

# **REPORT ON THE ACTUARIAL INVESTIGATION OF THE:**

- STATE AUTHORITIES SUPERANNUATION  
SCHEME**
- STATE AUTHORITIES NON-  
CONTRIBUTORY SUPERANNUATION  
SCHEME**
- STATE SUPERANNUATION SCHEME**
- POLICE SUPERANNUATION SCHEME**

**AS AT 30 JUNE 2012**

**VOLUME II**

**SAS TRUSTEE CORPORATION**

4 DECEMBER 2012

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# 1

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## Benefits and Contributions at 30 June 2012

### 1.1. SASS

#### 1.1.1. Definitions

"Accrued benefit points" at a contributor's exit date means the number of benefit points contributed to that date, or the contributor's maximum benefit points at that date if less.

"Accumulation of contributions" means, in respect of a contributor, the amount of contributions made to the Fund by that contributor plus interest less death and disability charges (if covered for additional benefits) less tax (where contributions are made on a salary sacrifice basis) less administration costs.

"Additional benefit" means the additional amount of 4% times final salary (or final average salary if higher) times prospective benefit points. The additional benefit is payable on death or total and permanent disability for those contributors who are covered. Contributors who are covered pay a levy (deducted from their accumulation of contributions) for one quarter of these additional benefits.

"Benefit points" - a contributor accrues 1/12th of a benefit point for each one per cent of salary contributed for a whole month. The maximum number of benefit points a contributor may accrue is the lesser of 180 or half the number of months the contributor is (or is deemed to be) a contributor to the Scheme.

"Continuous contributory service", in relation to a contributor, means the period beginning with the contributor's entry date and ending with the contributor's exit date.

"Early retirement age" means the age of 58 years or, if some lower age (but not lower than the age of 55) is prescribed, that lower age.

"Employers under Part 1" - The Crown and other employers. See Section 6.

"Employers under Part 3" - Hospitals and Other Bodies. See Section 6.

"Final average salary" in respect of a contributor means the average of full-time salaries on the contributor's exit date and on 31 December in each of the 2 years immediately preceding that in which he ceased to be an employee.

"Final salary" means the annual rate of full-time salary payable to a contributor immediately before exit.

"Prospective benefit points" means the future benefit points accruing to a contributor if he were to continue to contribute until early retirement age 58 (or earlier prescribed age) at the average rate at which he has contributed since

becoming a contributor to a points-based scheme, limited to the points required to reach the contributor's maximum benefit points at early retirement age.

"Salary" means for contributions payable in a superannuation year commencing on 1 April the annual rate of salary paid to a contributor at the previous 31 December (or entry if later).

"Taxable date" means the date on which the Trustee first became liable to pay income tax under a Commonwealth taxation law in respect of employers' contributions to the Fund, which was 1 July 1988.

## **1.1.2. Contributions**

### **1.1.2.1. Contributions by contributors**

- contributors may elect to contribute at 1, 2, 3, 4, 5, 6, 7, 8 or 9 per cent of salary;
- STC may approve a contribution rate of 0% in some circumstances, eg financial hardship.
- the elected rate of contribution may be altered each superannuation year (commencing 1 April).
- contributions are payable until the end of the month prior to exit or until age 70.

### **1.1.2.2. Contributions by employers**

- Part 1 employers - where the contributor is an employee of an employer under Part 1, the employer pays a multiple of employee contribution as determined by STC with the concurrence of the Treasurer.
- Part 3 employers - where a contributor is an employee of an employer under Part 3, the employer shall contribute 1.0 (or such higher factor prescribed with the concurrence of the Treasurer) times the contributor's contributions

## **1.1.3. Benefits**

### **1.1.3.1. Retirement on or after early retirement age**

The benefit payable to a contributor on exit on or after early retirement age is:

- a lump sum equal to the accumulation of the former contributor's contributions; plus
- a lump sum equal to  $F \times A \times 0.025 \times (1 - 0.15 \times B/C)$ ;

Where	F	Is the contributor's final average salary;
	A	is the contributor's accrued benefit points;
	B	represents the period in days of continuous contributory service that began on the taxable date;
		represents the period in days of continuous contributory service for the contributor;
	0.15	represents the tax rate of the Fund on employers' contributions.

### 1.1.3.2. Death

The benefit payable on death of the contributor after early retirement age is the benefit which would have become payable had he or she retired on the date of his death, but is not subject to reduction for tax, ie the factor B/C is zero.

The benefit payable on death of the contributor before attaining early retirement age is:

- a lump sum equal to the accumulation of the former contributor's contributions; plus
- a lump sum equal to  $S \times A \times 0.025$ ;

Where	S	is the former contributor's final salary, or final average salary if this is higher;
	A	is the contributor's accrued benefit points;

plus

- where the contributor was covered for additional benefits, the amount of the additional benefit (ie 4% times S times prospective benefit points).

### 1.1.3.3. Total and permanent invalidity before early retirement age

The benefit payable to a former contributor who retires before attaining early retirement age due to total and permanent invalidity is:

- a lump sum equal to the accumulation of the contributor's contributions; plus
- a lump sum equal to  $S \times A \times 0.025 \times (1 - 0.15 \times B/C)$ ;

Where	S	is the contributor's final salary or final average salary if this is higher;
	A	is the contributor's accrued benefit points;

- B represents the period in days of continuous contributory service that began on the taxable date;
- C represents the period in days of continuous contributory service for the contributor;
- 0.15 represents the tax rate of the Fund on employers' contributions.

plus

- where a contributor is covered for additional benefits, the amount of the additional benefit (ie 4% times S times prospective benefit points).

#### 1.1.3.4. Partial and permanent invalidity

The benefit payable to a contributor who retires before attaining the early retirement age due to partial and permanent invalidity is:

- a lump sum equal to the accumulation of the contributor's contributions; plus
- a lump sum equal to  $S \times A \times 0.025 \times (1 - 0.15 \times B/C)$ ;

- Where
- S is the contributor's final salary or final average salary if this is higher;
- A is the contributor's accrued benefit points;
- B represents the period in days of continuous contributory service that began on the taxable date;
- C represents the period in days of continuous contributory service for the contributor;

#### 1.1.3.5. Retrenchment

The benefit payable to a contributor who is retrenched before attaining the early retirement age is the same as for partial and permanent invalidity.

#### 1.1.3.6. Resignation, dismissal or discharge after 10 years' membership

The benefit payable to a contributor who resigns or is dismissed or discharged before attaining the early retirement age and who has been a member for 10 years or more is:

- a lump sum equal to the accumulation of the contributor's contributions; plus
- a lump sum equal to  $(V - 0.15 \times T) \times R \times A/Y \times 0.025$ ;

- Where
- V is the number of years of continuous contributory service (including fractional parts of a year);
- T is the number of years of continuous contributory service that commenced on the taxable date or entry date

(whichever occurred later) including fractional parts of a year;

- R is the contributor's accumulated contributions;  
 A is the contributor's accrued benefit points;  
 Y is the total benefit points the member would have accrued at exit had no maximum applied.

That part of the benefit above the maximum non-deferred amount calculated at 1 July 1999 must be taken in deferred form.

### 1.1.3.7. On attainment of age 65 or 70

On attainment of age 65, or at an age between 65 and 70 as elected by the contributor (providing the contributor continues to work at least 10 hours per week), the contributor must be paid the retirement benefit, but may elect to preserve the benefit. After attainment of age 70 no further benefits may accrue and no further contributions are payable.

### 1.1.3.8. Deferred benefits

A contributor who becomes entitled to a benefit on retrenchment, resignation, dismissal or discharge, on early retirement or attainment of age 65 (or 65 to 70 if relevant) may elect instead for a deferred benefit unless the benefit is less than \$500 or the contributor elects to take a cash benefit. The deferred benefit is payable on:

- application on attainment of early retirement age;
- death;
- total and permanent invalidity before early retirement age;
- retirement from the workforce (or effective retirement after 65 or 70 defined as working less than 10 or 30 hours a week respectively);
- on application if the benefit was deferred after early retirement age.

The deferred benefit is:

- a lump sum equal to the accumulated contributor's contributions, plus interest from the date of exit to the date of payment; plus
- a lump sum equal to  $F \times A \times 0.025 \times D \times (1 - 0.15 \times B/C)$  plus interest from the date of exit to the date of payment.

Where F is the contributor's final average salary;  
 A is the contributor's accrued benefit points;  
 D equals an actuarial discount factor (currently 0.99 for ages at exit under early retirement age, otherwise 1.0) raised to the power of (early retirement age less age at exit



- including fractions of a year);
- B represents the period in days of continuous contributory service that began on the taxable date;
- C represents the period in days of continuous contributory service for the contributor;

A retrenched member may elect to preserve, instead of the above, the amount of the cash retrenchment benefit.

A member may elect instead to receive a cash benefit (limited to the maximum amount to which he would have been entitled at exit) plus interest to the date of payment at an earlier date than the deferred benefit (which would then be appropriately reduced to reflect the cash payment).

### 1.1.3.9. Provisions for part-time contributors

- i. Benefits are calculated on the equivalent full-time salary.
- ii. Accrued benefit points for each month are reduced by salary ratio (actual salary divided by salary if full-time).
- iii. The maximum number of points attainable is scaled down by salary ratio for each month.
- iv. Prospective benefit points are scaled down by salary ratio at commencement of month in which exit occurs.
- v. Contributions are reduced by applying the salary ratio.

### 1.1.3.10. Superannuation Guarantee

The employer-financed benefit on exit for any reason, together with the employer-financed benefit payable for the State Authorities Non-Contributory Superannuation (SANCS) Fund is subject to a minimum benefit as specified in the current Benefit Certificate so that benefits paid by these schemes can be used to meet employers' obligations under the Superannuation Guarantee (Administration) Act. The shortfall, if any, is to be provided from the SANCS Fund.

The MRB (Minimum Requisite Benefit) specified in the Benefit Certificate adopted in the valuation in respect of SASS members is described below. This is the amount below which the combined SASS and SANCS benefits payable may not fall. The MRB is that set out in the Benefit Certificate valid from 1 July 2008, extended in a consistent manner to cover future periods.

- MRB = the accumulation of the former contributor's contributions (including salary sacrifice contributions net of tax, and any co-contributions); plus
- a pre 1 July 1992 component; plus
  - FASEX x 1.0524 x DF x SGLM1; plus

- $FASOTE \times 1.08 \times DF \times SGLM2$

Where **FASEX** is the contributor's final average salary at exit

**FASOTE** is the annual average of the Employee's Ordinary Time Earnings as defined in sub-section 6(1) of the Superannuation Guarantee (Administration) Act 1992, earned over the period commencing on the 1 January in the year two years before the date of determination and ending on the date of determination.

**DF** is .7 for age at exit < 45  
 1 - .015 x (65 - age at exit) for 45 < age at exit < 65  
 1 for age at exit >= 65.

**SGLM1** is the total accrued Superannuation Guarantee Levy multiple at 30 June 2008 comprising the sum over the contributor's service to 30 June 2008 of the multiple applying at a particular period times the number of years service during that period where the multiples are as follows:

Multiple accruing per year of service	Period over which given multiple applies
.04	01/07/92 to 31/12/92
.05	01/01/93 to 30/06/95
.06	01/07/95 to 30/06/98
.07	01/07/98 to 30/06/00
.08	01/07/00 to 30/06/02
.09	after 01/07/02

**SGLM1** is the total accrued Superannuation Guarantee Levy multiple accrued post 1 July 2008 comprising the contributor's service from 1 July 2008 to exit date times the multiple applying at that period.

The pre 1 July 1992 component is the total of employer-financed cash benefits which would have been paid had the contributor resigned or retired on 1 July 1992 (except that for final salary or final average salary the amount used is the fund salary at 1 July 1992, ie. salary at 31 December 1991) updated to the date of MRB calculation by the ratio of **FASEX** to salary at 31 December 1991 or later entry.

The MRB is reduced by the member's surcharge liability (if any), any adjustment for Family Law payments (if any), and adjusted for net MRB transfer payments (if any).

### 1.1.3.11. Transitional arrangements – Recognition of Previous Scheme membership

#### A. Public Authorities Superannuation Scheme (PASS)

- i. The additional benefit and associated levy automatically applies to a contributor who was qualified for the additional benefit under the PASS;
- ii. The contributor's account was to be credited at 1 April 1988 with the corresponding account balance under the PASS as at 31 March 1988;
- iii. Initial accrued benefit points will be the number of accrued benefit points under PASS as at 31 March 1988 multiplied by 0.72;
- iv. The contributor's entry date is deemed to be the date service commenced or was deemed to have commenced under PASS;
- v. Prospective benefit points will be subject to a minimum of 0.7 times the number of prospective benefit points that would have been calculated if early retirement age were 60;
- vi. Benefits are reduced where broken service has been recognised in the case of a contributor who had employment involuntarily terminated under Clause 5 of the New South Wales Retirement Benefits Regulation 1983;

#### B. Local Government Pension Fund (LGPF)

- i. Transitional arrangements for ex-LGPF members are as for ex-PASS members with some additional special provisions.
- ii. (An additional lump sum is payable to qualified contributors on death or total and permanent disablement before age 60 equal to

$$\frac{S}{100} \times (P-R)$$

- Where
- |   |   |
|---|---|
| S | is final salary;                          |
| P | is prospective benefit points to age 65;  |
| R | is prospective benefit points under SASS. |

- iii. Minimum lump sum benefits on death or total and permanent disablement apply to certain contributors.
- iv. Employer-financed benefits on retirement after age 60 may be taken completely or in part pension form as for LGPF except that benefit points provide .2223% pension, discounted for retirement before age 65 (special additional pension points are provided to ensure pensions always exceed LGPF pensions), as follows:

$$\text{Pension} = S \times C \times .002223 \times (1 - .025T)$$

Where	S	is final salary;
	C	is the number of benefit points converted to pension
	T	is the number of whole years that the member's exit date precedes his 65 <sup>th</sup> birthday.

These benefits are subject to a reduction to account for contribution tax liability to the Fund as follows:

$$\text{Reduction} = A \times B/C \times Q \times 0.15 \times \text{Pension Benefit}$$

Where	A	represents the contributor's accrued benefit points;
	B	represents the period in days of continuous contributory service that began on the taxable date;
	C	represents the period in days of continuous contributory service for the contributor;
	Q	represents the proportion of accrued benefit points to be converted to a pension.

There are also pension options on death and disability.

- v. Pensions in respect of children are payable as for LGPF. The rate as at 30 June 2012 was \$113.08 per fortnight where a parent survives or \$268.63 per fortnight where no parent survives. The total pension to dependants is not to exceed that which would have been payable on total and permanent disablement.

### **C. NSW Retirement Fund (NRF)**

- i. Transitional arrangements for ex-NRF members are as for ex-PASS members with some additional special provisions.
- ii. Contributions may be made at rates specified by regulation such that a certain benefit point accrual is attained (except that contributions shall not exceed 9% of salary).
- iii. Points accrual for each 1% of salary contributed after 1 April 1988 and before attainment of age 59 11/12 by contributors born in May 1926 or later may be obtained from Schedule 2 to the Regulation "State Authorities Superannuation (Transitional Provisions) Regulation 1988" (subject to a maximum annual accrual of 9 points), or is calculated as  $(L \times 1.8 + 0.7)/2.5$  if greater.

Where  $L$  is 1/9 of the maximum points the contributor could have acquired in the year commencing 1 April 1987

To accrue each benefit point the percentage of salary to be contributed by contributors born in April 1926 or earlier is the smaller of (percentage contribution rate at 31 March 1988)/(adjusted points limit), subject to a maximum annual accrual of 9 points or the adjusted points limit if greater, and 1%. The adjusted points limit is

$$\frac{(N \times 1.8 + 0.7)}{2.5}$$

Where  $N$  is the number of points accrued in the year commencing 1 April 1987.

(If a contributor is contributing 0% on 31 March 1988 they shall be deemed to be contributing 1%).

- iv. Employer-financed benefits and additional benefits may be taken in pension form as for NRF (ie as for LGPF with additional option to take a non-reversionary pension with higher value, the factor being .2778%).
- v. Minimum benefits are provided on death or invalidity before early retirement age.

**D. State Public Service Superannuation Scheme (SPSSS)**  
(transferred at 1 April 1989)

- i. The additional benefit and associated levy will automatically apply to a contributor who was qualified for the supplementary benefit under the SPSSS.
- ii. The contributor's account will be credited at 1 April 1989 with the corresponding account balance under the SPSSS as at 31 March 1989.
- iii. Initial accrued benefit points will be the number of accrued benefit points under SPSSS as at 31 March 1989.
- iv. The contributor's entry date will be deemed to be the date service commenced or was deemed to have commenced under SPSSS.
- v. The initial contributed points figure will be the corresponding figure under SPSSS.
- vi. The contributor's early retirement age is prescribed as age 55.
- vii. The maximum benefit points applying to a transferred contributor are:

age 55 or less	162
age 55 to 58	162 plus 6 per year after age 55
age 58 or more	180

- viii The employer financed benefits are to be calculated using a multiple of 0.03 except for benefits on resignation, dismissal or discharge before early retirement where a multiple of 0.025 is used.

#### **E. Transport Officers' Gratuity Scheme (TOGS)**

(transferred at 1 April 1989)

- i. Initial accrued benefit points will be calculated as follows:

$$P = Y \times 2.3$$

Where Y represents the number of completed years of service (with the fractional part of any year calculated on the basis of completed calendar months) which would have been taken into account under TOGS before 1 April 1989.

- ii. For each year of service after 1 April 1989 both contributors and non-contributors shall accrue 2.3 benefit points per annum in addition to any other accrual of benefit points under standard SASS provisions.
- iii. Transferred transport officers may elect to contribute at 0, 1, 2, 3, 4, 5, 6 or 6.7 per cent of salary.

Officers who elect to contribute at 1% or more on transfer cannot subsequently elect to become non-contributors.

- iv. The contributor's entry date will be deemed to be the date service commenced or was deemed to have commenced under TOGS.
- v. The points calculated under (i) and (ii) above will only be applied in the calculation of benefits paid on retirement, death, invalidity or retrenchment while employed by an employer which participated in TOGS. These points do not apply in the calculation of a resignation benefit or deferred benefit calculated under section 43.
- vi. Minimum benefits apply on exit from the Fund at or after early retirement age.

#### **F. Closed Local Government Schemes**

Local Government Provident Fund and Superannuation Benefits Funds and Local Government Superannuation Board insurance policyholders (effective 1 May 1990).

- i. The additional benefit and associated levy will automatically apply to a contributor who was qualified for the additional benefit in the Benefits Fund or was an insurance policyholder.
- ii. Accumulated credits and the proceeds on cancellation or surrender of insurance policies for each transferred contributor are allocated in certain ratios between contributor account and employer reserve.
- iii. A "notional accumulation" is developed from the amount allocated to the employer reserve plus estimated notional future employer

contributions plus interest.

- iv Initial accrued benefit points are calculated based on various formulae as stated in the "State Authorities Superannuation (Closed Local Government Schemes Transfer) Regulation 1990":

Insurance policyholders and fixed rate Provident Fund contributors	- points calculated according to Schedule 1 to the Regulation, based on sum assured and date of contribution/premium payment
Variable rate Provident Fund contributors	- 0.02 points per 1% of salary contributed per month to 30 June 1985 and 0.03 points per 1% per month from 1 July 1985 to 30 April 1990
Benefits Fund	- 0.21 points per month of contributory membership

- v Minimum employer financed benefits of the "notional accumulation" are provided.
- vi A minimum death and invalidity benefit based on a multiple of salary plus the notional accumulation applies to former Benefits Fund members covered for additional benefits.
- vii Early retirement age is 55 for ex-Sydney County Council employees with twenty or more years of service and for ex-Benefits Fund females.

Transferred contributors may elect to contribute at normal SASS rates.

Transferred contributors who do not make an election are deemed to have elected the following:

Benefits Fund and variable rate Provident Fund contributors	-3.5%
Insurance policyholders and fixed rate Provident Fund contributors	-1%

**G. Government Railways Superannuation Scheme (RSA)**  
(Transferred at 1 June 1990)

- i Ex-RSA contributors may elect to contribute at 1, 2, 3, 4, 5, 6, 7, 8 or 9 per cent of salary. Anyone not electing a rate will be assumed to have elected to contribute at 1 per cent.
- ii The contributor's account will be credited at the date of transfer with the corresponding RSA account balance at that date.
- iii Initial accrued benefit points will be calculated by the following formula:

$$TP = \frac{(1/40 \times K \times S \times 10) - EC}{W \times 0.025}$$

- Where TP represents the number of points to be calculated ("Transfer Points"), rounded up to four decimal places;
- K represents the amount of \$1,600 (CPI indexed);
- S represents the number of complete years of service of the transferred contributor (maximum 40 years);
- EC represents the contributions of the transferred contributor
- W represents salary.

- iv Transferred contributors may under certain circumstances elect a pension benefit with lower lump sum rather than the SASS lump sum.
- v The contributor's entry date will be calculated by subtracting from the transfer date the number of days of RSA service during which contributions were made to the account recognised under (iii) above, except that for the calculation of final average salary and prospective benefit points the entry date will be deemed to be the transfer date.

**H. Hunter District Water Board Employees' Provident Fund (HDWB)**  
(effective 1 July 1990)

- i The contributor's account will be credited at 1 July 1990 with sub-accounts 1 and 2 of the contributor's account in the HDWB Fund as at 30 June 1990.
- ii The employer reserve in SASS will be credited at 1 July 1990 with sub-accounts 3 and 4 of the contributor's account in the HDWB Fund as at 30 June 1990.
- lii The contributor's entry date will be deemed to be the date service commenced or was deemed to have commenced under HDWB, except that for the calculation of final average salary and prospective benefit points the entry date will be deemed to be 1 July 1990.
- iv Initial accrued benefit points will be calculated as per the following formula:

$$P = \frac{E}{0.025 \times W}$$

- Where P represents the initial points credit;
- E represents the amount relating to the contributor which was credited to the appropriate employer reserve in the SASS Fund from sub-accounts 3 and 4 of the HDWB Fund;
- W represents the contributor's annual salary at the transfer date.

- v A notional accumulation is set up for each transferred contributor consisting of sub-accounts 3 and 4 of the HDWB Fund plus a notional future contribution based on a percentage of salary as set out in the



transfer Regulation.

- vi Minimum benefits based on the notional accumulation are provided on death or invalidity before early retirement age if not covered for additional benefits, or on resignation before early retirement age.
- vii Transferred contributors may elect to contribute at normal SASS rates or at the rate at which they were contributing to the HDWB Fund prior to transfer, rounded up to the nearest whole percentage.

#### **1.1.4. Legislative Changes**

Amendments affecting benefits coming into effect since 1 July 2009 (including presaged changes) are summarised below:

- Changes in the provisions to recover the additional contribution tax for members who have not provided a TFN.
- SASS deferred members may remain in SASS after reaching age 58
- Provisions enabling increase of certain death benefits previously reduced to offset contributions tax.
- Provisions to enable ambulance officers and police officers to opt out of Additional Benefit Cover under SASS.

## 1.2. SANCS

### 1.2.1. Definitions

"Contributing Employee" is an employee who is a contributor to an associated superannuation scheme (SASS, SSS or Police Superannuation Scheme). All others are deemed "non-contributing employees".

"Eligible service" in respect of a member means service with an Employer. The eligible service accrued in respect of any day is a proportion of one day equal to the salary ratio of the member on that day.

"Employers under Part 1" - The Crown and other employers. See Section 6.

"Employers under Part 3" - Hospitals and Other Bodies. See Section 6.

"Final average salary" in respect of a member means the average of full time or attributed salaries on the member's exit date and on 31 December in each of the two years immediately preceding that in which he/she ceased to be a member.

"Final salary" means the annual rate of full time or attributed salary payable to a member immediately before exit.

"Salary ratio" means for a part-time employee the ratio of the employee's salary to the salary that would be payable to the employee if he/she was a full time employee. The salary ratio of a full-time employee equals 1.0.

"Taxable date" means the date on which the Trustee first became liable to pay income tax under a Commonwealth taxation law in respect of employers' contributions under the Scheme. Thus the taxable date is 1 July 1988.

## 1.2.2. Contributions

Part 1 employers - where the member is an employee of an employer under Part 1, the employer pays a percentage of the salary of the member as determined by the Trustee with the concurrence of the Treasurer.

Part 3 employers - where the member is an employee of an employer under Part 3, the employer pays a percentage of the salary of the member as determined by the Trustee with the concurrence of the Treasurer.

### 1.2.2.1. Contributions by members: Nil

## 1.2.3. Benefits

### 1.2.3.1. Death

The benefit payable on death of a member is calculated as:

a lump sum equal to  $0.03 \times F \times Y$

Where	F	is, in the case of a member who is aged 55 or over, the member's final average salary; or in any other case the member's final salary
	Y	is the years of eligible service commencing on 1 April 1988 or entry date (whichever is the later) including fractional parts of a year on a daily basis

### 1.2.3.2. Retirement, Resignation, Retrenchment and Total and Permanent Invalidity

The benefit payable on the retirement, resignation, retrenchment, total and permanent invalidity or any other prescribed circumstances is as follows:

a lump sum equal to  $0.03 \times F \times (Y - 0.15 \times Z)$

Where	F	is, in the case of the retrenchment or cessation of employment before age 55 due to physical or mental incapacity of a member, the member's final salary; or in any other case the member's final average salary
	Y	is the years of eligible service commencing on 1 April 1988 or entry date (whichever is the later) including fractional parts of a year
	Z	is the years of eligible service commencing on the taxable date or entry date (whichever is the later) including fractional parts of a year on a daily basis
	0.15	represents the tax rate of the Scheme for employer's contributions

### 1.2.3.3. Preservation of Benefits

All benefits are subject to the preservation rules as prescribed by the Superannuation Industry (Supervision) Regulations.

### 1.2.3.4. Provisions for Part-time Employees

In the case of part-time employees the amount of eligible service accrued by the employee is reduced in proportion to the salary ratio.

## 1.2.4. Superannuation Guarantee

Members are entitled to minimum benefits assuming no superannuation guarantee shortfall under the Acts governing the associated superannuation schemes. The difference between the unsupplemented benefit and the minimum benefit is payable from the appropriate reserve in the SANCS Scheme.

The Minimum Requisite Benefit (MRB) specified in the current Benefit Certificate is described below. This is the minimum applying to the total benefits payable from SANCS and the associated superannuation scheme in respect of a member on exit.

In the case of SASS or SSS members:

MRB = the accumulation of the former contributor's contributions (including salary sacrifice contributions net of tax, and any co-contributions); plus

- a pre 1 July 1992 component; plus
- FASEX x 1.0524 x DF x SGLM1; plus
- FASOTE x 1.08 x DF x SGLM2

Where FASEX is the contributor's final average salary at exit

FASOTE is the annual average of the Employee's Ordinary Time Earnings as defined in sub-section 6(1) of the Superannuation Guarantee (Administration) Act 1992, earned over the period commencing on the 1 January in the year two years before the date of determination and ending on the date of determination.

DF is .7 when age at exit < 45  
 .7 + .015 x (65 - age at exit) for 45 < age at exit < 65  
 1 for age at exit >= 65.

SGLM1 is the total accrued Superannuation Guarantee Levy multiple at 30 June 2008 as follows:

Multiple accruing per year of service	Period over which given multiple applies
.04	01/07/92 to 31/12/92
.05	01/01/93 to 30/06/95
.06	01/07/95 to 30/06/98
.07	01/07/98 to 30/06/00
.08	01/07/00 to 30/06/02
.09	after 01/07/02

SGLM2 is the Superannuation Guarantee Levy multiple accrued post 1 July 2008.

The pre 1 July 1992 component is the total of the employer-financed benefits (from SANCS and the associated scheme) which would have been paid had the contributor resigned or retired on 1 July 1992 (except that for final average salary or final salary the amount used is the fund salary at 1 July 1992 for SASS members. For SSS members, salaries and commutation factors are as set out in the Benefit Certificate) updated to exit date by the ratio of FASEX for SASS members, final salary at exit for SSS members, to fund salary at 1 July 1992.

Further, in the case of SSS members the Minimum benefit is limited to:

The amount provided by an alternative MRB equal to the SSS benefit plus the SANCS benefit plus a post 1 July 1992 amount calculated using Superannuation Guarantee Levy Multiples 3% lower than in the table above; with the further proviso that the minimum SSS benefit for purposes of the alternative MRB calculation is the member's accumulated contributions.

In the case of PSS members:

MRB =

- a pre 1 July 1992 component; plus
- FASEX x 1.0524 x DF x SGLM1; plus
- FASOTE x 1.08 x DF x SGLM2; plus
- 0.06 / 0.85 x post 1 July 1992 service x DF x FS

Where FASEX, FASOTE, DF and SGLM are as for SASS and SSS above  
FS is final salary at exit

the pre 1 July 1992 component is the total of the cash benefit from SANCS which would have been paid had the contributor resigned or retired on 1 July 1992; plus 85% of the vested benefit as for the PSS at 1 July 1992; plus 15% of the member's contributions between 1 July 1983 and 30 June 1992; updated to exit date by the ratio of FS to fund salary at 1 July 1992.

The MRB is reduced by the member's surcharge liability (if any), any adjustment for Family Law payments (if any), and adjusted for net MRB transfer payments (if any).

### 1.2.5. Legislative changes

Amendments affecting benefits coming into effect since 1 July 2009 are summarised below:

- Provisions to recover the additional contribution tax for members who have not provided their TFN.
- Provisions enabling increase of certain death benefits previously reduced to offset contributions tax.

## 1.3. SSS

### 1.3.1. Definitions

"Annual review date" means for contributors whose birthday falls in the first half of the calendar year, 28 July, for the rest 9 February.

"Annual adjustment date" means for contributors whose birthday falls in the first half of the calendar year, 21 October, for the rest 5 May.

"Abandoned Units" are units for which no contribution is being made. The amount of these is the difference between Unit Entitlement and Contributory Units. They are also referred to as Reduced Value Units.

"Accumulation of contributions" means, in respect of a contributor, the amount of contributions made to the Fund by that contributor plus interest. Interest was at the rate of 3.5% pa until 30 June 1972, thereafter a rate determined by the Trustee based on the earnings of the Fund. This is called the "Section 33B Accumulation" and is the amount maintained in respect of each contributor in the Contributors' Reserve.

"Contributory Units" are units for which the member is paying (or has paid) contributions.

"Retirement Age" is 60 years, except in the case of a woman who elects to contribute at rates to retire at age 55 (denoted R55 members), for whom it is 55 years.

"Unit Entitlement" - A member's unit entitlement is governed by the amount of salary notified as being received, in accordance with the following formula-

$$\text{Salary} / \$260 + 9 \times \text{factor}$$

where 'factor' is an allowance for the increase shown in the last published Consumer Price Index (All Groups) Sydney since 30 June 1982. The two components of the entitlement are separately calculated and their total rounded up to the next whole number.

"Salary" means the annual rate of salary paid to a contributor at the relevant date (exit, annual review date).

"Taxable date" means the date on which the Trustee became liable to pay income tax under Commonwealth taxation law in respect of employers' contributions to the Fund, which was 1 July 1988.

### 1.3.2. Contributions

#### 1.3.2.1. Employee Contributions

- Employees pay a 4-weekly contribution towards each contributory unit. The total contribution payable over each year depends on the number of units held

and the cost per unit, and is adjusted each annual review date with effect from the annual adjustment date.

- An employee must contribute for the full unit entitlement as at the annual review date unless the resulting contributions would exceed 6% of salary, when units may be 'abandoned'. Abandoned units confer a smaller benefit entitlement, but may be 'taken up' on exit or next annual review day.
- The contribution per unit depends on:
  - the employee's sex and age when contributions for the unit commence,
  - for a female, whether election has been made to contribute for retirement on full pension at age 55, and
  - the date of commencement of service.
- Contributions for units commenced before (5 years prior to the Retirement Age) cease at Retirement Age. Contributions for units taken up after attaining age 55 (or 50 for R55 females) are payable over five years in 65 instalments (with any instalments outstanding at retirement due then).
- Contributions cannot be accepted from a contributor over 70 years of age.
- During periods of leave without pay in excess of three months, a contributor has the option of accepting a permanent reduction in unit entitlement, otherwise the contributor may be required to pay the employer liability during the period of leave without pay.

### 1.3.2.2. Employer contributions

- Employers are required to meet the balance of the cost of benefits, ie that part of the benefit not covered by the Contributor's Reserve plus expenses and Contributions Tax.
- The amount of the normal contribution payable by the employer is a multiple of the contributions made by the employees. The multiple for each employer is periodically fixed by the Trustee, having regard to meeting the full cost of the liabilities under this Division. Additional employer contributions may be required in respect of past contributors for unfunded benefit payments.
- An Employer Reserve is maintained for each employer into which contributions are paid and interest earnings credited. Benefit payments, expenses and taxes are paid from this reserve. When an employee becomes eligible for a benefit, the contributor reserve (limited to the total value of the benefit) is transferred into the employer reserve and the employer reserve becomes liable for the total benefit (ie all future pension payments).

## 1.3.3. Benefits

### 1.3.3.1. Retirement on or after attaining retirement age

Subject to completion of at least ten years of service, a fortnightly pension commencing at

$$(\$5.50 \times CU + \$3.30 \times RVU) \times (1 - 0.15 \times B/C \times \text{ppn e'er})$$



where:

CU = contributory units  
 RVU = abandoned or reduced value units  
 0.15 = the tax rate of the Fund on the employers' contributions  
 B = the period in days of contributory service that began on the taxable date  
 C = the period in days of the contributory service for the contributor  
 Ppn e'er = the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(\text{unreduced pension} \times \text{capitalisation factor} - 33\text{B accumulation at exit})}{(\text{unreduced pension} \times \text{capitalisation factor})}$$

where the unreduced pension is  $(\$5.50 \times \text{CU} + \$3.30 \times \text{RVU})$ , and the capitalisation factors are valuation factors for pensions at emergence depending on age and sex supplied for this purpose from time to time.

