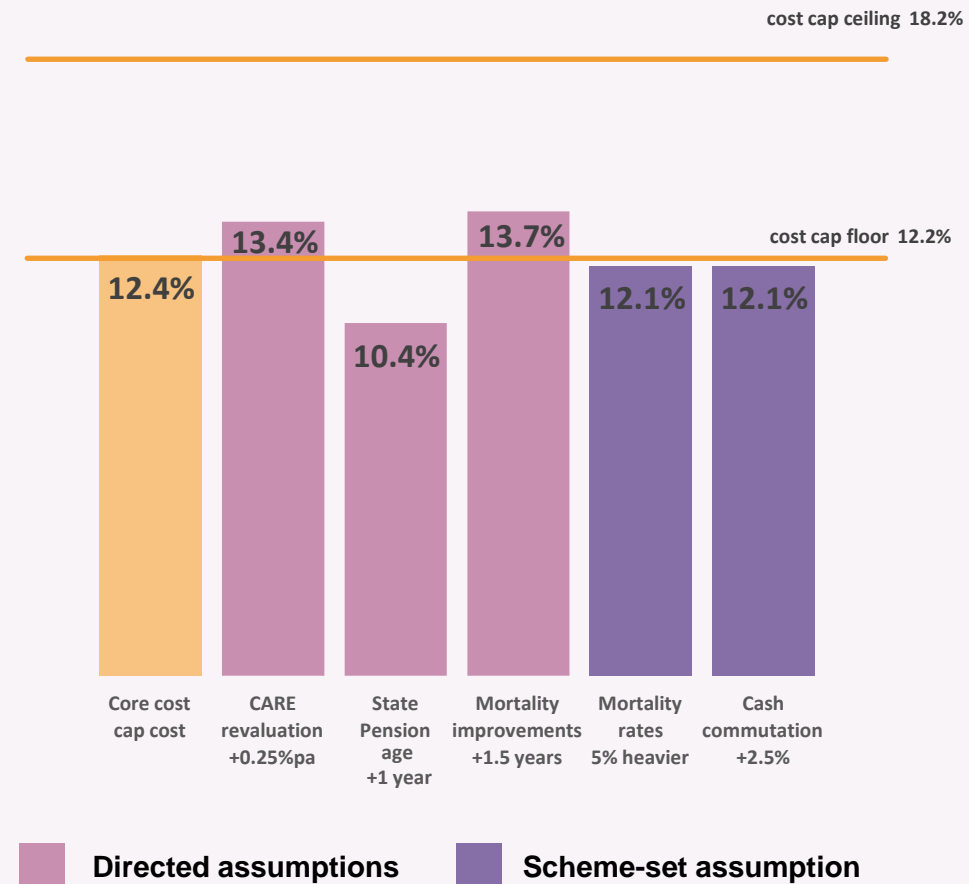
Unlike the Employer Contribution Rate, the core cost cap cost of the scheme is not sensitive to the main CPI linked directed assumptions of discount rate, pension increases and long-term salary.

It should be noted that:

- The sensitivities have been calculated in isolation for each assumption, leaving all others unchanged.
- Sensitivities are not a prediction of future changes and are not minimum or maximum possible impacts.
- Whilst a change in discount rate would not impact on the core cost cap cost, a 0.25% p.a. reduction would increase the economic cost cap cost of the scheme by 2.3%.
- Changes to the assumptions in the opposite direction to illustrated here will produce approximately equal and opposite changes in the valuation results.

Full details of the sensitivities can be found in Appendix C.

Core cost cap cost sensitivity



All percentages shown are of pensionable pay per annum.

Factors affecting future valuations

The previous two pages illustrate the impact on the **current** valuation results of changes to a number of key assumptions. It is useful to also consider which factors will potentially impact **future** valuation results. These are summarised in the following table:

Factor	Potential impact
Mortality improvements	<p>Recent evidence is that the UK is continuing to experience more deaths than expected based on pre-pandemic levels.</p> <p>The ONS 2020 projections made an adjustment to mortality rates to allow for expert views on the impact of the Covid-19 pandemic on mortality rates up to 2024.</p> <p>It is not yet possible to tell whether the projections used for the 2024 valuations will show further reductions in life expectancy but recent evidence points to that being the trend. This would reduce the costs of the scheme.</p>
Scheme demographic experience	<p>Actual demographic experience will differ from assumptions and this could have a large impact on results, both directly and in the way it influences scheme set assumptions at future valuations.</p> <p>The most significant such assumptions are baseline mortality and commutation. Appendix A shows the impact on the results of changes in these assumptions.</p>
Directed assumptions	<p>These have the potential to have the largest impact on the contribution rate but the direction and magnitude of any such change is unknown.</p>

Factors affecting future valuations

Factor	Potential impact
Age profile	Any change in the age profile of the scheme, e.g. a recruitment freeze meaning that fewer younger members join, will impact the results, with a higher average age generally leading to an increase in the assessed costs of the scheme.
Legal cases	Any further cases that extend scheme benefits could have a large upward impact on costs. Legal cases we are aware of at the date of this report are summarised in Appendix E.
Legislative and policy changes	Any legislative or policy changes could impact on the benefits provided under the schemes, with the impact dependent on the change that is implemented.
Membership data	The valuation results are heavily dependent on the accuracy of the membership data. If the data is later shown to be materially incorrect or inconsistent with future datasets then a further cost or saving will emerge.
Membership profile	As time goes on fewer members will have legacy scheme accrual and this is expected to lead to differences in behaviour around retirement patterns.

As well as affecting future valuation results, the factors above may impact future benefits paid, and contributions received, by the scheme. In the case of the scheme the impact on contributions would occur indirectly, as a result of similar factors affecting the contribution rates set by the valuations of local funds.

As each of the local funds is a segregated arrangement, the balance between contributions and benefit payments, and the assets held by the scheme, can vary significantly between funds. These will also change over time depending on the above factors - in particular the scheme's membership profile and the relative numbers of members accruing and receiving benefits.

Appendices



**Appendix A:
Additional Cost Control
Mechanism Results**



Cost Control

What are the aims of the cost control mechanism?

The cost control mechanism was introduced following the recommendations of the Independent Public Pension Commission in 2011. Its aims were to:

- Ensure a fair balance of risk between members of public service pension schemes and taxpayers with regard to the costs of these schemes.
- Maintain the value of such schemes to their members.
- Provide stability and certainty of member benefit and contribution levels, with changes only being triggered by 'extraordinary, unpredictable' events.

How does the mechanism work?

In the first instance, a measure of the cost of providing reformed scheme benefits, known as the core cost cap cost of the scheme, is assessed. If this cost changes by more than 3% of pensionable pay compared to its original level (known as the employer cost cap), a 'breach of the cost cap corridor' is said to have occurred.

An 'economic check', using what is known as the economic cost cap cost, is then carried out. This is a new introduction at this valuation and assesses whether a breach would also have occurred if the impact of long-term economic assumptions had also been considered.

If both the core cost cap and economic cost cap costs result in a breach in the same direction, a cost control mechanism breach is deemed to have occurred. In that case the Scottish Ministers are required to consult on changes to the scheme to bring the cost of the scheme back to the employer cost cap. Any such changes would impact the Employer Contribution Rate.

Full details of the cost control mechanism and examples of the interaction between the core and economic cost cap costs can be found in HM Treasury's document: [Public Service Pensions: cost control mechanism consultation](#)

Terminology relating to the cost control mechanism is defined in Appendix J, Glossary 2

Results for the 2020 valuation

Pages 21, 23 and 24 cover the core cost cap cost of the scheme. This has been assessed to be within the cost cap corridor.

Because it lies within the corridor, the economic check does not apply. However, pages 22, 25 and 26 illustrate the economic cost cap cost of the scheme. This has been assessed to be more than 3% above the employer cost cap.

As there is no breach of the cost cap corridor, there is no requirement for Scottish Ministers to consult on changes to the scheme.

Core cost cap cost of the scheme

What is the assessment process?

As explained on page 20, the cost control mechanism begins with the assessment of the core cost cap cost of the scheme against the employer cost cap. We need to determine whether the former lies within a $\pm 3\%$ corridor of the latter. Based on the outcome of this, action may need to be taken to bring costs back to the target cost.

The core cost cap cost of the scheme is a calculated measure of the cost of benefits being provided from the reformed scheme. This excludes the impact of changing long-term economic assumptions. The employer cost cap is the previously determined 'target cost' of the scheme and is set to 15.2%.

Core cost cap cost of the scheme components

The component parts of the core cost cap cost of the scheme are:

a: Cost cap future service cost – contribution rate required to cover the expected cost of benefits accrued by members during the cost cap implementation period.

b: Core cost cap past service cost – difference between the cost cap liabilities and core cost cap fund as at the effective date, as a percentage of pensionable pay. More details can be found on page 23.

c: Cost cap contribution yield – the contributions expected from members during the cost cap implementation period.

d: Cumulative future service technical immunity adjustment – the future technical immunity adjustment at this valuation (4.6%) plus the cumulative future service technical immunity adjustment from the reconstructed 31 March 2017 cost cap valuation of the scheme (3.4%).

Core cost cap cost calculation

	% p.a.	
Cost cap future service cost	27.2%	a
+ Core cost cap past service cost	-0.6%	b
- Cost cap contribution yield	-6.2%	c
- Cumulative future service technical immunity adjustment	-8.0%	d
Core cost cap cost of the scheme	12.4%	a+b-c-d

Comparison with employer cost cap

	% p.a.
Core cost cap cost of the scheme	12.4%
- Employer cost cap	-15.2%
Difference	-2.8%

The core cost cap cost of the scheme lies within the 3% corridor. Therefore, there is no requirement for Scottish Ministers to consult on changes to the scheme.

