

**Review of the Local Government Pension Scheme
(England & Wales)**

**Assessment of cost ceiling and scheme-specific
proposals**

Draft cost ceilings - results

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1 Introduction

- 1.1 In March 2011 Lord Hutton published his final report of the Independent Public Service Pensions Commission. His report recommended reform of the public service pension schemes. At the March 2011 Budget the Government accepted the report's recommendations as a basis for consultation.
- 1.2 The Government has decided to set scheme-specific cost ceilings to facilitate discussions at scheme level of pension scheme designs with trades unions and other interested parties. Cost ceilings will be set as the scheme-specific contribution rates required to provide the benefits of the 'Reference Scheme' design which has been specified by HM Treasury (as set out in Appendix A).
- 1.3 As part of this process, James Richardson (Director, Public Spending, HM Treasury) wrote to Jeremy Pocklington (Chair of the Public Sector Pay Committee (Pensions)) on 31 August 2011 asking schemes to calculate draft cost ceilings. The Department for Communities and Local Government (DCLG) have asked GAD to calculate draft cost ceilings for the Local Government Pension Scheme (the scheme).
- 1.4 Some draft cost ceilings were provided to HM Treasury in the GAD note of 9 September 2011. A further note was issued on 16 September 2011 which set out draft cost ceiling calculations based on more up-to-date assumptions that have been derived from an analysis of the scheme's demographic experience between 1 April 2009 and 31 March 2011. This note supersedes the note of 16 September following some minor changes made to the methodology (further details set out in paragraph 3.9). The results are set out in Section 2 of this note. The assumptions that have been used are set out in Appendix C.
- 1.5 Final cost ceilings will be set by HM Treasury and the results set out in this note are subject to verification by HM Treasury. In particular, the data, methodology and assumptions used to determine final cost ceilings will be set by HM Treasury and so are subject to approval by HM Treasury. The data, methodology and assumptions used to determine the draft cost ceilings in this note are described in Section 3 of this note.
- 1.6 It should be recognised that the draft cost ceilings in this note:
 - > are gross cost ceilings (i.e. they ignore income from member contributions)
 - > do not represent "employer contribution caps"
 - > do not reflect contribution rates that may emerge from valuations of the scheme following implementation of Lord Hutton's recommendations

These, and a number of other, limitations are described more fully in Section 4 of this note.

- 1.7 This note has been prepared by the Government Actuary's Department (GAD) in its capacity as actuarial advisor to the DCLG on the scheme. We understand that the DCLG will forward this note to HM Treasury.

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2 Results

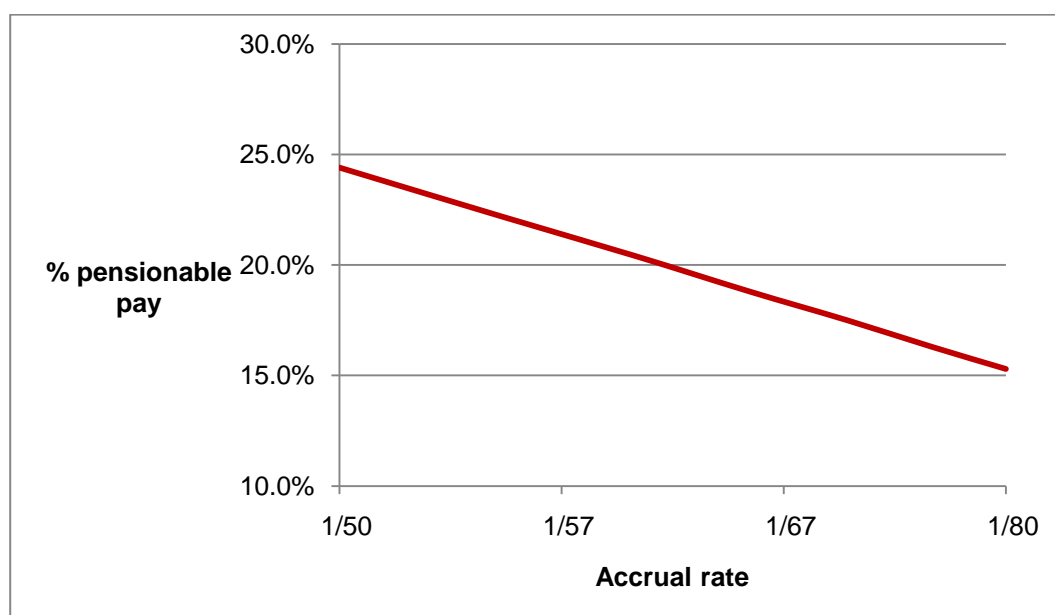
2.1 James Richardson's letter to Jeremy Pocklington of 31 August 2011 asked schemes to calculate draft cost ceilings on a range of accrual rates between 1/50ths and 1/80ths. Table 1 below sets out draft cost ceilings based on this range of accrual rates.