### 1.3.3.2. Early Retirement

Subject to continuous contribution to the Fund for at least ten years, a reduced pension is payable on retirement after having attained the age of 55 years if contributing at rates prescribed for retirement at age 60. The amount of the fortnightly pension at commencement is:

$$(\$2.20 \times \text{EPU} \times (1 - .07 \times \text{TM}) + \$3.30 \times \text{UE} \times \text{S} / (\text{S} + \text{TM}) \times (1 - .04 \times \text{TM})) \times (1 - 0.15 \times \text{B}/\text{C} \times \text{Ppn e'er})$$

where:

EPU = Contributory units adjusted to reflect non-payment of contributions due to early retirement.  
 TM = number of years (with fractions included on daily basis) from exit date to Retirement Age  
 UE = Unit Entitlement in respect of salary at exit  
 0.15 = the tax rate of the Fund on the employers' contributions  
 B = the period in days of contributory service that began on the taxable date  
 C = the period in days of the contributory service for the contributor  
 Ppn e'er = the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(\text{unreduced pension} \times \text{capitalisation factor} - 33\text{B accumulation at exit})}{(\text{unreduced pension} \times \text{capitalisation factor})}$$

where the unreduced pension is:

$$(\$2.20 \times \text{EPU} \times (1 - .07 \times \text{TM}) + \$3.30 \times \text{UE} \times \text{S} / (\text{S} + \text{TM}) \times (1 - .04 \times \text{TM})),$$

and the capitalisation factors are valuation factors for pensions at emergence depending on age and sex supplied for this purpose from time to time.

### 1.3.3.3. Retirement owing to physical or mental incapacity

A proportion of the full retirement pension; the proportion being 80 per cent immediately on joining the Fund, increasing uniformly each year thereafter to reach 100 per cent either after ten years of contributory service, or at normal retirement age, whichever occurs first. The pension at commencement is:

$$P(\text{DIS}) \times (\$5.50 \times \text{CU} + \$3.30 \times \text{RVU}) \times (1 - 0.15 \times \text{B/C} \times \text{ppn e'er})$$

where:

P(DIS) =	proportion between .8 and 1.0 depending upon years of service
CU =	Contributory units
RVU =	Abandoned or reduced value units
0.15 =	the tax rate of the Fund on the employers' contributions
B =	the period in days of contributory service that began on the taxable date
C =	the period in days of the contributory service the contributor would have attained had he remained in service until his retirement age.
ppn e'er =	the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(\text{unreduced pension} \times \text{capitalisation factor} - 33\text{B accumulation at exit})}{(\text{unreduced pension} \times \text{capitalisation factor})}$$

where the unreduced pension is  $P(\text{DIS}) \times (\$5.50 \times \text{CU} + \$3.30 \times \text{RVU})$ , and the capitalisation factors are valuation factors for invalidity pensions at emergence depending on age and sex supplied for this purpose from time to time.

Reemployment and Scheme reinstatement can occur if health is restored.

#### 1.3.3.4. Resignation, dismissal or discharge

- a lump sum equal to the employee's accumulation of contributions, plus
- if contributory service exceeds ten years, an additional lump sum of  $.025 \times A \times TS \times (1 - 0.15 \times B/C)$

where:

A =	the employee's 33B accumulation of contributions
TS =	years of contributory service (including fractional parts of a year)
0.15 =	the tax rate of the Fund on the employers' contributions
B =	the period in days of contributory service that began on the taxable date
C =	the period in days of the contributory service for the contributor

Alternatively, at the option of the employee, a benefit may be deferred in the Fund until retirement or earlier death or disability.

The total lump sum resignation benefit is capped at the lump sum payable to a contributor on commutation of the retirement pension he/she would have been entitled to had they been age 55 (or current age if higher). The retirement pension for contributors under age 55 is the deferred pension adjusted for commencement at age 55.

#### 1.3.3.5. Death

On the death of a married contributor a pension is payable to the spouse at two-thirds of the rate of the pension which would have been payable to the contributor had he or she retired on the grounds of ill-health (but with the tax reduction calculated using the capitalised value of the spouse pension to derive the proportion employer financed). In addition, a pension is paid for each eligible child. If the spouse then dies, the excess of the resignation benefit over spouse benefits already paid is refunded to the deceased contributor's personal representative. Any child's pension can be ignored or may cause the excess payment to be delayed.

At 30 June 2012 the pension payable in respect of a child, independent of the number of units held, was \$113.08 per fortnight for each child under 18 years (or 25 if a full time student), or \$268.63 per fortnight if both parents are deceased (an orphan's pension).

On the death before retirement of an unmarried contributor, at the Trustee's discretion a cash withdrawal benefit as in 1.3.3.4 but without reduction for contributions tax, is payable to the deceased personal representative, or an orphan's pension is payable to each eligible child and members contributions without interest. The guaranteed minimum then applies when the last child's pension ceases.

On the death of a married pensioner, a pension is payable to the spouse (but only if married prior to the pensioner's retirement or married to an invalidity pensioner for the 3 years immediately prior to the retirement age), equal to two-thirds of the pension that the deceased pensioner would have been receiving if none of it had been commuted, and children's pensions as above.

### 1.3.3.6. Retrenchment

After three years contributory service, an immediate lump sum is payable (unless aged 55 years or over) equal to

$$(\$2.20 \times \text{EPU} \times (0.96^{M-A}) \times F + \$3.30 \times \text{UE} \times S / (S + \text{TM}) \times (0.98^{M-A}) \times F) \times (1 - 0.15 \times B/C \times \text{ppn e'er})$$

where:

- EPU = contributory units adjusted to reflect non-payment of contributions due to shorter service.  
M = retirement Age  
A = age in years (including fractional parts of a year) on the exit date  
F = 285 if M = 60; 320 if M = 55  
UE = Unit Entitlement in respect of salary at exit  
S = number of years of contributory service (with fractions included on a daily basis)  
0.15 = the tax rate of the Fund on the employers' contributions  
B = the period in days of contributory service that began on the taxable date  
C = the period in days of the contributory service for the contributor  
TM = Number of years from exit to Retirement Age  
ppn e'er = the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(\text{Unreduced benefit} - 33B \text{ accumulation at exit})}{(\text{Unreduced benefit})}$$

where the unreduced benefit is:

$$(\$2.20 \times \text{EPU} \times (0.96^{M-A}) \times F + \$3.30 \times \text{UE} \times S / (S + \text{TM}) \times (0.98^{M-A}) \times F)$$

Alternatively the benefit may be taken as an equivalent pension or a deferred benefit.

On retrenchment after age 55, the retirement or early retirement benefit applies.

### 1.3.3.7. Pensions

Pensions in payment are adjusted each October in line with the Consumer Price Index (All Groups) Sydney.

A pension, other than a child's pension, may be exchanged for a lump sum, at age 55 years or later emergence (even if after age 60). A right of commutation applies

at age 60 to a person who has not exercised their one and only right to commute. Commutation factors per dollar of fortnightly pension are specified in the Act. On commutation by an ex-contributor of all or part of a pension, the reversionary pension to a spouse is unaffected.

### 1.3.3.8. Deferred Benefits

A contributor who becomes entitled to a benefit on retrenchment, resignation, dismissal or discharge, on early retirement or attainment of age 65 (or 65 to 70 if relevant) is provided with a deferred benefit. The deferred benefit commences payment on:

- application on attainment of early retirement age. The pension components are then reduced by the early retirement discount factors (P1 by 7%, P2 by 4%);
- death;
- total and permanent invalidity before early retirement age;
- retirement from the workforce (or effective retirement after 65 or 70 defined as working less than 10 or 30 hours a week respectively). Early retirement discount factors apply if age is less than normal retirement age.
- application if the benefit was deferred after early retirement age. Early retirement discount factors apply if age at commencement is less than normal retirement age.

The deferred benefit is a deferred pension calculated in two components. The amount of the fortnightly pension components at preservation date is set out below. Between deferral date and commencement the "employer-financed component" (P2) is indexed to CPI.

$$\text{Total Pension} = (P1 + P2U) \times (1 - 0.15 \times B/C \times \text{ppn e'er})$$

$$P2 = \text{Total Pension} - P1$$

where:

P1 =	\$2.20 x EPU
P2U =	\$3.30 x UE x S / (S + TM)
EPU =	contributory units adjusted to reflect non-payment of contributions due to early exit.
TM =	number of years (with fractions included on daily basis) from exit date to Retirement Age
UE =	Unit Entitlement in respect of salary at exit
S =	number of years of contributory service (with fractions included on a daily basis)
0.15 =	the tax rate of the Fund on the employers' contributions
B =	the period in days of contributory service that began on the taxable date
C =	the period in days of the contributory service for the contributor
ppn e'er =	the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(\text{Capitalised unreduced pension} - 33\text{B accumulation at exit})}{(\text{Capitalised unreduced pension})}$$

where the capitalised unreduced pension is:

$$(\text{P1} \times \text{employee component capitalisation factor} + \text{P2U} \times \text{employer component capitalisation factor}),$$

and the capitalisation factors are valuation factors for deferred pensions at preservation depending on age and sex supplied for this purpose from time to time.

### 1.3.3.9. Provisions for part time contributors

A contributor may move to permanent part-time employment. Contributions paid prior to the change will purchase paid-up units, and a permanent reduction in unit entitlement is made, to reflect the service that will not be given. Appropriate provisions are made for subsequent changes in hours worked.

### 1.3.3.10. Superannuation Guarantee

The employer-financed benefit on exit for any reason, together with the employer-financed benefit payable for the State Authorities Non-Contributory Superannuation (SANCS) Fund is subject to a minimum benefit as specified in the current Benefit Certificate so that benefits paid by these schemes can be used to meet employers' obligations under the Superannuation Guarantee (Administration) Act. The shortfall, if any, is to be provided from the SANCS Fund. The employee-financed benefit from SSS is defined as the s33B Accumulation (or total benefit if less), and the balance of the benefit is the employer-financed benefit.

The MRB (Minimum Requisite Benefit) specified in the Benefit Certificate adopted in the valuation in respect of SSS members is described below. This is the amount below which the combined total SSS and SANCS benefits payable may not fall. The MRB is that set out in the Benefit Certificate valid from 1 July 2008, extended in a consistent manner to cover future periods.

MRB = the accumulation of the former contributor's contributions (including salary sacrifice contributions net of tax, and any co-contributions); plus

- a pre 1 July 1992 component; plus
- FASEX x 1.0524 x DF x SGLM1; plus
- FASOTE x 1.08 x DF x SGLM2

Where FASEX is the contributor's final average salary at exit

FASOTE is the annual average of the Employee's Ordinary Time Earnings as defined in sub-section 6(1) of the Superannuation Guarantee (Administration) Act 1992, earned over the period commencing on the 1 January in the year two years before the date of determination and ending on the date of determination.

DF is .7 for age at exit < 45  
 .7 + .015 x (65 - age at exit) for 45 < age at exit < 65  
 1 for age at exit >= 65.

SGLM1 is the accrued Superannuation Guarantee Levy multiple at 30 June 2008 where the multiple accrued as follows:

Multiple accruing per year of service	Period over which given multiple applies
.04	01/07/92 to 31/12/92
.05	01/01/93 to 30/06/95
.06	01/07/95 to 30/06/98
.07	01/07/98 to 30/06/00
.08	01/07/00 to 30/06/02
.09	after 01/07/02

SGLM2 is the Superannuation Guarantee Levy multiple accrued post 1 July 2008.

The pre 1 July 1992 component is the total of the employer-financed benefits (from SSS and SANCS) which would have been paid had the contributor resigned or retired on 1 July 1992 with salaries and commutation factors as set out in the Benefit Certificate, updated to exit date by the ratio of final salary at exit to fund salary at 1 July 1992.

The Minimum Benefit as derived above is limited to:

The amount provided by an alternative MRB equal to the SSS benefit plus the SANCS benefit plus a post 1 July 1992 amount calculated using Superannuation Guarantee Levy Multiples 3% lower than in the table above; with the further proviso that the minimum SSS benefit for purposes of the alternative MRB calculation is the member's accumulated contributions.

The MRB is reduced by the member's surcharge liability (if any), any adjustment for Family Law payments (if any), and adjusted for net MRB transfer payments (if any).

#### 1.3.4. Legislation Changes

Amendments affecting benefits coming into effect since 1 July 2009 are summarised below:

- Changes in the provisions to recover the additional contribution tax for members who have not provided a TFN.
- Provisions enabling increase of certain death benefits previously reduced to offset contributions tax.

## 1.4. PSS

### 1.4.1. Definitions

"Accumulation of contributions" means, in respect of a contributor, the amount of contributions made to the Fund by that contributor plus interest from 23 November 1984. A contributor reserve is maintained for each member.

"Normal Retirement Age" is 60 years.

"Salary" means the annual rate of salary last nominated as paid to a contributor at the relevant date.

"Taxable date" means the date on which the Trustee first became liable to pay income tax under the Commonwealth Law in respect of employers' contributions to the Fund, which was 1 July 1988.

### 1.4.2. Contributions

#### 1.4.2.1. Employee Contributions

Members contribute 6% of salary.

#### 1.4.2.2. Employer Contributions

The balance of the cost of benefits ie that part of the benefits and expenses not covered by the members' contributions, plus Contributions Tax is paid from the PSS employer reserve set up for this purpose.

### 1.4.3. Benefits

#### 1.4.3.1. Retirement on or after attaining retirement age

Subject to completion of at least twenty years of service, a pension commencing at

$$\text{Salary} \times 2.425\% \times \text{YPS} \times (1 - 0.15 \times \text{B/C} \times \text{ppn e'er})$$

where:

YPS =	service (with fractions of a year in complete months) since joining PSS, limited to a maximum of 30 years
0.15 =	the tax rate on the employer contributions
B =	the period in days of contributory service that began on the taxable date
C =	the period in days of the contributory service for the contributor
ppn e'er =	the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(\text{Unreduced pension} \times \text{capitalisation factor} - \text{accumulation of contributions at exit})}{(\text{Unreduced pension} \times \text{capitalisation factor})}$$



where the unreduced pension is  $\text{Salary} \times .02425 \times \text{YPS}$ ,  
and the capitalisation factors are valuation factors for pensions at emergence  
depending on age and sex supplied for this purpose from time to time.

Alternatively, at the member's discretion, a lump sum benefit of:

$$\text{Salary} \times \text{LSF} \times (1 - 0.15 \times \text{B/C} \times \text{ppn e'er})$$

where:

- LSF = as given in Schedule 3 of the Act, for various ages at retirement  
and entry  
0.15 = the tax rate on the employer contributions  
B = the period in days of contributory service that began on the taxable  
date  
C = the period in days of the contributory service for the contributor  
ppn e'er = the proportion of the benefit deemed to be employer-financed  
calculated as:

$$\frac{(\text{Salary} \times \text{LSF} - \text{accumulation of contributions at exit})}{(\text{Salary} \times \text{LSF})}$$

The lump sum benefit equates to the annual pension benefit multiplied by 10.92

#### 1.4.3.2. Early Retirement

An early retirement pension is payable on retirement after having attained the age  
of 55 years. The amount of the pension at commencement is:

$$\text{Salary} \times 2.425\% \times \text{YPS} \times (1 - 0.04 \times (60 - A)) \times (1 - 0.15 \times \text{B/C} \times \text{ppn e'er})$$

where:

- YPS = service (with fractions of a year in complete months) since joining  
PSS, limited to a maximum of 30 years  
A = age at the date of retirement (with complete months counting as  
fractions)  
0.15 = the tax rate on the employer contributions  
B = the period in days of contributory service that began on the taxable  
date  
C = the period in days of the contributory service for the contributor  
ppn e'er = the proportion of the benefit deemed to be employer-financed  
calculated as:

$$\frac{(\text{Unreduced pension} \times \text{capitalisation factor} - \text{accumulation of contributions at exit})}{(\text{Unreduced pension} \times \text{capitalisation factor})}$$

where the unreduced pension is:

$$\text{Salary} \times 2.425\% \times \text{YPS} \times (1 - 0.04 \times (60 - A))$$

and the capitalisation factors are valuation factors for pensions at emergence depending on age and sex supplied for this purpose from time to time

Alternatively, a lump sum benefit of

$$\text{Salary} \times \text{LSF} \times (1 - 0.15 \times B/C \times \text{ppn e'er})$$

where:

- LSF = as given in Schedule 3 of the Act, for various ages at retirement and entry.
- 0.15 = the tax rate on the employer contributions
- B = the period in days of contributory service that began on the taxable date
- C = the period in days of the contributory service for the contributor
- ppn e'er = the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(\text{Salary} \times \text{LSF} - \text{accumulation of contributions at exit})}{(\text{Salary} \times \text{LSF})}$$

### 1.4.3.3. Retirement owing to invalidity

#### **Not Hurt on Duty**

If service is less than 20 years, a lump sum of:

$$2 \times \text{Salary} - (2 \times \text{salary} - \text{accumulation of contributions at exit}) \times 0.15 \times B/C$$

where:

- A = age at the date of retirement (with complete months counting as fractions)
- 0.15 = the tax rate on the employer contributions
- B = the period in days of contributory service that began on the taxable date
- C = the period in days of the contributory service for the contributor
- If 20 years or more service, a pension of:

$$\text{Salary} \times 2.425\% \times \text{YPS} \times (1 - 0.15 \times B/C \times \text{ppn e'er})$$

where:

- YPS = service (with fractions of a year in complete months) since joining PSS, limited to a maximum of 30 years
- 0.15 = the tax rate on the employer contributions
- B = the period in days of contributory service that began on the taxable date
- C = the period in days of the contributory service for the contributor

ppn e'er = the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(\text{Unreduced pension} \times \text{capitalisation factor} - \text{accumulation of contributions at exit})}{(\text{Unreduced pension} \times \text{capitalisation factor})}$$

where the unreduced pension is Salary x 2.425% x YPS, and the capitalisation factors are valuation factors for invalidity pensions at emergence depending on age and sex supplied for this purpose from time to time.

### Hurt on Duty

A pension of:

$$P(\text{HOD}) \times \text{Salary} \times (1 - 0.15 \times B/\text{TS} \times \text{ppn e'er})$$

Where:

- P(HOD)= 72.75% minimum, increasing to 100% at STC's discretion. For valuation purposes, the maximum benefit is assumed. (Injury pre 21 November 1979 is 72.75% maximum.)
- 0.15 = the tax rate on the employer contributions
- B = the period in days of contributory service that began on the taxable date
- TS = the period in days of the contributory service for the contributor to normal retirement
- ppn e'er = the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(\text{Unreduced pension} \times \text{capitalisation factor} - \text{accumulation of contributions at exit})}{(\text{Unreduced pension} \times \text{capitalisation factor})}$$

where the unreduced pension is P(HOD) x Salary, and the capitalisation factors are valuation factors for invalidity pensions at emergence depending on age and sex supplied for this purpose from time to time.

Special benefits may be paid for specific injuries in accordance with Division 3,4 and 5 of Part 3 of the Workers Compensation Act 1987.

#### 1.4.3.4. Resignation, dismissal or discharge

A lump sum equal to the employee's accumulation of contributions. In the case of dismissal interest is only payable from 1 July 1990.

Alternatively, at the option of the employee, a benefit may be deferred in the Fund until retirement or earlier death or disability.

### 1.4.3.5. Death

Not Killed on Duty

A lump sum of:

$$\text{Salary} \times 12\% \times (\text{YPS} + \text{YPS55})$$

where:

- YPS = service (with fractions of a year in complete months) since joining PSS, limited to a maximum of 30 years
- YPS55 = service to age 55 (with fractions of a year in complete months) since joining PSS, limited to a maximum of 30 years

Killed on Duty

Pension to spouse of:

$$P(\text{KOD}) \times \text{Salary} \times (1 - 0.15 \times B/\text{TS} \times \text{ppn e'er})$$

Where:

- P(KOD) = 55% minimum, increasing to 62.5% at STC's discretion. For valuation purposes, the maximum benefit is assumed.
- 0.15 = the tax rate on the employer contributions
- B = the period in days of contributory service that began on the taxable date
- TS = the period in days of the contributory service for the contributor to normal retirement (60)
- ppn e'er = the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(\text{Unreduced pension} \times \text{capitalisation factor} - \text{accumulation of contributions at exit})}{(\text{Unreduced pension} \times \text{capitalisation factor})}$$

where the unreduced pension is  $P(\text{KOD}) \times \text{Salary}$ , and the capitalisation factors are valuation factors for spouse pensions at emergence depending on age and sex supplied for this purpose from time to time.

The equivalent of a spouse pension may also be paid to dependants of the deceased member. If those dependants are children, the pension is payable to age 25.

A lump sum benefit may also be payable in accordance with Division 1 of Part 3 of the Workers Compensation Act 1987.

In addition to the spouse pension, a pension may be paid for each eligible child (under age 18, or 21 if a student). The amount of pension payable is set out in Division 1 of Part 3 of the Workers Compensation Act 1987.

The alternative lump sum or benefit if no spouse is the not-killed-on-duty amount.

#### Death of pensioner

On the death of a married pensioner, a pension is payable to the spouse (but only if married prior to the pensioner's retirement), equal to 62.5% of the pension that the deceased pensioner was receiving. No spouse pension is payable if the former member had commuted the pension.

### 1.4.3.6. Pensions

Pensions in payment are adjusted each October in line with the Consumer Price Index (All Groups) Sydney with the proviso that a pension cannot fall below the level at emergence.

An invalidity pension may be exchanged for a lump sum, at age 55 years, 60 years or later emergence. The commuted lump sum equals a commutation factor times the annual pension, where the commutation factor ranges from 11.82 at age 55 to 10.92 at 60 and over.

The invalidity hurt on duty pension above 72.75% may be exchanged for a lump sum before aged 60 at STC's discretion. The commutation factor is as in Schedule 3 of the Act.

### 1.4.3.7. Deferred Benefits

A contributor who becomes entitled to a benefit on resignation, dismissal or discharge or on early retirement may elect instead for a deferred benefit. The deferred benefit commences payment on:

- application on attainment of age 55;
- death;
- total and permanent invalidity before age 55;
- retirement from the workforce (or effective retirement after 65 or 70 defined as working less than 10 or 30 hours a week respectively);
- on application if the benefit was deferred after age 55.

The former member can at any time exchange the deferred benefit for the withdrawal benefit applicable at the date of preservation plus interest to payment date.

The deferred benefit is a lump sum indexed to CPI between preservation date and payment. The lump sum at preservation date is the greater of:

- (A) 2.5 x member's own contributions (with no interest), and
- (B)  $E \times YPS/YPS55 \times .97^{(55-A)} \times (1 - 0.15 \times B/C \times \text{ppn e'er})$

where

E =	early retirement lump sum which would have been payable had the former member continued in service until age 55 (obtained by reference to Schedule 3 of the Act, for various ages at entry).
YPS =	service (with fractions of a year in complete months) since joining PSS, limited to a maximum of 30 years
YPS55 =	service to age 55 (with fractions of a year in complete months) since joining PSS, limited to a maximum of 30 years
A =	age at the date of preservation (with complete months counting as fractions)
0.15 =	the tax rate on the employer contributions
B =	the period in days of contributory service that began on the taxable date
C =	the period in days of the contributory service for the contributor
ppn e'er =	the proportion of the benefit deemed to be employer-financed calculated as:

$$\frac{(E \times YPS/YPS55 \times .97^{(55-A)} - \text{accumulation of contributions at exit})}{(E \times YPS/YPS55 \times .97^{(55-A)})}$$

Where a member is over age 55 the deferred benefit is the lump sum early retirement benefit.

#### 1.4.3.8. Provisions for part time contributions

Proportionately reduced contributions and service accrual recognise part time employment.

#### 1.4.3.9. Superannuation Guarantee

The benefit on exit for any reason, together with the benefit payable for the State Authorities Non-Contributory Superannuation (SANCS) Fund is subject to a minimum benefit as specified in the current Benefit Certificate so that benefits paid by these schemes can be used to meet employers' obligations under the Superannuation Guarantee (Administration) Act. The shortfall, if any, is to be provided from the SANCS Fund.

The MRB (Minimum Requisite Benefit) specified in the Benefit Certificate adopted in the valuation in respect of PSS members is described below. This is the amount below which the combined total PSS and SANCS benefits payable may not fall. The MRB is that set out in the Benefit Certificate valid from 1 July 2008, extended in a consistent manner to cover future periods.

MRB	=	<ul style="list-style-type: none"> <li>• a pre 1 July 1992 component; plus</li> <li>• FASEX x 1.0524 x DF x SGLM1; plus</li> <li>• FASOTE x 1.08 x DF x SGLM2</li> <li>• 0.06 / 0.85 x post 1 July 1992 service x DF x FS</li> </ul>
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Where FASEX is the contributor's final average salary at exit

- FASOTE is the annual average of the Employee’s Ordinary Time Earnings as defined in sub-section 6(1) of the Superannuation Guarantee (Administration) Act 1992, earned over the period commencing on the 1 January in the year two years before the date of determination and ending on the date of determination.
- DF is .7 when age at exit < 45  
 .7 + .015 x (65 - age at exit) for 45 < age at exit < 65  
 1 when age at exit >= 65.
- FS is final salary at exit
- SGLM1 is the accrued Superannuation Guarantee Levy Multiple at 30 June 2008 where the multiple accrued as follows:

Multiple accruing per year of service	Period over which given multiple applies
.04	01/07/92 to 31/12/92
.05	01/01/93 to 30/06/95
.06	01/07/95 to 30/06/98
.07	01/07/98 to 30/06/00
.08	01/07/00 to 30/06/02
.09	after 01/07/02

- SGLM2 is the accrued Superannuation Guarantee Levy Multiple for the period from 1 July 2008 to exit date, where the multiple accrued as above.

The pre 1 July 1992 component is the total of the cash benefit from SANCS which would have been paid had the contributor resigned or retired on 1 July 1992; plus 85% of the vested benefit as for the PSS at 1 July 1992; plus 15% of the member’s contributions between 1 July 1983 and 30 June 1992; updated to exit date by the ratio of FS to fund salary at 1 July 1992.

The MRB is reduced by the member’s surcharge liability (if any), any adjustment for Family Law payments (if any), and adjusted for net MRB transfer payments (if any).

**1.4.4. Legislative Changes**

Amendments affecting benefits coming into effect since 1 July 2009 or in preparation by 2012 are summarised below:

- Changes in the provisions to recover the additional contribution tax for members who have not provided a TFN.
- Provisions enabling increase of certain death benefits previously reduced to offset contributions tax.

- Provisions in relation to discharge and superannuation entitlement of Police on long term sick leave.



# 2

## Actuarial Basis

We have set out below the assumptions used for each of the Schemes in the Pooled Fund.

Rates of mortality, total disablement, resignation and retirement were derived from the experience of each Scheme in the Pooled Fund. Where relevant we have also considered the experience of predecessor funds. These rates are shown in detail in this section for each Scheme.

### 2.1. Economic Assumptions

#### 2.1.1. Economic factors were assumed as follows:

Rate of investment return:	8.3% per annum for pensioners and 7.3% per annum for all other members, inclusive of capital appreciation and net of investment management charges and tax
Long term rate of salary escalation:	4% per annum after 30 June 2018, plus additional rates of promotional increase varying by age and sex. The promotional rates were derived from the salary histories of each Scheme's membership.
Short term rate of salary escalation for the 6 years following 30 June 2012:	2.7% per annum, for SASS, SSS and SANCS; and 3.5% per annum for PSS; plus additional rates of promotional increases as for the long term.
Rate of CPI increase:	2.5% per annum.

The rate of salary increase above does not include promotional rates of increase, which have been dealt with separately under other assumptions for each Scheme.

### 2.2. Demographic & Other Assumptions – SASS

#### 2.2.1. Expenses

It was assumed that the employee's share of expenses would amount to 1.0% of employee contributions. The employer share of expenses was assumed to be 1.0% of projected benefit payments in each year.

#### 2.2.2. Tax

The assumed rate of tax is 15%.

All benefits have been valued gross of surcharge. Where there is a surcharge debt in respect of an individual, this is assumed recoverable from the benefit payment.

No deduction from the assets has been made in respect of the surcharge.

### 2.2.3. Contribution rates

It is assumed that contributors maintain their current contribution rate through to retirement, unless they reach maximum benefit points, when 20% of members are assumed to reduce their contribution rate to the minimum (1%) with the remaining 80% maintaining their current contribution rate to retirement.

### 2.2.4. Tables of assumptions for Contributors

The following tables show in full the assumed rates of mortality, total disablement, retirement, resignation and promotional salary increases. In addition, redundancies are assumed as follows:

Year	Redundancy rate (all ages)		
	Part 1		Part 3
	General Gov't sector	Rest	
2012/13	4.8%	1.5%	4.8%
2013/14	5.6%	1.5%	5.6%
2014/15	6.5%	1.5%	6.5%
2015/16	7.6%	1.5%	7.6%
Thereafter	1.5%	1.5%	nil

**Males**

Age nearest Birthday	Number of members expected in any one year, out of 10,000 members at the age shown, to leave the fund as a result of:						Additional promotional	% married
	Death	Total & Permanent Disability*	Retirement		Resignation		salary increase rate %	
			Part 1	Part 3	Part 1	Part 3		
35	4	7	0	0	210	319	2.4	82
36	4	7	0	0	195	307	2.3	82
37	4	8	0	0	180	290	2.2	82
38	4	8	0	0	165	274	2.1	82
39	4	8	0	0	155	264	2.0	83
40	5	9	0	0	150	253	1.8	83
41	5	9	0	0	145	243	1.6	83
42	5	10	0	0	140	229	1.4	84
43	6	10	0	0	135	216	1.2	84
44	6	12	0	0	130	202	1.0	84
45	6	11	0	0	125	189	0.8	85
46	7	11	0	0	120	180	0.6	85
47	7	11	0	0	118	171	0.4	85
48	8	13	0	0	116	162	0.2	85
49	9	15	0	0	114	157	0.0	86
50	9	18	0	0	112	152	0.0	86
51	10	19	0	0	110	147	0.0	86
52	11	23	0	0	108	142	0.0	87
53	12	26	0	0	106	139	0.0	87
54	12	29	0	0	104	136	0.0	87
55	14	33	0	0	102	135	0.0	88
56	15	36	0	0	100	134	0.0	88
57	16	39	260	230	98	133	0.0	88
58	17	0	620	720	0	0	0.0	88
59	19	0	850	850	0	0	0.0	89
60	21	0	1,550	1,420	0	0	0.0	89
61	24	0	1,400	1,050	0	0	0.0	89
62	26	0	1,250	920	0	0	0.0	90
63	29	0	1,200	1,330	0	0	0.0	90
64	32	0	2,200	1,980	0	0	0.0	90
65	36	0	4,000	4,200	0	0	0.0	91
66	39	0	2,300	2,800	0	0	0.0	91
67	43	0	2,300	3,250	0	0	0.0	91
68	48	0	2,300	2,350	0	0	0.0	91
69	52	0	5,600	6,800	0	0	0.0	91
70	0	0	10,000	10,000	0	0	0.0	91

**Females**

Age nearest Birthday	Number of members expected in any one year, out of 10,000 members at the age shown, to leave the fund as a result of:						Additional promotional
	Death	Total & Permanent Disability*	Retirement		Resignation		salary increase rate %
			Part 1	Part 3	Part 1	Part 3	
35	2	2	0	0	230	417	2.4
36	2	3	0	0	215	383	2.3
37	2	3	0	0	205	349	2.2
38	2	3	0	0	195	315	2.1
39	2	3	0	0	185	289	2.0
40	3	3	0	0	175	265	1.8
41	3	4	0	0	165	250	1.6
42	3	5	0	0	155	240	1.4
43	3	5	0	0	145	235	1.2
44	4	7	0	0	135	230	1.0
45	4	8	0	0	135	230	0.8
46	4	10	0	0	135	230	0.6
47	5	11	0	0	137	230	0.4
48	5	13	0	0	139	230	0.2
49	5	15	0	0	141	230	0.0
50	6	18	0	0	144	230	0.0
51	6	21	0	0	147	230	0.0
52	7	25	0	0	150	230	0.0
53	7	28	0	0	155	230	0.0
54	8	32	0	0	170	230	0.0
55	8	36	0	0	185	230	0.0
56	9	39	0	0	200	230	0.0
57	10	43	430	270	200	230	0.0
58	11	0	1,000	750	0	0	0.0
59	12	0	1,000	770	0	0	0.0
60	13	0	1,500	1,350	0	0	0.0
61	15	0	1,350	1,200	0	0	0.0
62	16	0	1,300	1,200	0	0	0.0
63	18	0	1,800	1,500	0	0	0.0
64	19	0	2,300	2,350	0	0	0.0
65	21	0	2,750	2,400	0	0	0.0
66	23	0	2,200	2,400	0	0	0.0
67	25	0	2,200	2,270	0	0	0.0
68	28	0	2,200	1,700	0	0	0.0
69	31	0	6,600	5,600	0	0	0.0
70	0	0	10,000	10,000	0	0	0.0

\*In respect of Police contributors ill-health retirement combined with partial disability is assumed at the total of disability and hurt on duty rates under PSS, distributed between total MERCER

and partial disability in the same proportions as 2.2.7 below.

## 2.2.5. Proportions choosing Deferred Benefits

On resignation, dismissal or discharge, the proportion of contributors electing to take a deferred benefit in lieu of the cash benefit was assumed as follows:

Age at exit	Proportion of exits electing deferred benefit %	
	Males	Females
26-49	60	70
50	65	70
51	70	75
52	75	80
53	80	85
54	85	90
55	90	95
56	95	100
57	100	100
58	100	100

Following deferral and for current deferred members, for projection purposes deferred benefits are assumed to be fully paid out on average at age 60.

## 2.2.6. Proportions choosing Pension Benefits

Former Local Government Pension Fund, NSW Retirement Fund and Government Railways Superannuation Scheme (RSA) may elect to receive pension benefits instead of a lump sum.

Based on past experience it was assumed that 28% of former LGPF, NRF and RSA members would elect pensions, with the remainder choosing a lump sum.

## 2.2.7. Rates of Partial Disablement

In addition to total disablements, a decrement for partial and permanent disablement has been assumed for contributors below the early retirement age (age 58). The decrement is a percentage of the total disablement rate, as follows:

All Parts	Males	Females
Ages up to 45	400%	300%
Ages 46 - 50	350%	250%
Ages 51 - 57	150%	115%

## 2.2.8. Valuation of Pensions

The following assumptions were made in the valuation of pensions in payment at the valuation date and pensions assumed to be elected in the future by

contributors at the valuation date:

## 2.2.9. Mortality

Retired Male contributors:	The mortality is a percentage of the ALT2000-02(males) mortality, the percentage increasing with age from 50% at ages up to 74 to 100% at age 83.
Retired Female contributors:	The mortality is a percentage of the ALT2000-02(females) mortality, the percentage increasing with age from 45% at age 56 to 100% at age 82.
Widow(er)s of former pensioners or contributors, and spouses of current pensioners:	The mortality is the same as for retired contributors of the same sex.
Male and Female invalidity pensioners:	The mortality is the same as for retired contributors of the same sex.