All percentages shown are of pensionable pay per annum to the nearest 0.1%.

Economic cost cap cost of the scheme

What is the assessment process?

If the core cost cap cost of the scheme breaches the cost cap corridor, an economic check is required. In the case of LGPS (Scotland), **a breach did not occur**. However, the directions still require the economic cost cap cost of the scheme to be assessed and the details are set out below.

The economic cost cap cost of the scheme is another measure of the cost of benefits provided from the reformed scheme. It is similar to the core cost cap cost but allows for the impact of a change in long-term economic assumptions - the difference is known as the total cumulative technical immunity adjustment.

How is it calculated?

A summary of the calculations that form the assessment of the economic cost cap cost is set out in the tables to the right. Its component parts are:

a: Cost cap future service cost – the contribution rate required to cover the expected cost of benefits accrued during the cost cap implementation period (assuming no members opt for 50/50).

b: Economic cost cap past service cost – the difference between the cost cap liabilities and economic cost cap fund, as a percentage of pensionable pay at the effective date. More details can be found on page 25.

c: Cost cap contribution yield – the contributions expected from members during the cost cap implementation period (assuming no members opt for 50/50).

A comparison of the economic cost cap against the employer cost cap is also detailed on the right. As described previously, the latter is set to 15.2%.

Economic cost cap cost calculation

	% p.a.	
Cost cap future service cost	27.2%	a
+ Economic cost cap past service cost	1.2%	b
- Cost cap contribution yield	-6.2%	c
Economic cost cap cost	22.2%	a+b-c
- Employer cost cap	-15.2%	
Difference	7.0%	

Comparison with core cost cap cost

	% p.a.
Core cost cap cost of the scheme	12.4%
Economic cost cap cost of the scheme	22.2%
Difference (Total cumulative technical immunity adjustment)	(9.8%)

All percentages shown are of pensionable pay per annum to the nearest 0.1%.

Core cost cap fund balance

Why is it calculated?

In order to calculate the core cost cap past service cost we are required to calculate the core cost cap fund balance – that is the difference between the cost cap liabilities and core cost cap fund – and then divide this by pensionable pay.

How is it calculated?

The core cost cap fund is a notional amount of money, building up from 1 April 2015 when the reformed scheme was introduced. It has been estimated at 31 March 2020 using data at this date; we do not expect any approximations inherent in this estimate to have a material impact on the outcome of the cost control mechanism.

The Directions require an illustration of the development of the core cost cap fund between 2015 and 2020. The table to the right covers the period from 2017 **(a)** to 2020, with a description of each component item set out below. The change from 2015 to 2017 is detailed on the following page.

b: Core cost cap income – income received by the scheme, including contributions. The employer portion of this is that which would have been paid if the core cost cap rate had been in effect (see page 24).

c: Cost cap benefits paid – benefits paid, for example pensions.

d: Core cost cap notional investment returns – notional amount of growth of the core cost cap fund.

e: Past service technical immunity adjustment – adjustment made to the core cost cap fund to exclude the impact of a change in long-term economic assumptions.

Core cost cap fund balance

The table below summarises the calculation of the cost cap fund balance at 31 March 2020.

	£bn	
Reconstructed core cost cap fund at 31 March 2017	2.0	a
+ Core cost cap income	3.4	b
- Cost cap benefits paid	-0.2	c
+ Core cost cap notional investment returns	0.5	d
+ Past service technical immunity adjustment	1.3	e
Core cost cap fund at 31 March 2020*	7.1	a+b-c+d+e
- Cost cap liabilities at 31 March 2020	-6.7	
Core cost cap fund balance at 31 March 2020*	0.5	

*Does not sum due to rounding

All figures shown are calculated to 1 decimal place.

It should be noted that items a, b, c, d and e have been estimated and are shown for illustrative purposes only, in accordance with Directions requirements. They do not have any impact on the outcome of the cost control mechanism.

Core cost cap fund

Core cost cap fund 2015/17 development

	£bn	
Core cost cap fund at 31 March 2015	0.0	a
+ Core cost cap income	2.0	b
- Cost cap benefits paid	-0.0	c
+ Core cost cap notional investment returns	0.1	d
Reconstructed core cost cap fund at 31 March 2017*	2.0	a+b-c+d

*Does not sum due to rounding

It should be noted that the core cost cap fund contribution rate and items b, c, and d in the table above have been estimated and are shown for illustrative purposes only, in accordance with Directions requirements. They do not have any impact on the outcome of the cost control mechanism.

Core cost cap fund contribution rate

The core cost cap fund contribution rate is the contribution rate required from the employer to cover the cost of benefits accruing to members over the period 1 April 2017 to 31 March 2020, with an adjustment to reflect any surplus or deficit at 31 March 2017.

It is used to calculate the employer contribution component of the core cost cap income (see page 23, item b) and its component parts are set out below:

	% p.a.	
Expected cost of benefits accrued 2017 to 2020	23.1%	a
Core cost cap past service cost at 2017	-0.2%	b
Member contributions paid 2017 to 2020	-6.5%	c
Core cost cap fund contribution rate*	16.5%	a+b-c

*Does not sum due to rounding

All percentages shown are of pensionable pay per annum to the nearest 0.1%.

Economic cost cap fund balance

Why is it calculated?

In order to calculate the economic cost cap past service cost we are required to calculate the economic cost cap fund balance – that is the difference between the cost cap liabilities and economic cost cap fund – and then divide this by pensionable pay.

How is it calculated?

The economic cost cap fund is a notional amount of money, building up from 1 April 2015 when the reformed scheme was introduced. It has been estimated at 31 March 2020 using data at this date; we do not expect any approximations inherent in this estimate to have a material impact on the outcome of the cost control mechanism.

The Directions require an illustration of the development of the economic cost cap fund between 2015 and 2020. The table to the right covers the period from 2017 **(a)** to 2020, with a description of each component item set out below. The change from 2015 to 2017 is detailed on the following page.

b: Economic cost cap income – income received by the scheme, including contributions. The employer portion of this is that which would have been paid if the economic cost cap rate had been in effect (see page 26).

c: Cost cap benefits paid – benefits paid, for example pensions.

d: Economic cost cap notional investment returns – notional amount of growth of the economic cost cap fund.

Economic Cost Cap Fund Balance

The table below summarises the calculation of the economic cost cap fund balance.

	£bn	
Reconstructed economic cost cap fund at 31 March 2017	2.0	a
+ Economic cost cap income	3.4	b
- Cost cap benefits paid	-0.2	c
+ Economic cost cap notional investment returns	0.5	d
Economic cost cap fund at 31 March 2020*	5.8	a+b-c+d
- Cost cap liabilities at 31 March 2020	-6.7	
Economic cost cap fund balance at 31 March 2020	(0.9)	

*Does not sum due to rounding

All figures shown are calculated to 1 decimal place.

It should be noted that items a, b, c, and d have been estimated and are shown for illustrative purposes only, in accordance with Directions requirements. They do not have any impact on the outcome of the cost control mechanism.

Economic cost cap fund

Economic cost cap fund development 2015/17

	£bn	
Economic cost cap fund at 31 March 2015	0.0	a
+ Economic cost cap income	2.0	b
- Cost cap benefits paid	-0.0	c
+ Economic cost cap notional investment returns	0.1	d
Reconstructed economic cost cap fund at 31 March 2017*	2.0	a+b-c+d

*Does not sum due to rounding

It should be noted that items b, c, and d in the table above and the economic cost cap fund contribution rate to the right have been estimated and are shown for illustrative purposes only, in accordance with Directions requirements. They do not have any impact on the outcome of the cost control mechanism.

Economic cost cap fund contribution rate

The economic cost cap fund contribution rate is the contribution rate required from the employer to cover the cost of benefits accruing to members over the period 1 April 2017 to 31 March 2020 with an adjustment to reflect any surplus or deficit at 31 March 2017.

This is calculated in a similar manner to the core cost cap fund contribution rate.

It is used to calculate the employer contribution component of the economic cost cap income (see page 25, item b) and its component parts are set out below:

	% p.a.	
Expected cost of benefits accrued 2017 to 2020	23.1%	a
Economic cost cap past service cost at 2017	0.3%	b
Member contributions paid 2017 to 2020	-6.5%	c
Economic cost cap fund contribution rate	16.9%	a+b-c

All percentages shown are of pensionable pay per annum to the nearest 0.1%.

**Appendix B:
Employer Contribution Rate**



Employer Contribution Rate components

As described on page 6 – all Employer Contribution Rate disclosures in this Appendix are for compliance purposes only.

Breakdown of contribution rate

Key components

The chart on this page shows the components of the initially assessed Employer Contribution Rate payable from 2024 to 2027. These are the:

a. Cost of benefits accruing over the period 2024 to 2027 which represents the bulk of the rate. This is calculated to be 27.7% of pensionable pay per annum and is arrived at by using the methodology set out on page 45.

