

**Principal Civil
Service Pension
Scheme**

**Review of the
Accruing
Superannuation
Liability Charges
(ASLCs) as at 31
March 2003**

4 May 2004

Prepared for
**Civil Service
Pensions**

Prepared by
Richard Mulcahy

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Summary of results

Accruing Superannuation Liability Charges ("ASLCs")

Based on the method and assumptions outlined in this report, our recommended ASLCs payable with effect from 1 April 2005 and 1 April 2006 (based on the proposed pay bands effective for 2004/05) are given in the table below. For comparison, the existing ASLCs and 2003/04 pay bands are shown in brackets.

Band	Pay range (£pa)	ASLC from 1 April 2005 (as % of pensionable pay)	ASLC from 1 April 2006 (as % of pensionable pay)
Band 1	Less than 17,500 (Less than 17,000)	16.2 (12.0)	17.1
Band 2	17,501 – 36,000 (17,001 – 35,000)	18.6 (13.5)	19.5
Band 3	36,001 – 62,000 (35,001 – 60,500)	22.3 (16.5)	23.2
Band 4	More than 62,000 (More than 60,500)	24.6 (18.5)	25.5
Pre-1987 Prison Officers	Not applicable	25.6 (20.5)	26.5

The average ASLC from 1 April 2006 derived from these recommended rates is 19.4% excluding Pre-1987 Prison Officers (compared with the average rate of 13.3% after allowance for notional surplus calculated at the 1999 review).

A revised method has been used to calculate the above ASLCs when compared with the method used for the 1999 review. Under the new method contribution rates are significantly higher than the current rates. However, continued use of the existing method would also have resulted in significant increases in ASLCs as explained in the report.

In each case, the rates shown are payable in addition to members' own contributions.

Adoption of SCAPE

The recommended ASLC rates shown above have been calculated in a manner which is consistent with our understanding of the SCAPE methodology. Adoption of SCAPE would therefore lead to ASLC rates from 1 April 2005 as shown above. In future years the ASLC rate would be expected to remain relatively stable assuming that the discount rate of 3.5% pa is retained. Any changes in the SCAPE contribution rate would be expected to reflect changes in demographic assumptions.

Principal findings from experience investigation

The main findings of our experience analysis over the period 1 April 1999-31 March 2003 were as follows:

- The mortality of the Scheme's pensioners was lighter than expected (for both normal and ill-health retirements) on the basis of the assumptions adopted by GAD in 1999
- The mortality of active members in service was much lighter than expected, particularly at older ages
- Age retirement patterns of active members were broadly in line with those expected
- Rates of ill-health retirement were significantly lower than expected
- Rates of voluntary withdrawal from active service were generally greater than expected (particularly at older ages), although rates were lower than expected at younger ages for men and women in Bands 3 and 4
- Rates of promotional salary increases were broadly in line with those expected.

In the light of the experience analysis, we have adopted the following changes to the assumptions:

- Allowance for mortality of current and future pensioners has been strengthened
- Allowance for rates of ill-health retirement have been reduced by 25%
- Some minor changes have been made to the assumed rates of voluntary withdrawal from service for certain membership categories.

The effect on the ASLC rate of making these changes is to increase the average rate by around 0.3%pa. A further increase of around 0.2%pa. has occurred as a result of the changes to the financial assumptions since 1999.

Compliance with GN9

This report has been prepared in compliance with Guidance Note 9 (GN9) issued by the Institute and Faculty of Actuaries to the extent that it is applicable to this Scheme.

Introduction

Regular reviews

The last review of the ASLC rates was carried out by GAD as at 31 March 1999. Reviews are carried out every four years and the next review after this is due as at 31 March 2007.

The ASLC mechanism

The background to the ASLC mechanism is as follows:

1. The benefit expenditure of the PCSPS is met as it falls due on a *pay-as-you-go basis* and there is no separate fund of assets to pay the retirement benefits. It was decided in the early 1990s that a system should be introduced to make employers accountable for the pension costs accruing in respect of their employees and to ensure that such costs were recognised when taking decisions on staffing matters. This led to the development of the system of ASLCs, which in principle reflect the level of contributions which would be paid by private sector employers to pension schemes for their employees.
2. The ASLC mechanism assesses the cost of pension rights being accrued by employees at the present time and translates these costs into a charge, expressed as a percentage of pensionable pay, which is then paid by departments and agencies to the Civil Superannuation Vote. The fundamental principles for determining the contribution rates for employers (or ASLC in the PCSPS) are the same as for a private sector scheme.
3. PCSPS contribution income and benefits expenditure is accounted for through the Civil Superannuation Vote. This account meets the cost of all PCSPS expenditure (pensions, lump sums, transfer values etc) allowing for contributions and other income received.
4. The cost to the employer of the accruing pension rights, or the value of those rights to the member, in any salary-related pension scheme varies according to a number of factors. Of prime importance are the age, sex, promotion prospects, rate of turnover and age at retirement of the staff in post.
5. These factors can lead to marked differences in the cost of providing retirement benefits for different groups of staff. As the staff profiles of different departments and agencies can vary quite considerably, it was felt that the ASLC mechanism should allow separate rates to be specified for different groups of civil servants according to their grade as a proxy for collective differences in the key characteristics.