Note: ALT 2000-02 mortality is adjusted from the base date by including improvements at the ALT 2005-07 25 year average rates to 2018 and at 100 year average rates thereafter.

## 2.2.10. Age of Spouse (reversionary pensions)

When the spouse's date of birth was not provided in the data, the following assumptions were made:

Male pensioner:	4 years older than spouse
Female pensioner:	2 years younger than spouse

## 2.2.11. Proportion Married at Death

All Part 1 pensioners identified in the data as having a reversionary pension attached were assumed married at the date the pension commenced. Allowance was made on the bases described above for the mortality of spouses from the commencement date. All other Part 1 pensioners were assumed unmarried.

For Part 3 pensioners and pensioners under the former Government Railways Superannuation Scheme, the proportions of pensioners assumed married at the date the pension commenced were as shown in the relevant tables in 2.2.4 above. Allowance was made for the mortality of the spouse from the pension commencement date in the same way as for Part 1.

For pensions assumed to be elected in future by current contributors, the proportions married were assumed as shown in the relevant tables in 2.2.4 above.

## 2.2.12. Children's Pensions

Average numbers and ages of children were assumed at the same levels as the previous investigation of SASS in respect of future pensions becoming payable to

children under former Local Government Pension Fund rules.

### 2.2.13. Reversionary Pensions (former Government Railways Superannuation (RSA) Scheme)

Data was not available for reversionary pensions to spouses of RSA pensioners. The proportions of pensioners married and the average age of spouses were assumed as described in 2.2.11 and 2.2.10 above. The amount of the reversionary pension was taken from Column 3 of Schedule 2 to the relevant Transitional Regulation increased for indexation, with the length of service of the former member estimated by reference to the amount of his/her pension as a proportion of the maximum (40 years) pension.

As at the valuation date, base reversionary pensions are thereby estimated to be between \$50.82 and \$63.08 per fortnight, depending upon the former member's length of service.

### 2.2.14. Table of Mortality Assumptions for Pensioners

Age	All Pensioners	
	Males	Females
55	0.0013	0.0012
56	0.0014	0.0012
57	0.0016	0.0013
58	0.0019	0.0015
59	0.0021	0.0017
60	0.0023	0.0020
61	0.0026	0.0024
62	0.0029	0.0028
63	0.0033	0.0030
64	0.0036	0.0034
65	0.0042	0.0038
66	0.0048	0.0042
67	0.0055	0.0045
68	0.0064	0.0048
69	0.0073	0.0052
70	0.0085	0.0056
71	0.0101	0.0059
72	0.0119	0.0065
73	0.0141	0.0072
74	0.0169	0.0083
75	0.0201	0.0098
76	0.0237	0.0118
77	0.0279	0.0145
78	0.0327	0.0179

Age	All Pensioners	
	Males	Females
79	0.0380	0.0218
80	0.0440	0.0265
81	0.0507	0.0319
82	0.0582	0.0379
83	0.0668	0.0447
84	0.0774	0.0525
85	0.0906	0.0618
86	0.1064	0.0725
87	0.1244	0.0846
88	0.1436	0.0983
89	0.1634	0.1134
90	0.1832	0.1301
91	0.2026	0.1477
92	0.2211	0.1665
93	0.2377	0.1861
94	0.2525	0.2068
95	0.2654	0.2284
96	0.2766	0.2512
97	0.2861	0.2750
98	0.2957	0.2988
99	0.3063	0.3232
100	0.3188	0.3479
101	0.3334	0.3732
102	0.3500	0.3976
103	0.3688	0.4203
104	0.3896	0.4412
105	0.4178	0.4638
106	0.4420	0.4794
107	0.4683	0.4930
108	0.4967	0.5047
109	0.5271	0.5144
110	1.0000	1.0000

For all pensioners mortality rates as above apply for the year 2011/2012. For subsequent years, rates are reduced to reflect future improvements in mortality as for SSS.



## 2.3. Demographic & Other Assumptions – SANCS

Decrement rates for SANCS are as for SASS, except in respect of redundancies which are as follows:

Year	Redundancy rate (all ages)		
	Part 1		Part 3
	General Gov't sector	Rest	
2012/13	4.9%	nil	4.9%
2013/14	5.7%	nil	5.7%
2014/15	6.8%	nil	6.8%
2015/16	8.3%	nil	8.3%
Thereafter	nil	nil	nil

The assumed level of expenses for SANCS is 1% of total benefits.

## 2.4. Demographic & Other Assumptions – SSS

### 2.4.1. Expenses

The assumed level of expenses for SSS is 1% of total benefits plus 1% of member contributions.

### 2.4.2. Tax

The assumed rate of tax is 15%.

All benefits have been valued gross of surcharge. Where there is a surcharge debt in respect of an individual, this is assumed recoverable from the benefit payment.

### 2.4.3. Tables of assumptions for Contributors

The following tables show in full the assumed rates of mortality, total disablement, retirement and promotional salary increases, as well as assumed rates of preservation and resignation taking a cash benefit at all ages. In addition, redundancies are assumed as follows:

Year	Rate of redundancy (all ages)
2012/13	6.1%
2013/14	7.9%
2014/15	10.0%
2015/16	14.2%
Thereafter	nil

**Males**

Age nearest birthday	Number of members expected in any one year, out of 10,000 members at the age shown, to leave the fund as a result of:					Additional promotional salary increase rate %
	Death	Ill-health Retirement	Retirement	Cash Resignation	Preservation	
41	5	58	0	43	91	1.6
42	5	63	0	39	77	1.4
43	6	67	0	35	63	1.2
44	6	75	0	31	56	1.0
45	6	84	0	29	53	0.8
46	7	86	0	25	49	0.6
47	7	91	0	21	46	0.4
48	8	105	0	15	42	0.2
49	9	123	0	12	39	0.0
50	9	144	0	12	35	0.0
51	10	151	0	12	32	0.0
52	11	156	0	12	28	0.0
53	12	179	0	12	25	0.0
54	12	201	0	12	21	0.0
55	14	224	390	0	0	0.0
56	15	246	200	0	0	0.0
57	16	268	275	0	0	0.0
58	17	291	450	0	0	0.0
59	19	313	2,700	0	0	0.0
60	21	0	7,600	0	0	0.0
61	24	0	4,200	0	0	0.0
62	26	0	2,550	0	0	0.0
63	29	0	2,350	0	0	0.0
64	32	0	3,500	0	0	0.0
65	0	0	10,000	0	0	0.0

**Females**

Age nearest birthday	Number of members expected in any one year, out of 10,000 members at the age shown, to leave the fund as a result of:								Additional promotional salary increase rate %
	Death	Ill-health Retirement	Retirement		Cash Resignation		Preservation		
			R55	R60	R55	R60	R55	R60	
41	3	24	0	0	62	33	60	100	1.6
42	3	27	0	0	49	26	60	90	1.4
43	3	33	0	0	42	23	60	80	1.2
44	4	39	0	0	38	20	60	75	1.0
45	4	45	0	0	35	17	60	70	0.8
46	4	58	0	0	29	17	60	65	0.6
47	5	65	0	0	26	17	60	60	0.4
48	5	75	0	0	23	17	50	55	0.2
49	5	88	0	0	20	17	55	50	0.0
50	6	103	0	0	13	17	50	50	0.0
51	6	108	0	0	9	17	45	50	0.0
52	7	112	0	0	4	17	40	50	0.0
53	7	128	0	0	3	17	40	50	0.0
54	8	144	0	0	1	17	40	50	0.0
55	8	160	6,700	300	0	0	0	0	0.0
56	9	176	3,300	300	0	0	0	0	0.0
57	10	192	1,750	300	0	0	0	0	0.0
58	11	208	2,400	380	0	0	0	0	0.0
59	12	224	2,350	2,300	0	0	0	0	0.0
60	13	0	2,950	7,000	0	0	0	0	0.0
61	15	0	2,350	3,400	0	0	0	0	0.0
62	16	0	2,900	2,000	0	0	0	0	0.0
63	18	0	625	2,000	0	0	0	0	0.0
64	19	0	2,500	3,000	0	0	0	0	0.0
65	0	0	10,000	10,000	0	0	0	0	0.0

**Male contributor factors**

Age	Proportion Married	Proportion of optional units taken up	
		Post 1963 membership	Pre 1963 membership
41	0.88	1.00	1.00
42	0.89	1.00	1.00
43	0.90	1.00	1.00
44	0.90	1.00	1.00
45	0.90	1.00	1.00
46	0.90	.99	.90
47	0.90	.99	.90
48	0.90	.98	.90
49	0.90	.97	.90
50	0.88	.96	.90
51	0.88	.95	.90
52	0.88	.94	.90
53	0.88	.93	.90
54	0.86	.92	.90
55	0.86	.90	.90
56	0.86	.88	.90
57	0.85	.86	.86
58	0.84	.84	.83
59	0.83	.82	.80
60	0.81	.80	.80
61	0.78	.75	.80
62	0.77	.70	.80
63	0.75	.60	.80
64	0.72	.50	.80
65	0.70	.40	.80

**Female contributor factors**

Age	Proportion Married	Proportion of optional units taken up			
		R55		R60	
		Post 1963 membership	Pre 1963 membership	Post 1963 membership	Pre 1963 membership
41	0.74	1.00	.70	1.00	1.00
42	0.74	1.00	.70	1.00	1.00
43	0.74	.98	.70	1.00	1.00
44	0.74	.96	.70	1.00	1.00
45	0.74	.94	.70	1.00	1.00
46	0.74	.92	.70	1.00	1.00
47	0.74	.90	.70	.99	.90
48	0.74	.90	.70	.99	.90
49	0.74	.90	.70	.99	.90
50	0.74	.90	.70	.99	.90
51	0.73	.80	.70	.97	.90
52	0.72	.80	.70	.95	.90
53	0.70	.80	.70	.93	.90
54	0.68	.80	.70	.91	.90
55	0.66	.80	.70	.89	.90
56	0.64	.70	.70	.85	.90
57	0.62	.60	.70	.80	.90
58	0.60	.50	.70	.75	.90
59	0.60	.40	.70	.65	.90
60	0.60	.40	.70	.55	.90
61	0.60	.40	.70	.50	.90
62	0.60	.40	.70	.50	.90
63	0.60	.40	.70	.50	.90
64	0.60	.40	.70	.50	.90
65	0.62	.40	.70	.50	.90

**2.4.4. Valuation of Pensions**

The following assumptions were made in the valuation of pensions in payment at the valuation date and pensions assumed to be elected in the future by contributors at the valuation date:

### Commutation of Pension Benefits

The proportion of retirement pensions assumed to be commuted at commencement is 5%.

The proportion of breakdown pensions assumed to be commuted on attainment of age 55 or later commencement is 12%.

Proportions of spouse/reversionary pension commuted on attainment of age 55 or later commencement:

Age	Widow	Widower
55	0.1300	0.2000
56	0.3501	0.5584
57	0.3618	0.5680
58	0.3735	0.5728
59	0.3852	0.5776
60	0.7500	0.5824
61	0.4500	0.5872
62	0.3000	0.5878
63	0.3000	0.5884
64	0.3000	0.5842
65	0.3000	0.5800
66	0.4000	0.5758
67	0.4000	0.5716
68	0.4000	0.5674
69	0.4000	0.5632
70	0.4000	0.5590
71	0.4500	0.5548
72	0.5000	0.5453
73	0.5500	0.5356
74	0.6000	0.5259
75	0.6000	0.5000
76	0.6000	0.5000
77	0.6000	0.5000
78	0.6000	0.5000
79	0.6000	0.5000
80	0.6000	0.5000
81	0.6000	0.5000
82	0.6000	0.5000
83	0.6000	0.5000
84	0.6000	0.5000
85	0.6000	0.5000
86	0.6000	0.5000

Age	Widow	Widower
87	0.6000	0.5000
88	0.6000	0.5000
89	0.6000	0.5000
90	0.6000	0.5000

### 2.4.5. Age of Spouse (reversionary pensions)

When the spouse's date of birth was not provided in the data, the following assumptions were made:

Male pensioner: 4 years older than wife  
 Female pensioner: 2 years younger than husband

### 2.4.6. Children's Pensions

No allowance has been made for new children's pensions.

### 2.4.7. Deferred Pensions

Deferred pensions including CPI increases on the P2 component, are assumed to commence at age 60, when they are valued as normal male retirement pensioners. No exits are assumed in the deferral period.

### 2.4.8. Assumptions for Pensioners

#### Pensioner Mortality Rates

Age	Retirement & Spouse Pensioners		Invalidity Pensioners	
	Males	Females	Males	Females
25	0.0004	0.0004	0.0020	0.0012
26	0.0004	0.0004	0.0020	0.0012
27	0.0004	0.0004	0.0020	0.0012
28	0.0004	0.0004	0.0020	0.0012
29	0.0004	0.0004	0.0020	0.0012
30	0.0004	0.0004	0.0020	0.0012
31	0.0004	0.0004	0.0020	0.0012
32	0.0004	0.0005	0.0020	0.0012
33	0.0004	0.0005	0.0020	0.0012
34	0.0004	0.0005	0.0019	0.0012
35	0.0004	0.0006	0.0019	0.0012
36	0.0004	0.0006	0.0019	0.0012
37	0.0005	0.0006	0.0023	0.0012
38	0.0005	0.0007	0.0023	0.0012
39	0.0005	0.0007	0.0023	0.0012
40	0.0005	0.0007	0.0016	0.0012

Age	Retirement & Spouse Pensioners		Invalidity Pensioners	
	Males	Females	Males	Females
41	0.0005	0.0008	0.0017	0.0013
42	0.0006	0.0008	0.0018	0.0014
43	0.0006	0.0009	0.0019	0.0016
44	0.0006	0.0010	0.0021	0.0017
45	0.0006	0.0011	0.0022	0.0018
46	0.0006	0.0012	0.0024	0.0019
47	0.0007	0.0012	0.0025	0.0020
48	0.0007	0.0012	0.0027	0.0021
49	0.0008	0.0012	0.0030	0.0021
50	0.0008	0.0012	0.0032	0.0022
51	0.0013	0.0012	0.0038	0.0023
52	0.0014	0.0012	0.0041	0.0025
53	0.0015	0.0012	0.0044	0.0026
54	0.0016	0.0012	0.0049	0.0027
55	0.0019	0.0013	0.0068	0.0029
56	0.0021	0.0014	0.0076	0.0031
57	0.0023	0.0015	0.0085	0.0034
58	0.0026	0.0015	0.0090	0.0036
59	0.0028	0.0016	0.0087	0.0039
60	0.0028	0.0017	0.0081	0.0042
61	0.0031	0.0018	0.0082	0.0045
62	0.0033	0.0020	0.0080	0.0052
63	0.0036	0.0021	0.0088	0.0060
64	0.0040	0.0030	0.0098	0.0067
65	0.0046	0.0037	0.0136	0.0075
66	0.0053	0.0045	0.0151	0.0083
67	0.0060	0.0049	0.0170	0.0091
68	0.0069	0.0053	0.0192	0.0099
69	0.0078	0.0058	0.0221	0.0107
70	0.0089	0.0060	0.0230	0.0116
71	0.0098	0.0068	0.0268	0.0127
72	0.0109	0.0079	0.0312	0.0143
73	0.0121	0.0097	0.0362	0.0167
74	0.0135	0.0109	0.0418	0.0204
75	0.0153	0.0119	0.0436	0.0258
76	0.0180	0.0138	0.0474	0.0300
77	0.0210	0.0159	0.0511	0.0339
78	0.0251	0.0183	0.0547	0.0392



Age	Retirement & Spouse Pensioners		Invalidity Pensioners	
	Males	Females	Males	Females
79	0.0299	0.0211	0.0583	0.0452
80	0.0362	0.0246	0.0596	0.0506
81	0.0455	0.0317	0.0632	0.0591
82	0.0540	0.0406	0.0682	0.0713
83	0.0609	0.0481	0.0696	0.0813
84	0.0690	0.0523	0.0780	0.0906
85	0.0782	0.0594	0.0881	0.0981
86	0.0887	0.0666	0.1004	0.1041
87	0.1006	0.0738	0.1138	0.1083
88	0.1138	0.0812	0.1287	0.1109
89	0.1283	0.0945	0.1418	0.1117
90	0.1403	0.1044	0.1517	0.1225
91	0.1570	0.1164	0.1612	0.1352
92	0.1749	0.1335	0.1702	0.1508
93	0.1941	0.1670	0.1784	0.1729
94	0.2147	0.2192	0.1973	0.1966
95	0.2420	0.2420	0.2032	0.2193
96	0.2528	0.2648	0.2111	0.2421
97	0.2657	0.2828	0.2206	0.2649
98	0.2806	0.3009	0.2315	0.2829
99	0.2995	0.3159	0.2456	0.3010
100	0.3302	0.3308	0.2691	0.3160
101	0.3728	0.3456	0.2983	0.3309
102	0.3999	0.3602	0.3179	0.3457
103	0.4272	0.3748	0.3375	0.3604
104	0.4431	0.3892	0.3545	0.3749
105	0.4548	0.3894	0.4548	0.3894
106	0.4665	0.4037	0.4665	0.4037
107	0.4782	0.4178	0.4782	0.4178
108	0.4897	0.4318	0.4897	0.4318
109	0.5012	0.4456	0.5012	0.4456
110	1.0000	1.0000	1.0000	1.0000

For invalidity pensioners select mortality is assumed for the first year after breakdown. A rate of 0.05 is assumed for ages up to 39 with 0.025 for ages after that, for both males and females.

Pensioner mortality rates above are those assumed to apply for the year 2011/12. Mortality rates for subsequent years are reduced according to assumed rates of future improvement.

### Pensioner Mortality Improvement Rates

For normal and spouse pensioners future improvements in mortality rates per annum are assumed as follows:

Age	Mortality Improvement rates-			
	(for years 2011-2018)		(for years post 2018)	
	Males	Females	Males	Females
25	0.02234	0.01801	0.01672	0.02627
26	0.02032	0.01690	0.01683	0.02605
27	0.01784	0.01576	0.01678	0.02619
28	0.01580	0.01458	0.01688	0.02603
29	0.01331	0.01337	0.01674	0.02603
30	0.01123	0.01247	0.01684	0.02580
31	0.00969	0.01168	0.01692	0.02545
32	0.00849	0.01190	0.01695	0.02531
33	0.00758	0.01187	0.01693	0.02501
34	0.00799	0.01244	0.01707	0.02472
35	0.00860	0.01273	0.01717	0.02425
36	0.00962	0.01347	0.01720	0.02386
37	0.01071	0.01436	0.01721	0.02336
38	0.01235	0.01550	0.01726	0.02286
39	0.01390	0.01627	0.01729	0.02232
40	0.01545	0.01674	0.01713	0.02171
41	0.01726	0.01771	0.01705	0.02113
42	0.01892	0.01837	0.01693	0.02054
43	0.02058	0.01900	0.01687	0.01986
44	0.02196	0.01960	0.01670	0.01913
45	0.02353	0.02029	0.01656	0.01856
46	0.02470	0.02074	0.01629	0.01794
47	0.02593	0.02133	0.01608	0.01741
48	0.02691	0.02196	0.01574	0.01696
49	0.02790	0.02243	0.01544	0.01652
50	0.02880	0.02293	0.01515	0.01618
51	0.02961	0.02340	0.01481	0.01586
52	0.03034	0.02373	0.01450	0.01564
53	0.03099	0.02402	0.01425	0.01547
54	0.03156	0.02428	0.01399	0.01542
55	0.03205	0.02450	0.01377	0.01535
56	0.03247	0.02470	0.01358	0.01521
57	0.03280	0.02486	0.01339	0.01502
58	0.03307	0.02499	0.01319	0.01490

Age	Mortality Improvement rates-			
	(for years 2011-2018)		(for years post 2018)	
	Males	Females	Males	Females
59	0.03325	0.02510	0.01295	0.01479
60	0.03337	0.02518	0.01268	0.01472
61	0.03341	0.02524	0.01242	0.01468
62	0.03339	0.02527	0.01217	0.01467
63	0.03329	0.02527	0.01193	0.01469
64	0.03313	0.02524	0.01175	0.01472
65	0.03290	0.02519	0.01161	0.01474
66	0.03261	0.02512	0.01156	0.01472
67	0.03225	0.02501	0.01153	0.01466
68	0.03184	0.02488	0.01153	0.01457
69	0.03136	0.02472	0.01156	0.01450
70	0.03082	0.02452	0.01159	0.01444
71	0.03022	0.02430	0.01162	0.01438
72	0.02957	0.02404	0.01155	0.01428
73	0.02886	0.02374	0.01132	0.01412
74	0.02810	0.02340	0.01098	0.01388
75	0.02729	0.02302	0.01060	0.01358
76	0.02637	0.02259	0.01021	0.01322
77	0.02530	0.02212	0.00983	0.01279
78	0.02424	0.02181	0.00946	0.01232
79	0.02317	0.02132	0.00908	0.01179
80	0.02207	0.02072	0.00870	0.01124
81	0.02092	0.01998	0.00830	0.01065
82	0.01975	0.01915	0.00793	0.01006
83	0.01854	0.01824	0.00758	0.00946
84	0.01730	0.01725	0.00722	0.00890
85	0.01605	0.01618	0.00685	0.00839
86	0.01481	0.01506	0.00647	0.00792
87	0.01358	0.01389	0.00611	0.00747
88	0.01247	0.01269	0.00579	0.00701
89	0.01149	0.01148	0.00552	0.00655
90	0.01067	0.01035	0.00526	0.00613
91	0.01000	0.00932	0.00499	0.00577
92	0.00946	0.00845	0.00472	0.00541
93	0.00892	0.00773	0.00446	0.00505
94	0.00838	0.00716	0.00419	0.00469
95	0.00784	0.00675	0.00393	0.00433

Age	Mortality Improvement rates-			
	(for years 2011-2018)		(for years post 2018)	
	Males	Females	Males	Females
96	0.00730	0.00633	0.00366	0.00397
97	0.00676	0.00592	0.00340	0.00361
98	0.00622	0.00551	0.00313	0.00324
99	0.00568	0.00510	0.00287	0.00288
100	0.00514	0.00469	0.00260	0.00252
101	0.00460	0.00427	0.00233	0.00216
102	0.00406	0.00386	0.00207	0.00180
103	0.00352	0.00345	0.00180	0.00144
104	0.00298	0.00304	0.00154	0.00108

**Pensioner Proportions with Eligible Spouse Surviving at Death**

Age	Males		Females	
	Normal	Breakdown	Normal	Breakdown
26	0.40	0.28	0.78	0.52
27	0.46	0.30	0.81	0.54
28	0.52	0.35	0.84	0.56
29	0.57	0.37	0.87	0.58
30	0.62	0.41	0.90	0.58
31	0.66	0.44	0.93	0.59
32	0.70	0.48	0.96	0.60
33	0.73	0.52	0.99	0.61
34	0.76	0.55	1.00	0.62
35	0.78	0.58	1.00	0.63
36	0.80	0.62	1.00	0.64
37	0.82	0.65	1.00	0.65
38	0.84	0.67	1.00	0.66
39	0.86	0.71	1.00	0.67
40	0.87	0.73	1.00	0.68
41	0.88	0.77	1.00	0.68
42	0.89	0.79	1.00	0.68
43	0.90	0.82	1.00	0.68
44	0.90	0.86	1.00	0.68
45	0.90	0.91	1.00	0.68
46	0.90	0.95	1.00	0.65
47	0.90	1.00	1.00	0.55
48	0.90	1.00	1.00	0.45
49	0.90	0.94	1.00	0.35
50	0.88	0.79	1.00	0.25
51	0.88	0.65	1.00	0.25
52	0.88	0.65	1.00	0.25
53	0.86	0.50	1.00	0.25
54	0.86	0.50	1.00	0.25
55	0.86	0.50	0.81	0.25
56	0.82	0.58	0.75	0.20
57	0.79	0.58	0.66	0.20
58	0.79	0.60	0.63	0.20
59	0.79	0.60	0.60	0.20
60	0.79	0.65	0.60	0.20
61	0.79	0.65	0.60	0.20
62	0.79	0.65	0.60	0.20
63	0.79	0.65	0.60	0.20

Age	Males		Females	
	Normal	Breakdown	Normal	Breakdown
64	0.79	0.65	0.60	0.20
65	0.79	0.65	0.54	0.20
66	0.78	0.65	0.48	0.45
67	0.77	0.65	0.48	0.45
68	0.74	0.65	0.42	0.45
69	0.71	0.65	0.42	0.45
70	0.71	0.65	0.42	0.35
71	0.70	0.65	0.36	0.35
72	0.69	0.58	0.36	0.35
73	0.68	0.58	0.36	0.35
74	0.68	0.58	0.30	0.35
75	0.67	0.58	0.30	0.35
76	0.67	0.58	0.20	0.23
77	0.64	0.50	0.20	0.23
78	0.64	0.50	0.20	0.23
79	0.63	0.50	0.20	0.23
80	0.62	0.50	0.20	0.23
81	0.61	0.50	0.20	0.12
82	0.59	0.50	0.20	0.12
83	0.55	0.50	0.15	0.03
84	0.54	0.50	0.13	0.03
85	0.51	0.43	0.13	0.03
86	0.46	0.43	0.13	0.03
87	0.44	0.43	0.13	0.03
88	0.41	0.43	0.08	0.03
89	0.38	0.43	0.08	0.03
90	0.36	0.43	0.08	0.00
91	0.33	0.34	0.05	0.00
92	0.31	0.34	0.05	0.00
93	0.28	0.34	0.05	0.00
94	0.24	0.26	0.05	0.00
95	0.15	0.26	0.05	0.00
96	0.14	0.26	0.05	0.00
97	0.12	0.17	0.05	0.00
98	0.11	0.17	0.05	0.00
99	0.08	0.13	0.05	0.00
100	0.06	0.10	0.05	0.00
101	0.05	0.09	0.05	0.00
102	0.02	0.07	0.03	0.00
103	0.00	0.05	0.00	0.00

Age	Males		Females	
	Normal	Breakdown	Normal	Breakdown
104	0.00	0.04	0.00	0.00
105	0.00	0.01	0.00	0.00
106	0.00	0.01	0.00	0.00
107	0.00	0.00	0.00	0.00
108	0.00	0.00	0.00	0.00
109	0.00	0.00	0.00	0.00

## **2.5. Demographic & Other Assumptions – PSS**

### **2.5.1. Expenses**

Expenses are assumed to amount to 1% of benefit payments plus 1% of member contributions.

### **2.5.2. Tax**

Benefits are reduced to offset tax on employer contributions. The assumed rate of tax is 15%.

All benefits have been valued gross of surcharge. Where there is a surcharge debt in respect of an individual, this is assumed recoverable from the benefit payment.

### **2.5.3. Tables of assumptions for Contributors**

The following tables show in full the assumed rates of mortality, disablement, retirement and promotional salary increases, as well as assumed rates of resignation taking a cash benefit or electing to preserve the benefit. Expenses.



**Male Contributors**

Age nearest birthday	Number of members expected in any one year, out of 10,000 members at the age shown, to leave the fund as a result of:						
	Death		Disability Retirement		Preserv -ations	Resignation with cash Benefit	Age Retirement
	Not killed On duty	Killed On duty	Not hurt on duty	Hurt on duty			
41	5	2	35	585	5	25	0
42	5	2	43	636	5	15	0
43	6	2	50	675	5	5	0
44	6	2	62	680	5	5	0
45	6	2	76	686	5	5	0
46	7	2	77	711	5	10	0
47	7	2	82	711	5	11	0
48	8	2	95	745	4	16	0
49	9	2	111	814	4	16	0
50	9	2	151	884	4	21	0
51	10	1	159	914	4	27	0
52	11	1	176	929	3	29	0
53	12	1	201	1049	3	32	0
54	12	1	241	1139	3	32	0
55	14	1	286	1186	0	0	800
56	15	1	332	1208	0	0	100
57	16	1	382	1216	0	0	100
58	17	1	437	1216	0	0	400
59	19	1	493	1216	0	0	400
60	0	0	0	0	0	0	10000

**Female Contributors**

Age nearest birthday	Number of members expected in any one year, out of 10,000 members at the age shown, to leave the fund as a result of:						
	Death		Disability Retirement		Preserv -ations	Resignation with cash Benefit	Age Retirement
	Not killed On duty	Killed on duty	Not hurt on duty	Hurt on duty			
41	3	2	35	585	5	20	0
42	3	2	43	636	5	18	0
43	3	2	50	675	5	15	0
44	4	2	62	680	5	15	0
45	4	2	76	686	5	13	0
46	4	2	77	711	5	10	0
47	5	2	82	711	5	11	0
48	5	2	95	745	4	11	0
49	5	2	111	814	4	11	0
50	6	2	151	884	4	11	0
51	6	1	159	914	4	12	0
52	7	1	176	929	3	12	0
53	7	1	201	1049	3	12	0
54	8	1	241	1139	3	12	0
55	8	1	286	1186	0	0	800
56	9	1	332	1208	0	0	100
57	10	1	382	1216	0	0	100
58	11	1	437	1216	0	0	400
59	12	1	493	1216	0	0	400
60	0	0	-	-	0	0	10000

### 2.5.4. Contributor Proportions Married and Promotional Salary Scale

Age nearest birthday	Proportions Married		Additional promotional salary increase rate %
	Males	Females	
40	0.86	0.73	0.97
41	0.87	0.74	0.97
42	0.88	0.75	1.04
43	0.89	0.76	1.04
44	0.90	0.77	1.50
45	0.90	0.77	1.50
46	0.90	0.77	1.50
47	0.90	0.77	1.87
48	0.90	0.77	2.32
49	0.90	0.76	2.32
50	0.90	0.75	2.32
51	0.89	0.74	2.33
52	0.88	0.73	1.72
53	0.87	0.72	1.72
54	0.86	0.70	1.72
55	0.85	0.68	1.72
56	0.84	0.66	1.72
57	0.84	0.64	0.78
58	0.83	0.62	0.78
59	0.83	0.60	0.78
60	0.82	0.58	-

## 2.5.5. Valuation of Pensions

The following assumptions were made in the valuation of pensions in payment at the valuation date and pensions assumed to be elected in the future by contributors at the valuation date:

### Mortality

Retired contributors,  
Widows/widowers of former  
pensioners or contributors, and  
wives/husbands of current  
pensioners

The same rates as assumed for male  
SASS retirement pensioners and for  
female SSS pensioners.

Male and Female invalidity (hurt  
on duty) pensioners:

A proportion of the rates assumed for SSS  
disability pensioners where the proportion  
ranges from 40% at ages up to 50,  
increasing to 100% at ages 60-70, then  
reducing to 66.7% at ages over 80, with a  
minimum of the retirement pensioner rate  
at the given age.

Male and Female invalidity (not  
hurt on duty) pensioners:

A proportion of the rates assumed for SSS  
disability pensioners where the proportion  
ranges from 100% at ages up to 70,  
reducing to 66.7% at ages over 80, with a  
minimum of the retirement pensioner rate  
at the given age.

### Age of Spouse (spouse pensions and reversionary pensions)

When the spouse's date of birth is not provided in the data, the following assumptions were made:

Male pensioner or contributor:	3 years older than wife
Female pensioner or contributor:	2 years younger than husband

## 2.5.6. Proportions Married at Death

For reversionary pensions on current and future pensions, the proportions married at death were assumed to be the same as for the State Superannuation Scheme.

## 2.5.7. Proportions choosing Pension Benefits

Retiring members may elect to receive benefits as a pension or a lump sum.

Based on past experience it was assumed that 55% of retiring members would elect pensions, with the remainder choosing a lump sum.

The proportion of disability pensions assumed to be commuted on attainment of age 60 is 5%.