Table 1: Draft cost ceilings for the specified range of accrual rates

Accrual rate	1/50ths	1/55ths	1/60ths	1/65ths	1/70ths	1/75ths	1/80ths
Draft cost ceiling (% pensionable pay)	24.4%	22.2%	20.4%	18.8%	17.5%	16.3%	15.3%

2.2 Table 1 shows that an accrual rate of 1/50ths produces a draft cost ceiling of 24.4% of pensionable pay. An accrual rate of 1/80ths produces a draft cost ceiling of 15.3% of pensionable pay. Accrual rates between 1/50ths and 1/80ths produce draft cost ceilings which lie between these two rates. Chart 1 below shows how draft cost ceilings vary across the specified range of accrual rates from 1/50ths to 1/80ths.

Chart 1: Draft cost ceilings for accrual rates between 1/50ths and 1/80ths



2.3 Chart 1 illustrates that the relationship between the accrual rate and the resulting draft cost ceiling is linear. The draft cost ceilings are not directly proportional to the accrual rate (e.g. doubling the accrual rate does not double the draft cost ceiling) because some of the benefits being valued are independent of the accrual rate (for example the lump sum payable on death in service of 3 times pensionable pay).

2.4 The benefits which are independent of the accrual rate make up 0.3% of pensionable pay in the draft cost ceilings shown above.

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3 Data, methodology and assumptions

- 3.1 Subject to the limitations described in Section 4 of this note, the data, methodology and assumptions used in this note are suitable for the purposes of determining draft cost ceilings.
- 3.2 Except where described below the data, methodology and assumptions used to determine the draft cost ceilings in Section 2 of this note are those set out in our note of 12 August 2011: *“Review of the Local Government Pension Scheme, Assessment of cost ceiling and scheme specific proposals, Data, methodology and assumptions”*. This note should be read in conjunction with our note of 12 August 2011.
- 3.3 A summary of the data, methodology and assumptions used to determine the draft cost ceilings shown in Section 2 is set out in paragraphs 3.10 to 3.12.
- 3.4 HM Treasury set out initial proposals for the data, methodology and assumptions to be used to determine cost ceilings in James Richardson’s letter to Jeremy Pocklington of 22 July 2011. Our note of 12 August 2011 reflected HM Treasury’s initial proposals. As set out in James Richardson’s letter to Jeremy Pocklington of 31 August 2011, HM Treasury have revised their initial proposals to reflect discussions with pension scheme officials.
- 3.5 The data, methodology and assumptions used to determine the draft cost ceilings in Section 2 reflect HM Treasury’s current proposals and therefore differ in some respects from those set out in our note of 12 August 2011. Paragraphs 3.6 to 3.9 below describe the data, methodology and assumptions which have been updated since 12 August 2011.