6. The managers of the PCSPS, in consultation with the participating employers therefore decided to implement a system of pay banded ASLC rates. The pre-1/10/87 Prison Officers with reserved rights remained a separate grouping. The other groups were reduced to the four shown in the table on page 1.
7. Each employer of an active member is required to make contributions in respect of the member at such rate and at such intervals as the Minister for the Civil Service may determine after consultation with the Scheme Actuary. This is referred to in part C.3 of the 2002 section of the PCSPS Rules.

**Outline of process
taken to review
ASLCs**

We have started from the framework for the ASLCs adopted in previous years, and have then proceeded as follows:

1. Individual data for each member of the Scheme was collected and entered onto a valuation model. The data is summarised in Appendix 3.
2. Experience data over the period since the last review was also collected to show actual numbers of members dying, withdrawing, etc, at each age.
3. Using the experience data, we made a comparison of actual demographic experience with the expected experience based on the assumptions used at the last review.
4. Based on the comparison above, and general trends in the UK, we derived demographic assumptions which we regarded as appropriate for the current review.
5. Using the financial assumptions under the SCAPE methodology – principally a 3.5% pa real interest rate – and the revised demographic assumptions, we calculated the annual cost of accrual of pension benefits using the individual data collected.
6. The cost of risk benefits (i.e. additional benefits payable in the event of retirement in ill-health or on death in service) was also calculated (based on the revised assumptions and the up to date data) and an addition to the ASLCs was made in respect of these benefits.
7. An addition of 0.15% of pensionable pay has also been made to the ASLCs to allow for expenses associated with the central administration function of the PCSPS. No allowance has been made for the direct expenses of administration carried out by employers participating in the PCSPS (or by APACs acting on their behalf).
8. Separate results were calculated for each pay band (excluding pre 1987 Prison Officers who are a closed group of members accruing special benefits).

9. Separate results were initially calculated for Classic Plus/Premium members and Classic members. The cost to employers of the two new scales of benefits were very similar to those for Classic so we have recommended a single, combined contribution rate covering members of all sections.
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The method used

Existing method

The approach adopted by GAD for previous ASLC reviews had been to derive ASLCs as if the PCSPS were a large and mature funded pension scheme in the private sector.

The first stage was to value the liabilities under the PCSPS using the standard actuarial technique known as the “projected unit method” for all groups of staff (with exception of Prison Officers). The projected unit method was modified to incorporate a three year control period, corresponding to the period expected between successive valuations. This calculation produced a “standard contribution rate”, which was the rate which would be sufficient to finance future benefits under the PCSPS in the absence of any surplus or deficit and assuming that actual experience was in line with assumptions.

In order to mirror the operation of a funded scheme, it was then necessary for GAD to devise a fund of notional assets having regard to the investment strategy likely to be adopted. On the basis of the kind of private sector strategy which would be adopted for a scheme with a liability profile like the PCSPS, it was assumed that the notional fund would be invested 75% in equities and 25% in index-linked gilts. Investments were assumed to perform in line with the returns on the FT-Actuaries All Share Index and the FT-Actuaries Index-Linked Gilt Index, as appropriate.

The value of the notional fund was calculated from time to time allowing for known income and outgo. As at the effective date of the ASLC review, the value of the notional fund was compared with the value of the past service liabilities of all members of the PCSPS and their dependants (called the “standard fund”).

A surplus or deficit of the notional fund over the standard fund was used to modify the standard contribution rate calculated earlier. In particular, some or all of the notional surplus or deficit was assumed to be eliminated over the remaining average working lifetime of staff in post. At the 1999 ASLC review, part of the surplus was used to adjust the contribution rate and the rest was carried forward as a contingency reserve.

We understand that a separate assessment was carried out for pre-1987 Prison Officers using another actuarial method (the “entry age method”), adjusted as described above for notional surplus or deficit.