## 2.5.8. Pensioner Mortality Rates

Age	Retirement Pensioners and Spouses and Widows		Hurt on duty Pensioners		Invalidity Pensioners	
	Males	Females	Males	Females	Males	Females
25	0.0004	0.0004	0.0008	0.0026	0.0019	0.0026
26	0.0004	0.0004	0.0008	0.0026	0.0019	0.0026
27	0.0004	0.0004	0.0008	0.0026	0.0019	0.0026
28	0.0004	0.0004	0.0008	0.0026	0.0019	0.0026
29	0.0004	0.0004	0.0008	0.0026	0.0019	0.0026
30	0.0004	0.0004	0.0008	0.0026	0.0020	0.0026
31	0.0004	0.0004	0.0008	0.0026	0.0020	0.0026
32	0.0004	0.0005	0.0008	0.0033	0.0020	0.0033
33	0.0004	0.0005	0.0008	0.0032	0.0020	0.0032
34	0.0004	0.0005	0.0008	0.0032	0.0019	0.0032
35	0.0004	0.0006	0.0008	0.0039	0.0019	0.0039
36	0.0004	0.0006	0.0008	0.0039	0.0019	0.0039
37	0.0005	0.0006	0.0010	0.0039	0.0023	0.0039
38	0.0005	0.0007	0.0010	0.0041	0.0023	0.0041
39	0.0005	0.0007	0.0009	0.0044	0.0023	0.0044
40	0.0005	0.0007	0.0009	0.0046	0.0023	0.0046
41	0.0005	0.0008	0.0009	0.0048	0.0022	0.0048
42	0.0006	0.0008	0.0011	0.0048	0.0027	0.0048
43	0.0006	0.0009	0.0011	0.0048	0.0027	0.0048
44	0.0006	0.0010	0.0011	0.0049	0.0027	0.0049
45	0.0006	0.0011	0.0012	0.0053	0.0031	0.0053
46	0.0006	0.0012	0.0012	0.0058	0.0030	0.0058
47	0.0007	0.0012	0.0014	0.0061	0.0034	0.0061
48	0.0007	0.0012	0.0013	0.0061	0.0034	0.0061
49	0.0008	0.0012	0.0015	0.0061	0.0039	0.0061
50	0.0008	0.0012	0.0022	0.0061	0.0042	0.0061
51	0.0013	0.0012	0.0021	0.0061	0.0042	0.0061
52	0.0014	0.0012	0.0024	0.0061	0.0046	0.0061
53	0.0015	0.0012	0.0025	0.0062	0.0051	0.0062
54	0.0016	0.0012	0.0028	0.0062	0.0054	0.0062
55	0.0019	0.0013	0.0032	0.0062	0.0064	0.0062
56	0.0021	0.0014	0.0037	0.0066	0.0064	0.0066
57	0.0023	0.0015	0.0040	0.0070	0.0064	0.0070
58	0.0026	0.0015	0.0047	0.0072	0.0065	0.0072
59	0.0028	0.0016	0.0053	0.0074	0.0066	0.0074
60	0.0028	0.0017	0.0059	0.0075	0.0066	0.0075
61	0.0031	0.0018	0.0066	0.0076	0.0066	0.0076

Age	Retirement Pensioners and Spouses and Widows		Hurt on duty Pensioners		Invalidity Pensioners	
	Males	Females	Males	Females	Males	Females
62	0.0033	0.0020	0.0072	0.0077	0.0065	0.0077
63	0.0036	0.0021	0.0080	0.0079	0.0064	0.0079
64	0.0040	0.0030	0.0090	0.0084	0.0071	0.0084
65	0.0046	0.0037	0.0096	0.0088	0.0082	0.0088
66	0.0053	0.0045	0.0101	0.0102	0.0093	0.0102
67	0.0060	0.0049	0.0105	0.0116	0.0105	0.0116
68	0.0069	0.0053	0.0116	0.0126	0.0120	0.0126
69	0.0078	0.0058	0.0129	0.0130	0.0136	0.0130
70	0.0089	0.0060	0.0137	0.0140	0.0157	0.0140
71	0.0098	0.0068	0.0146	0.0150	0.0183	0.0150
72	0.0109	0.0079	0.0162	0.0162	0.0216	0.0162
73	0.0121	0.0097	0.0191	0.0173	0.0255	0.0173
74	0.0135	0.0109	0.0226	0.0191	0.0301	0.0191
75	0.0153	0.0119	0.0267	0.0216	0.0355	0.0216
76	0.0180	0.0138	0.0313	0.0252	0.0410	0.0252
77	0.0210	0.0159	0.0365	0.0301	0.0465	0.0301
78	0.0251	0.0183	0.0422	0.0359	0.0520	0.0359
79	0.0299	0.0211	0.0488	0.0425	0.0567	0.0425
80	0.0362	0.0246	0.0559	0.0493	0.0605	0.0493
81	0.0455	0.0317	0.0597	0.0560	0.0644	0.0560
82	0.0540	0.0406	0.0635	0.0629	0.0683	0.0629
83	0.0609	0.0481	0.0681	0.0699	0.0732	0.0699
84	0.0690	0.0523	0.0774	0.0769	0.0801	0.0769
85	0.0782	0.0594	0.0906	0.0839	0.0906	0.0839
86	0.0887	0.0666	0.1064	0.0910	0.1064	0.0910
87	0.1006	0.0738	0.1244	0.0981	0.1244	0.0981
88	0.1138	0.0812	0.1436	0.1054	0.1436	0.1054
89	0.1283	0.0945	0.1634	0.1134	0.1634	0.1134
90	0.1403	0.1044	0.1832	0.1301	0.1832	0.1301
91	0.1570	0.1164	0.2026	0.1477	0.2026	0.1477
92	0.1749	0.1335	0.2211	0.1665	0.2211	0.1665
93	0.1941	0.1670	0.2377	0.1861	0.2377	0.1861
94	0.2147	0.2192	0.2525	0.2068	0.2525	0.2068
95	0.2420	0.2420	0.2654	0.2284	0.2654	0.2284
96	0.2528	0.2648	0.2766	0.2512	0.2766	0.2512
97	0.2657	0.2828	0.2861	0.2750	0.2861	0.2750
98	0.2806	0.3009	0.2957	0.2988	0.2957	0.2988
99	0.2995	0.3159	0.3118	0.3232	0.3118	0.3232

Age	Retirement Pensioners and Spouses and Widows		Hurt on duty Pensioners		Invalidity Pensioners	
	Males	Females	Males	Females	Males	Females
100	0.3302	0.3308	0.3331	0.3479	0.3331	0.3479
101	0.3728	0.3456	0.3551	0.3732	0.3551	0.3732
102	0.3999	0.3602	0.3781	0.3976	0.3781	0.3976
103	0.4272	0.3748	0.4022	0.4203	0.4022	0.4203
104	0.4431	0.3892	0.4270	0.4412	0.4270	0.4412
105	0.4548	0.3894	0.4610	0.4662	0.4610	0.4662
106	0.4665	0.4037	0.4866	0.4815	0.4866	0.4815
107	0.4782	0.4178	0.5130	0.4948	0.5130	0.4948
108	0.4897	0.4318	0.5402	0.5061	0.5402	0.5061
109	0.5012	0.4456	0.5696	0.5154	0.5696	0.5154
110	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

For retirement and spouse pensioners mortality rates as above apply for the year 2011/12. For subsequent years, rates are reduced to reflect future improvements in mortality as for SSS (see section 2.4.8).

## 3

## Summary of Financial Data

### 3.1. Total Pooled Fund

The table below summarises the total income and expenditure of the Pooled Fund during the intervalation period. The data has been taken from the audited annual reports of the Trustee for 2009/10, 2010/11 and 2011/12.

Financial Year ending 30th June	2010 \$m	2011 \$m	2012 \$m	3 years to 2012 \$m
<b>Reserves at beginning</b>	<b>28,847.7</b>	<b>30,743.2</b>	<b>32,179.4</b>	<b>28,847.7</b>
<b>Income</b>				
Contributions				
➤ Employer	1,733.6	1,494.7	6,144.9	9,373.2
➤ Salary sacrifice	307.0	312.4	317.2	936.6
➤ Employee	233.1	210.0	186.3	629.4
Investment income	3,168.0	3,011.2	48.4	6,227.6
Miscellaneous	2.8	2.0	5.0	9.8
Net Transfers	-0.3	2.3	1.1	3.1
<b>Total income</b>	<b>5,444.20</b>	<b>5,032.60</b>	<b>6,702.90</b>	<b>17,179.7</b>
<b>Expenditure</b>				
Total benefits	3,258.2	3,384.1	3,689.2	10,331.5
Expenses of management	33.1	32.6	35.3	101.0
Investment Expenses	90.4	86.4	85.8	262.6
Tax	174.0	99.2	727.0	1000.2
Superannuation Contributions				
Surcharge	-7.0	-5.9	-6.9	-19.8
<b>Total expenditure</b>	<b>3,548.7</b>	<b>3,596.40</b>	<b>4,530.40</b>	<b>11,675.5</b>
<b>Reserves at 30 June</b>	<b>30,743.2</b>	<b>32,179.4</b>	<b>34,351.9</b>	<b>34,351.9</b>



### 3.2. SASS

Consolidated Revenue Account for SASS for the period 1 July 2006 to 30 June 2009

	Period ended			3 years to 2012 \$m
	30 June 2010 \$m	30 June 2011 \$m	30 June 2012 \$m	
Reserves at 1 July	7,853.7	8,558.5	9,101.5	7,853.7
Net Transfers*	-0.3	2.0	0.7	2.4
Internal transfers*	0.0	-1.5	163.7	162.3
<b>Income</b>				
Contributions				
Employer	837.6	553.0	1,860.3	3,250.9
Salary sacrifice	123.1	129.6	143.5	396.2
Employee	112.6	99.7	94.1	306.4
Investment income*	657.5	720.7	13.7	1,391.9
Miscellaneous*	0.8	0.6	1.4	2.7
<b>Total income</b>	<b>1,731.6</b>	<b>1,503.5</b>	<b>2,113.0</b>	<b>5,348.1</b>
<b>Expenditure</b>				
Total benefits	915.7	891.8	992.3	2,799.8
Expenses of management*	9.3	8.6	9.5	27.4
Investment expenses*	24.6	24.1	24.3	72.9
Tax*	80.3	38.8	227.2	346.3
Superannuation				
Contributions Surcharge*	-3.4	-2.2	-2.1	-7.7
<b>Total expenditure</b>	<b>1,026.5</b>	<b>961.1</b>	<b>1,251.2</b>	<b>3,238.8</b>
<b>Reserves at 30 June</b>	<b>8,558.5</b>	<b>9,101.5</b>	<b>10,127.7</b>	<b>10,127.7</b>

Note: We have not been provided with a split of tax, expenses or some of the transfers between the schemes in the Pooled Fund. The items marked \* above are estimated allocations amongst the various items over the total three years in the investigation period.

#### 3.2.1. Reserve Allocations

The total reserves are allocated between Employer reserves, Member reserves, Death and Invalidity reserve and Deferred Benefits reserves as below:

	\$m
Employer reserves	4,549.2
Member reserves	4,235.0
D or I reserves	1.4
Deferred members reserves	1,342.1
<b>Total</b>	<b>10,127.7</b>

### 3.2.2. Employer Reserve Allocations

The total employer reserves are allocated between individual Employers' reserves:

	<b>Individual employer results \$m</b>	<b>Total \$m</b>
Total Employers' reserve from accounts		4,549.2
Adjustment		1.0
Employers' reserve from sum of adjusted individual allocations	4,550.2	4,550.2

Notes:

- (a) Actual investment return for June 2012 at 0.3778% is included in the accounts, whereas the individual employer reserves contained an estimated return of 0.0283%. Individual employer reserves have been adjusted to take this into account.
- (b) Significant tax allocations were made to the employer reserve after provision of the individual employer reserve balances. We have been advised of the amount of the adjustment and that the bulk of this is due to Crown contributions. For purposes of this investigation, the full SASS tax allocation has been deducted from the Crown employer reserve.
- (c) The remaining adjustment of \$1 million is a balancing item between the general ledger and the individual employer reserves. A difference between individual employer reserve balances and the accounts at the end of the year is usual and is due mainly to:
  - Extra surplus/deficit allocated to employer reserves for annual accounts reporting purposes and
  - Actual tax for the year is included in the accounts but only an estimate in the individual employer reserves.

### 3.3. SANCS

#### 3.3.1. Consolidated Revenue Account for SANCS for the period 1 July 2009 to 30 June 2012

	Period ended			3 years to 2012 \$m
	30 June 2010 \$m	30 June 2011 \$m	30 June 2012 \$m	
Reserves at 1 July	1,030.0	1,246.1	1,274.3	1,030.0
Net Transfers*	0.0	0.3	0.1	0.4
Internal transfers*	0.0	-0.2	-13.0	-13.2
<b>Income</b>				
Contributions				
Employer	413.0	194.8	791.0	1,398.8
Employee	7.3	3.6	2.2	13.1
Investment income*	73.9	104.3	1.9	180.1
Miscellaneous*	0.1	0.1	0.2	0.4
<b>Total income</b>	<b>494.3</b>	<b>302.8</b>	<b>795.3</b>	<b>1,592.4</b>
<b>Expenditure</b>				
Total benefits	243.6	262.6	294.6	800.8
Expenses of management*	2.5	2.5	2.8	7.8
Investment expenses*	3.2	3.5	3.4	10.1
Tax*	30.5	6.8	87.5	124.8
Superannuation				
Contributions Surcharge*	-1.7	-0.8	-0.9	-3.3
<b>Total expenditure</b>	<b>278.1</b>	<b>274.7</b>	<b>387.4</b>	<b>940.2</b>
<b>Reserves at 30 June</b>	<b>1,246.1</b>	<b>1,274.3</b>	<b>1,669.3</b>	<b>1,669.3</b>

Note: We have not been provided with a split of tax, expenses or some of the transfers between the schemes in the Pooled Fund. The items marked \* above are estimated allocations amongst the various items over the total three years in the investigation period.

#### 3.3.2. Reserve Allocations

The total reserves are allocated between Employer reserves and Deferred Benefits reserves as below:

	\$m
Employer reserves	1,368.4
Deferred members reserves	300.9
<b>Total</b>	<b>1,669.3</b>

### 3.3.3. Employer Reserve Allocations

The total employer reserves are allocated between Parts using the individual employer reserve amounts:

	Individual data results \$m	Total \$m
Total Employers' reserve from accounts		1,368.4
Less sum of co-contributions from individual member data	44.8	44.8
Adjustment		49.7
Employers' reserve from sum of adjusted individual allocations	1,373.3	1,373.3

Notes:

- (a) Actual investment return for June 2012 at 0.3778% is included in the accounts, whereas the individual employer reserves contained an estimated return of 0.0283%. Individual employer reserves have been adjusted to take this into account.
- (b) Significant tax allocations were made to the employer reserve after provision of the individual employer reserve balances. We have been advised of the amount of the adjustment and that the bulk of this is due to Crown contributions. For purposes of this investigation, the full SANCS tax allocation has been deducted from the Crown employer reserve.
- (c) The remaining adjustment of \$4.9 million is a balancing item between the general ledger and the individual employer reserves. A difference between individual employer reserve balances and the accounts at the end of the year is usual and is due mainly to:
  - Extra surplus/deficit allocated to employer reserves for annual accounts reporting purposes and
  - Actual tax for the year is included in the accounts but only an estimate in the individual employer reserves.

### 3.4. SSS

#### 3.4.1. Consolidated Revenue Account for SSS for the period 1 July 2009 to 30 June 2012

	Period ended			3 years to 2012 \$m
	30 June 2010 \$m	30 June 2011 \$m	30 June 2012 \$m	
Reserves at 1 July	17,214.3	18,025.3	18,758.1	17,214.3
Net Transfers*	0.0	0.0	0.3	0.3
Internal transfers*	0.0	1.4	-175.6	-174.2
<b>Income</b>				
Contributions				
Employer	259.3	527.1	2,368.3	3,154.7
Salary sacrifice	175.9	174.9	166.2	517.0
Employee	106.5	100.9	84.8	292.2
Investment income*	2,092.1	1,861.6	28.2	3,982.0
Miscellaneous*	1.7	1.2	2.9	5.8
<b>Total income</b>	<b>2,635.5</b>	<b>2,665.7</b>	<b>2,650.4</b>	<b>7,951.6</b>
<b>Expenditure</b>				
Total benefits	1,708.7	1,823.5	1,970.0	5,502.2
Expenses of management*	17.4	17.6	18.8	53.8
Investment expenses*	53.9	50.7	50.0	154.6
Tax*	45.5	44.7	286.8	377.0
Superannuation				
Contributions Surcharge*	-1.0	-2.1	-2.7	-5.8
<b>Total expenditure</b>	<b>1,824.5</b>	<b>1,934.3</b>	<b>2,323.0</b>	<b>6,081.8</b>
<b>Reserves at 30 June</b>	<b>18,025.3</b>	<b>18,758.1</b>	<b>18,910.2</b>	<b>18,910.2</b>

Note: We have not been provided with a split of tax, expenses or some of the transfers between the schemes in the Pooled Fund. The items marked \* above are estimated allocations amongst the various items over the total three years in the investigation period.

#### 3.4.2. Reserve Allocations

The total reserves are allocated between Employer reserves and Member reserves as below:

	\$m
Employer reserves	15,909.5
Member reserves	3,000.7
<b>Total</b>	<b>18,910.2</b>
Member reserves adjustment	-33.7

Note: the member reserves adjustment represents the difference between the sum of the individual reserves and the total contributor reserve shown in the annual accounts.

### 3.4.3. Employer Reserve Allocations

	Individual employer results \$m	Total \$m
Total Employers' reserve from accounts		15,909.5
Adjustment		13.2
Employers' reserve from sum of adjusted individual allocations	15,922.7	15,922.7

Notes:

- (a) Actual investment return for June 2012 at 0.3778% is included in the accounts, whereas the individual employer reserves contained an estimated return of 0.0283%. Individual employer reserves have been adjusted to take this into account.
- (b) An additional contribution of \$800 million was made to the Crown SSS employer reserve around 30 June 2012 which was not included in the individual employer reserve. This has been included in the adjusted balance
- (c) Significant tax allocations were made to the employer reserve after provision of the individual employer reserve balances. We have been advised of the amount of the adjustment and that the bulk of this is due to Crown contributions. For purposes of this investigation, the full SSS tax allocation has been deducted from the Crown employer reserve.
- (d) The remaining adjustment of \$13.2 million is a balancing item between the general ledger and the individual employer reserves. A difference between individual employer reserve balances and the accounts at the end of the year is usual and is due mainly to:
  - Extra surplus/deficit allocated to employer reserves for annual accounts reporting purposes and
  - Actual tax for the year is included in the accounts but only an estimate in the individual employer reserves.

### 3.5. PSS

#### 3.5.1. Consolidated Revenue Account for PSS for the period 1 July 2009 to 30 June 2012

	Period ended			3 years to 2012
	30 June 2010	30 June 2011	30 June 2012	
	\$m	\$m	\$m	\$m
Reserves at 1 July	2,749.7	2,913.3	3,045.5	2,749.7
Net Transfers*	0.0	0.0	0.0	0.0
Internal transfers*	0.0	0.2	24.9	25.2
<b>Income</b>				
Contributions				
Employer	223.7	219.8	1,125.3	1,568.8
Salary sacrifice	8.0	7.9	7.5	23.4
Employee	6.7	5.8	5.2	17.7
Investment income*	344.5	324.6	4.6	673.7
Miscellaneous*	0.3	0.2	0.5	0.9
<b>Total income</b>	<b>583.2</b>	<b>558.3</b>	<b>1,143.1</b>	<b>2,284.5</b>
<b>Expenditure</b>				
Total benefits	390.2	406.2	432.3	1,228.7
Expenses of management*	4.0	3.9	4.1	12.0
Investment expenses*	8.6	8.2	8.1	24.9
Tax*	17.7	8.9	125.5	152.1
Superannuation				
Contributions Surcharge*	-0.9	-0.9	-1.3	-3.0
<b>Total expenditure</b>	<b>419.6</b>	<b>426.3</b>	<b>568.8</b>	<b>1,414.7</b>
<b>Reserves at 30 June</b>	<b>2,913.3</b>	<b>3,045.5</b>	<b>3,644.7</b>	<b>3,644.7</b>

Note: We have not been provided with a split of tax, expenses or some of the transfers between the schemes in the Pooled Fund. The items marked \* above are estimated allocations amongst the various items over the total three years in the investigation period.

#### 3.5.2. Reserve Allocations

The total reserves are allocated between Employer reserves and Member reserves as below:

	\$m
Employer reserves	3,349.1
Member reserves	295.6
<b>Total</b>	<b>3,644.7</b>
Member reserves adjustment	-30.7

Note: the member reserves adjustment represents the difference between the sum of the individual member reserves (plus investment return to 30 June 2012) and the total contributor reserve shown in the annual accounts.

### 3.5.3. Employer Reserve Allocations

	Individual employer results \$m	Total \$m
Total Employer's reserve from accounts		3,349.1
Adjustment		2.6
Employer's reserve from adjusted individual allocation		3,351.7

Notes:

- (a) Actual investment return for June 2012 at 0.3778% is included in the accounts, whereas the individual employer reserves contained an estimated return of 0.0283%. Individual employer reserves have been adjusted to take this into account.
- (b) Significant tax allocations were made to the employer reserve after provision of the individual employer reserve balances. For purposes of this investigation, the full PSS tax allocation has been deducted.
- (c) The remaining adjustment of \$2.6 million is a balancing item between the general ledger and the individual employer reserves. A difference between individual employer reserve balances and the accounts at the end of the year is usual and is due mainly to:
  - Extra surplus/deficit allocated to employer reserve for annual accounts reporting purposes and
  - Actual tax for the year is included in the accounts but only an estimate in the individual employer reserves.



# 4

## Summary and Analysis of Valuation Data

### 4.1. SASS

#### 4.1.1. Movement Summary - Contributors (1 July 2009 to 30 June 2012)

	Part 1 Employers		Part 3 Employers		Total
	Male	Female	Male	Female	
Contributors at 1 July 2009 (as per previous valuation report)	18,185	14,575	4,177	9,804	46,741
Late Movements and Corrections, Transfers, Reinstatements (Net)	-71	-101	-12	-9	-193
Exits					
-Deaths	71	39	20	27	157
-Total Disablements	211	62	21	16	310
-Partial Disablements	262	103	23	40	428
-Resignations	360	274	96	283	1,013
-Retirements	1,817	2,259	613	1,407	6,096
-Retrenchments	263	177	35	65	540
Total Exits	2,984	2,914	808	1,838	8,544
Contributors as at 30 June 2012 (In force at 30 June 2012 for valuation)	15,130	11,560	3,357	7,957	38,004

**4.1.2. Part 1 Employers - Contributors as at 30 June 2012**

<b>Age</b>	<b>Number of Contributors</b>	<b>Annual Salary Payable as at 31 December 2011 \$000</b>	<b>Members' Accumulated Contributions with Interest as at 30 June 2012 \$000</b>	<b>Members' Accumulated Benefit Points as at 30 June 2012</b>	<b>Average Employee Contribution rate at 30 June 2012 %</b>
<b>Males</b>					
36-40	306	27,453	24,249	32,906	5.76
41-45	2,164	201,848	198,400	245,113	6.30
46-50	3,079	279,130	322,186	421,701	6.38
51-55	3,911	348,292	478,460	608,549	6.56
56-60	3,482	305,108	479,057	589,797	6.67
61-65	1,864	156,555	273,883	326,292	6.86
66-70	324	26,455	46,771	54,599	7.22
<b>Totals</b>	<b>15,130</b>	<b>1,344,841</b>	<b>1,823,006</b>	<b>2,278,957</b>	<b>6.54</b>
<b>Females</b>					
36-40	141	10,961	7,415	10,750	5.05
41-45	1,526	131,871	98,746	122,953	5.51
46-50	2,066	182,514	173,865	203,909	6.57
51-55	2,454	218,204	250,296	288,335	7.43
56-60	2,951	248,706	321,805	382,746	7.64
61-65	1,968	152,002	214,420	271,407	7.64
66-70	454	31,929	48,595	65,027	7.66
<b>Totals</b>	<b>11,560</b>	<b>976,187</b>	<b>1,115,142</b>	<b>1,345,127</b>	<b>7.08</b>

**4.1.3. Part 3 Employers - Contributors as at 30 June 2012**

Age	Number of Contributors	Annual Salary Payable as at 31 December 2011 \$000	Members' Accumulated Contributions with Interest as at 30 June 2012 \$000	Members' Accumulated Benefit Points as at 30 June 2012	Average Employee Contribution rate at 30 June 2012 %
<b>Males</b>					
36-40	10	642	571	898	5.84
41-45	195	15,815	16,149	21,041	6.45
46-50	439	35,430	42,825	52,713	7.05
51-55	963	89,949	130,409	134,663	7.43
56-60	1,005	98,976	163,782	153,759	7.71
61-65	616	64,464	115,658	97,217	7.34
66-70	129	16,991	32,052	21,597	6.80
Totals	3,357	322,267	501,446	481,888	7.37
<b>Females</b>					
36-40	24	1,592	1,000	1,622	5.02
41-45	526	42,018	30,169	39,304	5.46
46-50	1,097	88,572	82,731	100,992	6.53
51-55	2,160	177,083	208,205	237,816	7.33
56-60	2,312	191,583	263,559	293,542	7.89
61-65	1,519	118,286	182,348	207,524	7.78
66-70	319	25,566	42,677	46,415	7.85
Totals	7,957	644,700	810,689	927,215	7.36

**4.1.4. All Employers - Contributors as at 30 June 2012**

Number of Contributors	Annual Salary Payable as at 31 December 2011 \$000	Members' Accumulated Contributions with Interest as at 30 June 2012 \$000	Members' Accumulated Benefit Points as at 30 June 2012
38,004	3,287,995	4,250,283	5,033,187

#### 4.1.5. Movement Summary – Deferred Membership (1 July 2009 to 30 June 2012)

	Part 1 Employers		Part 3 Employers		Total
	Male	Female	Male	Female	
Contributors at 1 July 2009 (as per previous valuation report)	3,653	3,139	1,028	3,351	11,171
Late Movements and Corrections, Transfers, Reinstatements (Net)	-319	-83	366	140	104
Members at 1 July 2009	3,334	3,056	1,394	3,491	11,275
New Entrants	509	417	117	317	1,360
Exits					
-Retirement	354	375	156	395	1,280
-Transfer	0	0	0	0	0
-Death	14	12	5	11	42
-SIS invalidity	155	154	47	127	483
-Withdrawal	146	83	25	46	300
Total Exits	669	624	233	579	2,105
Members as at 30 June 2012 (In force at 30 June 2012 for valuation)	3174	2849	1278	3229	10,530

#### 4.1.6. All Employers - Membership as at 30 June 2012 - Deferred benefits

Age	Number of Deferreds	Total cash termination benefit \$000	Total current benefit including interest \$000
<b>Males</b>			
36-40	133	5,317	8,202
41-45	631	43,339	66,816
46-50	1,072	103,132	150,500
51-55	1,496	185,846	272,664
56-60	1,089	154,970	230,009
61-65	25	5,036	7,532
66-70	6	1,729	2,814
Totals	4,452	499,369	738,537
<b>Females</b>			
36-40	80	2,927	4,501
41-45	1,025	42,684	67,755
46-50	1,546	83,631	132,285
51-55	1,893	127,307	202,075
56-60	1,497	120,312	191,572
61-65	31	5,611	8,734
66-70	6	879	1,447
Totals	6,078	383,351	608,369

**4.1.7. Movement Summary - Pensioners (1 July 2009 - 30 June 2012)**

	Part 1 Employers		Part 3 Employers	Total
	Non-RSA	RSA		
Pensioners at 1 July 2009 (as per previous valuation report)	1,123	2,392	584	4099
Late Movements and Corrections (Net)	1	14	0	15
Pensioners at 1 July 2009	1124	2406	584	4114
New Pensioners				
-new pensions	426	0	274	700
-reversions	16	94	8	118
Exits				
-expiry	8	50	3	61
-death	161	804	18	983
Pensioners as at 30 June 2012	1397	1646	845	3888

**4.1.8. All Employers - Total Pensioners as at 30 June 2012**

	Type of Pensioner					
	Ex-Members (Retirement and Retrenchment)		Invalidity		Spouses and Children	
	No	Annual Pension \$000	No	Annual Pension \$000	No	Annual Pension \$000
Part 1 (non RSA)	1,131	25,117	118	2,656	148	1,131
Part 1 (RSA)	448	3,652	1	8	1,197	1,869
Part 3	725	19,233	63	1,048	57	571
Total	2,304	48,002	182	3,712	1,402	3,571

Note: Under Part 3 there are some ex-members who have fully commuted their own pension but retain entitlement to a reversionary pension. No data currently exists for these. The value of these reversions has been estimated by projecting forward 31 March 1984 data with allowance for the probability of survival of ex-member and spouse from the date of commutation to the valuation.

**4.1.9. Age Distribution of Pensioners at 30 June 2012**

	Retirement/ Retrenchment		Invalidity		Spouses and Children	
	No	Annual Pension \$	No	Annual Pension \$	No	Annual Pension \$
40-44	0	0	0	0	1	12,733
45-49	0	0	7	121,417	1	19,572
50-54	0	0	20	455,147	4	73,127
55-59	8	191,393	39	852,273	6	107,143
60-64	504	13,116,341	50	1,116,018	9	167,711
65-69	741	18,224,178	47	955,274	12	111,813
70-74	445	9,701,330	6	95,554	51	225,023
75-79	131	2,538,285	3	28,704	70	250,481
80-84	78	846,982	3	38,449	272	558,882
85-89	204	1,775,641	3	12,660	462	840,547
90-94	137	1,120,466	3	22,179	333	758,767
95-99	48	430,613	1	13,835	154	402,359
100+	8	56,970	0	0	27	42,661
<b>Total</b>	<b>2,304</b>	<b>48,002,199</b>	<b>182</b>	<b>3,711,511</b>	<b>1,402</b>	<b>3,570,821</b>

## 4.2. SANCS

### 4.2.1. Movement Summary – Contributors (1 July 2009 to 30 June 2012)

	Part 1 Employers		Part 3 Employers		Total
	Male	Female	Male	Female	
Contributors at 1 July 2009 (as per previous valuation report)	33,459	21,539	4,177	9,804	68,979
Late Movements and Corrections, Transfers, Reinstatements (Net)	-252	-161	-12	-9	-434
Exits					
-Deaths	95	50	20	27	192
-Disabilities	1,425	334	44	56	1,859
-Resignations	424	321	96	283	1,124
-Retirements	5,612	4,108	613	1,407	11,740
-Retrenchments	280	192	35	65	572
Total Exits	7,836	5,005	808	1,838	15,487
Contributors as at 30 June 2012 (In force at 30 June 2012 for valuation)	25,377	16,373	3,357	7,957	53,064

### 4.2.2. Part 1 Employers - Contributors as at 30 June 2012

Age	Number of Contributors	Annual Superannuation Salary as at 31 December 2011 \$000
<b>Males</b>		
36-40	306	27,453
41-45	2,386	225,984
46-50	4,100	386,471
51-55	7,087	677,182
56-60	8,826	865,735
61-65	2,302	203,515
66-70	370	30,471
Totals	25,377	2,416,811
<b>Females</b>		
36-40	141	10,961
41-45	1,618	139,881
46-50	2,664	234,666
51-55	4,717	430,196
56-60	4,623	407,539
61-65	2,136	168,054
66-70	474	33,756
Totals	16,373	1,425,053



**4.2.3. Part 3 Employers - Contributors as at 30 June 2012**

<b>Age</b>	<b>Number of Contributors</b>	<b>Annual Salary Payable as at 31 December 2011 \$000</b>
<b>Males</b>		
36-40	10	642
41-45	195	15,815
46-50	439	35,430
51-55	963	89,949
56-60	1,005	98,976
61-65	616	64,464
66-70	129	16,991
Totals	3,357	322,267
<b>Females</b>		
36-40	24	1,592
41-45	526	42,018
46-50	1,097	88,572
51-55	2,160	177,083
56-60	2,312	191,583
61-65	1,519	118,286
66-70	319	25,566
Totals	7,957	644,700

**4.2.4. All Employers - Contributors as at 30 June 2012**

<b>Number of Contributors</b>	<b>Annual Salary Payable as at 31 December 2011 \$000</b>
53,064	4,808,831

#### 4.2.5. Movement Summary - Deferred Membership (1 July 2009 to 30 June 2012)

	Male	Female	Total
Deferreds at 1 July 2009 (as per previous valuation report)	6,200	7,552	13,752
Late Movements and Corrections, Transfers, Reinstatements (Net)	47	49	96
New Entrants	721	803	1,524
Exits			
-Retirement	990	1,027	2,017
-Transfer	8	7	15
-Death	20	24	44
-SIS Invalidity	200	272	472
-Withdrawal	197	140	337
-Compassionate hardship	0	1	1
-Financial hardship	4	3	7
Total Exits	1,419	1,474	2,893
Members as at 30 June 2012 (In force at 30 June 2012 for valuation)	5,549	6,930	12,479

#### 4.2.6. All Employers - Membership as at 30 June 2012 - Deferred benefits

Age	Number of Deferreds	Total current benefit including interest \$000	Total Shortfall including interest \$000
<b>Males</b>			
36-40	125	1,784	9
41-45	630	14,733	103
46-50	1,102	28,248	125
51-55	1,831	51,614	67
56-60	1,627	47,366	58
61-65	199	10,313	3
66-70	35	1,916	9
Totals	5,549	155,974	373
<b>Females</b>			
36-40	78	1,265	15
41-45	1,007	17,568	155
46-50	1,656	33,364	217
51-55	2,297	48,575	259
56-60	1,779	39,519	144
61-65	99	4,968	59
66-70	14	659	0
Totals	6,930	145,918	849

#### 4.2.7. All Employers and all schemes – OC balances as at 30 June 2012

Age	Number of Contributors	Total current Other Contributions balances \$000
36-40	181	632
41-45	1,903	5,858
46-50	2,569	7,685
51-55	3,413	9,348
56-60	3,568	10,682
61-65	2,520	8,485
66-70	576	2,076
Totals	14,730	44,766

### 4.3. SSS

#### 4.3.1. Movement Summary – Contributors (1 July 2009 to 30 June 2012)

	Male	Female R55	Female R60	Total
Contributors at 1 July 2009 (as per previous valuation report)	13,216	3,060	3,627	19,903
Late Movements and Corrections (Net)	-163	-21	-37	-221
Exits				
-Deaths	24	1	10	35
-Breakdown Retirement	420	24	75	519
-Resignations	61	28	19	108
-Retrenchments	17	10	5	32
-Retirements	3,737	1,233	613	5,583
Total Exits	4,259	1,296	722	6,277
Contributors as at 30 June 2012 (In force at 30 June 2012 for valuation)	8,794	1,743	2,868	13,405

## 4.3.2. Contributors as at 30 June 2012

Age	Number of Contributors	Annual Salary	Employee annual contribution as at 30 June 2012	Units held at 30 June 2012	Members' Accumulated Contributions with Interest as at 30 June 2012	Outstanding Balance due on S10AH Units
		\$000	\$000		\$000	\$000
<b>Males</b>						
41-45	30	2,982	176	12,384	2,730	0
46-50	473	46,118	3,383	190,901	57,378	0
51-55	2,679	271,049	29,340	1,118,758	486,010	10
56-60	5,167	540,390	86,186	2,220,088	1,392,466	82,770
61-65	401	42,879	5,035	174,354	141,904	7,187
66-70	44	3,806	631	15,573	16,648	86
<b>Totals</b>	<b>8,794</b>	<b>907,224</b>	<b>124,751</b>	<b>3,732,058</b>	<b>2,097,136</b>	<b>90,053</b>
<b>Females R55</b>						
41-45	22	1,735	130	7,124	2,052	0
46-50	218	18,085	1,939	72,284	29,254	0
51-55	1,153	106,870	18,717	431,558	271,236	20,730
56-60	288	26,756	3,372	107,215	87,995	4,521
61-65	54	4,961	904	19,607	21,276	52
66-70	8	718	157	2,819	3,844	0
<b>Totals</b>	<b>1,743</b>	<b>159,125</b>	<b>25,219</b>	<b>640,607</b>	<b>415,657</b>	<b>25,303</b>
<b>Females R60</b>						
41-45	24	1,949	93	7,936	1,626	0
46-50	282	23,982	1,531	96,655	26,089	0
51-55	1,063	99,940	9,631	401,963	157,943	4
56-60	1,375	131,060	18,722	532,184	299,500	16,934
61-65	112	10,833	1,233	43,702	32,380	1,557
66-70	12	1,110	172	4,411	4,079	35
<b>Totals</b>	<b>2,868</b>	<b>268,874</b>	<b>31,382</b>	<b>1,086,851</b>	<b>521,617</b>	<b>18,530</b>
<b>Total male and female</b>	<b>13,405</b>	<b>1,335,223</b>	<b>181,352</b>	<b>5,459,516</b>	<b>3,034,410</b>	<b>133,886</b>

### 4.3.3. Movement Summary - Deferred Membership (1 July 2009 to 30 June 2012)

	Male	Female	Total
Members at 1 July 2009 (as per previous valuation)	1,869	1,358	3,227
Late Movements and Corrections (Net)	26	11	37
Members at 1 July 2009	1,895	1,369	3,264
New Preservations	59	60	119
Exits			
-Retirement	638	369	1,007
-Death	2	1	3
-Invalidity	10	8	18
-Withdrawal	34	19	53
Total Exits	684	397	1,081
Members as at 30 June 2012 (In force at 30 June 2012 for valuation)	1,270	1,032	2,302

### 4.3.4. Membership as at 30 June 2012 - Deferred benefits

Age	Number of Deferred Benefit Holders	Total cash termination benefit \$000	Total annual Deferred pension \$000
<b>Males</b>			
41-45	9	658	106
46-50	107	10,687	1,695
51-55	471	68,529	9,101
56-60	574	92,010	11,186
61-65	89	14,574	1,707
66-70	20	3,859	349
Totals	1,270	190,316	24,144
<b>Females</b>			
41-45	16	815	149
46-50	183	15,935	2,401
51-55	510	63,344	8,382
56-60	287	34,429	4,687
61-65	31	3,765	436
66-70	5	442	57
Totals	1,032	118,731	16,112
All	2,302	309,047	40,256

**4.3.5. Movement Summary - Pensioners (1 July 2009 - 30 June 2012)**

	Current pensioners	Fully Commuted pensioners
Pensioners at 1 July 2009 (as per previous valuation report)	44,516	17,929
Late Movements and Corrections (Net)	174	8
New Pensioners		
-new pensions	6,896	346
-reversions	1,737	
Exits		
-expiry	175	
-death	3,365	493
-commutation	715	
-other exits from fully commuted		138
Pensioners as at 30 June 2012	49,068	17,652

**4.3.6. Age Distribution of Current Pensioners at 30 June 2012**

	Retirement		Breakdown		Widows		Children	
	No	Annual Pension \$	No	Annual Pension \$	No	Annual Pension \$	No	Annual Pension \$
10-14	0	0	0	0	0	0	1	2,949
15-19	0	0	0	0	0	0	19	56,033
20-24	0	0	0	0	1	2,949	38	150,746
25-29	0	0	0	0	1	7,007	1	2,949
30-34	0	0	0	0	0	0	0	0
35-39	0	0	0	0	2	74,542	0	0
40-44	0	0	2	76,662	14	443,708	1	14,012
45-49	0	0	107	3,695,017	54	1,567,969	1	7,006
50-54	188	7,475,632	646	26,236,277	211	5,831,431	3	12,904
55-59	3,508	142,915,902	1,879	80,421,102	373	10,204,351	3	21,018
60-64	9,615	446,213,920	1,986	80,792,712	535	14,534,913	0	0
65-69	8,372	359,315,290	1,411	54,137,783	814	21,562,918	0	0
70-74	5,281	206,971,834	845	30,174,120	924	23,922,550	0	0
75-79	2,935	99,383,429	369	11,468,081	988	24,111,505	0	0
80-84	1,976	48,372,462	232	6,289,601	1,159	31,272,916	0	0
85-89	1,739	39,953,079	144	3,181,238	1,074	29,851,935	0	0
90-94	675	17,028,352	38	856,878	565	16,092,342	0	0
95-99	120	3,516,876	6	171,450	176	5,098,076	0	0
100+	16	568,775	2	56,477	18	496,842	0	0
Total	34,425	1,371,715,552	7,667	297,557,397	6,909	185,075,953	67	267,617

Note that some children's pensions are recorded with spouse pensions when there is a surviving parent.