Updates to data, methodology and assumptions in note of 12 August 2011

- 3.6 The following demographic assumptions have been revised in line with more recent scheme experience:
- > withdrawals from active service (including an allowance for re-entrants)
 - > ill-health retirements from active service
 - > distribution of benefit tier on ill-health retirement
 - > death-in-service
 - > proportion of members married or partnered
- 3.7 More information on these assumptions can be found in the draft GAD note of 7 September 2011: *“Analysis of the Scheme’s 2009-11 demographic experience”*.
- 3.8 Appendix C summarises the assumptions used for the draft cost ceilings in Section 2.
- 3.9 Minor changes have been made to the methodology compared to the draft cost ceilings note dated 16 September 2011. The method for allocating the enhanced portion of ill-health benefits and death-in-service pensions has been modified to be in line with that used for draft cost ceilings for other schemes advised by GAD.

Summary of data, methodology and assumptions used in this note

- 3.10 The membership data used to determine the draft cost ceilings in Section 2 is the most recent full extract of membership data used for the actuarial valuation of the LGPS Model Fund (data as at 31 March 2010) and is summarised in Appendix B.
- 3.11 The methodology used to determine the draft cost ceilings in Section 2 is the standard actuarial methodology known as the Projected Unit Method with a one year control period.

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3.12 The assumptions used to determine the draft cost ceilings in Section 2 are:

- > a nominal discount rate of 5% pa
- > earnings increases of 4¼% pa
- > CPI increases of 2% pa
- > improvements in post-retirement life expectancy in line with the ONS 2008-based principal population projections
- > for other demographic assumptions, set as best estimates

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4 Limitations

- 4.1 A number of limitations apply to the draft cost ceilings shown in Section 2. These are described below, broken down into the following categories: purpose of cost ceilings; data, methodology and assumptions; benefits; and third part reliance and liability.

Purpose of cost ceilings

- 4.2 The purpose of the cost ceiling is to allow scheme-specific discussions to deliver pension scheme designs that reflect the differing characteristics of different workforces, within specified cost limits.
- 4.3 The purpose of cost ceilings is not to set 'employer contribution caps' for the scheme going forward. As explained in James Richardson's letter to Jeremy Pocklington of 31 August 2011, I understand that the setting of cost ceilings is a separate process from determining employer contribution caps and that HM Treasury will set out the process for determining employer contribution caps in due course.
- 4.4 The draft cost ceilings do not reflect the different contribution rates that will emerge from future actuarial valuations of the scheme following implementation of Lord Hutton's recommendations. Emerging valuation results may differ from the draft cost ceilings, by up to several percent of pensionable pay or more, for reasons such as:
- > the data, methodology and assumptions used to calculate the draft cost ceilings will differ from those used in future valuations of the scheme
 - > the draft cost ceilings value benefits accruing to employees; they do not include adjustments for any notional surpluses or deficits in respect of past service
- and the above list may not be exhaustive.

Data, methodology and assumptions

- 4.5 The draft cost ceilings are sensitive to the data, methodology and assumptions adopted.
- 4.6 However the purpose of cost ceilings is to provide cost limits against which benefit variations to the 'Reference Scheme' can be compared. The significance of the data, methodology and assumptions used to determine cost ceilings therefore depends on what benefit variations are considered. If no benefit variations were to be proposed for the scheme then the data, methodology and assumptions used to set the scheme's cost ceiling would be irrelevant. For any specific benefit variation put forward some assumptions will be more significant than others. Once benefit variations are put forward sensitivity analyses in respect of certain assumptions may be appropriate.
- 4.7 The data, methodology and assumptions used to determine final cost ceilings will be set by HM Treasury. HM Treasury have not yet finalised the data, methodology and assumptions to be used to determine final cost ceilings and so final cost ceilings may differ from the draft cost ceilings shown in this note.

