

## Actuarial Assumptions for the Assessment of Broad Comparability

### *Introduction*

1. In relation to the pension rights of public sector employees whose functions are transferred to the private sector, the new employer must normally, at the time of the transfer of employment, offer a pension arrangement that provides benefits for future service which are broadly comparable to the benefits in the public service pension scheme. The principles on which broad comparability is assessed are contained in a Statement of Practice prepared by GAD, which forms an integral part of the Fair Deal policy. These include both tests of financial and qualitative value. Further information is available in the Staff Transfers section of GAD's website at [www.gad.gov.uk](http://www.gad.gov.uk).
2. This note sets out the key actuarial assumptions used by GAD in making its assessments of financial value for broad comparability.

### *Methodology*

3. GAD assesses the value of a set of pension benefits by calculating the underlying employer cost, in excess of the contributions paid by employees, of providing scheme benefits which will accrue over the employees' expected remaining working lifetimes. The employer's cost is expressed as a level percentage of pensionable pay which would be payable throughout those working lifetimes. The value is measured gross of any liability for tax. This approach to the assessment of cost is known as the 'Attained Age Method'. This method can be applied at any age and in respect of any member potentially involved in the transfer.
4. The results of the assessment depend on a number of assumptions made. These cover financial and demographic factors for the period until pension payments to the employee and to his or her dependants have ended.
5. The financial assumptions are common to all GAD's assessments. The demographic assumptions depend on the public sector pension scheme involved and the work group from which the employees are being transferred. These assumptions would generally be derived from the experience of the public sector pension scheme against which broad comparability is to be measured, supplemented by information from other large public sector schemes, as necessary.

### *Financial assumptions*

6. In all cases, long-term assumptions are made. These are assumed to remain unchanged from the date of assessment until benefit payments end. Although the public service pension schemes currently provide pension increases which follow directly changes in consumer prices this is not the case for most scheme designs being considered for broad comparability. It is therefore necessary to have assumptions which cover alternative forms of pension increases, a number of which are summarised below based on the Retail Prices Index (RPI) and the Consumer Prices Index (CPI).

7. The tables below summarise the main financial assumptions:

Annual gross return	6.50%
Annual increase in general earnings (before any allowance for increments due to promotion and performance)	4.41%

Index	RPI	CPI
Annual increase in Index	2.90%	2.15%
Annual increase in Index with annual cap of 5%	2.25%	1.85%
Annual increase in Index with annual cap of 2.5%	1.50%	1.25%
Annual increase in Index with overall cap of 5% pa	2.75%	2.05%
Annual increase in Index with overall cap of 2.5% pa	2.00%	1.65%

### ***Demographic assumptions***

8. The demographic assumptions are generally scheme specific, consistent with the last published actuarial valuation for the relevant public sector pension scheme. In the case of mortality, scheme specific baseline mortality assumptions are used with allowance for future improvements based on the latest (2008 based) ONS UK principal population projections. For LGPS, a summary of the main demographic assumptions is attached.

### ***Review***

9. GAD keeps the assumptions used for the assessment of broad comparability under review to ensure objective outcomes. It remains GAD's intention, however, that changes in these assumptions should be infrequent, to maintain consistency.
10. A background note about the differentials between index assumptions with and without caps has also been issued to accompany this note, following the recent consultation exercise. This background note is available from GAD's website at [www.gad.gov.uk](http://www.gad.gov.uk).

**Government Actuary's Department  
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## LGPS – Summary of main demographic assumptions

### Assumed number of exits per 10,000 members in the year following the age stated

Exact Age	Withdrawal		Death in Service		Ill-Health Retirement	
	Males	Females	Males	Females	Males	Females
30	1,122	1,246	3	2	4	4
35	737	867	3	3	8	10
40	560	670	5	4	15	17
45	417	514	8	7	26	27
50	387	415	14	11	56	58
55	356	316	24	18	103	116

### Assumed Rates of Promotional Pay Progression (Index base of 100 at age 20)

Exact Age	Promotional Pay	
	Males	Females
30	111	105
35	117	108
40	121	110
45	124	110
50	127	110
55	127	110
60	127	110

### Post-retirement mortality assumption Number of deaths per 10,000 members

Exact Age	Deaths in retirement	
	Males	Females
60	21	18
65	45	35
70	87	65
75	153	111
80	271	188
85	459	313
90	733	497

### Other demographic assumptions

<b>Post-retirement mortality</b>	Base table of PA92 projected to 2006 in line with the '92 series' improvements as published by the Continuous Mortality Investigation of the UK actuarial profession. Allowance for future improvements to 2048, based on the latest (2008 based) ONS UK principal population projections. (Sample rates shown in table above.)
<b>Age retirements</b>	Members are assumed to retire at the earliest age at which they can retire as of right, with no reduction to benefits accrued prior to 1 April 2008. Members joining on or after 1 October 2006 are assumed to retire at age 65.
<b>Ill health tiers</b>	3 tiers – 10% upper tier, 55% middle tier and 35% lower tier 2 tiers – 10% higher tier and 90% lower tier
<b>Proportions married/registered/partnered</b>	85% for males and 80% for females at retirement (or earlier death)
<b>Age difference</b>	Males are assumed to be 3 years older and females are assumed to be 3 years younger than their spouse, civil partner or partner at all ages
<b>Commutation</b>	Half of the members opt to take the maximum amount permitted