SCAPE

The Treasury have proposed that Civil Service pension arrangements should be costed under a new standard method known as SCAPE – Superannuation Contributions Adjusted for Past Experience.

SCAPE is a variant of the existing notional fund method, which effectively assumes that investment returns are exactly in line with those expected on a portfolio of assets yielding 3.5% pa in excess of price inflation, rather than being linked to actual market movements.

The liabilities (standard fund) and the standard contribution rate are also assessed using an assumed discount rate of 3.5% in excess of price inflation. As a consequence the notional fund is expected to remain similar to the standard fund because no notional investment profit or loss can emerge.

Some notional surplus or deficit could still emerge if the liability experience is different from that assumed. However, this would be expected to be at a relatively low level and the ASLC rate should remain stable and close to the standard contribution rate provided the net discount rate remains at 3.5%pa.

Method used for this review

We have carried out calculations using both the existing method and the SCAPE methodology.

Our calculations under the SCAPE methodology have been based on the following method and assumptions:

1. The projected unit funding method with a one-year control period has been used for all members except for pre-1987 Prison Officers. This is because it is not clear how much credit should be given to employers for paying contributions in the past in excess of the running cost of accrual.
2. No detailed calculations have been carried out for pre-1987 Prison Officers at this review. Instead their pension contribution rate has been calculated as the rate for Band 2 members plus the differential currently applicable between Band 2 and pre-1987 Prison Officers.
3. The initial notional fund under SCAPE has been assumed to be equal to the value of the past service liabilities on initial adoption of SCAPE (i.e. there is no notional surplus or deficit on initial adoption of SCAPE).

Comments on methodology

The Classic and Classic Plus sections of the PCSPS are effectively closed to new entrants. The populations of these sections will therefore decline over time and the average age of the members would be expected to increase. At the same time, the proportion of the total salary roll made up by Classic and Classic Plus members will tend to reduce over time.

The net effect of this is likely to be that the cost of benefits for Classic and Classic Plus members will increase over time as a percentage of these members' salaries but reduce as a percentage of the overall

pension cost of the PCSPS.

Conversely, the proportion of the overall pension cost in respect of Premium members would be expected to increase gradually over time, as the proportion in respect of Classic and Classic Plus decreases. Overall, we would expect the total pension cost to remain broadly constant (other things being equal), provided that:

- The overall age/sex/salary structure of the PCSPS active membership remains fairly constant; and
- The underlying cost to employers of Premium and Classic Plus benefits is broadly the same as the underlying cost of the Classic benefits, as was originally intended when the new benefits were introduced.

Given the above comments, we believe that it is appropriate to calculate ASLC rates using the projected unit method with a one year control period, because this is the actuarial funding method which is most appropriate to the situation of a stable membership all accruing benefits with a broadly equal cost.

However, we do not believe that the projected unit method is appropriate for the closed group of pre-1987 Prison Officers. Unlike the other sections, this group cannot be regarded as part of a larger, combined section because their benefits are significantly more expensive than those of the Premium, Classic Plus and Classic sections. Because this is a closed group of members, the average age of the members is expected to increase over time which would mean that the ASLC rates would be expected to increase.

In order to produce an ASLC rate which remains relatively stable, and which recognises the additional contributions paid in the past, we have retained the same differential between the Prison Officer and Band 2 ASLC rates in 1999 at this review.

The Assumptions used

Experience investigation

We have analysed the movements data supplied and compared the actual experience of the PCSPS with that which would have been expected if the assumptions underlying the 1999 ASLC review had been borne out in practice. A summary of the 1999 assumptions and the changes proposed for 2003 is attached as Appendix 2.

We produced a separate detailed report on the results of our experience investigation dated 14 November 2003. A summary of the main findings in that report is set out below.

Main findings and changes to assumptions

The main findings of our experience analysis over the period 1 April 1999-31 March 2003 were as follows:

- The mortality of the Scheme's pensioners was lighter than expected (for both normal and ill health retirements)
- The mortality of active members in service was much lighter than expected, particularly at older ages
- Age retirement patterns of active members were broadly in line with those expected
- Rates of ill-health retirement of non-Prison Officers were significantly lower than expected
- Rates of voluntary withdrawal from active service were generally greater than expected (particularly at older ages), although rates were lower than expected at younger ages for men and women in Bands 3 and 4
- Rates of promotional salary increases were broadly in line with those expected.

Further details can be found in our report on the experience dated November 2003.

In the light of this experience and having regard to general trends, we have adopted changes to some of the assumptions. We have taken the view that, overall, the demographic assumptions should represent our "best estimate" of future experience without unnecessary margins of prudence.

