



Australian Government
Department of Finance

PCSS LONG TERM COST REPORT 2014

A report on the long term cost of the Parliamentary Contributory
Superannuation Scheme

Prepared by Mercer Consulting (Australia) Pty Ltd using data as at
30 June 2014

GOVERNANCE AND RESOURCE MANAGEMENT GROUP



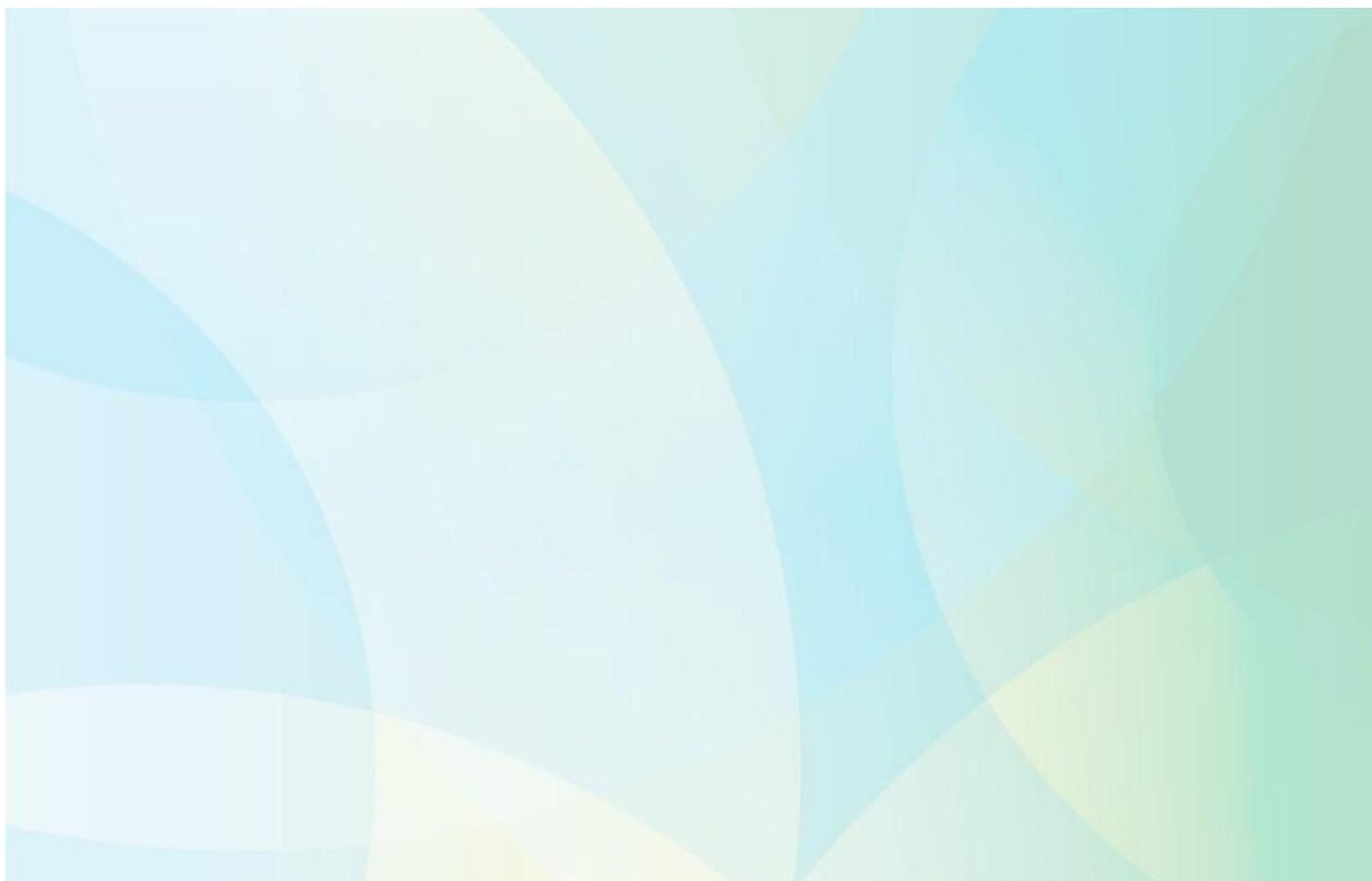
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Mercer Consulting (Australia) Pty Ltd
ABN 55 153 168 140 AFS Licence # 411770
Darling Park Tower 3
201 Sussex Street Sydney NSW 2000
GPO Box 9946 Sydney NSW 2001
+61 2 8864 8888