**4.3.7. Age Distribution of Fully Commuted Pensioners at 30 June 2012**

	Retirement		Breakdown	
	No	Annual Pension to spouse \$	No	Annual Pension to spouse \$
<55	6	29,372	5	107,829
55-59	147	2,909,181	123	3,282,388
60-64	559	11,543,838	324	8,266,338
65-69	1,275	24,954,480	338	8,236,685
70-74	2,861	58,729,759	295	6,684,312
75-79	4,379	88,311,113	294	6,306,133
80-84	4,353	99,487,999	237	5,365,411
85-89	1,784	46,356,711	80	1,801,014
90-94	387	10,396,981	28	750,027
95-99	143	4,325,903	1	11,292
100+	33	1,050,303	0	0
<b>Total</b>	<b>15,927</b>	<b>348,095,640</b>	<b>1,725</b>	<b>40,811,429</b>



#### 4.4. PSS

##### 4.4.1. Movement Summary – Contributors (1 July 2009 to 30 June 2012)

	Male	Female	Total
Contributors at 1 July 2009 (as per previous valuation report)	2,075	277	2,352
Late Movements and Corrections (Net)	-32	-4	-36
Contributors at 1 July 2009	2,043	273	2,316
Exits			
-Deaths (killed on duty)	1	0	1
-Deaths (not killed on duty)			0
-Retired hurt on duty	466	64	530
-Disablements (not hurt on duty)	51	4	55
-Resignations	3	0	3
-Retirements	58	3	61
Total Exits	579	71	650
Contributors as at 30 June 2012 (In force at 30 June 2012 for valuation)	1,464	202	1,666

##### 4.4.2. Contributors as at 30 June 2012

Age	Number of Contributors	Annual Salary  \$000	Employee contribution as at 30 June 2012  \$000	Average years of service at 30 June 2012	Members' Accumulated Contributions with Interest* as at 30 June 2012  \$000
<b>Males</b>					
41-45	192	20,316	1,378	24.9	31,387
46-50	548	59,068	3,979	26.7	99,647
51-55	501	56,445	3,795	29.9	105,763
56-60	183	20,499	1,378	34.3	43,255
61-65	38	4,051	272	36.1	9,143
66-70	2	201	14	44.2	538
Totals	1,464	160,580	10,816	28.8	289,733
<b>Females</b>					
41-45	46	4,022	300	24.9	6,681
46-50	98	9,714	695	27.2	16,995
51-55	47	5,011	353	29.1	9,236
56-60	9	995	66	30.3	1,911
61-65	2	253	17	35.8	522
Totals	202	19,995	1,431	27.3	35,345
<b>Total male and female</b>	1,666	180,575	12,247	28.6	325,078

\* Interest for June 2012 is not included

#### 4.4.3. Movement Summary - Deferred Membership (1 July 2009 to 30 June 2012)

	Male	Female	Total
Members at 1 July 2009 (as per previous valuation)	146	16	162
Late Movements and Corrections (Net)	-7	0	-7
Members at 1 July 2009	139	16	155
New Preservations	2	0	2
Exits			
- Withdrawal	7	0	7
- Retirement	17	0	17
Total Exits	24	0	24
Members as at 30 June 2012 (In force at 30 June 2012 for valuation)	117	16	133

#### 4.4.4. Membership as at 30 June 2012 - Deferred benefits

Age	Number of Deferreds	Total cash termination benefit \$000	Total current Deferred benefit \$000
<b>Males</b>			
41-45	6	448	510
46-50	42	3,404	3,694
51-55	40	4,188	4,459
56-60	23	2,574	2,840
61-65	6	696	905
Totals	117	11,310	12,408
<b>Females</b>			
41-45	3	159	164
46-50	5	469	557
51-55	7	580	593
56-60	1	68	78
Totals	16	1,276	1,392
All	133	12,586	13,800

#### 4.4.5. Movement Summary - Pensioners (1 July 2009 - 30 June 2012)

Pensioners at 1 July 2009 (as per previous valuation report)	6,190
Late Movements and Corrections (Net)	40
Pensioners at 1 July 2009	6,230
New Pensioners	
-new pensions	632
-reversions	152
Exits	
-expiry	9
-death	373
-commutation	110
Pensioners as at 30 June 2012	6,522

**4.4.6. Age Distribution of Pensioners at 30 June 2012**

	Retirement		Breakdown		Widows		Children		HOD	
	No	Annual Pension \$	No	Annual Pension \$	No	Annual Pension \$	No	Annual Pension \$	No	Annual Pension \$
35-39	0	0	0	0	1	44,901	0	0	0	0
40-44	0	0	5	265,229	4	159,722	0	0	254	15,299,935
45-49	0	0	20	1,109,453	23	787,423	2	25,568	1,072	66,060,166
50-54	1	48,267	55	2,859,569	35	1,095,717	0	0	1,027	63,461,618
55-59	20	1,234,545	108	6,056,243	43	1,389,536	0	0	915	55,350,493
60-64	98	6,636,466	207	10,781,500	54	1,810,489	0	0	707	42,134,007
65-69	141	9,086,214	159	9,226,991	72	2,381,943	0	0	328	19,252,286
70-74	72	4,231,315	45	2,312,045	46	1,504,204	0	0	89	4,955,458
75-79	31	1,768,582	28	1,545,901	91	3,189,294	0	0	21	1,028,096
80-84	74	4,647,725	35	2,119,566	166	5,993,532	0	0	13	681,493
85-89	107	7,519,961	30	1,711,070	167	6,512,706	0	0	15	749,608
90-94	33	2,253,335	6	317,138	71	2,360,163	0	0	4	186,856
95-99	7	519,578	2	108,258	17	576,393	0	0	1	43,412
100+	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>584</b>	<b>37,945,989</b>	<b>700</b>	<b>38,412,963</b>	<b>790</b>	<b>27,806,022</b>	<b>2</b>	<b>25,568</b>	<b>4,446</b>	<b>269,203,427</b>

Note that some children's pensions are recorded with spouse pensions when there is a surviving parent.

## 5

## Analysis of Experience

## 5.1. SASS

## 5.1.1. Rates of Salary Increase

For contributors who were in force at two consecutive 30 June review dates and for whom salaries were available at the two dates, the rates of salary increase experienced over the period 31 December 2008 to 31 December 2011 are shown in the table below.

	Part 1 employers %pa	Part 3 employers %pa	All %pa
Males	4.80%	4.15%	4.70%
Females	4.46%	3.81%	4.20%
All	4.68%	3.92%	4.48%

Excluding contributors during a year over which their salary fell, the actual rates of increase were compared with the rates expected in the long term on the actuarial basis adopted for this valuation. The ratio of actual over expected salary for each age to actual over expected salary for the total group measures the suitability of the promotional scale.

## General Salary Increases

	Actual Increase Rate %pa	Expected Increase Rate %pa	Excess of actual salary increases over expected %pa
Part 1 Employers			
-Males	5.40%	4.47%	0.93%
-Females	4.88%	4.39%	0.49%
Part 3 Employers			
-Males	4.92%	4.15%	0.77%
-Females	4.26%	4.21%	0.05%
All Employers	5.01%	4.37%	0.64%

## Ratio of Actual/Expected at Age Shown to Actual/Expected for Total Group

Age	Males		Females	
	Part 1	Part 3	Part 1	Part 3
31-35	0.97	0.92	0.96	0.95
36-40	0.99	0.98	0.99	0.99
41-45	1.00	0.99	0.99	1.00
46-50	1.00	1.00	1.00	1.00
51-55	1.00	1.00	1.00	1.00
56-60	1.00	1.00	1.00	1.00
61-65	1.00	1.01	1.00	1.00

## 5.1.2. Contributor Demographic Experience

### 5.1.2.1. Rates of Resignation

In the following table, the actual numbers of resignations (A) that occurred in the period 1 July 2008 to 30 June 2011 are compared with the numbers expected (E) under the actuarial basis adopted for this valuation.

Age group	Males						Females					
	Part 1 Employers			Part 3 Employers			Part 1 Employers			Part 3 Employers		
	A	E	A/E	A	E	A/E	A	E	A/E	A	E	A/E
31-35	2	5.0	0.40	0	0.2	0.00	1	2.0	0.50	1	0.6	1.68
36-40	52	79.7	0.65	3	7.9	0.38	34	55.4	0.61	19	25.9	0.73
41-45	75	116.3	0.65	18	22.0	0.82	65	89.9	0.72	39	65.0	0.60
46-50	111	135.8	0.82	24	38.2	0.63	47	102.5	0.46	65	123.4	0.53
51-55	115	130.7	0.88	35	48.2	0.73	127	147.8	0.86	129	177.1	0.73
56-60	36	44.9	0.80	14	17.6	0.79	54	92.1	0.59	49	72.1	0.68
Total	391	512.4	0.76	94	134.1	0.70	328	489.7	0.67	302	464.1	0.65

### 5.1.2.2. Rates of Preservation

The table below compares the numbers of members who resign and preserve their benefits (A) with the numbers expected to preserve their benefits (E) on the actuarial basis adopted, based on the actual numbers of resignations, over the period 1 July 2008 to 30 June 2011.

Age Group	1 year to 30 June 2009			1 year to 30 June 2010			1 year to 30 June 2011			3 years to 30 June 2011		
	A	E	A/E	A	E	A/E	A	E	A/E	A	E	A/E
<b>Males</b>												
31-35	1	1	1.00	0	0	-	0	0	-	1	1	1.00
36-40	10	13	0.77	17	13	1.31	10	8	1.25	37	34	1.09
41-45	30	27	1.11	17	12	1.42	22	17	1.29	69	55	1.25
46-50	49	34	1.44	34	25	1.36	25	23	1.09	108	84	1.29
51-55	41	35	1.17	44	40	1.10	52	45	1.16	137	121	1.13
56-60	25	25	1.00	24	26	0.92	21	21	1.00	70	72	0.97
Total	156	135	1.16	136	117	1.16	130	114	1.14	422	365	1.16
<b>Females</b>												
31-35	1	1	1.00	1	1	1.00	0	0	-	2	2	1.00
36-40	19	17	1.12	15	17	0.88	3	3	1.00	37	37	1.00
41-45	30	25	1.20	29	27	1.07	16	19	0.84	75	72	1.04
46-50	36	28	1.29	31	27	1.15	26	23	1.13	93	78	1.19
51-55	117	108	1.08	67	62	1.08	58	55	1.05	242	224	1.08
56-60	63	65	0.97	47	47	1.00	32	36	0.89	142	148	0.96
Total	266	245	1.09	190	180	1.06	135	137	0.99	591	562	1.05
Total M&F	422	380	1.11	326	297	1.10	265	251	1.06	1013	927	1.09

### 5.1.2.3. Rates of Redundancy

The table below shows the rates experienced in the period 30 June 2008 to 30 June 2011 separately for each year and employer group.

Percentage of Membership over one year who are retrenched								
Age Group	Part 1				Part 3			
	08/09	09/10	10/11	3 yrs	08/09	09/10	10/11	3 yrs
Males	%	%	%	%	%	%	%	%
31-35	0.0	1.6	0.0	0.4	20.0	0.0	-	14.3
36-40	0.3	0.4	0.1	0.3	0.0	0.0	0.0	0.0
41-45	0.5	0.4	0.1	0.3	0.5	0.0	0.0	0.2
46-50	0.7	0.6	0.3	0.5	0.3	0.6	0.0	0.5
51-55	0.7	0.9	0.4	0.7	0.9	0.8	0.0	0.7
56-60	0.4	0.3	0.2	0.3	0.4	0.4	0.0	0.3
Total	0.5	0.5	0.2	0.4	0.5	0.4	0.2	0.4
Females								
31-35	3.3	0.0	0.0	2.4	0.0	0.0	-	0.0
36-40	0.2	0.3	0.2	0.2	0.2	0.0	0.0	0.1
41-45	0.7	0.5	0.3	0.5	0.2	0.4	0.0	0.2
46-50	0.6	0.6	0.4	0.6	0.2	0.6	0.0	0.3
51-55	0.6	0.4	0.4	0.5	0.3	0.5	0.2	0.3
56-60	0.2	0.3	0.1	0.2	0.2	0.3	0.1	0.2
Total	0.4	0.4	0.2	0.4	0.2	0.3	0.1	0.2

### 5.1.2.4. Rates of Mortality and Disability

In the following tables, the actual numbers of deaths and disablements (A) that occurred in the period 1 July 2008 to 30 June 2011 are compared with the numbers expected (E) on the valuation basis adopted for this valuation.

#### Deaths

Age	Males			Females		
	A	E	A/E	A	E	A/E
31-35	0	0.1	0.00	0	0.0	0.00
36-40	2	2.3	0.89	1	0.9	1.10
41-45	4	5.4	0.74	2	3.0	0.66
46-50	20	11.3	1.77	6	6.4	0.94
51-55	16	18.5	0.87	15	12.0	1.24
56-60	33	22.9	1.44	24	19.6	1.22
61-65	20	16.7	1.20	12	15.1	0.80
66-70	4	4.2	0.96	6	3.9	1.55
Total	99	81.3	1.22	66	61.0	1.08

Separate rates are assumed for Police and non-Police SASS members

### Disablements – non-Police

Age	Disablements			Partial Disablements			All Disablements		
	A	E	A/E	A	E	A/E	A	E	A/E
Males									
31-35	1	0.2	6.39	0	0.6	0.00	1	0.8	1.28
36-40	2	2.4	0.83	7	9.7	0.72	9	12.1	0.75
41-45	6	8.5	0.70	27	34.2	0.79	33	42.8	0.77
46-50	11	18.6	0.59	37	65.0	0.57	48	83.6	0.57
51-55	32	39.8	0.80	54	59.8	0.90	86	99.6	0.86
56-60	8	21.7	0.37	13	32.5	0.40	21	54.2	0.39
Total	60	91.2	0.66	136	244.0	0.57	198	293.1	0.67
Females									
31-35	0	0.0	0.00	0	0.1	0.00	0	0.1	0.00
36-40	0	0.9	0.00	4	2.8	1.41	4	3.8	1.05
41-45	5	5.0	1.00	18	14.9	1.20	23	19.9	1.15
46-50	9	17.1	0.53	18	42.8	0.42	27	60.0	0.45
51-55	10	47.3	0.21	63	54.5	1.16	73	101.9	0.72
56-60	11	31.3	0.35	24	36.0	0.67	35	67.2	0.52
Total	35	101.7	0.34	127	151.2	0.84	162	252.9	0.64

### Disablements – Police

Age	Disablements			Partial Disablements			All Disablements		
	A	E	A/E	A	E	A/E	A	E	A/E
Males									
36-40	60	25.1	2.4	72	100.8	0.7	132	125.9	1.0
41-45	37	21.1	1.8	39	84.6	0.5	76	105.7	0.7
46-50	12	11.6	1.0	16	40.4	0.4	28	52.0	0.5
51-55	5	15.3	0.3	8	23.1	0.3	13	38.4	0.3
56-60	1	7.2	0.1	0	10.7	0.0	1	17.9	0.1
Total	115	80.3	1.4	135	259.6	0.5	250	339.9	0.7
Females									
36-40	11	8.9	1.2	25	27.2	0.9	36	36.1	1.0
41-45	10	7.1	1.4	9	21.5	0.4	19	28.6	0.7
46-50	3	5.0	0.6	2	12.4	0.2	5	17.4	0.3
51-55	1	9.0	0.1	0	10.3	0.0	1	19.3	0.1
56-60	0	10.4	0.0	0	11.9	0.0	0	22.3	0.0
Total	25	40.4	0.6	36	83.3	0.4	61	123.7	0.5

### 5.1.2.5. Rates of Retirement

The actual numbers (A) of retirements in the period 1 July 2008 to 30 June 2011 are compared with the numbers expected (E) under the valuation basis over the same period.

#### Males

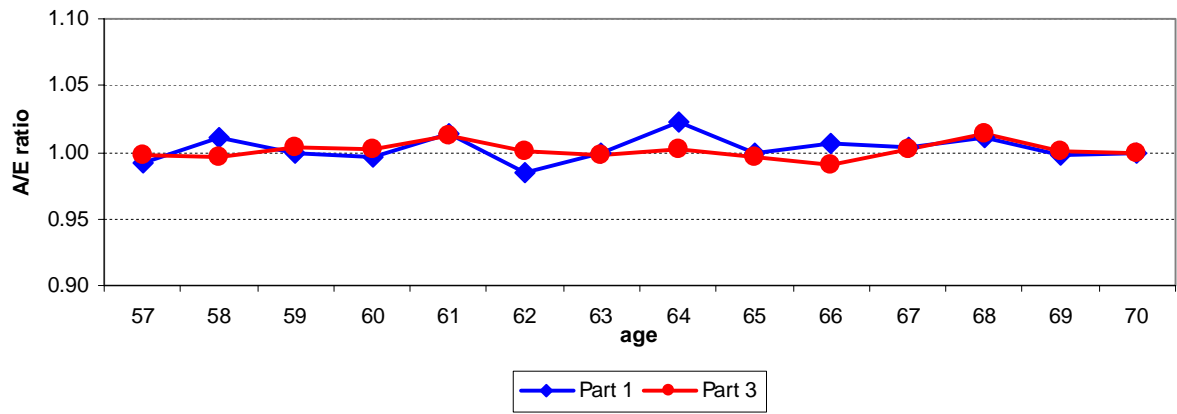
Age	Part 1 Employers			Part 3 Employers		
	A	E	A/E	A	E	A/E
57	58	58.5	0.99	15	15.0	1.00
58	138	136.5	1.01	46	46.1	1.00
59	169	169.2	1.00	52	51.8	1.00
60	273	274.1	1.00	83	82.8	1.00
61	200	197.2	1.01	51	50.3	1.01
62	145	147.2	0.99	40	39.9	1.00
63	113	113.2	1.00	50	50.1	1.00
64	165	161.4	1.02	61	60.8	1.00
65	203	203.1	1.00	94	94.4	1.00
66	68	67.5	1.01	33	33.3	0.99
67	51	50.8	1.00	28	28.0	1.00
68	33	32.6	1.01	15	14.8	1.01
69	62	62.2	1.00	32	32.0	1.00
70	46	46.0	1.00	20	20.0	1.00
71	1	0.0	-	-	-	-
Total	1,725	1,721.8	1.00	620	619.3	1.00

#### Females

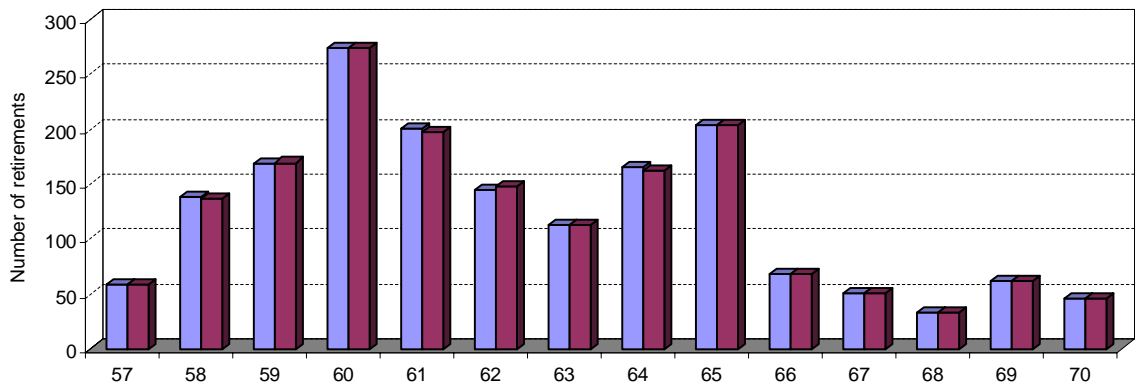
Age	Part 1 Employers			Part 3 Employers		
	A	E	A/E	A	E	A/E
57	102	102.8	0.99	42	42.0	1.00
58	239	237.8	1.01	121	120.4	1.01
59	210	209.0	1.00	116	115.7	1.00
60	286	287.4	1.00	187	189.9	0.98
61	218	215.2	1.01	147	148.7	0.99
62	181	181.0	1.00	115	117.3	0.98
63	202	204.1	0.99	128	128.1	1.00
64	205	203.1	1.01	144	144.3	1.00
65	167	168.5	0.99	99	98.2	1.01
66	86	87.1	0.99	70	70.2	1.00
67	60	59.8	1.00	48	47.9	1.00
68	38	37.9	1.00	27	27.1	1.00
69	82	81.8	1.00	60	59.9	1.00
70	45	45.0	1.00	42	42.0	1.00
Total	2,121	2,120.6	1.00	1,346	1,350.8	1.00



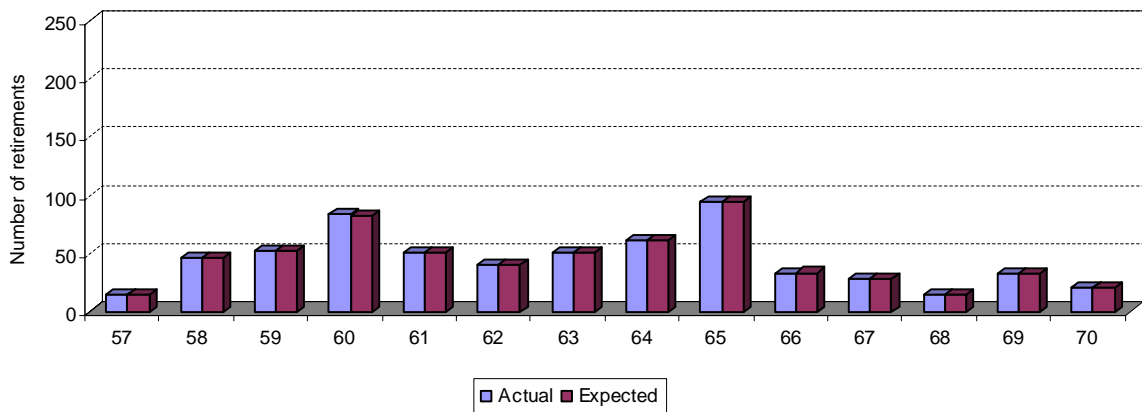
RETIREMENT - SASS Males



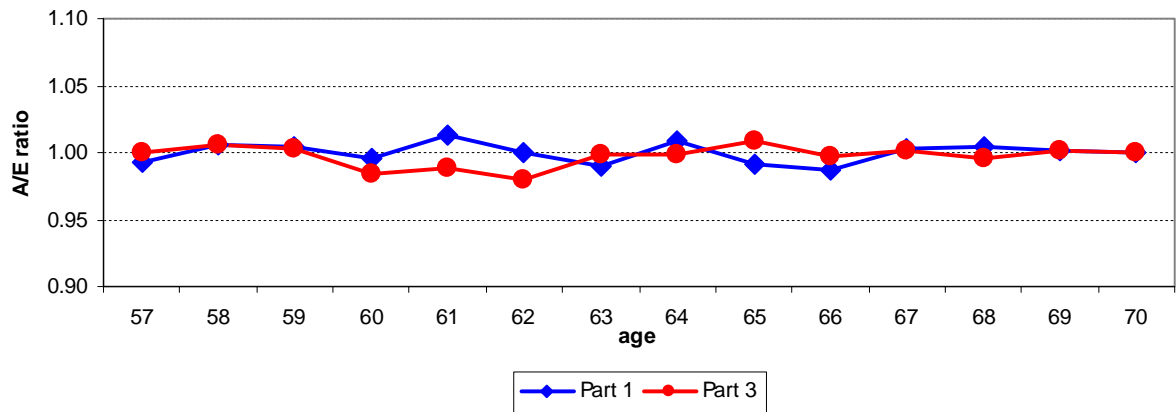
PART 1



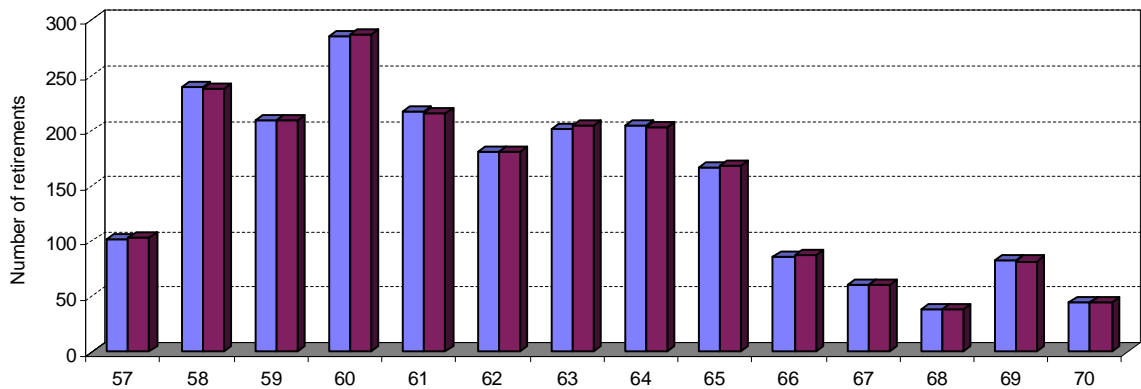
PART 3



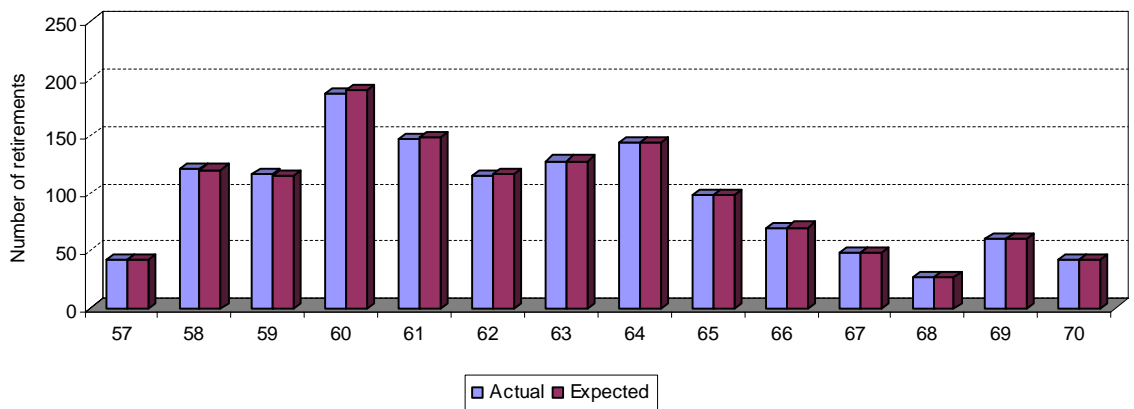
RETIREMENT - SASS Females



PART 1

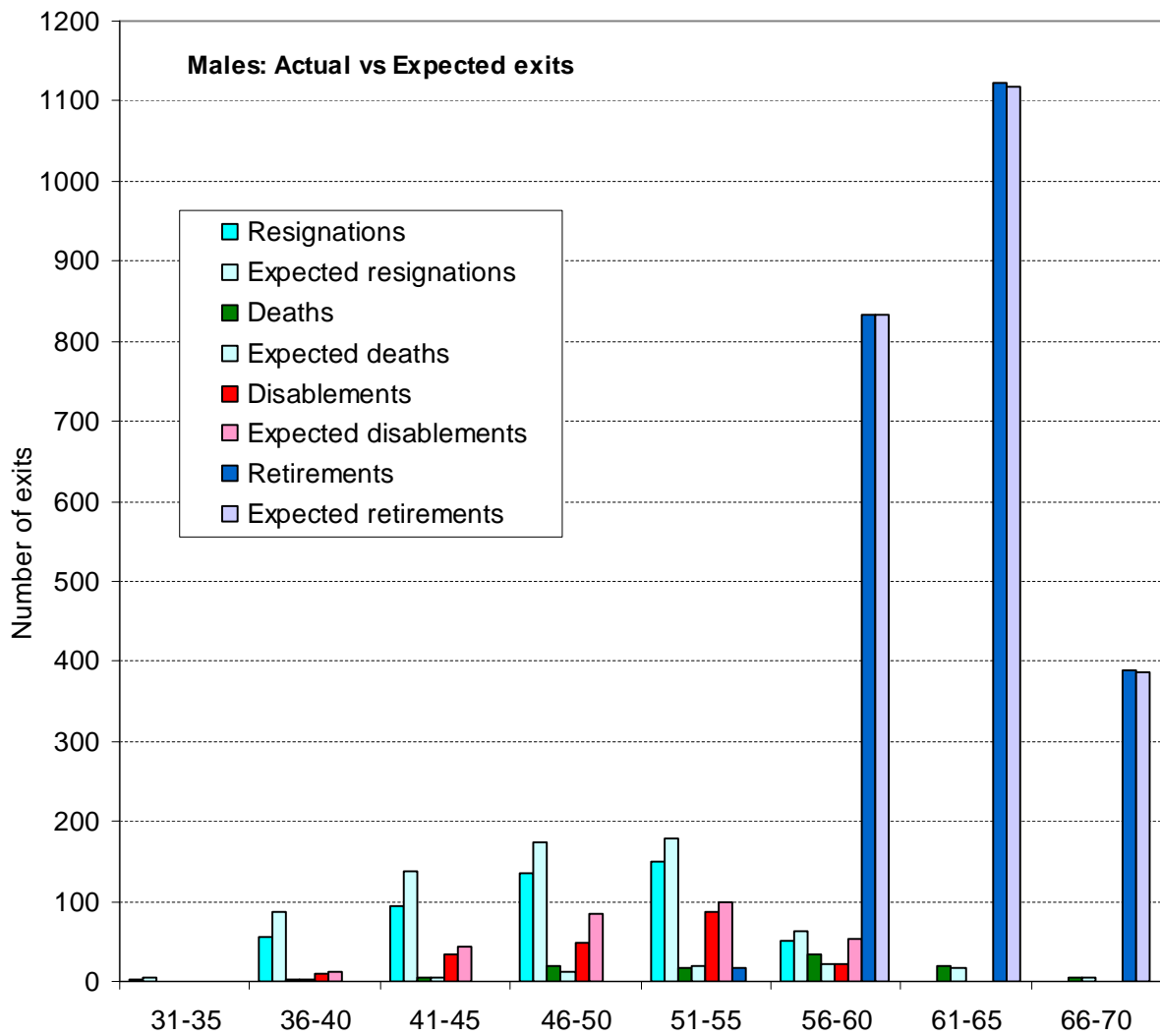
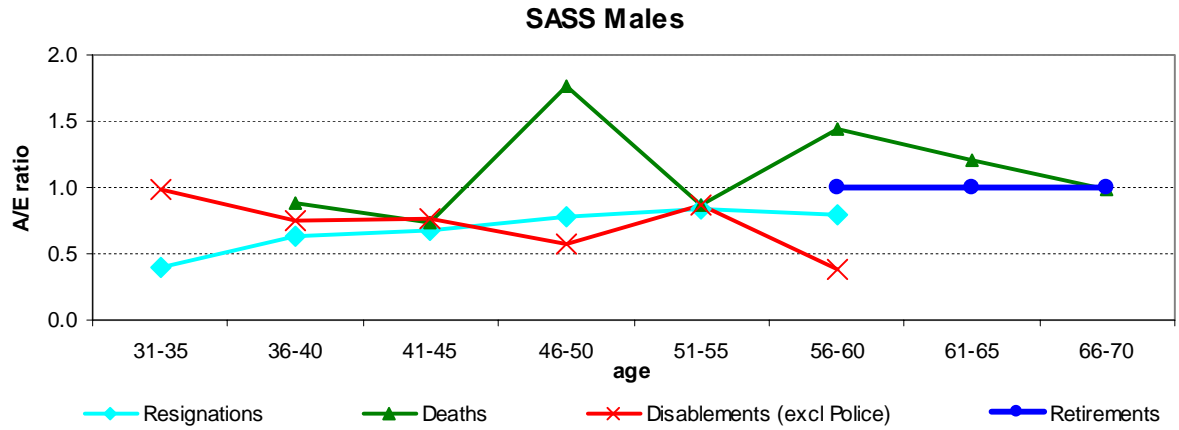