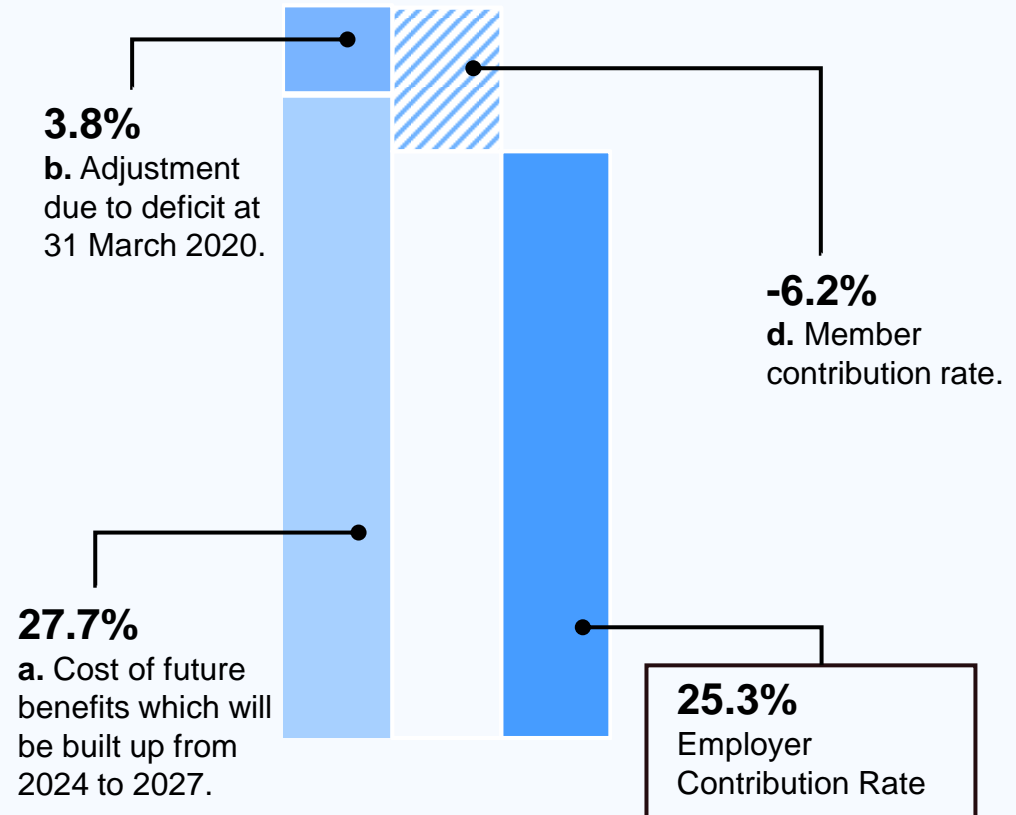
b. Adjustment due to deficit at 31 March 2020
(see pages 30 and 31).

c. Adjustment due to deficit arising between 2020 and 2024 (for LGPS, HMT directions set this equal to zero).

d. Member contribution rate (see page 32)

The initially assessed Employer Contribution Rate of 25.3% is calculated as $a + b - d$.

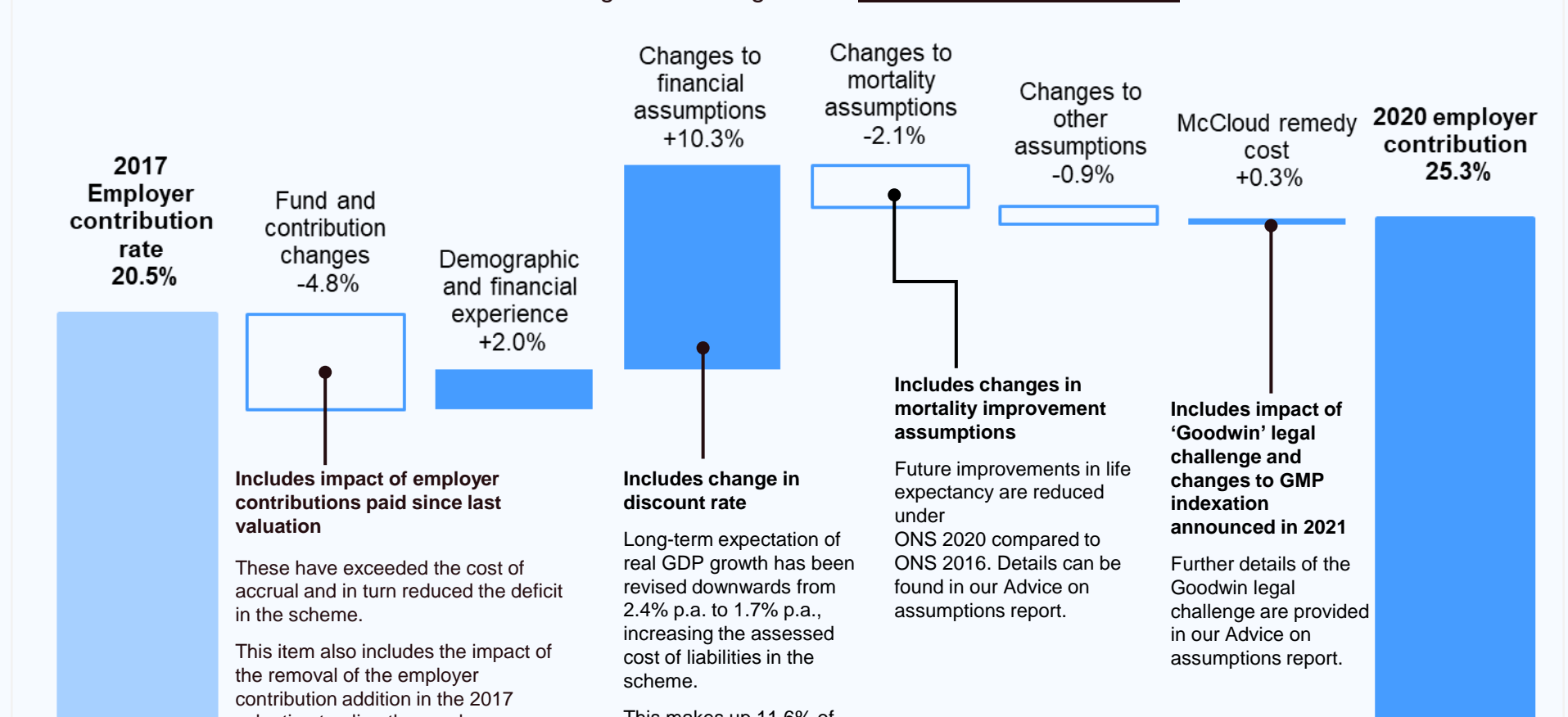
The following four pages provide further information relating to the derivation of items b and d. Detailed information relating to the methodology employed is set out in Appendix F.



All percentages shown are of pensionable pay per annum.

Changes since 2017

The chart below shows the main factors contributing to the change in the Employer Contribution Rate since the last valuation in 2017.



Although the 2020 employer contribution rate would be unaffected, the individual figures in this breakdown depend on various factors, such as the order of the calculations. The precise amount attributable to the discount rate change therefore depends on the method. Further details can be found on page 49.

b. Adjustment due to deficit at 31 March 2020

Adjusting for deficit

The Employer Contribution Rate is adjusted to allow for the deficit in the scheme as at 31 March 2020. This deficit is spread over a period of 15 years from 1 April 2024 and is identified on page 28 as item b, 'adjustment due to deficit', of +3.8%.

To assess scheme deficit we subtract the value of past service liabilities from notional assets. The calculation of each of these items is summarised on this page.

Past Service Liabilities

The value of the scheme's past service liabilities is the capital sum needed at the effective date to meet the stream of future cashflows in respect of benefits earned. The split of these liabilities between active, deferred and pensioner members is set out below:

Liabilities (£bn)	31 March 2017	31 March 2020
Actives	14.0	16.9
Deferreds	4.3	5.5
Pensioners	13.2	16.6
Total	31.5	39.0

Income and benefit payments have been derived from Scottish Local Government Finance Statistics and the notional investment returns are calculated by compounding interest using the prevailing SCAPE discount rate and relevant changes in the Consumer Price Index.

Notional assets

Notional assets (see page 47) are calculated by 'rolling up' their value at the last valuation in line with notional investment returns and adjusting for income and outgo over the period. This is summarised in the table below, followed by a breakdown over the intermediate years. At the 2017 valuation the notional assets of the scheme were set to be equal to the liabilities at that date.

	£bn
Notional assets at 31 March 2017	31.5
+ Income Received	4.1
- Benefits Paid	-4.4
+ Notional Investment Returns	5.0
Notional assets at 31 March 2020*	36.3

*Does not sum due to rounding

	2017-18	2018-19	2019-20	Total
Income Received (£bn)	1.3	1.4	1.4	4.1
Benefits Paid (£bn)	1.4	1.5	1.5	4.4
Notional Investment Returns (£bn)	1.9	1.7	1.4	5.0
	5.9%	5.3%	4.1%	

Scheme Deficit

	31 March 2017	31 March 2020
Liabilities (£bn)	31.5	39.0
Notional assets (£bn)	31.5	36.3
(Deficit)	(0.0)	(2.7)

All percentages shown are to the nearest 0.1% and all figures are rounded to 1 decimal place.

b. Adjustment due to deficit at 31 March 2020

Contributory factors

The factors contributing to the change in deficit in the scheme since the last valuation (from £0.0bn to £2.7bn) are quantified in the table to the right.

Impacts are considered in the order listed and although a different order could change the intermediate figures, there would be no impact on the deficit.

	£bn	
Surplus (deficit) at 31 March 2017	0.0	i
Notional Assets minus Liabilities (£31.5bn minus £31.5bn)		
Interest on surplus (deficit)	0.0	
Excess of contributions paid against cost of benefits accruing 2017-2020	0.4	ii
Repayment of deficit	0.0	iii
Experience effects	(0.6)	iv
Change in financial assumptions	(3.1)	v
Change in demographic assumptions	1.2	vi
Unattributed	(0.7)	vii
Surplus (deficit) at 31 March 2020:		
Notional Assets minus Liabilities (£36.3bn minus £39.0bn)	(2.7)	

All figures are rounded to 1 decimal place. May not sum due to rounding.