The changes are as follows:

- The mortality experience of pensioners who retired in normal health was lighter than expected over the period 1 April 1999 to 31 March 2003 on the basis of the assumptions adopted by GAD in 1999.

The experience suggests that the allowance for mortality should be strengthened. In our view, standard table PMA C2010 rated down by one year would be a more appropriate assumption for current pensioners. This represents a step towards the actual experience over the period without moving the whole way.

Adopting a consistent approach for future pensioners, taking into account future improvements in mortality already projected under the P92 tables, would suggest adopting tables appropriate for calendar year 2026, also rated down by one year.

We have also considered what allowance to make (if any) for the further improvement expected to mortality in future. In particular, we have considered the CMIB's most recently published work in progress in relation to the "cohort effect", which indicated that the rates of longevity improvement for certain groups (or cohorts) of people were better than projected under the P92 tables.

Having regard to this, we have retained the differential age rating adopted by GAD in 1999 for the future pensioners. The tables for the future pensioners would therefore be rated down by two years (rather than by 1 year).

- The allowance for ill-health retirements (except for Prison Officers) has been reduced by applying a scaling factor of 75%. This produces expected rates of ill-health retirement which are closer to those experienced in practice over the period and (we believe) closer to representing a best estimate of the rates expected.
- The allowance for withdrawals from active service has been increased for Male Band 1 members where the numbers of withdrawals was significantly more than expected and decreased for Female Band 2 members where the numbers of withdrawals was significantly less than expected. For convenience, we have applied a scaling factor of 150% to the Band 1 Males and adopted the Band 3 rates for Band 2 females

We have not adopted changes to assumed pre-retirement mortality or withdrawal rates for categories other than those described above. In each case, the existing assumptions were (overall) reasonably close to the actual experience over the period and not significant enough to necessitate a change to the existing assumptions.

We have also taken the opportunity to simplify the assumptions for proportions married, remarriage rates and age differences and to propose explicit assumptions for the incidence of dependants benefits for Premium members.

Financial assumptions

The main financial assumptions for the ASLC calculations are as follows:

- An investment return in excess of price increases of 3.5%p.a.
- Earnings increases (before allowance for promotional increases) of 1.5%p.a. in excess of price inflation
- Price increases of 2.4%p.a.
- A gross rate of investment return of 6.0%p.a.

Other financial assumptions (e.g. rates of revaluation or increases to Guaranteed Minimum Pensions) have been chosen to be consistent with the main assumptions above.

The investment return in excess of price increases (i.e. the net discount rate) is the same as that used for the 2002-2003 Resource Accounts.

The assumed real rate of earnings increases is also consistent with that used for the 2002-03 Resource Accounts and the 1999 ASLC review.

The price increase assumption, and consequently the gross rate of investment return, is 2.5%p.a. lower than was used for the 1999 ASLC review. The impact of this is to increase the average ASLC rate by around 0.2%pa. of pensionable pay.

Results

Recommended ASLCs Based on the method and assumptions outlined in this report, our recommended ASLCs payable with effect from 1 April 2005 and 1 April 2006 are shown in the table below (alongside the pay ranges for 2004/05).

Band	Pay range (£pa)	ASLC from 1 April 2005 (as % of pensionable pay)	ASLC from 1 April 2006 (as % of pensionable pay)
Band 1	Less than 17,500	16.2	17.1
Band 2	17,501 – 36,000	18.6	19.5
Band 3	36,001 – 62,000	22.3	23.2
Band 4	More than 62,000	24.6	25.5
Pre-1987 Prison Officers	Not applicable	25.6	26.5

As has been the case in the past, we recommend that the pay bands should be reviewed each year having regard to the levels of price and earnings inflation.

In each case, the rates shown are payable in addition to the contributions by members.

Results on previous method

We have also carried out calculations of the hypothetical ASLC rates which would have applied if the 1999 method (including allowance for notional fund) had been used for this review.

Based on the data and assumptions used to calculate the recommended ASLC rates above, and allowing for an updated value of the notional fund of assets underlying the 1999 ASLC rates, we have calculated the hypothetical ASLC rates which would have applied.

Our valuation of the notional fund (and our estimate of the adjustment for the deficit in the notional fund) is based on our understanding of the assumptions used in 1999. It is not necessarily the case that these assumptions remain appropriate in 2003.

In particular, the use of a discounted income approach to value the assets and the assumptions used in this approach (particularly the assumed rate of dividend growth) may be less appropriate in 2003.

Subject to these comments, we have calculated the following hypothetical ASLC rates (shown with the pay ranges applicable for 2004/05).