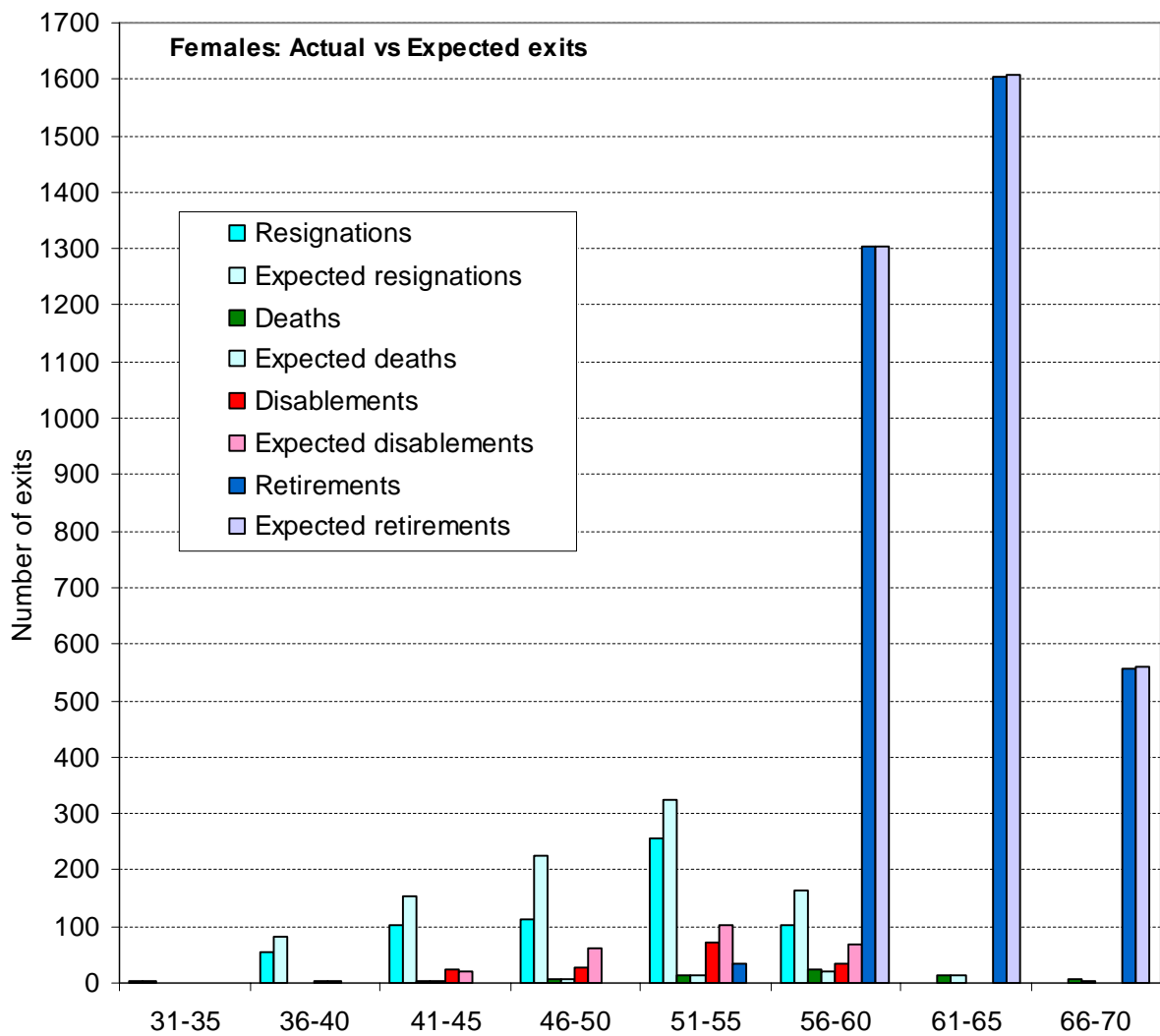
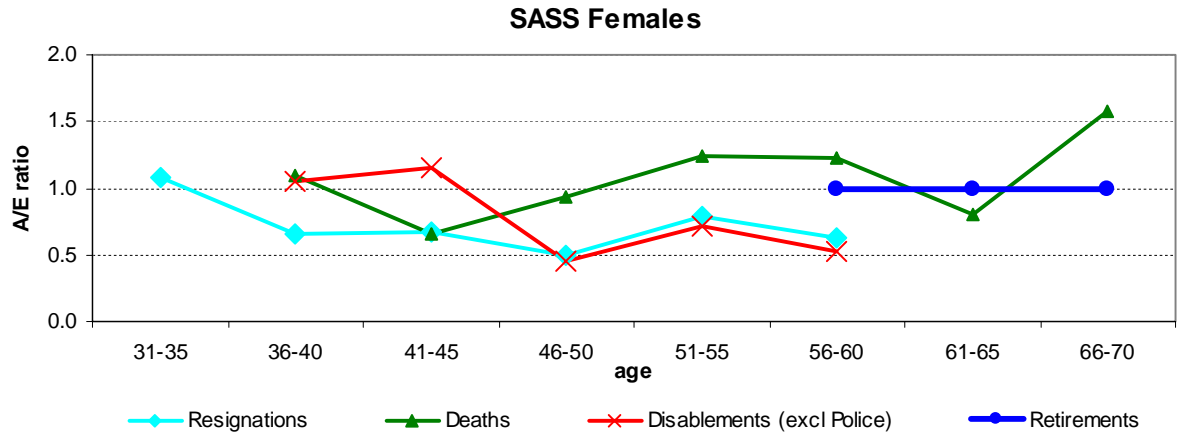
PART 3



5.1.2.6. Contributor Experience Graphs

The graphs below compare actual exits due to resignation, death, disablement and retirement in the period 30 June 2008 to 30 June 2011 with that expected under the actuarial basis.





### 5.1.3. Pensioner Experience

#### 5.1.3.1. Members Choosing Pension Benefits

The table below shows the percentage of members eligible for pension type benefits who elected to take the pension benefit in the period 1 July 2008 to 30 June 2011 compared with the percentage assumed in the valuation.

	Actual percentage electing pension	Assumed percentage electing pension
Invalidity	41.0%	28%
Death	2.9%	28%
Retirement	28.2%	28%
Total	27.8%	28%

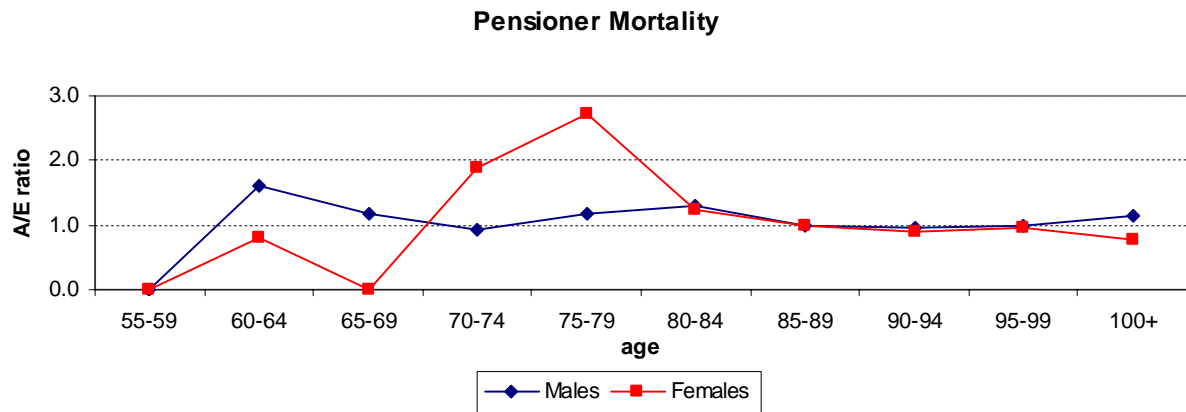
#### 5.1.3.2. Mortality of Pensioners

The following tables compare the actual number of pensioners dying (A) (including those assumed to have died although the death has not been confirmed) in the period 1 July 2008 to 30 June 2011 with those expected to die (E) under the mortality assumed for the category of pensioner in the valuation basis.

##### Retirement and Spouse Pensioners

Age group	Males			Females		
	Actual number of deaths (A)	Expected deaths (E)	A/E	Actual number of deaths (A)	Expected deaths (E)	A/E
55-59	0	0.0	0.00	0	0.0	0.00
60-64	4	2.5	1.61	1	1.3	0.80
65-69	7	6.0	1.17	0	3.6	0.00
70-74	6	6.4	0.93	7	3.7	1.90
75-79	7	6.0	1.16	21	7.8	2.71
80-84	42	32.2	1.31	71	56.7	1.25
85-89	111	111.8	0.99	169	172.4	0.98
90-94	119	123.8	0.96	225	246.5	0.91
95-99	51	50.9	1.00	163	167.5	0.97
100+	16	14.2	1.13	33	43.4	0.76
Total	363	353.8	1.03	690	702.8	0.98

The graph below shows the ratio of actual to expected number of deaths under the mortality rates assumed for SASS male normal pensioners and female retirement and spouse pensioners in the period 30 June 2008 to 30 June 2011.



#### 5.1.4. Deferred Membership

The table below shows the rates of early withdrawal experienced by deferred members in the period 30 June 2009 to 30 June 2012.

Percentage of deferred members who withdraw per year			
Age group	Males	Females	Combined
36 - 40	1.49%	1.60%	1.55%
41 - 45	1.12%	0.92%	1.00%
46 - 50	1.10%	0.66%	0.85%
51 - 55	1.38%	0.60%	0.94%
56 - 60	1.10%	0.23%	0.58%
Total	1.22%	0.67%	0.90%

## 5.2. SSS

### 5.2.1. Rates of Salary Increase

#### 5.2.1.1. SSS overall salary increases

For contributors who remained in force over the three year investigation period and for whom salaries were available at each review date, the rates of salary increase experienced over the period 30 June 2009 to 30 June 2012 are shown in the table below.

	2009/2010 %	2010/2011 %	2011/2012 %	3 years %
Males	5.24%	4.56%	3.24%	4.39%
Females	5.47%	4.24%	3.14%	4.30%
Females (R55)	4.96%	4.18%	3.24%	4.20%
All	5.24%	4.45%	3.22%	4.35%

Excluding contributors during a year over which their salary fell, the actual rates of increase were compared with the rates expected in the long term on the assumptions adopted for this valuation. The ratio of actual over expected salary for each age to actual over expected salary for the total group measures the suitability of the promotional scale.

#### General Salary Increases

	Actual Increase Rate %	Expected Increase Rate %	Excess of actual salary increases over expected %pa
-Males	4.93%	4.03%	0.90%
-Females	5.00%	4.06%	0.94%
All	4.95%	4.04%	0.91%

#### Ratio of Actual/Expected at Age Shown to Actual/Expected for Total Group

Age	Males	Females
36-40	0.94	0.94
41-45	1.01	0.99
46-50	1.00	1.00
51-55	1.00	1.00
56-60	1.00	1.00
60-65	0.99	1.01

#### 5.2.1.2. SSS salary increases in respect of Universities

Salary increase rates for employees of Universities have been observed to be significantly different to non-university employees.

For contributors who were in force at two consecutive 30 June review dates and for whom salaries were available at the two previous salary review dates, the rates of salary increase experienced over the three years to 30 June 2011 for University staff are shown in the tables below and compared with the rates experienced by the whole Scheme.

SSS	Universities				Non-universities	All SSS
	2008/09	2009/10	2010/11	3 years (pa)	3 years (pa)	3 years (pa)
Males	6.25%	6.34%	5.79%	6.14%	4.70%	4.81%
Females	5.93%	5.47%	5.74%	5.71%	4.65%	4.72%
Females (R55)	7.54%	6.49%	4.25%	6.10%	4.62%	4.67%
<b>All</b>	<b>6.28%</b>	<b>6.22%</b>	<b>5.67%</b>	<b>6.07%</b>	<b>4.68%</b>	<b>4.77%</b>

## 5.2.2. Contributor Demographic Experience

### 5.2.2.1. Rates of Cash Resignation

In the following table, the actual numbers of resignations (A) taking cash benefit rather than preserved, that occurred in the period 1 July 2008 to 30 June 2011 are compared with the numbers expected (E) under the actuarial basis adopted for this valuation.

Age	Males			Females (R60)			Females (R55)		
	A	E	A/E	A	E	A/E	A	E	A/E
36-40	0	0.1	0.00	0	0.0	0.00	0	0.1	0.00
41-45	4	2.0	1.95	2	0.9	2.17	2	1.3	1.51
46-50	8	6.6	1.21	3	3.3	0.90	3	3.6	0.83
51-55	14	14.1	1.00	3	6.7	0.45	4	2.1	1.93
Total	26	22.8	1.14	8	11.0	0.73	9	7.1	1.27

### 5.2.2.2. Rates of Preservation

The table below compares the numbers of members who leave (both resignations and retrenchments) and preserve their benefits (A) with the numbers expected to preserve their benefits (E) on the actuarial basis adopted, over the period 1 July 2008 to 30 June 2011.

Age	Males			Females (R60)			Females (R55)		
	A	E	A/E	A	E	A/E	A	E	A/E
36-40	0	0.12	0.00	0	0.12	0.00	0	0.06	0.00
41-45	1	3.78	0.26	5	3.38	1.48	1	1.97	0.51
46-50	15	17.75	0.85	5	10.57	0.47	5	9.86	0.51
51-55	17	30.21	0.56	8	19.75	0.41	13	20.91	0.62
Total	33	51.85	0.64	18	33.81	0.53	19	32.80	0.58



### 5.2.2.3. Rates of Redundancy

The table below shows the rates experienced in the period 30 June 2008 to 30 June 2011 separately for each year and for the three year period. Note that SSS redundancies exclude those who are retrenched but elect to preserve their benefit. Including these increases the redundancy rates by less than 0.1%.

Age Group	Percentage of Membership over one year who are retrenched			
	08/09	09/10	10/11	3 yrs
Males	%	%	%	%
36-40	0.0	0.0	-	0.0
41-45	0.0	0.0	0.0	0.0
46-50	0.3	0.0	0.2	0.2
51-55	0.1	0.1	0.0	0.1
56-60	0.0	0.0	0.0	0.0
Total	0.1	0.0	0.0	0.0
Females				
36-40	0.0	0.0	-	0.0
41-45	0.8	0.0	0.0	0.4
46-50	0.1	0.1	0.1	0.1
51-55	0.0	0.0	0.0	0.0
56-60	0.0	0.0	0.0	0.0
Total	0.1	0.0	0.0	0.0

### 5.2.2.4. Rates of Mortality and Disability

In the following tables, the actual numbers of deaths and ill-health retirements (A) that occurred in the period 1 July 2008 to 30 June 2011 are compared with the numbers expected (E) on the valuation basis adopted for this valuation.

#### Males

Age	Deaths			Disablements		
	A	E	A/E	A	E	A/E
36-40	0	0.0	0.00	0	0.0	0.00
41-45	0	0.4	0.00	0	0.1	0.00
46-50	2	3.7	0.54	1	4.8	0.21
51-55	23	18.6	1.24	36	53.3	0.68
56-60	8	25.5	0.31	185	290.1	0.64
61-65	1	3.0	0.34	286	394.9	0.72
66-70	0	0.3	0.00	0	0.0	0.00
Total	34	51.4	0.66	508	743.2	0.68

**Females**

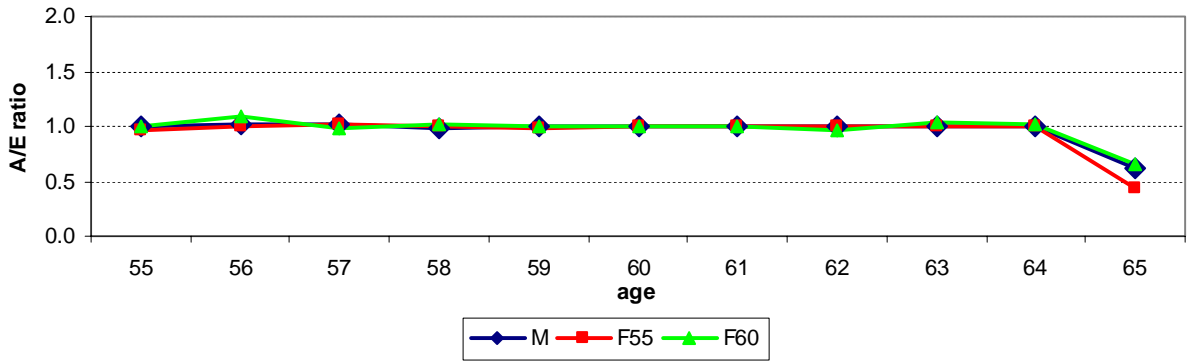
Age	Deaths			Disabilities		
	A	E	A/E	A	E	A/E
36-40	0	0.0	0.00	0	0.0	0.00
41-45	0	0.3	0.00	0	0.0	0.00
46-50	3	2.0	1.51	3	2.9	1.03
51-55	6	7.5	0.80	25	32.1	0.78
56-60	3	3.5	0.85	90	135.5	0.66
61-65	3	0.7	4.38	34	62.4	0.55
66-70	0	0.1	0.00	0	0.0	0.00
Total	15	14.1	1.06	152	232.8	0.65

## 5.2.2.5. Rates of Retirement

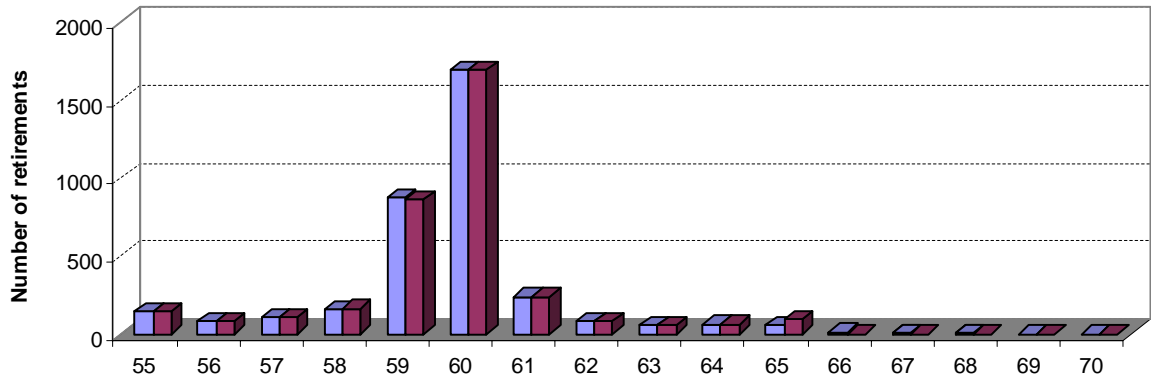
In the following tables and graphs, the actual numbers of retirements (A) that occurred in the period 1 July 2008 to 30 June 2011 are compared with the numbers expected (E) over the same period on the valuation basis adopted for this valuation.

Age	Males			Females R60			Females R55		
	A	E	A/E	A	E	A/E	A	E	A/E
55	149	147.7	1.01	29	29.0	1.00	920	947	0.97
56	80	78.8	1.02	28	25.7	1.09	89	89.1	1.00
57	106	105.0	1.01	22	22.3	0.99	29	28.7	1.01
58	160	163.4	0.98	23	22.7	1.01	26	26.2	0.99
59	871	863.9	1.01	120	119.8	1.00	19	19.3	0.99
60	1,691	1,690.9	1.00	243	245.0	0.99	17	17.1	0.99
61	239	240.2	0.99	38	38.2	0.99	11	11.0	1.00
62	85	85.4	1.00	14	14.4	0.97	11	11.0	1.00
63	58	57.7	1.01	13	12.5	1.04	2	2.0	1.00
64	64	63.7	1.00	14	13.8	1.01	7	7.0	1.00
65	60	96.0	0.63	21	32.0	0.66	9	21.0	0.43
66	15	0.0	-	5	0.0	-	4	0.0	-
67	7	0.0	-	2	0.0	-	1	0.0	-
68	4	0.0	-	0	0.0	-	1	0.0	-
69	3	0.0	-	0	0.0	-	0	0.0	-
70	2	0.0	-	0	0.0	-	0	0.0	-
<b>Total</b>	<b>3,594</b>	<b>3,592.7</b>	<b>1.00</b>	<b>572</b>	<b>575.5</b>	<b>0.99</b>	<b>1146</b>	<b>1179</b>	<b>0.97</b>

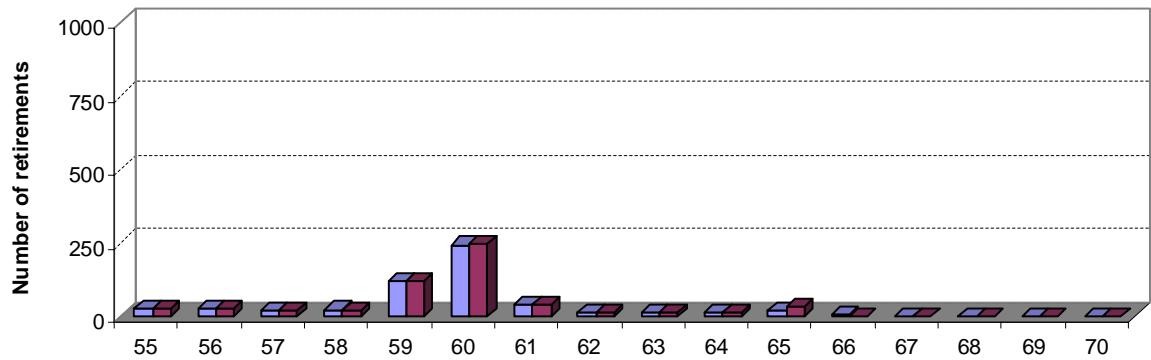
RETIREMENTS - SSS

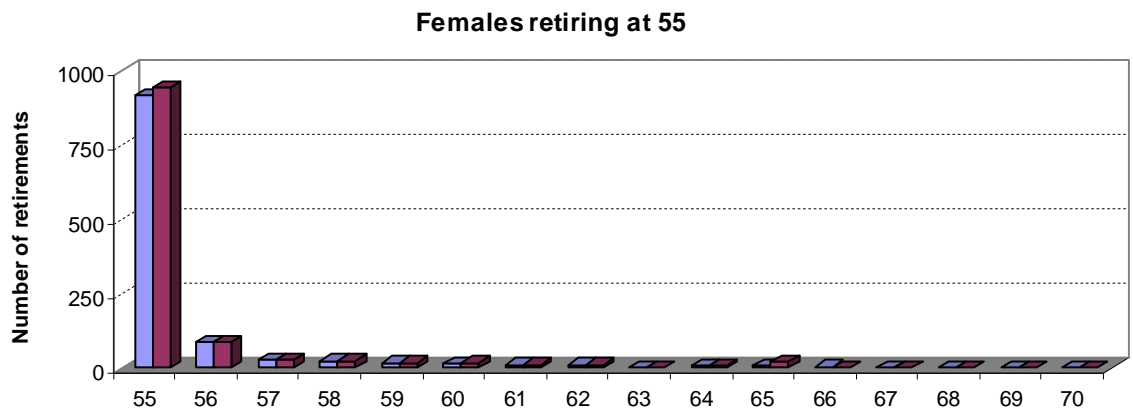


Males



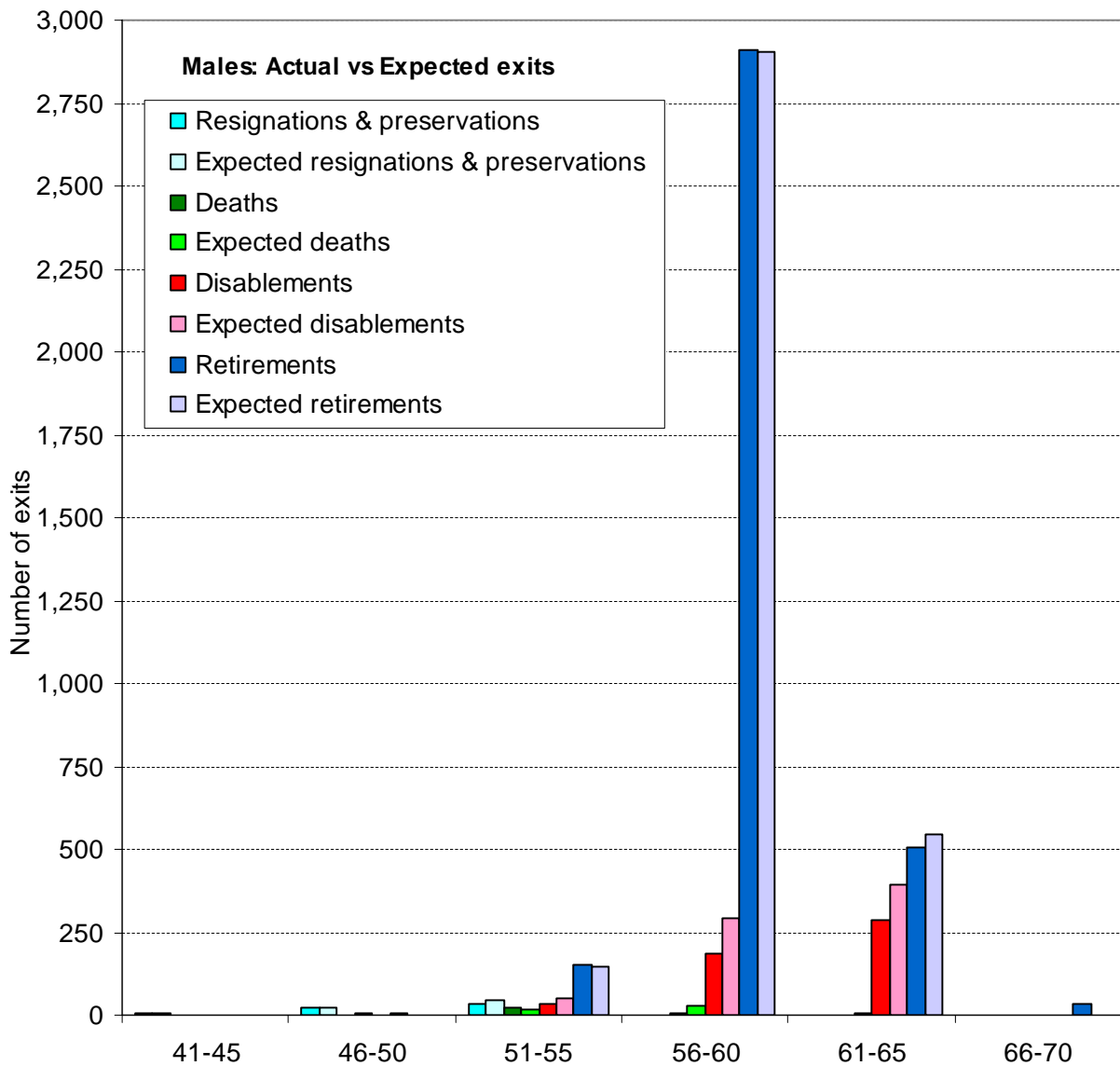
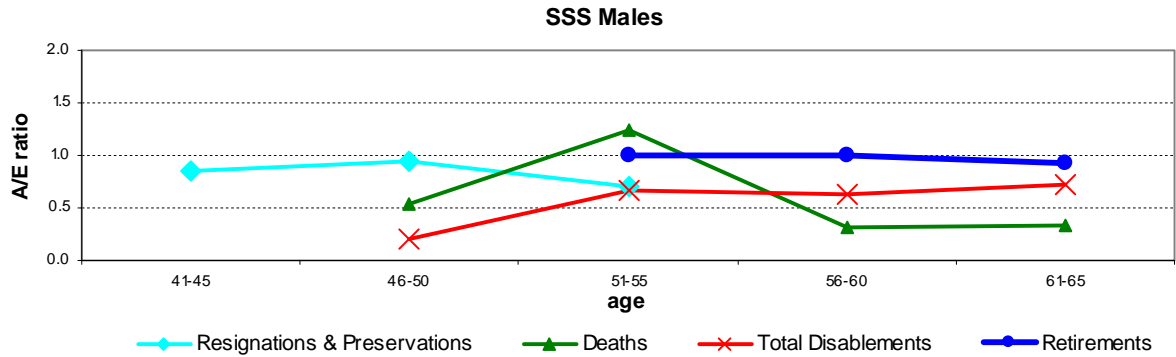
Females retiring at 60

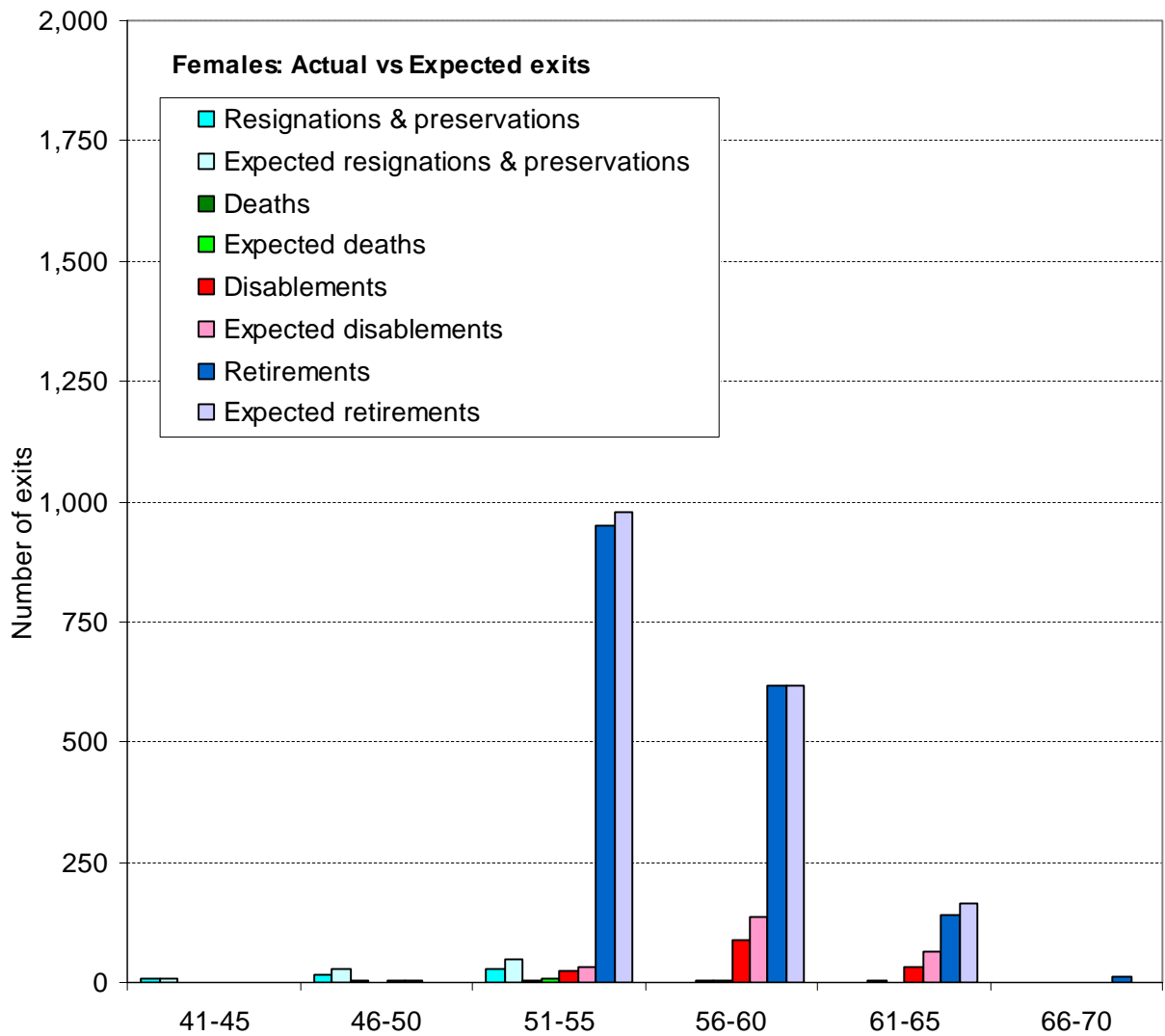
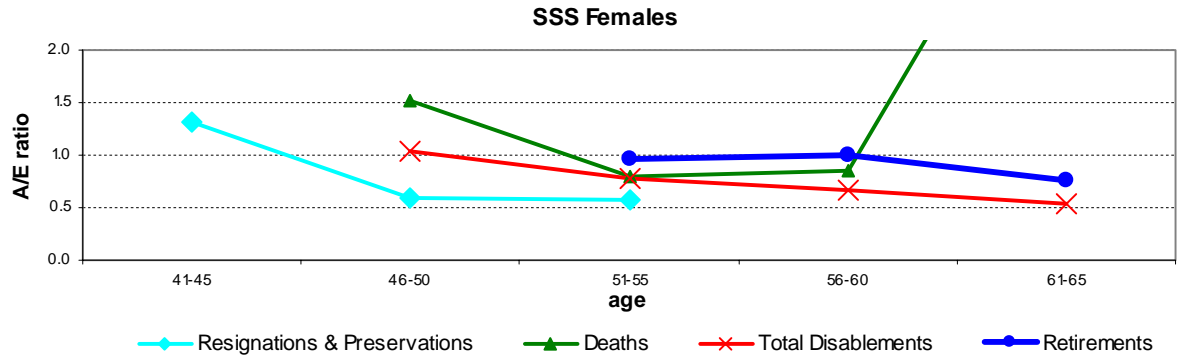




### 5.2.2.6. Contributor Experience Graphs

The graphs below compare actual exits due to resignation, death, disablement and retirement in the period 30 June 2008 to 30 June 2011 with that expected under the actuarial basis.