- i. The Notional Assets are described on pages 30 and 47; 'Liabilities' represent Past Service Liabilities.
- ii. Assessed using financial assumptions at the 2017 valuation. Includes allowance for payment of the corrected Employer Contribution Rate since 1 April 2017.
- iii. Nil as there was no deficit at the 2017 valuation.
- iv. The impact of scheme experience over the period 2017-2020 diverging from that which was expected at the 2017 valuation.
- v. Pages 12 and 13 summarise the financial assumptions at the current and previous valuations. The change with the greatest financial significance is the discount rate fall from CPI+2.4% to CPI+1.7% p.a.
- vi. This is the net result of a number of demographic changes including mortality.
- vii. Balancing item.

d. Member Contributions

The contribution rates paid by members vary according to their pensionable pay. There are five tiers, with contributions based on how much of the member's pensionable pay falls into each tier. These tiers are summarised in the table to the right.

Members who join the 50/50 section of the Scheme pay half the rates shown.

On average, the contribution rate is calculated to be 6.2% of pensionable pay as identified on page 28 as item d 'member contribution rate'.

The member contribution rates shown are those payable by members over the 2023/24 period.

Pensionable pay (actual)	Member contribution rate
Up to £25,300	5.5%
From £25,301 up to £31,000	7.25%
From £31,001 up to £42,500	8.5%
From £42,501 up to £56,600	9.5%
Above £56,601	12%

Sensitivities – Employer Contribution Rate

Which assumptions are the Employer Contribution Rate most sensitive to?

The chart to the right shows the sensitivity of the Employer Contribution Rate to specified changes in a number of key directed and scheme-set assumptions.

The chart shows that:

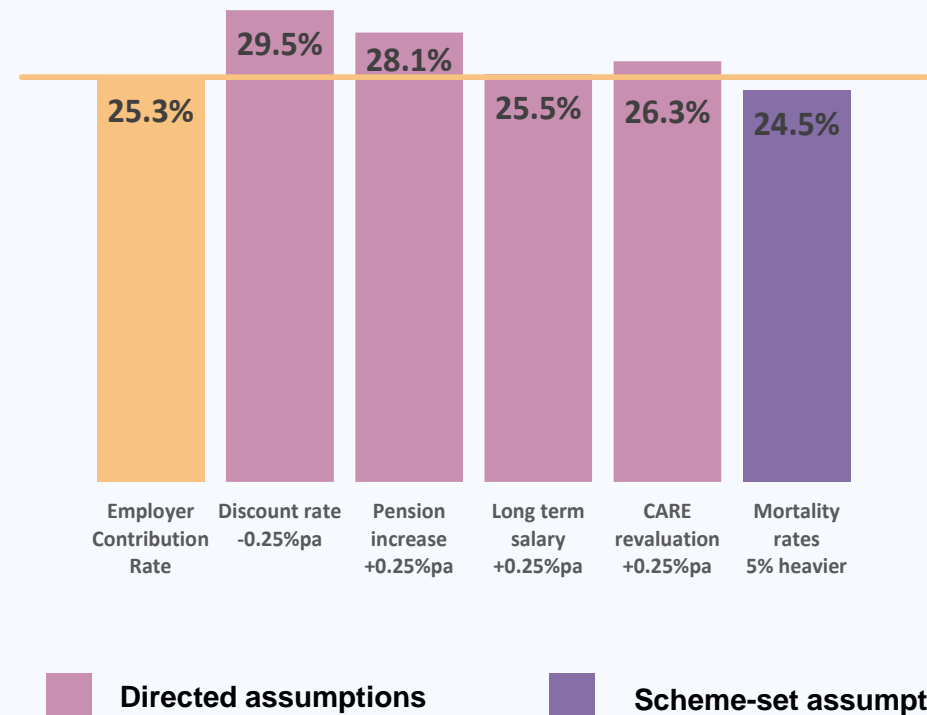
- some assumptions are more significant than others.
- the more significant assumptions tend to be directed.

It should be noted that:

- The sensitivities have been calculated in isolation for each assumption, leaving all others unchanged.
- Sensitivities are not a prediction of future changes and are not minimum or maximum possible impacts.
- Changes to the assumptions in the opposite direction to illustrated here will produce approximately equal and opposite changes in the valuation results.

Full details of the sensitivities can be found in Appendix C.

Employer Contribution Rate sensitivity



All percentages shown are of pensionable pay per annum.

Appendix C: Sensitivities



Sensitivities

The tables below contain further information on the sensitivity of each of the Employer Contribution Rate and core cost cap cost of the scheme to the assumptions adopted. Also shown is the sensitivity of the economic cost cap cost of the scheme to the discount rate. It should be noted that both the cost of future service and adjustment for past service deficit/surplus elements of these rates are affected by the sensitivities.

The assumptions are split between directed and scheme-set. Details of the baseline directed short-term and long-term assumptions can be found on page 13.

The sensitivities shown in brackets relate only to the change in assumption described. The impact of a combination of assumption changes will not necessarily equate to the sum of those individual rows.

Furthermore, they refer only to the results of this valuation and are expected to change materially over time. It is important to note that these sensitivities are not intended to reflect the possible variation in assumptions at future valuations. Opposite changes in the assumptions will produce approximately equal and opposite changes in the valuation results.

Increase in

Directed assumptions	Employer Contribution Rate	Core cost cap cost
Discount rate in excess of CPI (-0.25% p.a.)	4.2%	The core cost cap cost of the scheme is not sensitive to the main CPI linked directed assumptions of discount rate, pension increases and long-term salary.
Pension increases applied to deferred pensions and those in payment (+0.25% p.a.)	2.8%	A 0.25% p.a. reduction to the discount rate is estimated to increase the economic cost cap cost of the scheme by 2.3%.
Long-term rate of public service earnings growth in excess of CPI (+0.25% p.a.)	0.2%	

Sensitivities

	Increase in	
Directed assumptions	Employer Contribution Rate	Core cost cap cost
Short-term rate of public service earnings growth (+0.25% p.a. to each short-term rate)	0.2%	0.0%
CARE revaluation rate (+0.25% p.a.)	1.0%	1.0%
Future mortality improvement assumption (changing improvements, from ONS 2020 to ONS 2016, which increases life expectancy by broadly 1.5 years)	3.1%	1.3%
State Pension age for 2015 Scheme (one year later than under current Directions)	-1.9%	-2.0%
Deficit spreading period (increased by 5 years)	-0.9%	0.0%
	Increase in	
Scheme-set assumptions	Employer Contribution Rate	Core cost cap cost
Mortality rates (5%* heavier rates of baseline pensioner mortality)	-0.8%	-0.3%
Cash commutation (additional 2.5% of pension assumed to be commuted)	-0.4%	-0.3%

* Represents a multiplicative increases to rates, i.e. 5% means rates 1.05 times higher.

Sensitivities

Scheme-set assumptions	Increase in	
	Employer Contribution Rate	Core cost cap cost
Ill-health retirement (5%* increase in number of retirements)	0.1%	0.1%
Proportions married / partnered (5%* more members assumed to have qualifying partners at death)	0.3%	0.1%
Resignations and opt outs (10%* more pre-retirement voluntary leavers assumed, net of rejoiners)	-0.1%	0.0%
Promotional pay increases (+0.25% p.a.)	0.4%	0.0%

* Represents a multiplicative increases to rates, i.e. 5% means rates 1.05 times higher.

**Appendix D:
Climate Change**



Climate Change – risks

Why consider climate risk?

- Public service pension scheme valuations tend to have long-term horizons, over which climate change can have a significant impact.
- Climate change may affect scheme experience as well as the prevailing economic and societal landscape. These may all impact on the assumptions required for valuations.
- Climate change may also have material implications for the future plans of funds and the cost of benefits now and in the future.
- The Financial Reporting Council which sets technical standards for actuarial work in the UK requires the impact of climate change to be reflected and reported on in pension scheme valuations.

Impact of climate change on the LGPS

- Unlike other public service pension schemes, the LGPS is made up of many funded schemes, each with assets.
- The impacts of climate change are expected to affect both the estimated cost of scheme liabilities and asset returns.
- As part of the LGPS valuations dated 31 March 2023 fund actuaries are required to consider climate change risk.

Climate risk types

Physical risks

Arising due to the changes in temperature and extreme weather events.

Transition risks

Arising from moves to a greener, low carbon economy. These risks are primarily due to policy and financial market changes.

Widespread impacts including on:

Life expectancy
Government spending priorities
Economic growth

The LGPS will be impacted by both physical and transition risks. In addition, there may be legal liability risks relating to the potential for litigation.

Climate Change – risk reporting

Climate change risk reporting

- LGPS Scotland fund valuations must address all material risks, including climate change.
- While the way in which climate risks are addressed may differ between fund valuations, they all aim to help funds make climate-informed decisions.
- The impact of climate change is expected to vary between funds based on their specific membership makeup and investment portfolio.
- As a result, no climate change scenario analysis has been done on the consolidated 2020 valuation data, because the employer contribution rate reported in this valuation is not used to set contributions to be paid by participating employers in each fund. Instead, the individual 2023 valuation reports from funds can be considered, noting that these have been prepared by third parties and do not necessarily represent GAD's views.
- The 2023 fund valuation reports must be completed by 31 March 2024

Limitations of climate change risk reporting

Modelling climate change involves understanding and estimating: future physical climate risk impacts; transitional costs; and how macro-financial variables are affected.

The uncertainty in any climate change risk reporting in part comes from the uncertainty in existing climate models. In particular, a number of known shortcomings are listed below:

- **Tipping points:** These are thresholds that once crossed may cause irreversible changes in the earth's system. Anticipating the point at which a tipping point would be reached and its consequences is challenging. As a result, tipping points are often excluded from climate models.
- **Speed of realising climate impacts:** Due to the various levers acting over a range of timescales, the timing of the emergence of different climate change impacts is uncertain.
- **Geographical spread of impacts:** Whilst the climate change impacts under any scenario are generally expected to be less severe on the UK relative to the world average, the geographical spread is still uncertain. Ultimately the climate outcome will be determined by overall global emissions (of which the UK contributes a small part).
- **Potential future climate policies:** These are also very difficult to model, if at all, due to their subjective nature.