Benefits

- 4.8 The draft cost ceilings in Section 2 are "gross" cost ceilings which reflect the cost of benefits accruing as a percentage of pensionable pay ignoring income from member contributions. To determine "net" cost ceilings member contribution rates would need to be deducted from these gross cost ceilings.
- 4.9 The 'Reference Scheme' set out by HM Treasury does not specify the full detail of every aspect of the benefit structure. Where there is scope for interpreting what

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benefits the 'Reference Scheme' includes, the draft cost ceilings value benefits which are consistent with the recommendations of Lord Hutton's Independent Public Service Pensions Commission and in line with the scheme's current provisions. In most cases these benefit decisions are of limited materiality for the purpose of determining draft cost ceilings (for example upper age limits on dependent child's benefits on death in deferment). In respect of three more material benefit design questions, the approach taken when determining the draft cost ceilings shown in Section 2 is described below:

- > "a normal pension age linked to SPA (or 65, whichever is higher)" includes; the Government proposals for increasing State Pension Age to 66¹; and the existing legislation to increase State Pension Age to 67 and 68²;
- > early and late retirement terms are assumed to be available on actuarially neutral terms: and
- > benefit enhancements available on upper tier ill health retirement and death in service are assumed to be based on salary in 2015/16.

Third party reliance and liability

- 4.10 This note has been prepared for the DCLG. I am content for the DCLG to release this note to third parties (including HM Treasury, other public service schemes, trades unions and respective scheme actuaries), provided that:
- > it is released in full
 - > the advice is not quoted selectively or partially, and
 - > GAD is identified as the source of the note
- 4.11 Third parties whose interests may differ from those of the DCLG should be encouraged to seek their own actuarial advice where appropriate.
- 4.12 Other than the DCLG, no person or third party is entitled to place any reliance on the contents of this note, except to any extent explicitly stated herein, and 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 note. If any contents of this note are to be used to inform any Government policy decisions GAD should be consulted before those decisions are made.

¹ A sustainable State Pension: when the State Pension age will increase to 66 Cm 7956 November 2010
<http://www.dwp.gov.uk/consultations/2010/spa-66-review.shtml>

² The Pension Act 1995 (1995 Ch. 26) Schedule 4, as amended by the Pension Act 2007 (2007 Ch. 22) section 13

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Appendix A - HM Treasury's reference scheme design

A.1 The draft cost ceilings in Section 2 of this note value the benefits specified in HM Treasury's reference scheme design and which I understand are consistent with the recommendations of Lord Hutton's Independent Public Service Pensions Commission.

A.2 In particular the Reference Scheme design is a Career Average Revalued Earnings (CARE) pension scheme which includes the following features:

- a) a normal pension age linked to State Pension Age (or 65, whichever is higher);
- b) earnings revaluation of past CARE service for active members;
- c) pensions in payment and in deferment indexed by CPI;
- d) no fixed lump sums, optional commutation, with a 12:1 factor for converting pension to lump sum;
- e) ancillary benefits (ill-health, death and survivors benefits) that match the current provisions that are currently available to new members (i.e. a lower tier ill health pensioner receives an unreduced CARE pension; a partner receives same proportion of member's pension as now);
- f) members rejoining after a period of deferment of less than 5 years can link new service with previous service, as if they had always been an active member (so previous accruals are indexed by earnings for that period of deferment); and
- g) members transferring between public service schemes would be treated as having continuous active service (which would include those transferring between schemes who had rejoined public service after a gap of less than 5 years).

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Appendix B - Data

B.1 This appendix contains summary statistics of the data used to produce the results in Section 2 of this note.

B.2 Table B1 contains the number of members in the scheme, their pensionable salaries and their average ages weighted by salaries.

Table B1 - Active members as at 31 March 2010

	Number	Total FTE Salaries (£ billion pa)	Average Age
Males	495,000	14.0	46.2
Females	1,286,000	28.5	44.8
Total	1,781,000	42.5	45.3

B.3 Further details regarding the data can be found in Section 2 of the GAD note of 12 August 2011.

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Appendix C - Assumptions

1. This appendix contains a summary of the demographic assumptions used for the draft cost ceilings contained in this note following the analysis of the scheme's more recent demographic experience.
2. Table C1 details the baseline mortality assumptions. The life expectancies are for members who are aged 65 in 2015 allowing for improvements in the post-retirement life expectancy in line with the ONS 2008-based principal population projections (as instructed by HM Treasury).