## 5.2.2.7. Optional Unit take up

The table below compares actual numbers of optional units (A) taken up by members who remain in force over 2008/9, 2009/10 and 2010/11 with those expected (E) to be taken up if the proportion of optional units taken up were to be as assumed in the valuation.

<b>Males</b>	<b>Post 1963 members</b>			<b>Pre 1963 members</b>		
<b>AGE</b>	<b>A</b>	<b>E</b>	<b>A/E</b>	<b>A</b>	<b>E</b>	<b>A/E</b>
41-45	1,351	1,351	1.00			
46-50	18,076	18,161	1.00			
51-55	71,783	72,049	1.00			
56-60	46,341	46,530	1.00			
61-65	2,843	2,862	0.99	155	147	1.05
Total	140,394	140,952	1.00	155	147	1.05
<b>Females R60</b>	<b>Post 1963 members</b>			<b>Pre 1963 members</b>		
<b>AGE</b>	<b>A</b>	<b>E</b>	<b>A/E</b>	<b>A</b>	<b>E</b>	<b>A/E</b>
41-45	1,059	1,059	1.00			
46-50	6,090	5,662	1.08			
51-55	26,344	24,154	1.09			
56-60	13,695	12,380	1.11			
61-65	691	406	1.70			
Total	47,879	43,661	1.10	(None)		
<b>Females R55</b>	<b>Post 1963 members</b>			<b>Pre 1963 members</b>		
<b>AGE</b>	<b>A</b>	<b>E</b>	<b>A/E</b>	<b>A</b>	<b>E</b>	<b>A/E</b>
41-45	1,316	1,256	1.05			
46-50	8,795	8,608	1.02			
51-55	23,388	20,207	1.16			
56-60	2,749	2,083	1.32			
61-65	976	771	1.27	57	40	1.43
Total	37,224	32,924	1.13	57	40	1.43

Rates of take up of abandoned units on exit are similar to the above except for ages over normal retirement when they are nearly 100%.

## 5.2.3. Pensioner Experience

### 5.2.3.1. Members Commuting Pension Benefits

The table below shows the percentage of members eligible for commutation who elected to commute their pension in the period 1 July 2008 to 30 June 2011 compared with the percentage assumed in the valuation.

	Percentage pension commuted	Percentage pension assumed commuted
Retirement pensioners		
Males	3.7%	5%
Females	3.9%	5%
Ill-health pensioners at 55	11.9%	12%
Spouse pensioners at 55	13.0%	13%

The table below compares actual number of commutations (A) of reversionary pensions (including partial commutations) in the period 1 July 2008 to 30 June 2011 with the number expected under the valuation basis adopted for this valuation.

Age	Widows commuting			Widowers commuting		
	actual (A)	expected (E)	A/E	actual (A)	expected (E)	A/E
56-60	60.4	55.0	1.10	10.2	19.5	0.52
61-65	31.6	36.9	0.86	6.0	5.8	1.02
66-70	65.9	67.2	0.98	8.7	8.5	1.02
71-75	93.6	85.9	1.09	6.2	6.9	0.90
76-80	159.5	136.8	1.17	12.5	10.5	1.19
61-85	112.2	102.6	1.09	19.7	11.0	1.80
85+	82.2	70.2	1.17	8.7	4.5	1.94
Total	605.5	554.6	1.09	78.5	68.5	1.15



### 5.2.3.2. Mortality of Pensioners

The following tables compare the actual number of pensioners dying (A) in the period 1 July 2008 to 30 June 2011 with those expected to die (E) under the mortality assumed for the category of pensioner in the valuation basis (excluding allowance for future improvements in mortality). Results are shown only for groups with sufficient numbers to justify a comparison.

#### Retirement Pensioners

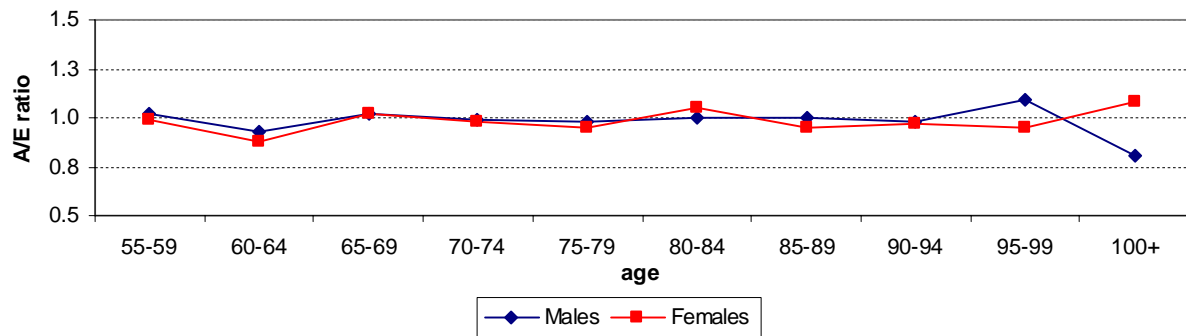
Age group	Males			Females		
	Actual deaths (A)	Expected deaths (E)	A/E	Actual deaths (A)	Expected deaths (E)	A/E
55-59	8	7.8	1.02	9	9.1	0.99
60-64	62	67.0	0.93	16	18.1	0.88
65-69	98	95.8	1.02	34	33.2	1.02
70-74	104	104.8	0.99	34	34.6	0.98
75-79	114	116.3	0.98	40	42.2	0.95
80-84	248	248.0	1.00	94	89.8	1.05
85-89	428	427.0	1.00	118	124.1	0.95
90-94	229	233.5	0.98	87	89.3	0.97
95-99	88	81.0	1.09	51	53.7	0.95
100+	6	7.4	0.81	9	8.3	1.08
<b>Total</b>	<b>1,385</b>	<b>1,388.5</b>	<b>1.00</b>	<b>492</b>	<b>502.4</b>	<b>0.98</b>

#### Spouse Pensioners

Age group	Widows			Widowers		
	Actual deaths (A)	Expected deaths (E)	A/E	Actual deaths (A)	Expected deaths (E)	A/E
40-44	0	0.0	0.00	0	0.0	0.00
45-49	0	0.0	0.00	0	0.0	0.00
50-54	0	0.7	0.00	0	0.1	0.00
55-59	0	1.6	0.00	0	0.3	0.00
60-64	6	3.5	1.72	0	0.7	0.00
65-69	8	10.4	0.77	1	0.9	1.11
70-74	26	20.1	1.29	5	2.0	2.45
75-79	58	48.8	1.19	3	3.5	0.87
80-84	142	143.5	0.99	12	8.1	1.48
85-89	217	241.3	0.90	10	8.7	1.15
90-94	284	253.1	1.12	6	7.9	0.76
95-99	129	163.1	0.79	6	3.9	1.53
100+	20	24.3	0.82	1	0.3	3.01
<b>Total</b>	<b>890</b>	<b>910.3</b>	<b>0.98</b>	<b>44</b>	<b>36.5</b>	<b>1.20</b>

The graph below show the ratio of actual to expected number of deaths under the mortality rates assumed for SSS male normal pensioners and female retirement and spouse pensioners in the period 30 June 2008 to 30 June 2011.

**Pensioner Mortality**



**Breakdown Pensioners - 1st year**

Age group	Males			Females		
	Actual deaths (A)	Expected deaths (E)	A/E	Actual deaths (A)	Expected deaths (E)	A/E
40-44	0	0.0	0.00	0	0.1	0.00
45-49	1	0.8	1.24	2	0.7	2.99
50-54	7	5.6	1.26	3	3.4	0.89
55-59	14	13.3	1.06	1	2.4	0.41
60-64	2	1.5	1.33	0	0.1	0.00
<b>Total</b>	<b>24</b>	<b>21.1</b>	<b>1.14</b>	<b>6</b>	<b>6.6</b>	<b>0.91</b>

**Breakdown Pensioners - after 1<sup>st</sup> year**

Age group	Males			Females		
	Actual deaths (A)	Expected deaths (E)	A/E	Actual deaths (A)	Expected deaths (E)	A/E
40-44	0	0.0	0.00	0	0.0	0.00
45-49	0	0.8	0.00	1	0.6	1.62
50-54	7	7.1	0.98	8	2.8	2.83
55-59	32	31.2	1.03	9	6.0	1.51
60-64	38	40.4	0.94	6	6.6	0.90
65-69	47	48.1	0.98	6	8.1	0.74
70-74	52	51.4	1.01	7	8.1	0.87
75-79	38	37.1	1.02	11	11.4	0.96
80-84	39	40.6	0.96	17	16.3	1.04
85-89	37	36.0	1.03	4	9.7	0.41
90-94	9	10.9	0.83	5	4.2	1.20
95-99	1	1.6	0.63	2	1.9	1.04
100+	0	0.0	0.00	0	1.0	0.00
<b>Total</b>	<b>300</b>	<b>305.0</b>	<b>0.99</b>	<b>76</b>	<b>76.7</b>	<b>0.99</b>

### 5.2.3.3. Proportions married at death

The following tables compare the actual number of pensioners married at death (A) (including those assumed to have died although the death has not been confirmed) in the period 1 July 2008 to 30 June 2011 with those expected to be married at death (E) under the valuation assumptions for the category of pensioner.

#### Retirement Pensioners

Age group	Males				Females			
	Actual deaths	Actual married deaths (A)	Expected married deaths (E)	A/E	Actual deaths	Actual married deaths (A)	Expected married deaths (E)	A/E
56-60	16	11	12.6	0.87	10	8	6.3	1.28
61-65	65	49	51.4	0.95	18	11	10.6	1.04
66-70	100	73	73.8	0.99	34	15	15.0	1.00
71-75	109	77	74.5	1.03	35	10	11.9	0.84
76-80	119	78	76.0	1.03	41	7	8.2	0.85
81-85	286	169	157.1	1.08	103	19	16.2	1.18
86-90	399	195	164.8	1.18	115	16	11.9	1.34
91-95	212	75	58.5	1.28	87	3	4.4	0.69
96-100	76	16	8.7	1.84	46	0	2.3	0.00
100+	4	1	0.1	8.33	7	0	0.0	0.00
<b>Total</b>	<b>1,386</b>	<b>744</b>	<b>677.4</b>	<b>1.10</b>	<b>496</b>	<b>89</b>	<b>86.7</b>	<b>1.03</b>

#### Breakdown Pensioners

Age group	Males				Females			
	Actual deaths	Actual married deaths (A)	Expected married deaths (E)	A/E	Actual deaths	Actual married deaths (A)	Expected married deaths (E)	A/E
46-50	1	0	1.0	0.00	5	2	1.6	1.29
51-55	16	9	8.6	1.05	10	5	2.5	2.00
56-60	53	33	31.9	1.03	10	2	2.0	1.00
61-65	38	23	24.7	0.93	7	1	1.4	0.71
66-70	49	34	31.9	1.07	5	1	2.2	0.47
71-75	48	33	28.5	1.16	6	3	2.1	1.43
76-80	42	24	21.5	1.12	15	4	3.5	1.16
81-85	37	17	18.3	0.93	13	2	0.9	2.15
86-90	35	18	15.1	1.20	5	0	0.1	0.00
91-95	8	3	2.6	1.14	5	1	0.0	-
96-100	1	0	0.1	0.00	1	0	0.0	-
100+	0	0	0.0	-	0	0	0.0	-
<b>Total</b>	<b>328</b>	<b>194</b>	<b>184.1</b>	<b>1.05</b>	<b>82</b>	<b>21</b>	<b>16.2</b>	<b>1.30</b>

#### Age of spouse

	Actual age of spouse	Assumed age of spouse
Male pensioner	3.96 years younger than pensioner	4 years younger than pensioner
Female pensioner	1.59 years older than pensioner	2 years older than pensioner

### 5.2.4. Deferred Membership

The table below shows the rates of early withdrawal experienced by deferred members in the period 30 June 2008 to 30 June 2011.

Percentage of deferred members who withdraw per year	
Age group	Combined Males & Females
	%
36 - 40	0.00
41 - 45	0.43
46 - 50	0.16
51 - 55	0.24
56 - 60	0.52
Total	0.32

## 5.3. PSS

### 5.3.1. Rates of Salary Increase

For contributors who were in force at two consecutive 30 June review dates and for whom salaries were available at the two dates, the rates of salary increase over the period 30 June 2009 to 30 June 2012 experienced are shown in the table below.

	2009/2010 %	2010/2011 %	2011/2012 %	3 years %pa
Males	6.91%	5.30%	3.87%	5.30%
Females	7.49%	6.01%	6.35%	6.59%
All	6.97%	5.38%	4.14%	5.44%

Excluding contributors during a year over which their salary fell, the actual rates of increase over the period 30 June 2009 to 30 June 2012 were compared with the rates expected in the short term on the previous actuarial basis. The ratio of actual over expected salary for each age to actual over expected salary for the total group measures the suitability of the promotional scale.

General Salary Increases			
	Actual Increase Rate %	Expected Increase Rate %	Excess of actual salary increases over expected %pa
-Males	6.67%	5.53%	1.14%
-Females	8.37%	5.63%	2.73%
All	6.94%	5.55%	1.39%

Ratio of Actual/Expected at Age Shown to Actual/Expected for Total Group		
Age	Males	Females
36-40	0.98	1.03
41-45	1.01	1.01
46-50	1.00	0.99
51-55	0.99	0.98
56-60	1.00	0.98

### 5.3.2. Contributor Demographic Experience

#### 5.3.2.1. Rates of Resignation and Preservation

In the following table, the actual numbers of resignations (A) that occurred in the period 1 July 2008 to 30 June 2011 are compared with the numbers expected (E) under the actuarial basis adopted for this valuation.

Age	Males			Females		
	A	E	A/E	A	E	A/E
36-40	0	0.4	0.00	0	0.1	0.00
41-45	1	1.7	0.58	0	0.6	0.00
46-50	1	3.2	0.31	0	0.3	0.00
51-55	0	3.1	0.00	0	0.1	0.00
56-60	0	0.0	-	0	0.0	-
Total	2	8.4	0.24	0	1.1	0.00

No analysis was done of the numbers of members who resign and preserve their benefits with the numbers expected to preserve their benefits as the numbers were negligible.

#### 5.3.2.2. Rates of Death and Disablement

In the following table, the actual numbers of deaths (A) that occurred in the period 1 July 2008 to 30 June 2011 are compared with the numbers expected (E) on the valuation basis adopted for this valuation separately for killed on duty and not killed on duty.

Age	Deaths (not killed on duty)		
	A	E	A/E
<b>Males</b>			
36-40	0	0.1	0.00
41-45	1	1.0	0.98
46-50	0	1.8	0.00
51-55	3	1.4	2.14
56-60	1	0.8	1.31
61-65	0	0.1	0.00
Total	5	5.2	0.96
<b>Females</b>			
36-40	0	0.0	-
41-45	0	0.0	-
46-50	0	0.1	0.00
51-55	0	0.1	0.00
56-60	0	0.0	-
Total	0	0.2	0.00
	<b>Deaths (Killed on duty)</b>		
All ages	0	1.1	0.00

In the following tables, the actual numbers of disablements (A) that occurred in the period 1 July 2008 to 30 June 2011 are compared with the numbers expected (E) on the valuation basis adopted for this valuation separately for hurt on duty and not hurt on duty as well as combined.

Age	Disablements (not hurt on duty)			Hurt on Duty			Total Disablements		
	A	E	A/E	A	E	A/E	A	E	A/E
<b>Males</b>									
36-40	1	0.3	2.86	13	7.1	1.83	14	7.5	1.88
41-45	11	10.0	1.10	135	124.0	1.09	146	134.0	1.09
46-50	22	22.5	0.98	160	176.7	0.91	182	199.2	0.91
51-55	27	25.1	1.07	124	132.4	0.94	151	157.6	0.96
56-60	10	16.9	0.59	60	57.2	1.05	70	74.1	0.94
60+	1	0.0	-	5	3.3	1.51	6	3.3	1.81
Total	72	74.8	0.96	497	500.8	0.99	569	575.6	0.99
<b>Females</b>									
31-35	0	0.1	0.00	1	2.2	0.45	1	2.3	0.43
36-40	1	2.1	0.49	26	26.1	1.00	27	28.1	0.96
41-45	1	2.7	0.37	24	22.1	1.09	25	24.8	1.01
46-50	1	1.4	0.74	7	7.3	0.95	8	8.7	0.92
51-60	0	0.7	0.00	0	2.2	0.00	0	2.9	0.00
56-60	0	0.0	-	1	0.3	3.18	1	0.3	3.18
Total	3	6.9	0.43	59	60.3	0.98	62	67.2	0.92

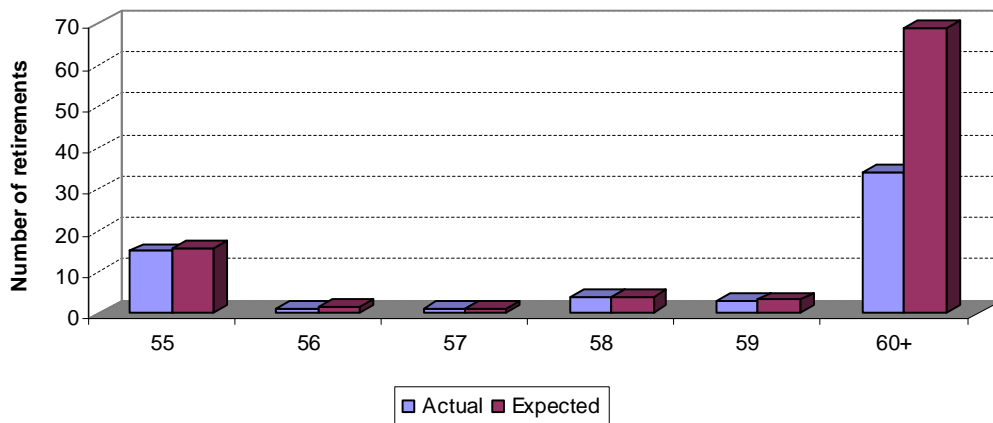
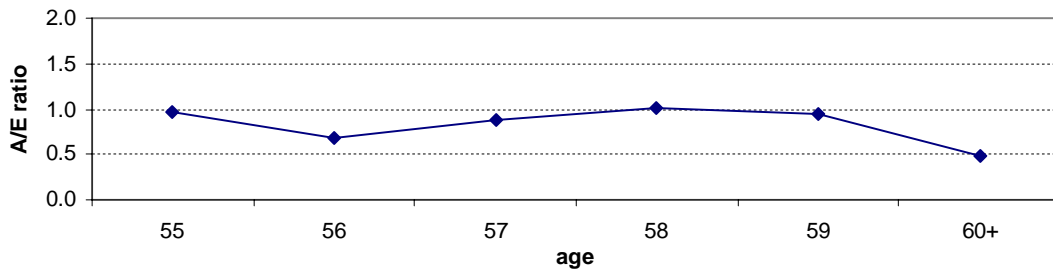
### 5.3.2.3. Rates of Retirement

The actual numbers (A) of retirements in the period 1 July 2008 to 30 June 2011 are compared with the numbers expected (E) under the valuation basis over the same period.

#### Males and Females

Age	A	E	A/E
55	15	15.5	0.97
56	1	1.5	0.69
57	1	1.1	0.89
58	4	3.9	1.02
59	3	3.2	0.95
<b>Total under 60</b>	24	25.2	0.95
60+	34	69.0	

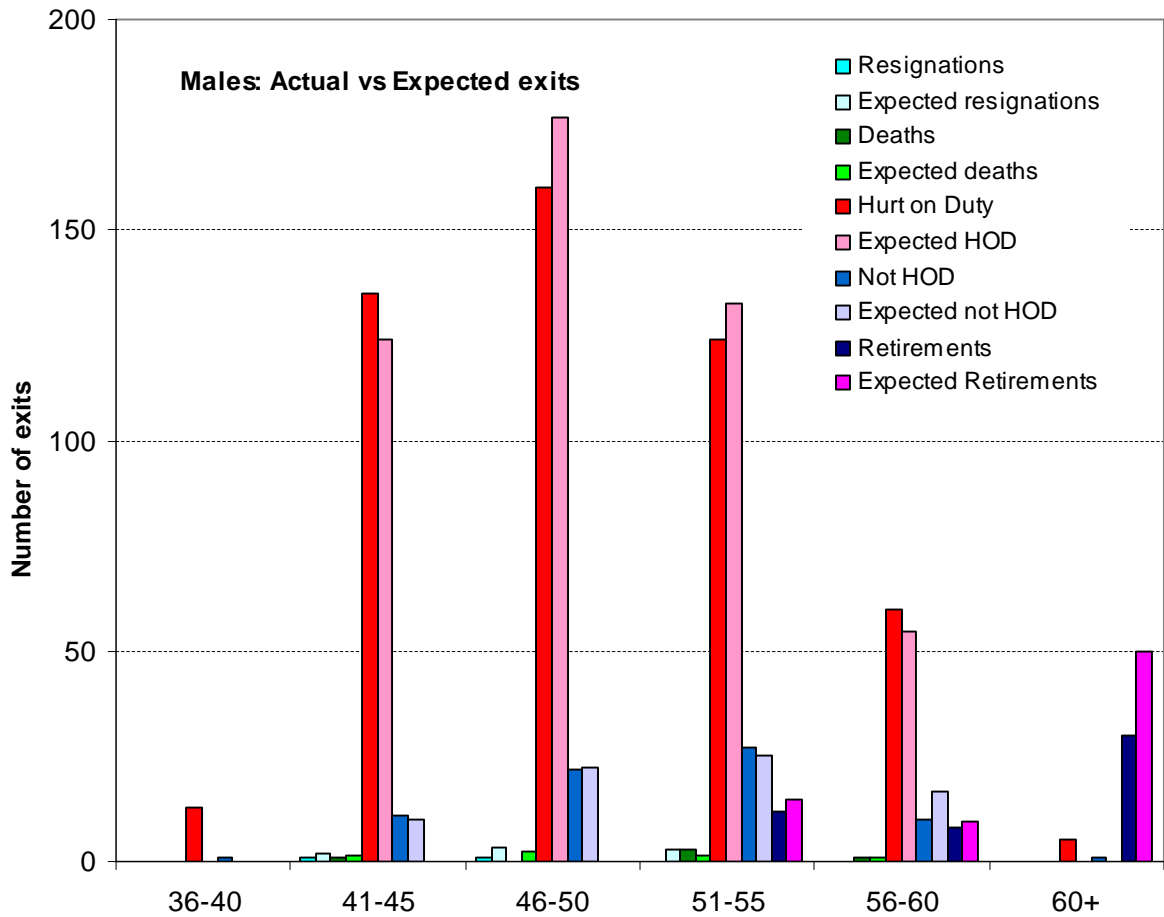
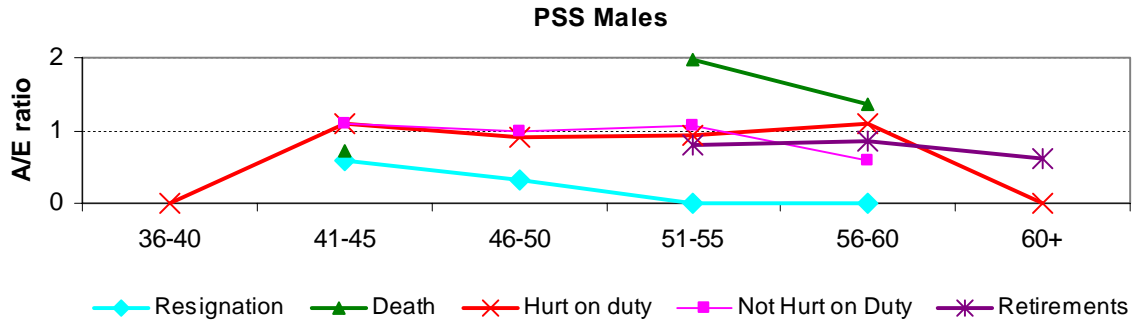
Retirements - Males & Females



### 5.3.2.4. Contributor Experience Graphs

The graphs below compare actual exits due to resignation, death, disablement and retirement in the period 30 June 2008 to 30 June 2011 with that expected under the actuarial basis for males only as the number of females is very small.





### 5.3.3. Pensioner Experience

#### 5.3.3.1. Members Choosing Pension Benefits

The table below shows the percentage of members eligible for pension type benefits who elected to take the pension compared in the period 1 July 2008 to 30 June 2011 with the percentage assumed in the valuation.

	Actual percentage electing pension	Assumed percentage electing pension
Retirement exits	55.2%	55%
Ill-health pensioners on attainment of age 55	97.4%	95%

#### 5.3.3.2. Mortality of Pensioners

The following tables compare the actual number of pensioners dying (A) (including those assumed to have died although the death has not been confirmed) in the period 1 July 2008 to 30 June 2011 with those expected to die (E) under the mortality assumed for the category of pensioner in the valuation basis. Results are shown only for groups with sufficient numbers to justify a comparison.

##### Retirement and Spouse Pensioners

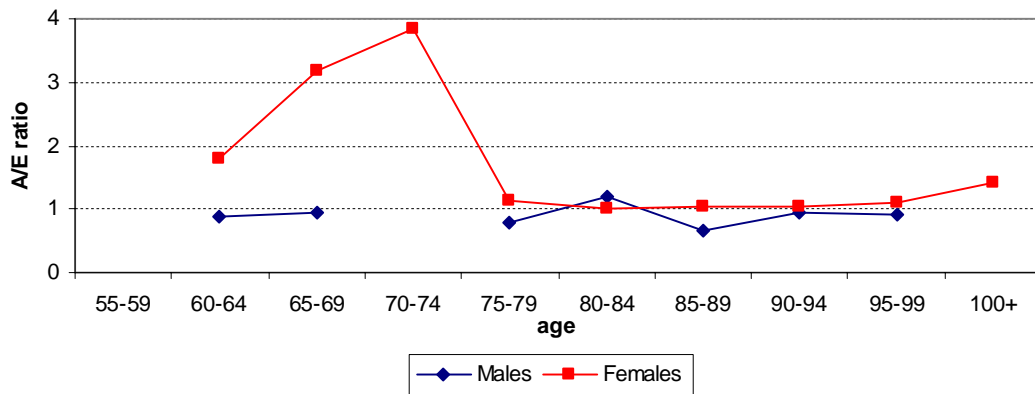
Age group	Males			Females		
	Actual number of deaths (A)	Expected deaths (E)	A/E	Actual number of deaths (A)	Expected deaths (E)	A/E
55-59	0	0.1	0.00	0	0.2	0.00
60-64	1	1.1	0.89	1	0.6	1.78
65-69	2	2.1	0.94	2	0.6	3.17
70-74	0	1.8	0.00	5	1.3	3.84
75-79	2	2.6	0.78	6	5.3	1.13
80-84	33	27.5	1.20	22	21.9	1.00
85-89	31	46.2	0.67	45	43.5	1.03
90-94	23	24.4	0.94	39	37.3	1.04
95-99	5	5.5	0.90	21	19.3	1.09
100+	0	0.0	-	6	4.2	1.42
<b>Total</b>	<b>97</b>	<b>111.5</b>	<b>0.87</b>	<b>147</b>	<b>134.3</b>	<b>1.09</b>

**Disability Pensioners (Males only)**

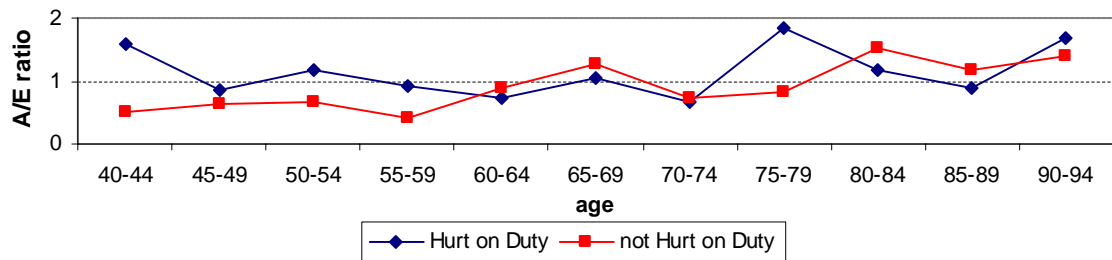
Age group	Not hurt on duty			Hurt on duty		
	Actual number of deaths (A)	Expected deaths (E)	A/E	Actual number of deaths (A)	Expected deaths (E)	A/E
40-44	1	1.9	0.52	2	1.3	1.60
45-49	4	6.2	0.65	3	3.5	0.86
50-54	6	9.0	0.67	7	6.0	1.17
55-59	6	14.7	0.41	10	11.0	0.91
60-64	12	13.6	0.89	9	12.6	0.72
65-69	10	7.9	1.27	7	6.7	1.04
70-74	4	5.4	0.74	2	3.0	0.67
75-79	5	6.0	0.83	3	1.6	1.85
80-84	25	16.5	1.52	6	5.0	1.19
85-89	15	13.0	1.16	5	5.5	0.90
90-94	7	5.0	1.41	5	3.0	1.67
95-99	0	0.3	0.00	0	0.0	0.00
100+	0	0.0	0.00	0	0.0	0.00
<b>Total</b>	<b>95</b>	<b>99.4</b>	<b>0.96</b>	<b>59</b>	<b>59.2</b>	<b>1.00</b>

The graphs below show the ratio of actual to expected number of deaths under the mortality rates assumed for PSS male normal pensioners and female retirement plus spouse pensioners and for male disability pensioners in the period 30 June 2008 to 30 June 2011.