Appendix E: Benefits



Summary benefits

The benefits provided to members in respect of pre 2015 and post 2015 service are set out in regulations. The main provisions are summarised over the next two pages. A statutory underpin was provided to certain members for service from 1 April 2015 in line with the benefit provision before 1 April 2015. From 1 April 2022, members accrue service in line with the provision from 1 April 2015.

As per the Public Service Pensions and Judicial Offices Act 2022 (PSPJOA 2022), the local government new scheme means a scheme under section 1 of the Public Service Pensions Act 2013 (PSPA 2013) which came into force on 1 April 2015. As per the PSPJOA 2022, the local government legacy scheme means an existing scheme mentioned in paragraphs 16 or 17 of Schedule 5 of PSPA 2013.

	From 1 April 2009 to 31 March 2015 (legacy)	From 1 April 2015 (new)
Basis of provision	Final salary	Career average with revaluation of CPI
Contracted out/in prior to 2017		Contracted out
Normal Pension Age (NPA)	65	Higher of a member's State Pension age and 65
Pension accrual rate	1/60	1/49
Retirement lump sum structure	By commutation only at £12:1 p.a.	
Final pensionable pay	Pay in last 12 months prior to retirement or earlier exit, or in either of the previous two years if higher	Not applicable

Summary benefits

From 1 April 2009 to 31 March 2015

From 1 April 2015

	From 1 April 2009 to 31 March 2015	From 1 April 2015
Dependants' benefits	1/160 (on death in service, full prospective service is included)	
Ill health pension	<p>2-Tier system with benefit tier depending on prospect of return to gainful employment.</p> <p>Tier 1 (no reasonable expectation of return to gainful employment before NPA) – service enhanced by full prospective service to NPA.</p> <p>Tier 2 (expectation of return to gainful employment before NPA) – service enhanced by 25% of prospective service to NPA.</p>	
Early Retirement	Transitional Rule of 85 for some members	
Pension increases	Governed by the Pensions (Increase) Act 1971	

**Appendix F:
Methodology, Assumptions
and Notional Assets**



Methodology

Employer Contribution Rate

To assess the Employer Contribution Rate we:

- Calculate the percentage of total projected pensionable pay needed to meet the benefits accrued over the implementation period (**cost of future benefits**).
- Assess whether there is any deficit/surplus at the effective date (**past service position**).
- Spread this total deficit/surplus over 15 years (**adjustment due to deficit/surplus**) and express it as a percentage of total projected pensionable pay. Then add/subtract this resulting percentage from the cost of future benefits.
- Subtract member contributions expressed as a percentage of total **projected pensionable payroll**.
- Assess whether any further adjustments are required to the resulting Employer Contribution Rate in respect of the cost control mechanism.

The items in **bold** are considered in turn in further detail.

Cost of future benefits

To assess the cost of future benefits we:

- Estimate the benefits that are accrued by each scheme member (and their dependants where applicable) over the implementation period.
- Express these as a stream of future projected cashflows.
- Calculate the capital sum needed at the effective date to meet this stream of future cashflows. This is done by discounting the cashflows using the discount rate.
- Divide this capital sum by the 'present value' of total pensionable pay over the implementation period

This methodology is known as Projected Unit and is specified by the Directions.

The Directions also specify that benefits should be attributed to periods of service in accordance with the requirements of International Accounting Standard 19: Employee Benefits.

In carrying out the above steps we need to make assumptions about the future service and salaries of scheme members, and the length of time over which they will receive benefits. These assumptions are summarised on page 47.

We also make a number of more minor assumptions and these are summarised on pages 48 to 51.

Methodology

Past Service Position

To assess the surplus/deficit at the effective date we:

- Estimate the benefits accrued by each scheme member (and their dependants, where applicable) in respect of service accrued prior to the effective date (past service).
- Express these as a stream of future projected cashflows.
- Calculate the capital sum (past service liabilities) needed at the effective date to meet this stream of future cashflows. This is done by discounting the cashflows using the discount rate.
- Subtract from this capital sum the value of the notional assets at the effective date. The assets are described as notional as there is no actual fund set aside to pay benefits (see page 47 for more details). The actual LGPS assets held are not considered for this purpose.

We then need to spread this total deficit/surplus over 15 years and express it as a percentage of total projected pensionable pay. This gives the **past service position**.

As per the assessment of the future service position, in carrying out the above steps we need to make assumptions about the future service and salaries of scheme members, and the length of time over which they will receive benefits.

Adjustment due to deficit/surplus

If the scheme's notional assets are less than the past service position, the fund is said to be in deficit. This deficit needs to be met by an adjustment (addition) to the contribution rate, over a 15 year period.

Conversely, if the scheme's notional assets are more than the past service position, the fund is said to be in surplus. This deficit needs to be met by an adjustment (reduction) to the contribution rate, over a 15 year period.

The adjustments due to deficit/surplus at the effective date was identified separately on page 28 of this report.

Projected Pensionable Payroll

In order to carry out our calculations, pensionable payroll is projected from the effective date to the start and end of the implementation period. These projections are shown below.

Date	Pensionable Payroll (£bn)
Effective date (31 March 2020)	5.2
Start of implementation period (1 April 2024)	6.2
End of implementation period (31 March 2027)	6.5

Pensionable payroll is also projected over the above-mentioned 15-year deficit spreading period. The approach taken is detailed further on page 48.

Assumptions and Notional Assets

Assumptions

In assessing the cost of past and future service benefits we have made assumptions about the future service and salaries of scheme members, and the length of time over which they will receive benefits.

In doing so we have assumed that a largely stable active population will be maintained.

Our calculations therefore assume that over the period from the effective date to the end of the implementation period, the overall profile of the membership in terms of distribution of headcount and pay by age and gender will remain stable.

The implied expected future pensionable service and length of time over which members receive benefits (duration of liabilities) are summarised in the table below.

Member Type	Average expected future pensionable service	Duration of liabilities
Active Member	11.4	23.6
Current Pensioner	N/A	10.2

Notional Assets

In line with HMT Directions, the actual LGPS assets held are not considered in this valuation. Instead, an account is maintained of contributions from current members and (notional) contributions from employers. They are 'rolled up' from year to year using pre-determined notional rates of return and reduced by benefits as and when they are paid.

The resulting amount is known as the notional assets and stood at £36.3bn as at the effective date. Page 30 provides further information on the development of the notional assets since the previous valuation as at 31 March 2017.

The (notional) contributions from employers for this purpose are calculated on the assumption that employers paid contributions at a rate equal to the corrected employer contribution rate set out in the 2017 valuation (20.5% of pay) over the period 1 April 2017 to 31 March 2020.

Core and Economic Cost Cap Funds

In a similar way to which the notional assets are required to assess the past service position of the scheme, core and economic cost cap notional funds are required to assess the core cost cap and economic cost cap past service costs respectively.

These notional funds have been estimated at 31 March 2020 using data at this date. The estimate is equivalent to 'rolling up' the values of the notional funds at the previous valuation using pre-determined notional rates of return, and adjusting for income received, benefits paid and other technical adjustments. Full details can be found in pages 23 to 26.

Minor assumptions

Deficit spreading

The scheme's projected pensionable payroll over a 15-year period is required to spread deficits. An estimate has been calculated using payroll data at the valuation date, projected forward with the earnings increases described on page 13.

Public Sector Transfer Club (PSTC)

Transfers into the scheme on a PSTC basis can result in liabilities in excess of the transfer values received. We have analysed recent transfer data in order to estimate the potential impact on the future costs of the scheme.

In setting the employer contribution rate we have allowed for a 0.3% p.a. addition over the implementation period (this was [0.3%] p.a. at the 2017 valuation).

The cost control mechanism requires that only transfers of reformed scheme benefits are considered. No allowance over the cost cap implementation period has been made at the 2020 valuation (as our estimate of the impact is smaller than 0.05% p.a.). The Directions require that this is compared against the PSTC allowance of 0.3% p.a., which was included within the employer cost cap set at the 2014 valuation.

Guaranteed Minimum Pensions (GMPs)

For pensioners reaching State Pension age (SPa) prior to 6 April 2016, certain increases on the GMP part of pensions are not the responsibility of the scheme. This is reflected through an overall adjustment to the past service liabilities. The adjustment is a reduction in the Employer Contribution Rate. We have considered this adjustment together with that for the 'Goodwin' legal case described on the next page. Given the tolerances and purpose of the assessment of the Employer Contribution Rate we have assumed that these two adjustments will broadly offset each other, and so no allowance is made for either.

There is no impact on the cost control mechanism.

During the inter-valuation period, the Government announced that members reaching SPa after 6 April 2021 will receive full indexation of public service pensions. This follows previous similar announcements covering earlier periods. This acts to increase the past service liabilities and is shown as part of the reconciliation on page 29 of the Employer Contribution Rate with that set at the 2017 valuation.

Timing of increases

Pension increases and reformed scheme in-service revaluations are assumed to occur annually in April.

General salary increases and progression / promotional increases are assumed to occur evenly throughout the year (so on average halfway through).

Minor assumptions

Final Pensionable Pay

Members' legacy scheme final salary benefits have been valued by projecting salary data at the valuation date up to the point of their assumed retirements. No explicit allowance has been made for the impact of prior years' earnings resulting in higher final pensionable pay for particular members as the impact is not expected to be material.

Actuarial factors

Certain benefit options available to members of the scheme are determined using tables of factors. These are typically generated following advice from the actuary, and are generally set to be broadly cost-neutral against the assumptions used for a valuation. In our calculations, we have assumed that, where material, the factors used at a particular point in time in our calculations are reflective of those that were / are expected to be in force at that date.