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Department of Finance
(Governance and Resource Management Group)

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1. Executive Summary

We are pleased to present this report on the actuarial investigation of the long term costs of the Parliamentary Contributory Superannuation Scheme (PCSS), prepared at the request of the Department of Finance (Finance). This report has been carried out based on membership data as at 30 June 2014.

Previous PCSS Long Term Cost Report

The previous actuarial investigation into the long term costs of the PCSS was undertaken by Mercer Consulting (Australia) Pty Limited, based on data as at 30 June 2011. The outcomes of this investigation are outlined in the *Parliamentary Contributory Superannuation Scheme – Long Term Cost Report 2011*.

Purpose of the Report

This report estimates the long term cost of providing superannuation benefits to members of the PCSS. The scheme costs have been estimated in three ways:

- accrued liability as at 30 June 2014;
- projected outlays over the next three year period; and
- the notional employer contribution rate.

Accrued Liabilities

The accrued liabilities are the liabilities for superannuation entitlements in respect of service already rendered to the Australian Government. The total accrued liabilities of the PCSS at 30 June 2014 were \$833.4m.

This compares with accrued liabilities calculated as at 30 June 2011 (the effective date of the previous report) of \$778.9m.

The increase in the accrued liability since the last report is primarily due to notional interest on accrued liabilities, and the accrual of new benefits during the period offset by the payment of benefits to members.

The increase is approximately as expected overall, with the impact of favourable experience items (ie salary and pension increases and the increased reduction in liability due to members holding Offices of Profit) being approximately offset by other less favourable experience and changes in the valuation methodology and pensioner mortality assumptions.

These impacts are summarised in the table below:

	\$ million
Liability at 30 June 2011	778.9
Expected increase in liability	54.2
Expected Liability at 30 June 2014	833.1
Salary (and pension) increases less than assumed (average increase of 3.1% pa compared with 4% pa assumed)	-22.6
Change in Office of Profit (OOP) reduction	-6.5
Change in pensioner mortality assumptions	10.1
Change in valuation methodology	10.3
Other	9.0
Actual Liability at 30 June 2014	833.4

Further details are provided in Section 6.

Notional Employer Contribution Rate

The Notional Employer Contribution Rate (NECR) represents the estimated contribution rate that would be required to fund the benefits accruing to contributors over the next three years (from 1 July 2014 to 30 June 2017) based on current projections – that is, if the scheme were fully funded at the valuation date and contributions were made at the NECR, then the liability for contributors would be expected to be fully funded at the end of the period.

The NECR is determined using long term assumptions as this rate is notional in nature. No employer contributions are paid to the Scheme.

For the PCSS as a whole the NECR is 41.6% of total salaries. Whilst the NECR is suitable for budgeting purposes, a more appropriate measure of the long term cost of the scheme is the cost of providing future service benefits to existing members over their remaining membership. This future service cost is 31.4% of total salaries.

The following table compares these results with those calculated as at 30 June 2011:

	NECR (% Total Salaries)	Future Service Cost (% Total Salaries)
30 June 2011	40.0%	28.9%
30 June 2014	41.6%	31.4%

If experience were in line with the valuation assumptions, the NECR would be expected to reduce over time, as the average age and service of contributors increases. This is due to the rate of benefit accrual reducing with longer service. However, the rate has increased since the last valuation due to the average additional officeholder allowance of contributors increasing significantly, which increases the NECR. The impact of the increase in additional officeholder

allowances more than offset the reduction in NECR due to other changes in the membership profile.