Band	Pay range (£pa)	ASLC (as % of pensionable pay)
Band 1	Less than 17,500	24.6
Band 2	17,501 – 36,000	27.0
Band 3	36,001 – 62,000	30.7
Band 4	More than 62,000	33.0
Pre-1987 Prison Officers	Not applicable	43.5

The rates above (averaging 26.9% excluding Prison Officers) are significantly higher than the standard charges (which would have averaged 19.4% excluding Prison Officers) after allowing for the deficit in the notional fund as at 31 March 2003. We have allowed for the notional deficit assuming that it would have been repaid over the remaining service of current active members.

If the previous method had been used for this ASLC review, there would therefore have been a significant increase in the charges from these calculated in 1999, almost entirely due to the effect of the notional fund moving from surplus to deficit between 1999 and 2003.

The underlying standard charges on the old method (before allowing for the notional fund) are the same as the recommended rates under SCAPE. They are marginally higher than the underlying standard

charges calculated in 1999 due to the impact of changes in membership, use of more accurate data and the changes to the assumptions, but partially offset by the use of a one-year control period rather than a three-year control period.

The rates payable under the old method would have been significantly higher in 2003 than in 1999 after allowing for the impact of the notional fund. In particular, the ASLC rate would have increased by around 6% if allowance for notional surplus was removed but no allowance was made for the deficit, or by around 13.5% if repayment of the notional deficit was allowed for in full.

Analysis of change in ASLCs

We have analysed the change in the ASLC rates from those applicable in 1999 to those recommended now, excluding Prison Officers. The key factors are approximately as follows:

	% salaries
• Average ASLC rate in 1999 (before adjustment for notional surplus)	18.5
• Effect of change in demographic assumptions	0.3
• Effect of change in financial assumptions	0.2
• Reduction in allowance for administrative expenses	(0.1)
• Effect of change in membership and underlying data source	0.8
• Effect of change in methodology (control period)	(0.4)
• Average ASLC rate from 1 April 2005	19.3
• Effect of delaying increase for one year	0.1
• Average ASLC rate from 1 April 2006	19.4

Signed

Richard Mulcahy FIA
 Scheme Actuary
 01372 733863
 richard.mulcahy@hewittbaconwoodrow.com

Appendix 1: Summary of Benefits

	Classic	Premium
Eligibility	Closed to new members	All permanent staff, including part time
Normal Retirement Age (NRA)	60	60
Pensionable Earnings (PE)	Basic Pay plus allowance deemed to be pensionable	Basic Pay plus allowance deemed to be pensionable
Final Pensionable Earnings (FPE)	Best 12 months Pensionable Earnings in final 3 years	Last 12 months Pensionable Earnings (will consider earnings over last 13 years, plus price indexation, if better result)
Relationship to S2P/SERPS	Contracted-Out	Contracted-Out
Members' Contributions	1.5% of Pensionable Earnings	3.5% of Pensionable Earnings
Benefits on retirement		
Normal retirement		
- Pension	$1/80 \times \text{FPE}$ per year of service	$1/60 \times \text{FPE}$ per year of service
- Lump Sum	$3/80 \times \text{FPE}$ per year of service	Commutation - £1 pension for £12 lump sum
Voluntary early retirement	Accrued pension reduced for early retirement	Accrued pension reduced for early retirement
Ill-health retirement	Normal retirement benefits based on enhanced service	Normal retirement benefits based on service enhanced to NRA for those who cannot work again. Immediate payment of accrued pension (with enhancement for those under 10 years service) for those who can not continue at their current level.
Benefits on Death in Service		
- Lump sum	2 x PE	3 x FPE
- Spouse pension	50% of Ill-Health Retirement pension	$1/160 \times \text{FPE} \times \text{enhanced service}$