Income tax and National Insurance

The valuation framework considers cash amounts into and out of the pension scheme. Calculated liabilities therefore reflect full payments and do not, for example, allow for any deductions applicable prior to receipt by members.

Goodwin judgment

A case ('Goodwin') brought in the Employment Tribunal against the Teachers' Pension Scheme in 2020 highlighted the potential for the form of dependants' benefits to result in direct sexual orientation discrimination. The Government [announced](#) that it will make amendments to the public service schemes, where appropriate, to address this discrimination.

The impact of this would be a small increase to the employer contribution rate over the implementation period. As noted above, we have considered this judgment alongside the savings related to GMP (see page 48) and have assumed these will broadly offset each other. There is no impact on the cost control mechanism.

Impact of change to discount rate

We have estimated the impact on the employer contribution rate of the 0.7% p.a. reduction in the SCAPE discount rate since the previous valuation. Various approaches could be justified, depending on the objectives of the assessment. We have assumed:

- The SCAPE discount rate change occurs prior to all other changes in the contribution rate reconciliation.
- The impact includes costs related to future benefit accrual and past service liabilities.

Minor assumptions

LGPS – 50:50 section

Employees accruing benefits in the Local Government Scheme (Scotland) can elect to make member contributions at a rate half of the standard level for their salary. Where a member elects to do this, they also accrue benefits at half the standard rate.

HMT Directions prevent changes in the take up of the 50/50 option from triggering action under the cost cap mechanism.

In carrying out the valuation, previous periods of half-rate contribution will be reflected in the benefits accrued, and so the past service liabilities calculated, and the contributions paid into the scheme.

In valuing benefits accruing during the implementation periods of the scheme, the Directions instruct us to assume all members accrue benefits at the standard rate (i.e. no members elect to join the 50:50 section).

Minor assumptions

The impact of the factors set out on this page have been considered in aggregate. Overall we have determined that no material adjustments are required in respect of them, when setting the employer contribution rate, or as part of the cost cap mechanism.

Children and dependants' pensions

The cost to the scheme of paying existing and future pensions to children, or short-term dependants' pensions, on the death of a scheme member.

'Pension debits' for active / deferred members

Savings arising from 'pension debit' deductions to be applied to divorcing members' retirement pensions as a result of a pension sharing order.

'Scheme pays' deductions for active / deferred members

Savings arising from 'scheme pays' debits to be applied to retirement pensions as a result of the scheme having previously paid pension tax charges on behalf of members.

Additional voluntary contributions

The cost of additional pensionable service and pension benefits secured through the payment of additional voluntary contributions through the scheme's regulations.

Additional contributions purchasing benefits on a defined contribution basis are separate to the pension scheme and have not been considered in the valuation.

Earnings Cap

Savings to the scheme arising from members whose pensions at retirement are restricted by the Earnings Cap. This cap limits the final pensionable pay which can be used to calculate the final salary benefits payable in certain legacy schemes.

Expenses

The costs of administering the scheme are outside the framework set by the Directions and so are not directly included in our valuation calculations.

**Appendix G:
Inter-valuation events**



McCloud

What is McCloud?

In December 2018 the England and Wales Court of Appeal upheld claims of age discrimination brought by some firefighters and members of the judiciary against transitional protection rules. This became known as the McCloud judgment, so called after one of the claimants' names. These rules determined the date on which some members would move between the legacy schemes and the reformed scheme.

Why does it matter?

The outcome of the remedy required to address the judgment is that the statutory underpin, which provides members with the better of the pre-2015 level of accrual and post-2015 level of accrual, is extended to in scope members (rather than being limited to members meeting a certain age criteria as was the original approach).

To allow for the McCloud remedy in our calculation methodology, we have allowed for the statutory underpin applying, where relevant.

Who is affected?

The McCloud judgment typically affects those who were in active service on both 31 March 2012 and 31 March 2015. These members are said to be **in scope**.

Where can I find out more?

Full details of [SPPA's consultation](#) on the McCloud remedy are available online.

GAD allowed for impact of McCloud in the 2017 cost cap valuation of the scheme. Details of these calculations can be found in [this](#) report.

This valuation adopts the same approach for calculating the cost of McCloud as part of the employer contribution rate. The only change is to allow for revised demographic and financial assumptions that apply at 31 March 2020.

The 2017 cost cap valuation included the full impact of McCloud remedy on the cost control mechanism. Under the reformed mechanism there is no further McCloud impact on the 2020 cost cap valuation of the scheme.

Other events since the 2017 valuation

Member contributions

Page 32 sets out the member contribution rates expected to be paid during the implementation period 1 April 2024 to 31 March 2027.

Employer contributions

Regular employer contributions were in practice paid at a rates set by the valuations of local funds.

For the purposes of calculating the Employer Contribution Rate for this valuation, however, it is assumed that contributions were paid at a rate of 20.5% of pensionable pay, which is the corrected employer contribution rate set out in the 2017 valuation.

In-service revaluations

The rates of CARE revaluation applied to the accrued pensions of those members of the 2015 scheme who were in-service between the 2017 and 2020 valuation dates, are set out in table below.

Year commencing	In-service revaluation
April 2017	1.0%
April 2018	3.0%
April 2019	2.4%
April 2020	1.7%
April 2021	0.5%
April 2022	3.1%
April 2023	10.1%

Other events since the 2017 valuation

Pension increases

The rates of increase applied to pensions in payment since the 2017 valuation are set out in the table below.

Year commencing	Pension increase
April 2017	1.0%
April 2018	3.0%
April 2019	2.4%
April 2020	1.7%
April 2021	0.5%
April 2022	3.1%
April 2023	10.1%

Legal Cases

A number of legal challenges, summarised below, have been brought against public service (and other) pension schemes since the 2017 valuation of the scheme. This report describes the allowances that we have included at this valuation in respect of those cases.

In some cases, final determinations are outstanding, or impacts have yet to be agreed. Such determinations could impact on future valuations, however prior to their outcomes being known we have not made any allowance for them in the current valuation.

Other events since the 2017 valuation

Cost Control Mechanism Review

Following the provisional results of the 2017 valuation, HM Treasury questioned whether the cost control mechanism, in its then current form, was too volatile. Following this, at HM Treasury's request, the Government Actuary conducted a review of the cost control mechanism. The Government Actuary's final report to HM Treasury containing his findings and recommendations was published in June 2021.

Full details of the consultation, the proposed changes to the cost control mechanism and the Government's response can be found in HM Treasury's document:

[Public Service Pensions: cost control mechanism consultation](#)

HM Treasury has implemented the changes to the cost control mechanism for the 2020 valuation. Further details of the cost control mechanism can be found on page 20.

SCAPE rate review

From June to August 2021 the Government held a public consultation into the methodology for setting the SCAPE discount rate, the discount rate used in the valuation of public service pension schemes to set the employer contribution rates.

In March 2023, the Government issued its consultation response full details of which can be found at the link below:

[Public Service Pensions: Consultation on the discount rate methodology](#)

Details of the level of the SCAPE discount rate used for the 2020 valuation can be found on page 13.

Appendix H: Compliance, Limitations and Data Uncertainty



Compliance

Purpose

GAD has been appointed as scheme actuary by the Local Government Pension Scheme (Scotland) as at 31 March 2020 (the effective date), as required by the Local Government Pension Scheme (Scotland) Regulations 2018.

This report has been prepared for the use of the Scottish Ministers.

Its purpose is to set out the results of the 31 March 2020 valuation, namely:

- The costs of the scheme and how these compare to the employer cost cap.
- Complete a compliance assessment of the scheme's Employer Contribution Rate.

It has been prepared in accordance with the Public Service Pensions Act 2013, the Directions and scheme regulations.

The information and advice in this report should not be relied upon or assumed to be appropriate for any other purpose, or by any other person.

Throughout this report the totals given for summed data may not be exactly the same as the sum of the components shown due to rounding effects.

Sharing

This report will be published as part of completing the 2020 valuation of the scheme, and we are content for the Scottish Ministers to release this report to third parties, provided:

- It is released in full
- The advice is not quoted selectively or partially;
- GAD is identified as the source of the report, and;
- GAD is notified of such release

Third parties whose interests may differ from those of the Scottish Ministers should be encouraged to seek their own actuarial advice where appropriate. 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.

Compliance statement:

This report has been prepared in accordance with the applicable Technical Actuarial Standards: TAS 100 and TAS 300 issued by the Financial Reporting Council (FRC). The FRC sets technical standards for actuarial work in the UK.

Reliances, Limitations and Data Uncertainty

Reliances and Limitations

In preparing this report, GAD has:

- Relied on the data and other information supplied by the administrators of the scheme, as described in our Membership data report, dated 1 March 2024. The limitations set out in that report apply equally here.
- Used directed and scheme-set assumptions.

HM Treasury have consulted with the Government Actuary on the directed assumptions. These are reasonable in our opinion, as they meet the Government's policy objectives.

The scheme-set assumptions were determined by the Scottish Ministers following GAD's recommendations. These were discussed with SPPA and are summarised in our Advice on assumptions report dated 1 March 2024. The limitations set out in that report apply equally here.

Checks, Adjustments and Reconciliations

GAD carried out a significant review of the data supplied to us and excluded records deemed to be unreliable, or not usable due to missing data. Certain processing adjustments were also made to the data received to prepare it for the calculations.

At the final checking stage, the adjusted data was used to calculate liabilities which were reconciled approximately against the 2017 valuation results, adjusted for accounting cashflows.

Can data issues cause uncertainty?

Our checks, adjustments and reconciliations aim to ensure that the data is appropriate for use in valuation calculations.