Further details are provided in Section 8.

Projected Outlays

The projected outlays of the PCSS for the next three years are as follows:

Year ending	Benefit Payments
30 June 2015	\$39.0m
30 June 2016	\$39.9m
30 June 2017	\$46.5m

Further details are provided in Section 9.

2. Scheme Information

The PCSS is governed by the *Parliamentary Contributory Superannuation Act 1948* (the Act), and covers members of Federal Parliament. Details of the benefits provided under the PCSS are set out in Appendix A.

The PCSS was closed to new members on and from the 2004 election. New Members entering Parliament at the 2004 election or later receive a defined superannuation contribution from the Commonwealth. This contribution is paid into another superannuation fund.

Since the last report, there has been one Federal Election, on 7 September 2013. As a result of the election, 34 members left the PCSS, including 5 Senators whose membership ceased at 30 June 2014. In addition, 4 Senators retired prior to the 2013 election.

We are not aware of any other significant events affecting the valuation during the review period.

3. Membership and Data

This report has been based on data supplied by Finance which carries out the administration of the PCSS.

A range of checks have been carried out by our firm to test the integrity of the data. In addition, a reconciliation of the current data with the data used for the previous report as at 30 June 2011 has been carried out.

We are satisfied that the data is sufficiently accurate for the purposes of this report.

Details of membership movements during the review period are provided in Appendix B. The following is a summary of contributory member numbers during the review period.

	Male	Female	Total
At 1 July 2011	72	25	97
Exits	28	10	38
At 30 June 2014	44	15	59

The following is a summary of PCSS membership as at 1 July 2014.

	Male	Female	Total
Contributors	44	15	59
Former Member Pensioners	273	59	332
Spouse Pensioners	1	78	79
Contingent Spouses	0	16	16
Former Member Deferred Pensioners	3	1	4
Associate Pensioners	1	10	11

As at 1 July 2014, the annual rate of pensions currently in payment was approximately \$39.4 million¹. As at 1 July 2011, the equivalent figure was \$34.1 million. The increase is primarily due to the commencement of new pensions following the election in September 2013, as well as increases in the rate of Parliamentary salaries over the three years.

¹ In certain circumstances the pension benefit of a pension is reduced if the pensioner receives income from an office of profit or membership of State Parliament. This figure allows for these reductions.

For a period prior to 1984, members were able to commute 100% of their pension benefit without affecting the reversionary pension benefit payable to the spouse in the event of death of the former contributor. The spouses of members who elected to commute 100% are described as 'Contingent Spouses' in the table above. Since 1984, members are only able to commute up to 50% of their pension, and any commutation reduces the reversionary pension benefit as well as the member's pension benefit.

The Act allows for the splitting of superannuation benefits following marriage breakdown. In such cases, the member's benefit is reduced and a separate pension or deferred pension entitlement is created for the member's former spouse. Associate pensioners in the table above are former spouses of members in respect of whom a pension or deferred pension benefit is payable.

4. Experience of the Scheme

Increases in Parliamentary Allowance

The basic parliamentary salary increased from \$140,910 as at 1 July 2011 to \$154,400 as at 1 July 2014. This represents an average increase of 3.1% per annum compound over the three year period. This was also the rate of increase in pensions over the review period. This is lower than the rate assumed for the previous report, and will have reduced the value of accrued liabilities at 30 June 2014 by approximately \$22.6 million.

The salaries of those members who were members throughout the entire three year review period increased at an average rate of 7.2% per annum compound. This is higher than the increase in the basic salary over the period because several members have moved to additional offices with higher salaries since 1 July 2011.

The increase in basic salary is considered a more reliable measure for comparative purposes as benefits which have already accrued to members will increase in line with basic salary, rather than the member's total salary. However, when considering the cost of future benefits (ie the NECR) the increase in total salaries is also relevant as members accrue supplementary benefits in respect of any additional offices held.