**Pensioner Mortality**



**Disability Pensioner Mortality**



# 6

## Schedule of Employers

### 6.1. Part 1 The Crown and other employers

A Government Department or Administrative Office NSW Police Force  
 Health Administration Corporation  
 Water Administration Ministerial Corporation  
 Sydney Water Corporation  
 Hunter Water Corporation  
 Upper Parramatta River Catchment Trust  
 Western Lands Commissioner  
 Australian Museum Trust  
 Residual Business Management Corporation  
 New South Wales Treasury Corporation  
 Judicial Commission of New South Wales  
 Independent Commission Against Corruption  
 Bathurst-Orange Development Corporation  
 Clann Limited  
 Homebush Abattoir Corporation  
 Hunter Valley Catchment Management Trust  
 Justice and Police Museum Limited  
 New South Wales Film and Television Office  
 The Trustees of the Anzac Memorial Building  
 The University of Sydney  
 The University of New England  
 University of New England, Armidale Union (limited to persons who were contributors to the Fund immediately before becoming employed by the University of New England, Armidale Union)  
 The University of New South Wales  
 The Macquarie University  
 The University of Newcastle  
 The University of Wollongong  
 Australian College for Seniors Incorporated  
 Charles Sturt University  
 University of Technology, Sydney  
 University of Western Sydney  
 Southern Cross University  
 Children's Medical Research Foundation (limited to the employees whose names were specified in the Order made under the Public Authorities Superannuation Act 1985 dated 16 April 1986 and published in the Gazette of 18 April 1986 at p 1694)  
 Garvan Institute of Medical Research (limited to those persons:  
 (a) who were employees of that Institute immediately before 6 March 1998, and  
 (b) who were members of the Fund immediately before that date)  
 St. Luke's Hospital (limited to persons who, immediately before the appointed day, were employees of the Hospital and also contributors within the meaning of the Public Authorities Superannuation Act 1985 )  
 The New South Wales Teachers' Federation  
 Public Service Association of New South Wales  
 Australian Transport Officers Federation (New South Wales Division)  
 The Water and Sewerage Employees Union (Salaried Division and Wages Division)

Australian Railways Union  
 The Australian Tramway and Motor Omnibus Employees' Association  
 Australian Federated Union of Locomotive Enginemmen  
 Construction Forestry Mining Energy Union (limited to the employee whose name was specified in the Order made under the Public Authorities Superannuation Act 1985 dated 3 June 1987 and published in the Gazette of 5 June 1987 at p 2710)  
 The Police Association of New South Wales  
 Trustees of Arakoon State Conservation Area  
 Trustees of Bent's Basin State Conservation Area  
 Trustees of Burrendong State Conservation Area  
 Trustees of Burrinjuck State Conservation Area  
 Trustees of Copeton State Conservation Area  
 Trustees of Lake Glenbawn State Conservation Area  
 Trustees of Grabine State Conservation Area  
 Trustees of Killalea State Conservation Area  
 Trustees of Lake Keepit State Conservation Area  
 Trustees of Wyangala State Conservation Area  
 The Sydney Opera House Trust  
 Wentworth Park Trust  
 Zoological Parks Board of New South Wales  
 Roads and Maritime Services  
 The State Transit Authority of New South Wales  
 Home Care Service of New South Wales  
 The Hills Centre Limited (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )  
 Parramatta Park Reserve Trust  
 Parramatta Stadium Trust  
 Ambulance Service of New South Wales  
 University of Wollongong Recreation and Sports Association  
 The Trustees of the Roman Catholic Church of the Diocese of Lismore (limited to persons:  
 (a) who were employees of St. Vincent's Hospital, Lismore, and contributors to the State Authorities Superannuation Scheme immediately before 31 October 1990, and  
 (b) who continue after that date to be employees of the Hospital and contributors to that Scheme)  
 Australian Securities Commission (limited to those persons who:  
 (a) immediately before 1 January 1991, were employed in the Government Department known as Business and Consumer Affairs, and  
 (b) immediately before the date of assent to the Statute Law (Miscellaneous Provisions) Act (No 2) 1991 , were employed in the service of the Commission, and  
 (c) on being employed in that service, have elected to remain contributors to the Fund)  
 TAFE Commission  
 Wild Dog Destruction Board  
 Audit Office  
 Lord Howe Island Board  
 New South Wales Casino Control Authority  
 Internal Audit Bureau of New South Wales  
 Australian Industrial Registry (limited to those persons:  
 (a) who on 3 February 1993 were employed by the Joint Coal Board constituted under the Coal Industry Act 1946 as officers or employees of the Coal Industry Tribunal also constituted under that Act, and  
 (b) who, before becoming employed in the Australian Industrial Registry, have not elected to make provision for a preserved benefit as referred to in clause 3 (1) of Schedule 5)

Independent Living Centre (limited to Concetta de Bonis, Ann Louise Gibson, Jocelyn Frances Sloane and Melba Wu)

Public Transport Union NSW Branch (limited to existing employees of the Public Transport Union NSW Branch who were contributors to the Fund as at 1 March 1993 and employees who become employees on or after 1 March 1993 and who are contributors to the Fund immediately before becoming employees)

Government Pricing Tribunal of New South Wales

Financial Institutions Commission (limited to those persons:

- (a) who, being contributors, were employed in the Registry of Co-operatives, Department of Local Government and Co-operatives, immediately before the transfer date specified in the order by which their employment was transferred to that Commission in accordance with clause 3 of Schedule 3 to the Financial Institutions Commission Act 1992 , and
- (b) who did not, before that transfer date, exercise their entitlement under this Act to make provision for a preserved benefit provided by section 43)

Sydney Organising Committee for the Olympic Games

New South Wales Aboriginal Land Council

Hawkesbury-Nepean Catchment Management Trust

TransGrid (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

The Northcott Society (limited to:

- (a) contributors in respect of any period during which they have been employees of the employer from and including 14 October 1988 (but only if they were employees of the employer on 18 December 1992), and
- (b) other contributors in respect of any period during which they were employees of the employer from and including 14 October 1988 and before 18 December 1992)

Newcastle Port Corporation

Port Kembla Port Corporation

Sydney Ports Corporation

Maritime Authority of NSW

Port Macquarie Base Hospital (limited to those persons:

- (a) who were, immediately before 2 November 1994:
  - (i) employees of Hastings District Hospital, Port Macquarie, and
  - (ii) contributors to the State Authorities Superannuation Fund, and
- (b) who, on that date:
  - (i) transferred their employment to Port Macquarie Base Hospital, and
  - (ii) did not cease to be contributors to that Fund)

Great Southern Energy (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Delta Electricity

Macquarie Generation

Advance Energy (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Australian Inland Energy Water Infrastructure (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

EnergyAustralia (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Integral Energy Australia (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

NorthPower (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

FSS Trustee Corporation

SAS Trustee Corporation

The Corporation constituted under the Superannuation Administration Authority Corporatisation Act 1999

Hawkesbury District Health Service Limited (limited to persons:

(a) who were, immediately before 7 August 1996, employees of the Hawkesbury District Hospital, Windsor and contributors to the State Authorities Superannuation Fund, and

(b) who, on that date, transferred their employment to Hawkesbury District Health Service Limited and did not cease to be contributors to that Fund)

Benevolent Society of New South Wales (limited to Genoveva Almeida, Robyn Brooks, Adrian Ford, Caroline Lynn, Lynne Perl, Angela Plant, Elizabeth Sawtell, Beulah Warren, Pauline Wells and Barbara Wittig while continually employed by the Society)

Olympic Roads and Transport Authority

Australian Prudential Regulation Authority (limited to those persons:

(a) who, being contributors, were employed by the Financial Institutions Commission immediately before they became employees of the Authority under section 32 of the Financial Sector Reform (New South Wales) Act 1999 , and

(b) who did not, before becoming employees of the Authority, exercise their entitlement to make provision for a preserved benefit under clause 3 (1) of Schedule 5)

Sydney Catchment Authority

Eraring Energy

Parramatta Rail Link Company Pty Limited

Catholic Health Care Services Limited (limited to those persons:

(a) who were employed at the Bodington Hospital, Wentworth Falls, immediately before 1 September 2001, or

(b) who were employees of Mid Western Area Health Service immediately before 1 October 2004 and transferred their employment to Macquarie Care Centre, Bathurst, on that date)

Mercy Care Centre Young Limited (limited to those persons who were employed at the Mt St Joseph's Residential Care Facility, Young, immediately before 1 September 2001)

The Trustees of the Roman Catholic Church for the Diocese of Lismore (limited to those persons who were employed at the St Joseph's Nursing Home, Lismore, immediately before 1 September 2001)

Landcom

Pacific National (NSW) Pty Ltd (limited to those persons who were, immediately before 21 February 2002, employees of the Freight Rail Corporation)

Asciano Services Pty Ltd (limited to those persons who were, immediately before 21 February 2002, employees of the Freight Rail Corporation)

A body corporate constituted under the Local Government Act 1993 as a council or a county council (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 , not being employees referred to in clause 11 of the Superannuation Administration (Local Government Superannuation Scheme Transitional Provisions) Regulation 1997 )

A livestock health and pest authority constituted under the Rural Lands Protection Act 1998

The N.S.W. Local Government Industry Training Committee Incorporated

Local Government Association of New South Wales (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Shires Association of New South Wales (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Electricity Association of New South Wales (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Health Services Association of New South Wales

Institute of Municipal Management (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

New South Wales Nurses' Association

State Sports Centre Trust

Sydney Cricket and Sports Ground Trust

Australian Catholic University (limited to:

(a) contributors in respect of any period during which they have been employees of the employer from and including 1 April 1988 (but only if they were employees of the employer on 18 December 1992), and

(b) other contributors in respect of any period during which they were employees of the employer from and including 1 April 1988 and before 18 December 1992)

Government Employees Health Club (limited to:

(a) contributors in respect of any period during which they have been employees of the employer from and including 1 April 1988 (but only if they were employees of the employer on 18 December 1992), and

(b) other contributors in respect of any period during which they were employees of the employer from and including 1 April 1988 and before 18 December 1992)

Electrical Trades Union of Australia (New South Wales Branch) (limited to:

(a) contributors in respect of any period during which they have been employees of the employer from and including 1 April 1988 (but only if they were employees of the employer on 18 December 1992), and

(b) other contributors in respect of any period during which they were employees of the employer from and including 1 April 1988 and before 18 December 1992)

Little Company of Mary, Calvary Hospital, Wagga Wagga (limited to:

(a) contributors in respect of any period during which they have been employees of the employer from and including 1 April 1988 (but only if they were employees of the employer on 18 December 1992), and

(b) other contributors in respect of any period during which they were employees of the employer from and including 1 April 1988 and before 18 December 1992)

New South Wales State Cancer Council (limited to:

(a) contributors in respect of any period during which they have been employees of the employer from and including 1 April 1988 (but only if they were employees of the employer on 18 December 1992), and

(b) other contributors in respect of any period during which they were employees of the employer from and including 1 April 1988 and before 18 December 1992)

Sydney Credit Union (limited to:

(a) contributors in respect of any period during which they have been employees of the employer from and including 1 April 1988 (but only if they were employees of the employer on 18 December 1992), and

(b) other contributors in respect of any period during which they were employees of the employer from and including 1 April 1988 and before 18 December 1992)

Waverley-Woollahra Destruction Committee (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Richmond-Tweed Regional Library (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )



Richmond-Upper Clarence Regional Library (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Northern Area Regional Organisation of Councils (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Health Services Union, being the authority registered under that name on 1 October 2003 as a State industrial organisation of employees under Chapter 5 of the Industrial Relations Act 1996

Health and Building Surveyors Association of New South Wales (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Federated Municipal and Shire Council Employees' Union of Australia, New South Wales Division (limited to those employees who became employees after 1 July 1997 and before the commencement of the State Authorities Superannuation (Local Government and Energy Employers) Order 2002 )

Trustees of the Roman Catholic Church for the diocese of Maitland-Newcastle (limited to those employees who were employed at St Joseph's Home, Sandgate, immediately before 11 October 2002).

Western Sydney Buses

Game Council of New South Wales

POWMRI Limited (limited to those employees who were employees of the University of New South Wales immediately before 21 July 2003)

Healthscope Limited (limited to those employees who were employed by Hospitals of Australia Limited immediately before 17 August 2003 and were contributors to the Fund immediately before that date)

Jenolan Caves Reserve Trust

St Catherine's Aged Care Services Ltd (limited to those employees who were employed at St Catherine's Villa, Eastwood, immediately before 7 November 2003)

Rail Corporation New South Wales

Independent Transport Safety and Reliability Regulator

Sydney Ferries

State Water Corporation

Cancer Institute (NSW)

Natural Resources Commission

New South Wales Institute of Sport

Australian Rail Track Corporation Ltd (limited to those persons who:

- (a) become employees of Australian Rail Track Corporation Ltd on or after 1 June 2004 and not later than 31 December 2008, and
- (b) cease to be employed by Rail Infrastructure Corporation, RailCorp or the State Rail Authority not more than 30 days before being so employed, and
- (c) do not elect to cease to be contributors to the Fund within 30 days of commencing employment with Australian Rail Track Corporation Ltd).

National Office Products Ltd (limited to those persons:

- (a) who were:
  - (i) employed in the Q Stores business unit of the Department of Commerce, and
  - (ii) contributors to the Fund, immediately before 1 February 2005, and
- (b) who, on that date, transferred their employment to National Office Products Ltd and did not cease to be contributors to the Fund)

Toll Pty Limited-limited to those persons who:

- (a) immediately before 1 March 2005, were employed in the State Mail business unit of the Department of Commerce and were contributors to the Fund, and

(b) on that date, became employees of Toll Pty Limited and did not cease to be contributors to the Fund

Salmat Document Management Solutions Pty Limited-limited to those persons who:

(a) immediately before 16 April 2005, were employed in the Government Printing Service business unit of the Department of Commerce and were contributors to the Fund, and

(b) on that date, became employees of Salmat Document Management Solutions Pty Limited and did not cease to be contributors to the Fund

Calvary Retirement Community Cessnock Limited (limited to those employees:

(a) who were employees of Hunter Area Health Service immediately before 2 April 2003, and

(b) who, on or after that date, transferred their employment from Hunter Area Health Service to Calvary Retirement Community Cessnock Limited)

Police Federation of Australia

Events New South Wales Pty Limited-limited to those persons who:

(a) were employed in the Major Events Unit of the Department of State and Regional Development immediately before becoming employees of Events New South Wales Pty Limited, and

(b) became employees of Events New South Wales Pty Limited on or before 10 March 2009

Pacific National (QLD) Pty Ltd (limited to those persons who were, immediately before 21 February 2002, employees of the Freight Rail Corporation)

Pacific National (Tasmania) Pty Limited (limited to those persons who were, immediately before 21 February 2002, employees of the Freight Rail Corporation)

Pacific National (Victoria) Pty Ltd (limited to those persons who were, immediately before 21 February 2002, employees of the Freight Rail Corporation)

Murray-Darling Basin Authority (limited to those persons who were, immediately before 15 December 2008, employees of the Murray-Darling Basin Commission)

Sydney Metro

Greyhound Racing New South Wales (limited to persons who, immediately before 1 July 2009, were employees of the Greyhound and Harness Racing Regulatory Authority)

Harness Racing New South Wales (limited to persons who, immediately before 1 July 2009, were employees of the Greyhound and Harness Racing Regulatory Authority)

Tatts Employment Co (NSW) Pty Ltd (limited to persons who, immediately before 31 March 2010, were employees of New South Wales Lotteries Corporation)

National Measurement Institute (limited to those persons who were, immediately before 1 July 2010, employed in the Department of Services, Technology and Administration in a function relating to trade measurement)

SITA (No. 1) Pty Ltd (limited to persons who, immediately before 31 January 2011, were employees of Waste Recycling and Processing Corporation)

National VET Regulator (limited to those persons who, immediately before 1 July 2011, were employed in the Department of Education and Communities in the Quality Assurance Services Directorate)

RSL LifeCare Limited (limited to those persons who, immediately before 23 January 2012, were employed under Part 1 of Chapter 9 of the Health Services Act 1997 and assigned to work at the Governor Phillip Nursing Home, Penrith, or the Queen Victoria Memorial Home, Picton)

Harbour City Ferries Pty Ltd (limited to those persons who, immediately before 28 July 2012, were employed on a permanent basis by Sydney Ferries and:

(a) on that date, transferred their employment to Harbour City Ferries Pty Ltd, or

(b) were covered by the Sydney Ferries Salaried and Senior Officers Agreement 2011, commenced employment with Harbour City Ferries Pty Ltd between 28 July 2012 and 28 October 2012 (inclusive), were not made an offer of employment by Harbour City Ferries Pty Ltd before 28 July 2012 and did not receive a voluntary redundancy payment from Sydney Ferries)

## **6.2. Part 2 Local government and other authorities**

There are no employers under this part.

## **6.3. Part 3 Public health organisations**

A public health organisation within the meaning of the Health Services Act 1997.

## 7

## Apportionment of Benefits and sensitivity analysis

### 7.1. SASS

Where liabilities for expected future benefit payments under SASS in this valuation have been apportioned between past service liabilities (benefits in respect of membership prior to the valuation date) and future service liabilities (membership after the valuation date), the method of apportioning to past service is as set out below. Future service liabilities are the difference between the total liabilities and the past service liabilities.

For benefits payable at time  $t$  years after the valuation date:

- on retirement, partial disability, withdrawal with deferred benefit (before discount) and on total disability:

Past service component

$$= SAL_t \times ABP_0 \times 0.025 \times \left( 1 - \frac{\text{TaxPS}+t}{\text{PS}+t} \times 0.15 \right)$$

- on death:

Past service component

$$= SAL_t \times ABP_0 \times 0.025$$

- on resignation with 10 years' membership:

Past service component

$$= (\text{PS}+t) \times MCI_t \times \frac{ABP_0}{Y_t} \times 0.025 \times \left( 1 - \frac{\text{TaxPS}+t}{\text{PS}+t} \times 0.15 \right)$$

where:

$ABP_0$  = accrued benefit points at time 0 (ie at 30 June 2009), subject to maximum points limit.

$Y_t$  = as  $ABP_t$  except not subject to maximum points limit

PS = membership period to 30 June 2012, including previous fund membership

TaxPS = membership period to 30 June 2012, excluding any period before 1 July 1988

$SAL_t$  = salary at time  $t$  (Final Salary or Final Average Salary as appropriate to the particular benefit)

$MCI_t$  = member contributions plus interest at time t, assuming member continues to contribute at his/her 30 June 2012 rate until achieving maximum points limit, less expenses and additional benefit levy where appropriate.

## 7.2. SANCS

Where liabilities for expected future benefit payments under SANCS in this valuation have been apportioned between past service liabilities (benefits in respect of membership prior to the valuation date) and future service liabilities (membership after the valuation date), the method of apportioning to past service is as set out below. Future service liabilities are the difference between the total liabilities and the past service liabilities.

For benefits payable at time t years after the valuation date:

Past service component

$$= \frac{PS}{PS+t} \times (\text{benefit payable in respect of SANCS membership})$$

$$+ \frac{SGPS}{SGPS+t} \times (\text{SG top-up, if any})$$

where:

PS = membership period to 30 June 2012

SGPS = membership period to 30 June 2012, excluding any period before 30 June 1992

## 7.3. SSS

Where liabilities for expected future employer-financed benefit payments under SSS in this valuation have been apportioned between past service liabilities (benefits in respect of membership prior to the valuation date) and future service liabilities (membership after the valuation date), the method of apportioning to past service is as set out below. Future service liabilities are the difference between the total liabilities and the past service liabilities.

For benefits payable at time t years after the valuation date:

- on retirement, withdrawal and preservation:

Past service component

$$= \frac{PS}{PS+t} \times \text{Value of employer-financed benefit commencing payment at time t}$$

- on death or disability:

Past service component

$$= \frac{PS}{TS} \times \text{Value of employer-financed benefit commencing payment at time } t$$

where:

PS = membership period to 30 June 2012, or normal retirement age if earlier

TS = membership period to normal retirement age.

PS+t = membership period to time t, or normal retirement age if earlier.

Value of employer-financed benefit = Value total benefit less amount of accumulated member contributions at time t.

## 7.4. PSS

Where liabilities for expected future benefit payments under PSS in this valuation have been apportioned between past service liabilities (benefits in respect of membership prior to the valuation date) and future service liabilities (membership after the valuation date), the method of apportioning to past service is as set out below. Future service liabilities are the difference between the total liabilities and the past service liabilities.

For benefits payable at time t years after the valuation date:

- on retirement, withdrawal and preservation:

Past service component

$$= \frac{PS}{PS+t} \times \text{Value of benefit commencing payment at time } t$$

- on death or invalidity:

Past service component

$$= \frac{PS}{PS+t} \times \frac{PS+t(\max 30)}{TS(\max 30)} \times \text{Value of benefit commencing payment at time } t$$

where:

- PS = membership period to 30 June 2012, or normal retirement age if earlier
- TS(max 30) = lesser of membership period to normal retirement age or 30 years.
- PS+t = membership period to time t, or normal retirement age if earlier.
- PS+t(max 30) = membership period to time t, or normal retirement age if earlier, limited to 30 years.

## 7.5. Sensitivity analysis

The results of the sensitivity analysis are set out in the following tables:

Basis	Unfunded liability under varying assumptions (\$million)				
	SASS	SANCS	SSS	PSS	Total
Standard	3,009.3	829.2	12,093.8	3,046.5	18,978.8
Investment return plus 1%	2,551.5	711.0	9,317.8	2,359.4	14,939.7
Investment return minus 1%	3,532.6	961.3	15,403.2	3,883.6	23,780.8
Salary increases plus 1%	3,404.0	961.6	12,260.2	3,120.1	19,745.9
Salary increases minus 1%	2,649.2	708.9	11,935.3	2,977.1	18,270.6
CPI increases plus 1%	3,137.8	829.2	15,405.1	3,849.1	23,221.2
CPI increases minus 1%	2,898.8	829.2	9,280.7	2,377.1	15,385.8
Pensioner mortality higher	3,003.6	829.2	11,860.7	2,997.6	18,691.1
Pensioner mortality lower	3,021.4	829.2	12,176.3	3,063.3	19,090.3

Basis	Decrease in unfunded liability (\$ million)				
	SASS	SANCS	SSS	PSS	Total
Investment return plus 1%	457.8	118.2	2,776.0	687.1	4,039.1
Investment return minus 1%	-523.3	-132.1	-3,309.4	-837.1	-4,802.0
Salary increases plus 1%	-394.7	-132.4	-166.4	-73.6	-767.1
Salary increases minus 1%	360.1	120.3	158.5	69.4	708.2
CPI increases plus 1%	-128.5	-	-3,311.3	-802.6	-4,242.4
CPI increases minus 1%	110.5	-	2,813.1	669.4	3,593.0
Pensioner mortality higher	5.7	-	233.1	48.9	287.7
Pensioner mortality lower	-12.1	-	-82.5	-16.8	-111.5

From the above tables it is apparent:

1. Overall the rate of investment return has the major impact on the financial condition of the Pooled Fund;
2. For SASS and SANCS, the rate of salary increase also has a major effect;
3. For SSS and PSS, the rate of increase in CPI is very important because of the pension liabilities of those two Schemes.
4. In respect of pensioner mortality, there is potential for a significant impact on SSS and PSS with a large proportion of liabilities in pensions. The difference between the long term and short term improvement factors assumed for pensioner mortality averages 1.0% for males and 0.6% for females in the age range appropriate for pensioners. Thus the effect of applying more or fewer years of improvements at the 25 year level is less than the 1% change in CPI increases, and even extending the higher level improvements indefinitely would not increase the unfunded liability by more than half the increase were CPI increases 1% higher.

It is also noticeable that a worsening of an economic parameter by 1% per annum has a greater dollar effect than a favourable change of 1% per annum. This can be explained algebraically.



Consider the present value of \$1 benefit payable in one year's time.

Let  $i =$  Standard discount rate ( $i > 0$ )  
 $\Delta =$  Change in discount rate ( $0 < \Delta < i$ )  
 $D =$  Present value, discounted at the standard rate  
 $D_+ =$  Decrease in the present value when the discount rate is increased by  $\Delta$   
 $D_- =$  Increase in the present value when the discount rate is decreased by  $\Delta$

$$D = \frac{1}{1+i}$$

$$D_+ = \frac{1}{1+i} - \frac{1}{1+i+\Delta}$$

$$= \frac{\Delta}{(1+i)(1+i+\Delta)}$$

$$D_- = \frac{1}{1+i-\Delta} - \frac{1}{1+i}$$

$$= \frac{\Delta}{(1+i)(1+i-\Delta)}$$

$$D_+ / D_- = \frac{1+i-\Delta}{1+i+\Delta}$$

$< 1$  on the assumptions above since  $i - \Delta < i + \Delta$

That is, the decrease in the liability when the discount rate is increased by an amount is less than the increase in the liability when the discount rate is decreased by the same amount.

## 8

## Matrix of Analysis of Surplus

### 8.1. Surplus and Deficiency Table

The items of surplus and deficiency as set out in Volume 1 are summarised here.

Item	Amounts of Surplus and Deficiency \$ million				
	SASS	SANCS	SSS	PSS	Total
Unfunded Liability as at 30 June 2009	4,020.1	1,531.7	10,742.7	3,576.6	19,871.2
Investment Earnings	245.8	108.2	517.9	100.7	972.6
Past Service Funding Contributions	-1,976.4	-1,070.0	-2,379.0	-1,550.6	-6,975.9
Change of Actuarial Basis	-186.9	-120.3	296.4	175.6	164.7
Salary Increases	24.8	12.2	78.2	-23.0	92.2
CPI Increases	3.4	0.0	116.6	25.8	145.8
Interest on previous unfunded liability	946.2	360.5	2,677.6	841.9	4,826.2
PSS Disability rates	0.0	0.0	0.0	-124.4	-124.4
Exits	-62.8	2.0	42.4	0.0	-18.4
Other	-4.9	4.7	1.1	23.9	24.8
Unfunded Liability as at 30 June 2012	3,009.3	829.2	12,093.8	3,046.5	18,978.8

## 9

## Results for individual employer reporting codes

## 9.1. 30 June 2012 Financial Position and recommended contributions PTES and other non State Sector Entities

REPORTING CODE	NAME	EMPLOYER RESERVE	PAST SERVICE LIABILITIES	PAST SERVICE DEFICIT (SURPLUS)	RECOMMENDED ANNUAL FUTURE SERVICE CONTRIBUTION	RECOMMENDED ANNUAL EXTRA CONTRIBUTION		
						5 YEARS	10 YEARS	TO 2030
A35000	Sydney Harbour Foreshore Auth	7,723,062	9,821,941	2,098,880	80,745	559,596	331,727	236,352
A42300	Soil Services	19,324,471	20,184,061	859,591	329,487	229,181	135,858	96,797
A42400	Land And Property Information	306,093,430	338,359,381	32,265,951	4,387,830	8,602,644	5,099,615	3,633,425
A42402	Waste Assets Management Corporation (Wamc)	3,087,910	2,731,456	-356,454	77,568	0	0	0
A51202	Dept Of Primary Industries - Mine Subsidence Board	8,041,622	8,290,413	248,791	105,720	66,332	39,321	28,016
A51300	State Forests Of Nsw	132,267,543	144,625,838	12,358,295	954,468	3,294,929	1,953,222	1,391,651
A51301	Forestry Commission Division	22,700,953	23,892,687	1,191,735	508,779	317,737	188,353	134,200
A52000	Office Of The Institute Of Teachers	4,451,394	4,798,711	347,317	89,215	92,600	54,893	39,111
A54003	Sydney Opera House	50,573,623	29,391,357	-21,182,266	0	0	0	0
B02001	Teacher Housing Authority	1,841,685	1,343,410	-498,275	0	0	0	0
B44000	Public Transport Ticketing Authority	2,097	0	-2,097	0	0	0	0
C09000	Australian Securities Commission	28,965,602	20,204,050	-8,761,552	0	0	0	0
C11000	Australian Services Union	595,564	0	-595,564	0	0	0	0
C21000	Delta Electricity	226,970,055	251,651,390	24,681,335	3,926,749	6,580,458	3,900,871	2,779,331
C23006	Energy Australia - Stc	103,995	204,220	100,225	6,016	26,721	15,840	11,286
C24001	Australian Prudential Regulation Authority-Apra	614,890	325,473	-289,417	0	0	0	0
C25000	Pacific National	96,508,239	136,914,736	40,406,497	2,051,645	10,773,050	6,386,224	4,550,121
C41001	Hunter Water Corp Ltd - Wages	70,974,697	90,729,335	19,754,638	1,011,360	5,266,918	3,122,209	2,224,543

REPORTING CODE	NAME	EMPLOYER RESERVE	PAST SERVICE LIABILITIES	PAST SERVICE DEFICIT (SURPLUS)	RECOMMENDED ANNUAL FUTURE SERVICE CONTRIBUTION	RECOMMENDED ANNUAL EXTRA CONTRIBUTION		
						5 YEARS	10 YEARS	TO 2030
C41003	Hunter Water Australia Pty Ltd	10,921,861	11,167,333	245,472	120,646	65,447	38,797	27,642
C43000	Independent Living Centre	68,799	55,083	-13,716	0	0	0	0
C51000	Macquarie Generation	161,790,672	183,084,708	21,294,036	3,071,613	5,677,347	3,365,510	2,397,892
C60001	Nsw Nurses Association	5,229,952	5,740,323	510,371	239,073	136,073	80,664	57,472
C61000	Teachers' Federation	26,052,466	30,114,603	4,062,137	359,945	1,083,034	642,019	457,432
C62000	Nsw Treasury Corporation	1,356,244	897,731	-458,513	0	0	0	0
C63000	Newcastle Port Corporation	31,222,457	21,565,241	-9,657,216	0	0	0	0
C64001	The Northcott Society	837,727	349,916	-487,811	0	0	0	0
C65008	Essential Energy - Northpower	8,488,270	6,076,869	-2,411,401	0	0	0	0
C69000	Police Association Of Nsw	234,788	0	-234,788	0	0	0	0
C71000	Port Kembla Port Corporation	10,178,742	9,548,401	-630,341	115,586	0	0	0
C73000	Public Service Association	20,030,593	19,373,408	-657,185	339,794	0	0	0
C74000	Rail Tram And Bus Union	2,396,573	2,074,639	-321,934	0	0	0	0
C79000	S A S Trustee Corporation Division	4,347,483	3,964,349	-383,134	0	0	0	0
C82000	State Transit Authority Division	88,172,151	185,789,674	97,617,523	4,060,597	26,026,469	15,428,395	10,992,576
C85000	Sydney Grammar School	24,964,364	31,968,492	7,004,128	168,372	1,867,418	1,106,998	788,725
C89000	Sydney Ports Corporation	56,912,239	56,247,877	-664,362	693,039	0	0	0
C90000	Sydney Water Corporation	761,547,709	918,176,435	156,628,725	10,470,032	41,759,845	24,755,082	17,637,747
D04000	St Vincents Hosp Priv Lismore	1,743,687	1,923,436	179,749	68,569	47,924	28,409	20,241
D24000	Zoological Parks Board Division	8,333,647	9,249,667	916,019	202,777	244,226	144,776	103,152
D33000	Sydney Catchment Authority	25,735,626	35,078,058	9,342,432	705,608	2,490,849	1,476,566	1,052,039
D35000	Eraring Energy	139,184,869	153,064,233	13,879,364	2,171,833	3,700,471	2,193,626	1,562,936
D43000	Landcom	11,889,217	15,029,648	3,140,431	309,797	837,291	496,343	353,640
D45000	Western Sydney Buses Division	129,270	106,211	-23,059	6,714	0	0	0
D47000	Residual Business Management Corporation	20,959,271	17,310,290	-3,648,981	0	0	0	0
D49000	Healthscope	27,759	238,660	210,901	0	56,230	33,333	23,749
D53000	Railcorp	845,661,034	1,007,384,353	161,723,318	17,751,967	43,118,149	25,560,280	18,211,443
D54000	Transport Infrastructure Development Corporation	-101,921	0	101,921	0	27,174	16,109	11,477
D55000	Sydney Ferries	20,640,736	27,199,996	6,559,260	687,933	1,748,809	1,036,687	738,629

REPORTING CODE	NAME	EMPLOYER RESERVE	PAST SERVICE LIABILITIES	PAST SERVICE DEFICIT (SURPLUS)	RECOMMENDED ANNUAL FUTURE SERVICE CONTRIBUTION	RECOMMENDED ANNUAL EXTRA CONTRIBUTION		
						5 YEARS	10 YEARS	TO 2030
D56000	State Water	39,424,712	44,862,286	5,437,574	703,678	1,449,748	859,405	612,318
D60000	Australian Rail Track Corporation Ltd	15,129,171	18,233,243	3,104,072	307,867	827,597	490,597	349,545
D61000	Officemax Austalia Limited	615,696	690,920	75,224	0	20,056	11,889	8,471
D63000	Salmat Document Management Solutions	2,728,189	2,766,045	37,856	25,761	10,093	5,983	4,263
D64000	Calvary Retirement Community Cessnock Ltd	1,654,228	1,836,251	182,023	64,187	48,530	28,769	20,497
D70000	Harness Racing Nsw	513,504	404,117	-109,387	0	0	0	0
D71000	Tattersall'S Holdings Pty Ltd (Tatts Group)	13,943,362	15,745,927	1,802,566	252,137	480,594	284,895	202,985
D73000	National Measurement Institute	2,088,098	1,897,290	-190,808	45,487	0	0	0
D74000	Sita	1,390,968	1,596,685	205,717	65,235	54,848	32,513	23,165
D75000	National Vet Regulator	1,562,836	1,157,909	-404,927	0	0	0	0
D77000	RSL Lifecare	1,759,546	1,653,758	-105,788	112,534	0	0	0
H31000	Canterbury City Council - Stc	28,649	0	-28,649	0	0	0	0
H55000	Council Holding Account	469,897	0	-469,897	0	0	0	0
H59000	Forbes Shire Council - Stc	138,102	149,021	10,919	1,612	2,911	1,726	1,230
H63002	Gosford City Council Stc	192,726	161,977	-30,749	0	0	0	0
H64002	Goulburn City Council	104,398	111,977	7,579	6,183	2,021	1,198	854
H75000	Hastings Municipal Council - Stc	123,218	134,301	11,083	7,354	2,955	1,752	1,248
H80000	Hornsby Shire Council - Stc	982,401	1,412,938	430,538	17,072	114,789	68,046	48,482
H98002	Liverpool City Council - Stc	189,995	37,417	-152,577	0	0	0	0
J04002	Manly Council - Stc	-4,927	0	4,927	0	1,314	779	555
J36002	Ryde City Council-Stc	800,432	1,012,837	212,405	18,238	56,631	33,571	23,919
J47002	City Of Sydney Council - Stc	430,118	554,720	124,602	21,898	33,221	19,693	14,031
J48000	Palerang Council	128,171	127,980	-191	7,027	0	0	0
J52002	Tumbarumba Shire Council	154,009	177,378	23,368	5,244	6,230	3,693	2,632
J61002	Walgett Shire Council	253,506	237,519	-15,987	10,386	0	0	0
J72002	Wollongong City Council - Stc	495,207	507,082	11,875	14,830	3,166	1,877	1,337
M67000	Central North Livestock Health And Pest Authority	1,604,343	795,212	-809,131	0	0	0	0
M68000	Central West Livestock Health And Pest Authorities	939,308	477,214	-462,094	0	0	0	0

REPORTING CODE	NAME	EMPLOYER RESERVE	PAST SERVICE LIABILITIES	PAST SERVICE DEFICIT (SURPLUS)	RECOMMENDED ANNUAL FUTURE SERVICE CONTRIBUTION	RECOMMENDED ANNUAL EXTRA CONTRIBUTION		
						5 YEARS	10 YEARS	TO 2030
M69000	Cumberland	715,174	591,121	-124,054	0	0	0	0
M71000	Hume Livestock Health And Pest Authorities	1,714,181	1,504,658	-209,524	0	0	0	0
M72000	Lachlan Livestock Health And Pest Authorities	1,881,287	2,108,951	227,663	72,154	60,699	35,982	25,637
M73000	Mid Coast Livestock Health And Pest Authorities	761,731	851,338	89,607	35,896	23,891	14,162	10,091
M74000	New England Livestock Health And Pest Authorities	1,682,877	1,166,507	-516,371	0	0	0	0
M75000	North Coast Livestock Health And Pest Authorities	1,180,317	971,978	-208,340	0	0	0	0
M76000	North West Livestock Health And Pest Authorities	1,071,818	1,015,643	-56,176	25,616	0	0	0
M77000	Riverina Livestock Health And Pest Authorities	1,939,636	1,341,614	-598,022	0	0	0	0
M78000	South East Livestock Health And Pest Authorities	1,268,088	1,183,813	-84,275	0	0	0	0
M79000	Tablelands Livestock Health And Pest Authorities	1,649,818	1,310,153	-339,665	0	0	0	0
N01000	Australian Catholic Uni Ltd	303,708	303,060	-649	16,066	0	0	0
N05000	Australian Health Management Group Ltd	4,447,140	4,105,444	-341,696	169,145	0	0	0
N07000	Health Service Union	4,661,496	6,390,585	1,729,090	190,643	461,004	273,282	194,710
N13000	Nsw Loc Govt Ind Train Com	477,571	497,787	20,215	0	5,390	3,195	2,276
N20000	Sydney Credit Union	2,354,993	1,664,100	-690,893	0	0	0	0
N21000	Sydney Cricket Ground Division	1,186,909	1,358,009	171,100	58,356	45,618	27,042	19,267
OTHERS	Reserves but no members/liabilities	406,003	0	-406,003	0	0	0	0
<b>TOTAL</b>		<b>3,385,339,728</b>	<b>3,959,354,852</b>	<b>574,015,124</b>	<b>57,328,082</b>	<b>168,408,228</b>	<b>99,831,778</b>	<b>71,129,138</b>

## Notes

- 1 The recommended future service contribution is based on a combination of a multiple of expected member contributions for SASS and SSS and a percentage of salaries for SANCS
- 2 The recommended future service contribution is based on expected member contributions and salaries in the year ending 30 June 2013
- 3 The recommended annual extra contributions are those expected (on the assumptions made) to be required to eliminate the current past service deficit over 5, 10 or 18 years respectively



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