The more confidence we have that the dataset adopted reflects that of the true scheme, the more confidence we have in the accuracy of the valuation results.

However, our checks do not constitute a full data audit and our adjustments, although reasonable in our view, may not mean that the dataset adopted accurately reflects the scheme reality.

As a result, residual **data uncertainty** exists, however this is normal in large, complex data sets and isn't usually concerning.

Is data uncertainty a significant issue?

We are comfortable that the checks and adjustments that have been made are reasonable and the data is appropriate for the purpose of the 2020 valuation. In our opinion, the potential impact of data uncertainty on the employer contribution rate and member outcomes (via the cost control mechanism) is:

- **Employer contribution rate:** The uncertainty will be captured together with other experience and changes through the 2024 (or subsequent) valuations and is expected to have an impact of not more than $\pm 1.0\%$ of pensionable pay. This has been discussed and deemed acceptable by SPPA.
- **Member Outcomes:** No impact expected.

**Appendix I:
Directions locations**



Location of material required by Directions

Direction 22 outlines the reporting requirements for the demographic analysis of the scheme.

Reporting Direction	Description	Relevant Directions	Location (Page, Appendix or Report)
22 (1), (3), (4)	Summary of demographic analysis		Assumption Report
22 (2)	Statement where scheme membership data not sufficient to carry out analysis		Assumption Report

Direction 23 outlines the reporting requirements for information about the scheme and data.

Reporting Direction	Description	Relevant Directions	Location (Page, Appendix or Report)
23 (1) (a)	Information regarding scheme membership		11 and Data Report
23 (1) (b)	Average age of scheme members on effective date		Data Report
23 (1) (c)	Average expected future pensionable service of scheme members in service at the effective date		Appendix F
23 (1) (d)	Total projected payroll at i) effective date, ii) the <u>implementation date</u> and iii) last day of implementation period		Appendix F
23 (1) (e)	Statement that valuation results have been prepared in accordance to with the requirements		4 and Appendix H
23 (1) (f)	A summary of regulations, Directions and professional standards relating to the valuation		Appendix H

Reporting Direction	Description	Relevant Directions	Location (Page, Appendix or Report)
23 (1) (g)	A summary of the main provisions of the scheme		Appendix E
23 (1) (h)	An analysis of the demographic experience	22	12 and Assumptions Report
23 (1) (i)	A statement of the assumptions used by the scheme actuary in preparing the report		12, 13, Appendix F and Assumptions Report
23 (1) (j)	Other liabilities of the scheme		n/a
23 (1) (k)	Any other matters the scheme actuary considers to be relevant		n/a
23 (2) (a)	Sensitivity to the number of years used to spread costs	14	Appendix C
23 (2) (b)	Sensitivities to assumptions specified in the Directions	15, 16, 17, 18, 19a, 19d	15, 33 and Appendix C

Direction 24 outlines the reporting requirements for information about Employer Contribution Rate.

Reporting Direction	Description	Relevant Directions	Location (Page, Appendix or Report)
24 (a)	Liabilities as at effective date	27	Appendix B
24 (b)	Notional assets as at effective date	28	Appendix B
24 (c)	Information about notional assets	29	Appendix B

Reporting Direction	Description	Relevant Directions	Location (Page, Appendix or Report)
24 (d)	Contribution rates calculated in accordance with direction 30	30	Appendix B
24 (e)	Contribution yields calculated in accordance with direction 31	31	Appendix B
24 (f)	Employer Contribution Rate calculated in accordance with direction 32	32	Appendix B

Direction 25 outlines the content requirements for the cost cap valuation report

Reporting Direction	Description	Relevant Directions	Location (Page, Appendix or Report)
25 (a)	Cost cap liabilities at the effective date	34	Appendix A
25 (b)	Prior value of the core cost cap fund	35	Appendix A
25 (c)	Core cost cap fund contribution rate	36	Appendix A
25 (d)	Core cost cap income	37	Appendix A
25 (e)	Cost cap benefits paid	38	Appendix A

Reporting Direction	Description	Relevant Directions	Location (Page, Appendix or Report)
25 (f)	Core cost cap notional investment returns	39	Appendix A
25 (g)	Past service technical immunity adjustment	40	Appendix A
25 (h)	Value of the core cost cap fund at the effective date	41	Appendix A
25 (i)	Change in the value of the core cost cap fund	42	Appendix A
25 (j)	Core cost cap past service cost	43	Appendix A
25 (k)	Cost cap future service cost	44	Appendix A
25 (l)	Cost cap contribution yield	45	Appendix A
25 (m)	Future service technical immunity adjustment	46	Appendix A
25 (n)	Cumulative future service technical immunity adjustment	47	Appendix A
25 (o)	Core cost cap cost of the scheme	48	8 and Appendix A

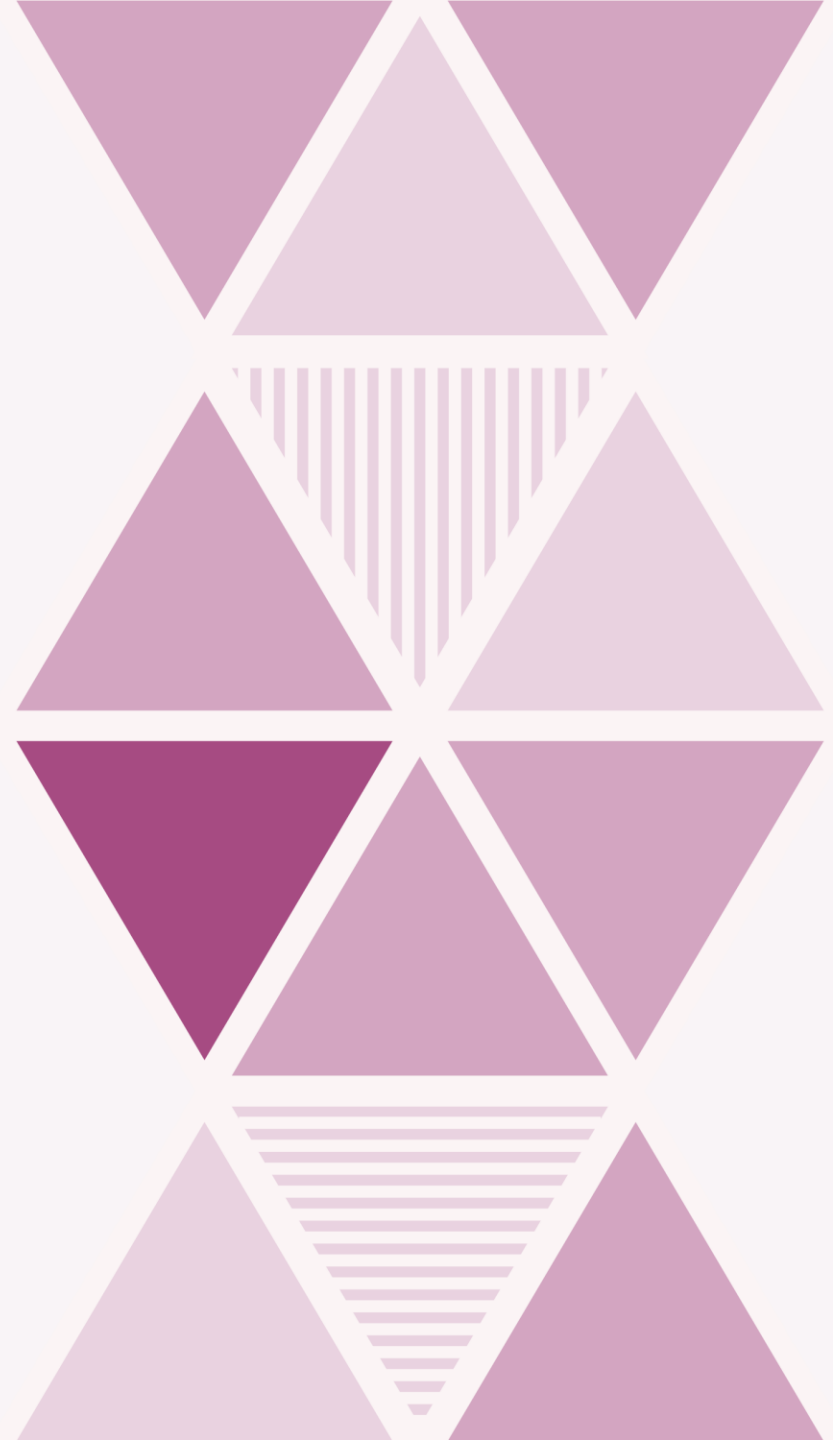
Reporting Direction	Description	Relevant Directions	Location (Page, Appendix or Report)
25 (p)	Prior value of the economic cost cap fund	60	Appendix A
25 (q)	Economic cost cap fund contribution rate	61	Appendix A
25 (r)	Economic cost cap income	62	Appendix A
25 (s)	Economic cost cap notional investment returns	63	Appendix A
25 (t)	Value of the economic cost cap fund at the effective date	64	Appendix A
25 (u)	Change in value of the economic cost cap fund	65	Appendix A
25 (v)	Economic cost cap past service cost	66	Appendix A
25 (w)	Economic cost cap cost of the scheme	67	Appendix A
25 (x)	Total cumulative technical immunity adjustment	68	Appendix A
25 (y)	Statement that the core cost cap valuation results and economic cost cap valuation results have been calculated in accordance with the requirement of the Directions		4 and Appendix H