<p>Benefits on Death in Deferment</p> <ul style="list-style-type: none"> - Lump sum - Spouse pension 	<p>Cash member would have received at NRA including increases since date of leaving</p> <p>50% of member's pension</p>	<p>Lesser of: a) 5 x deferred pension</p> <p>b) 2 * FPE – any lump sum derived from AVCs</p> <p>37.5% of member's Pension</p>
<p>Benefits on Death After Retirement</p> <ul style="list-style-type: none"> - Lump sum - Spouse pension 	<p>5 years pension less pension and lump sum already received</p> <p>50% of member's pension</p>	<p>5 years pension less pension already received</p> <p>37.5% of member's pension before commutation</p>
<p>Benefits on Resignation</p> <ul style="list-style-type: none"> - Less than 2 years service - 2 or more years service 	<p>Transfer value payment and/or refund of member's contributions (if unmarried) less cost of buying back into S2P</p> <p>Benefits increased in deferment, payable from NRA</p>	<p>Transfer value payment or refund of member's contributions less cost of buying back into S2P</p> <p>Benefits increased in deferment, payable from NRA</p>
<p>Increase to Pensions</p> <ul style="list-style-type: none"> - In Payment - In Deferment 	<p>In line with increases in RPI, on excess over GMP</p> <p>Total pension increased in line with RPI</p>	<p>In line with increases in RPI, on excess over GMP</p> <p>Total pension increased in line with RPI</p>
<p>Service enhancement on Ill-health Retirement or death in service</p>	<p>Actual service</p> <p>2 to 5 years - No enhancement</p> <p>5 to 10 years - Service doubled</p> <p>10 to 13 1/3 years - Service enhanced to 20 years</p> <p>More than 13 1/3 years - Extra 6 2/3 years service</p>	<p>Minimum Service of: 2 times reckonable service (excluding added years);</p> <p>10 years;</p> <p>projected reckonable service to NPA</p>

Note:

- Benefits for members of the Classic Plus Section are based on the provision of the Classic Section for service before 1.10.02 and on the provisions of the Premium Section for service after 30.09.02.

Appendix 2: Demographic assumptions

Demographic assumptions

A summary of the assumptions used in the 1999 ASLC review is set out below.

	Category	Table	Adjustment
Mortality in retirement (future pensioners)	Age retirement	PMA/PFA 92 2022	Rated down 1 year
	Ill-health retirement	PMA/PFA 92 2022	Rated up 2 years for the 4 pay bands Rated down 2 years for the prison officers Addition of 0.0110 for females and 0.0160 for males
	Dependants	PMA/PFA 92 2022	Rated down 1 year for females
Mortality in retirement (Current pensioners)	Age retirement	PMA/PFA 92 2006	No adjustment
	Ill-health retirement	PMA/PFA 92 2006	Rated up 3 years Addition of 0.0110 for females and 0.0160 for males
	Dependants	PMA/PFA 92 2006	Rated up 1 year for males
Mortality before retirement	Allowance was made for death in service and death in deferment based on an analysis of experience.		
Retirements in normal health (active members)	Allowance was made for retirement between ages 60 and 65 (except for pre-1987 prison officers, who are assumed to retire between ages 55 and 60)		
Retirements in normal health (deferred pensioners)	Retirement was assumed to occur at the earliest age at which unreduced benefits may be drawn.		
Retirements in ill health	Allowance was made for retirements before normal retirement age on grounds of ill health based on an analysis of experience.		
Withdrawals	Allowance was made for withdrawals based on an analysis of experience.		
Family details	Allowance was made for a proportion of deaths (varying by age) to give rise to spouses' or dependants' benefits, with the dependant's age derived from that of the member.		
	Allowance was made for a proportion of spouses to remarry (and their benefits to cease).		

Appendix 2: Changes to demographic assumptions in 2003

Changes proposed

The assumptions summarised on the previous page have been amended for the current ASLC review following analysis of the experience of the Scheme since 1999. The items which have been revised are as follows:

	Category	Table	Adjustment
Mortality in retirement (future pensioners)	Age retirement	PMA/PFA 92 2026	Rated down 2 years
	Ill-health retirement	PMA/PFA 92 2026	Rated up 1 year for the 4 pay bands Rated down 3 years for the prison officers Addition of 0.0110 for females and 0.0160 for males
	Dependants	PMA/PFA 92 2026	Rated down 2 years for females and 1 year for males

	Category	Table	Adjustment
Mortality in retirement (Current pensioners)	Age retirement	PMA/PFA 92 2010	Rated down 1 year
	Ill-health retirement	PMA/PFA 92 2010	Rated up 2 years Addition of 0.0110 for females and 0.0160 for males
	Dependants	PMA/PFA 92 2010	Rated down 1 year for females

Retirements in ill health

A scaling factor of 75% has been applied to the existing rates of ill-health retirement adopted for GAD for all members except pre-1987 prison officers.

Withdrawals

The allowance for withdrawals has been adjusted in the following respects:

- A scaling factor of 150% has been applied to the existing rates of withdrawal for Band 1 males
- The existing rates of withdrawal applicable for Band 3 females have been applied to Band 2 females.

Family details

A simplified approach has been adopted which makes implicit allowance for remarriage of spouses in the Classic Section.