Table C1 – Mortality Assumptions and Life Expectancies

	Mortality Table	Age Rating	Life expectancy		
			At age 65 in 2015	At age 65 in 2040	At SPA in 2040
<i>Post Retirement Mortality</i>					
Males	S1NMA	0	23.8	26.0	24.1
Females	S1NFA	0	26.2	28.4	26.5
<i>Ill Health Mortality</i>					
Males	S1IMA	0	20.8	23.3	21.7
Females	S1IFA	0	24.4	27.0	25.2
<i>Surviving Partners' Mortality</i>					
Males	S1NMA	0	23.8	26.0	24.1
Females	S1NFA	0	26.2	28.4	26.5

3. All members are assumed to retire on reaching SPA. No allowance is made for early or late retirements.
4. Table C2 outlines the proposed assumptions for rates of withdrawal from active service.
5. No withdrawals are assumed once a member reaches SPA, with the rates shown below applying before SPA.

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Table C2 – Rates of withdrawal from active service

Age		
	Males	Females
25	0.1220	0.1445
30	0.1044	0.1224
35	0.0894	0.1036
40	0.0765	0.0877
45	0.0655	0.0743
50	0.0560	0.0629
55	0.0480	0.0533
60	0.0410	0.0451
65	0.0351	0.0382
66	0.0341	0.0369
67	0.0330	0.0357

6. There is very limited information available on re-entrants. Our provisional analysis shows that 5% of members who left the scheme re-enter within 5 years of exit. Therefore, the rates shown in Table C2 are after allowing for re-entrants. The impact of this assumption is unlikely to be material except when considering an alternative design which restricts this option of allowing members to re-link new service with previous service if members re-enter within 5 years. Also, there is very little information available on members transferring between public service schemes.
7. Table C3 outlines the proposed assumptions for rates of death in service and ill-health retirement.
8. No ill-health retirements are assumed once a member reaches SPA, with the rates shown below applying before SPA.

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Table C3 – Assumed rates of death-in-service and ill-health retirement

Age	Death-in-service		Ill-health retirement	
	Males	Females	Males	Females
25	0.0001	0.0001	0.0001	0.0001
30	0.0002	0.0001	0.0002	0.0001
35	0.0003	0.0002	0.0003	0.0003
40	0.0005	0.0003	0.0006	0.0005
45	0.0008	0.0005	0.0011	0.0008
50	0.0013	0.0008	0.0022	0.0016
55	0.0021	0.0013	0.0041	0.0029
60	0.0034	0.0020	0.0078	0.0053
65	0.0054	0.0030	0.0148	0.0098
66	0.0060	0.0033	0.0168	0.0110
67	0.0065	0.0036	0.0191	0.0125

9. 75% of ill-health retirees were assumed to retire on tier 1, 10% on tier 2 and 15% on tier 3.
10. All members are assumed to take 65% of the maximum lump sum permitted under HMRC Rules.
11. Table C4 outlines the proposed promotional salary scales.

Table C4 – Assumed salary scale for active members

Age	Salary scale	
	Males	Females
20	100	100
25	102	101
30	111	105
35	117	108
40	121	110
45	124	110
50	127	110
55	127	110
60	127	110
65	127	110
66	127	110
67	127	110
68	127	110

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12. Table C5 outlines the proposed assumptions for family statistics (proportion partnered and the age difference between member and partner).

Table C5 – Assumed family statistics

Age	Proportion partnered		Age difference between member and partner	
	Males	Females	Males	Females
25	0.7660	0.6782	3	-3
30	0.7660	0.6782	3	-3
35	0.7660	0.6782	3	-3
40	0.7660	0.6782	3	-3
45	0.7660	0.6782	3	-3
50	0.7660	0.6782	3	-3
55	0.7660	0.6782	3	-3
60	0.8287	0.7038	3	-3
65	0.8500	0.7053	3	-3
70	0.8580	0.6805	3	-3
75	0.8699	0.6052	3	-3
80	0.8606	0.4033	3	-3
85	0.8433	0.1795	3	-3
90	0.7806	0.1036	3	-3
95	0.6374	0.1099	3	-3
100	0.5423	0.0672	3	-3