Reporting Direction	Description	Relevant Directions	Location (Page, Appendix or Report)
25 (z)	Summary of the regulations, Directions and professional standard applicable to the preparation of the cost cap valuation report		Appendix H
25 (aa)	Comparison of the core cost cap of the scheme with the employer cost cap	70	8 and Appendix A
25 (bb)	Comparison of the economic cost cap of the scheme with the employer cost cap		8 and Appendix A
25 (cc)	Notification to the responsible authority of a <u>cost control mechanism</u> breach		n/a
25 (dd)	Analysis of difference between the employer cost cap cost of the scheme and the core cost cap cost of the scheme		9

Appendix J:

Glossary 1 – General

**Glossary 2 – Cost Control
Mechanism**



Glossary 1 - General

CARE	CARE stands for Career Average Revalued Earnings and refers to a methodology whereby earnings over a member's working lifetime in the scheme are used in the calculation of their benefits in the reformed scheme.
Directions	<p>A document published by HM Treasury and referred to in The Public Service Pensions Act 2013, which sets out the process and requirements for carrying out valuations, including the results which need to be disclosed.</p> <p>Directions were first published in 2014 and have been amended several times since then.</p> <p>The latest Directions, on which the results of this valuation are based, are the Public Service Pensions (Valuation and Employer Cost Cap) Directions 2023, as they apply at the date of signing.</p>
Effective date	31 March 2020
Employer Contribution Rate	<p>The percentage of scheme members' pensionable salaries which employers are required to pay in order to:</p> <ul style="list-style-type: none"> • meet the costs of future benefits accrued by active members • make good any deficit in the notional amounts set aside to cover benefits already built up. <p>The result is heavily dependent on assumptions about future financial conditions and membership changes. These amounts are notional amounts in respect of LGPS as in practice local fund valuations are carried out to calculated employer contribution rates actually paid.</p>
Implementation date	1 April 2024
Implementation period	The period over which future accrual in the scheme is measured for the purposes of the Employer Contribution Rate. For the 31 March 2020 valuation the implementation period is 1 April 2024 to 31 March 2027.

Glossary 1 - General

Inter-valuation period	For the valuation with an effective date of 31 March 2020, the inter-valuation period is the four years from 1 April 2017 to 31 March 2020.
McCloud	McCloud refers to a legal judgment made in December 2018. The England and Wales Court of Appeal upheld claims of age discrimination brought by some firefighters and members of the judiciary against 'transitional protection' rules.
Normal pension age	The age at which a member in normal health is entitled to unreduced benefits. This age varies between the schemes and is set out in Appendix D.
Notional assets	Notional amount of money, initially set as the value of all members' past service liabilities at 31 March 2017. It is updated at each valuation to take account of all actual scheme income and benefits paid, plus an allowance for notional investment returns.
Past service liabilities	The monetary amount assessed in today's terms, as being required to meet benefit promises (pensions, lump sums, dependants' pensions etc) that have been made to scheme members over their period of service prior to the <u>effective date</u> . For active members, these liabilities include allowance for future salary inflation and in-service benefit revaluation until the assumed date of cessation of pensionable service.
Pension increase	Public service pensions are increased under the provisions of the Pensions (Increase) Act 1971 and Section 59 of the Social Security Pensions Act 1975.

Glossary 1 - General

Pension revaluation	The rate at which the CARE pension is revalued each year a member is active.
Professional actuarial requirements	<p>The professional requirements that we have complied with when completing this actuarial valuation include:</p> <ol style="list-style-type: none">1. Technical Actuarial Standards: TAS 100 and TAS 300, issued by the Financial Reporting Council (FRC)2. The Actuaries' Code, issued by the Institute and Faculty of Actuaries (IFoA)3. The Civil Service Code. <p>GAD is also accredited under the IFoA's Quality Assurance Scheme. More details can be found on our website.</p>
Reformed (new) and legacy schemes	As per the Public Service Pensions and Judicial Offices Act 2022 (PSPJOA 2022), the local government new scheme means a scheme under section 1 of the Public Service Pensions Act 2013 (PSPA 2013) which came into force on 1 April 2015 (referred to as the reformed/post 2015 section in this report). As per the PSPJOA 2022, the local government legacy scheme means an existing scheme mentioned in paragraphs 16 or 17 of Schedule 5 of PSPA 2013 (referred to as the legacy/pre 2015 section in this report).
SCAPE discount rate	<p>SCAPE is short for the Superannuation Contributions Adjusted for Past Experience.</p> <p>It is the discount rate set by HM Treasury which is used when assessing the discounted value of pension payments from public service pension schemes.</p> <p>It is currently based on OBR's forecast for long-term GDP growth.</p>
50/50 section	Employees accruing benefits in the Local Government Pension Scheme (Scotland) can elect to make member contributions at a rate half of the standard level for their salary. Where a member elects to do this, they also accrue benefits at half the standard rate. HMT Directions prevent changes in the take up of the 50/50 option from triggering action under the cost cap mechanism.

Glossary 2 – Cost Control Mechanism

Cost cap benefits paid	Benefits paid during the inter-valuation period 1 April 2017 to 31 March 2020 from the 2015 Scheme (excluding any benefits paid in respect of the statutory underpin for members who are in scope for McCloud remedy).
Cost cap ceiling	3% above the employer cost cap
Cost cap contribution yield	The expected average contribution rate payable by members over the cost cap implementation period.
Cost cap corridor	The range of rates lying between the employer cost cap $\pm 3\%$. If the cost cap costs of the scheme both lie outside of this corridor in the same direction, then a breach is deemed to have occurred.
Cost cap cost of the scheme	<p>The rate which is compared to the employer cost cap at each valuation to determine whether the Secretary of State is required to consult on changes to the scheme.</p> <p>The cost cap cost of the scheme comes in two forms:</p> <ol style="list-style-type: none"> 1) Core cost cap cost of the scheme – <u>excludes</u> the impact of changing long-term economic assumptions. 2) Economic cost cap cost of the scheme – <u>includes</u> the impact of changing long-term economic assumptions.
Cost cap floor	3% below the employer cost cap.

Glossary 2 – Cost Control Mechanism

Cost cap fund	<p>The cost cap fund comes in two forms, core and economic.</p> <p>It is a notional amount of money, building up from 1 April 2015 when the <u>reformed scheme</u> was introduced.</p> <p>The cost cap fund values at 31 March 2017 have been reconstructed in accordance with the latest Directions and have been estimated at 31 March 2020 using data at this date.</p>
Cost cap fund contribution rate	<p>The cost cap fund contribution rate comes in two forms, core and economic.</p> <p>It is the rate required to cover the cost of benefits accruing from 1 April 2017 to 31 March 2020. Consists of:</p> <ol style="list-style-type: none"> 1) Expected cost of benefits accrued 2017 to 2020 plus 2) Cost cap past service cost at 2017 minus 3) Member contributions paid 2017 to 2020
Cost cap future service cost	<p>The contribution rate required to cover the expected cost of benefits accrued by members during the cost cap implementation period.</p>
Cost cap implementation date	<p>1 April 2023.</p>
Cost cap implementation period	<p>The period over which future accrual in the scheme is measured for the purposes of the cost control mechanism. For the 31 March 2020 valuation the implementation period is 1 April 2023 to 31 March 2027.</p>
Cost cap income	<p>The cost cap income comes in two forms, core and economic.</p> <p>Income received by the scheme, for example employee contributions. Employer contributions are also included, but these are set to the amount that would have been received if employer contributions were paid at the core, or economic, cost cap fund contribution rate.</p>

Glossary 2 – Cost Control Mechanism

Cost cap liabilities	<p>The value of the liabilities relating to benefits that have accrued in the reformed scheme as at 31 March 2020.</p>
Cost cap notional investment returns	<p>The cost cap notional investment returns comes in two forms, core and economic. Notional amount of money added to the core, or economic, cost cap fund representing the growth of the core cost cap fund over time.</p>
Cost cap past service cost	<p>The cost cap past service cost comes in two forms, core and economic. It is the difference between the cost cap liabilities and the core, or economic, cost cap fund as at 31 March 2020, expressed as a percentage of pensionable pay.</p>
Cost control mechanism	<p>A risk-sharing arrangement that seeks to ensure a fair balance of risk between members of public service pension schemes and taxpayers regarding these scheme costs. It also aims to maintain value to members and provide stability and certainty of member benefit and contribution levels, with changes only being triggered by ‘extraordinary, unpredictable’ events.</p> <p>The mechanism compares certain costs of the schemes (core and economic cost cap costs) to the original employer cost cap.</p> <p>If both these assessed costs have moved outside the cost cap corridor in the same direction, a breach of the mechanism is said to have occurred and the Scottish Ministers are required to consult on changes to the scheme to bring the costs back to the employer cost cap.</p> <p>See page 20 for further information.</p>
Cumulative future service technical immunity adjustment	<p>An adjustment made to the core cost cap cost of the scheme to exclude the impact of changes to long-term economic assumptions (e.g. SCAPE rate) from the future service cost.</p>

Glossary 2 – Cost Control Mechanism

Economic check	Assessment of whether the economic cost cap cost of the scheme (which includes the impact of changing long-term economic assumptions) breaches the cost cap corridor.
Employer cost cap	<p>The contribution rate, determined at the 2014 valuation, to cover the cost of benefits accruing over the implementation period 2015 to 2019, less expected member contribution payable during this same period.</p> <p>The employer cost cap can be thought of as the baseline cost or target cost of the scheme and is used as the comparator for the core cost cap cost and economic cost cap cost at the 2020 valuation.</p>
Future service technical immunity adjustment	The part of the Cumulative Future service technical immunity adjustment that is in respect of the impact of changes to long-term economic assumptions arising only since the previous valuation.
Past service technical immunity adjustment	An adjustment made to the core cost cap fund to exclude the impact of changes to long-term economic assumptions (e.g SCAPE rate).
Total cumulative technical immunity adjustment	The difference between the core cost cap of the scheme and the economic cost cap of the scheme .