In particular, we have assumed that:

- 65% of men and 50% of women in the Classic Section; and
- 90% of men and 75% of women in the Premium Section

will be married (or have dependants) at age 60. Implicit allowance has been made for re-marriage of spouses in the Classic Section in the proportion married assumption.

Consistent assumptions have been adopted at other ages and for Classic Plus members.

A man is assumed to be four years older than his wife (or other dependant).

Appendix 3: Summary of data

Data supplied

We were supplied with separate files of information relating to:

- Membership movements over the period 1 April 1999-31 March 2003 (“experience data”)
- Membership details of all current active members of the PCSPS as at 31 March 2003.

The experience data was used to derive the assumptions proposed for the current ASLC review. These assumptions were then used together with the active data as at 31 March 2003 to calculate the revised ASLC rates.

Data supplied for ASLC calculations

Separate databases of individual membership information in respect of current active members were supplied by each of the APACs responsible for the administration of the PCSPS (except for the Foreign and Commonwealth Office which makes up less than 5% of the total active membership).

The aggregated information provided was as follows:

- The Foreign and Commonwealth Office provided spreadsheets containing details of numbers of active members (split by age, section and sex) and total salaries (split by salary band, section and sex). This information was used to derive an assumed database of information in the same format as that supplied by other APACs.
- The APACs also provided information on the number of leavers with preserved or non-preserved awards who had not been processed before the date of compiling the databases of active members.

Experience data

We were supplied with experience data in respect of current and former active members of the PCSPS in a format similar to that described above. A database was also supplied by Capita containing movements data in respect of existing pensioners. No data was available in respect of dependants and deferred pensioners.

Comments on quality of data provided

Individual (rather than aggregated or sampled) membership data for active members was provided for the first time for this ASLC review. The overall quality of the data appeared to be very good, reflecting the considerable amount of data cleaning work carried out by the APACs as part of the 2002 Options exercise.

However, our analysis of the data did highlight a few problems. In particular, for all APACs, there were a number of members’ records for which salary and/or service figures were either blank or outside the

normal ranges we would have expected. For most APACs, the frequency of blank or extreme records was very low (less than 1%) and we were able to make suitable assumptions to allow for the missing information. For one APAC, the frequency of blanks was somewhat higher (more than 5%) and the problem was referred to the Penserver team and the APAC for further investigation. As a result of this, some amendments were made to the data to allow for errors.

Despite the amendments made to the data originally supplied, we believe that the data we have used for our calculations is sufficiently robust to produce reliable figures for the purposes of this ASLC review.

Similarly, we are comfortable with the quality of the data supplied for the analysis of experience which has been used (in part) to derive the new assumptions. The absence of movements data for deferred pensioners and dependants is not expected to cause any distortions to our analysis.

A summary of the data we have used for our ASLC calculations is set out below.

Summary of Data used for ASLC Calculations

Active members – Classic

Salary Band	Number of Members		Average Ages		Average Service (Years)		Average Salary (\$p.a.)	
	Male	Female	Male	Female	Male	Female	Male	Female
1	88,858	163,300	40.42	38.92	8.95	8.67	13,150	13,555
2	130,486	119,060	42.89	41.18	16.36	14.68	23,804	22,006
3	23,422	9,539	47.96	43.82	22.20	16.10	44,158	43,190
4	2,925	893	51.56	48.86	24.14	19.59	76,290	73,879
Total	245,691	292,792	42.58	40.03	14.33	11.39	22,516	18,141
Prison Officers	6,975	428	49.12	45.21	21.78	19.96	26,758	27,265
GRAND TOTAL	252,666	293,220	42.76	40.04	14.54	11.40	22,633	18,154

Active members – Classic Plus

Salary Band	Number of Members		Average Ages		Average Service (Years)		Average Salary (\$p.a.)	
	Male	Female	Male	Female	Male	Female	Male	Female
1	3,156	5,258	39.02	36.03	7.12	6.65	13,384	12,912
2	5,743	5,163	41.59	37.79	13.65	10.82	24,371	22,935
3	1,715	801	46.27	41.01	17.90	12.32	43,931	43,063
4	251	69	50.77	46.45	22.04	16.42	72,716	71,795
Total	10,865	11,291	41.79	37.25	12.62	9.02	25,384	19,994
Prison Officers	8	-	51.13	-	33.36	-	31,476	-
GRAND TOTAL	10,873	11,291	41.80	37.25	12.63	9.02	25,388	19,994

Active members – Premium

Salary Band	Number of Members		Average Ages		Average Service (Years)		Average Salary (\$p.a.)	
	Male	Female	Male	Female	Male	Female	Male	Female
1	15,107	19,778	34.63	32.96	2.25	2.21	12,396	12,298
2	12,740	8,604	39.92	35.89	10.62	6.97	23,728	22,526
3	3,238	1,159	46.67	41.29	16.90	9.14	43,956	43,584
4	423	143	49.91	47.32	14.90	9.67	80,162	74,195
Total	31,508	29,684	38.21	34.20	7.31	3.90	21,131	16,782
Prison Officers	21	3	52.62	51.33	16.21	7.01	22,253	23,884
GRAND TOTAL	31,529	29,687	38.22	34.21	7.32	3.90	21,132	16,783

Active members – all actives

Salary Band	Number of Members		Average Ages		Average Service (Years)		Average Salary (\$p.a.)	
	Male	Female	Male	Female	Male	Female	Male	Female
1	107,121	188,336	39.56	38.21	7.95	7.94	13,051	13,405
2	148,969	132,827	42.59	40.71	15.76	14.03	23,819	22,076
3	28,375	11,499	47.71	43.37	21.34	15.14	44,121	43,221
4	3,599	1,105	51.31	48.51	22.91	18.11	76,496	73,790
Total	288,064	333,767	42.08	39.42	13.50	10.64	22,473	18,083
Prison Officers	7,004	431	49.13	45.25	21.78	19.87	26,750	27,241
GRAND TOTAL	295,068	334,198	42.24	39.42	13.69	10.65	22,574	18,095

Note: the above tables include any deferred pensioners recorded as active members in the data

Pensioners – age retirements

Section	Number of Members			Average Ages			Average Pension (£p.a.)		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Classic	163,707	125,429	289,136	73.97	74.58	74.24	6,813	3,071	5,190
Classic Plus	24	-	24	60.63	-	60.63	14,200	-	14,200
Premium	28	1	29	60.96	60.00	60.93	10,145	2,696	9,889
GRAND TOTAL	163,759	125,430	289,189	73.97	74.58	74.23	6,815	3,071	5,191

Pensioners – early retirement

Section	Number of Members			Average Ages			Average Pension (£p.a.)		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Classic	33,575	18,661	52,236	66.17	66.41	66.25	11,097	5,108	8,958
Classic Plus	1	2	3	56.00	57.50	57.00	9,252	19,902	16,352
Premium	1	-	1	58.00	-	58.00	33,259	-	33,259
GRAND TOTAL	33,577	18,663	52,240	66.17	66.41	66.25	11,098	5,109	8,958

Pensioners – ill health retirement

Section	Number of Members			Average Ages			Average Pension (£p.a.)		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Classic	37,245	32,615	69,860	62.36	61.77	62.09	5,586	3,770	4,738
Classic Plus	-	2	2	-	56.00	56.00	-	2,377	2,377
Premium	2	-	2	36.00	-	36.00	393	-	393
GRAND TOTAL	37,247	32,617	69,864	62.36	61.77	62.08	5,586	3,770	4,738

Pensioners – all pensioners

Section	Number of Members			Average Ages			Average Pension (£p.a.)		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Classic	234,527	176,705	411,232	71.01	71.35	71.16	7,232	3,415	5,592
Classic Plus	25	4	29	60.44	56.75	59.93	14,002	11,139	13,607
Premium	31	1	32	59.26	60.00	59.28	10,262	2,696	10,025
GRAND TOTAL	234,583	176,710	411,293	71.01	71.35	71.16	7,233	3,416	5,593

Note: pensioner members of by analogy schemes, and overseas pensioners are excluded from the above tables

Dependants (including children)

Section	Number of Members			Average Ages			Average Pension (£p.a.)		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Classic	7,663	122,053	129,716	52.00	76.37	74.93	1,188	2,601	2,517
Classic Plus	8	10	18	32.75	34.10	33.50	2,378	5,225	3,960
Premium	4	2	6	30.50	34.00	31.67	2,438	7,466	4,114
GRAND TOTAL	7,675	122,065	129,740	51.96	76.37	74.93	1,190	2,601	2,517

Deferred pensioners

Section	Number of Members			Average Ages			Average Pension (£p.a.)		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Classic	134,917	153,573	288,490	45.95	44.92	45.40	3,246	1,791	2,471
Classic Plus	23	23	46	39.83	37.52	38.67	2,269	2,449	2,359
Premium	42	29	71	42.45	35.00	39.41	7,285	2,100	5,167
GRAND TOTAL	134,982	153,625	288,607	45.95	44.92	45.40	3,247	1,791	2,472

Note: deferred pensioner members of by analogy schemes and deferreds recorded as active in the data are excluded from the above table