Contributor Mortality

In the three year review period, no contributory members died in service.

Contributor Invalidity

There were no invalidity retirements during the period.

Contributor Resignation/Retirement

The following table shows the actual number of members resigning or retiring during each election period, compared with the approximate expected number based on the 2011 assumptions.

Election Period	0-8 years membership		8-12 years membership		12-18* years membership		18+* years membership	
	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected
4 Oct 1998 to 9 Oct 2001	9	16	6	11	12	10	4	11
10 Oct 2001 to 8 Oct 2004	15	11	10	17	7	10	6	12
9 Oct 2004 to 23 Nov 2007	7	6	26	17	5	12	14	12
24 Nov 2007 to 21 Aug 2010	0	0	9	6	13	19	10	19
22 Aug 2010 to 9 Sept 2013**	0	0	1	4	21	14	16	15
Total	31	33	52	55	58	65	50	69
Last 3 elections	7	6	36	27	39	45	40	46

*16 years for period 4 October 1998 to 9 Oct 2001.

** including all exits between the 2010 election and the 2013 election.

It can be seen that over the last five elections, the experience of members exiting the scheme relative to the assumptions varies between members with different membership periods. Exits for members with shorter membership periods has been very close to what was expected, whereas the number of members leaving with more than 12 years of membership has been less than assumed.

In contrast, over the three year review period, the most significant feature is the higher than expected number of members leaving with between 12 and 18 years membership. This will have had an adverse effect on the financial position of the Scheme as the benefits payable to these members will have commenced earlier (on average) than assumed.

All members are assumed to exit at the election following their 70th birthday.

We have separately reviewed the experience of members aged 66 or over at the 2013 election. Of the 16 members over age 66 at the 2013 election, 10 have exited the scheme. Of the 7 members over age 70 at the 2013 election, 4 have exited the scheme. Based on this review we are satisfied that the above assumption remains reasonable. In particular, the experience indicates that prior to age 70 the number of retirements is broadly in line with the assumed service based rates. Although a small number of members do continue beyond age 70, the financial impact of this is not material.

Commutation of Pensions

Of those members leaving the PCSS during the three year review period who were entitled to a pension benefit, the average commutation percentage (weighted by the

pension amount) was 9.5%, compared with the assumed percentage of 5%. This will have had a small positive impact on the financial position of the PCSS.

Pensioner Mortality

The following table shows the actual number of pensioner deaths in the three year review period, compared with the expected number based on the 2008 assumptions.

	Actual	Expected	A/E
Former Members ²	21	28.4	74%
Spouses	13	14.4	90%
Total	34	42.8	79%

It can be seen that the number of pensioner deaths was lower than expected, which will have had a small negative impact on the financial position of the PCSS. The number of members in the PCSS is small and therefore we expect the actual number of deaths to differ to the expected number over the three year review period.

Offices of Profit and Membership of State Parliament

An office of profit is a position (as specified in the Act) in respect of which a salary or similar allowance is payable by an Australian government.

In certain circumstances, the pension benefit of a pensioner is reduced if the pensioner receives income from an office of profit or membership of State Parliament.

As at 30 June 2011, we estimated the total amount of these reductions and suspensions was approximately \$642,000 per annum (based on data provided by Finance). It was assumed that these reductions would:

- increase in line with assumed pension increases; and
- decrease by 10% of the original amount each year, meaning that by 30 June 2021 there would be no further reductions.

The following table shows the estimated reductions and suspensions at the end of each year during the valuation period, compared with the amount assumed for the previous report.

	Estimated (per annum)	Assumed (per annum)
30 June 2012	\$1,009,000	\$599,000
30 June 2013	\$1,247,000	\$554,000
30 June 2014	\$1,663,000	\$504,000

It can be seen that the total reductions have increased significantly in each year of the review period, rather than reducing as assumed. This is due to:

² Includes members who commuted 100% of their pension where a "contingent spouse" remains.

- an increase in the number of members holding positions which result in a reduction or suspension to their pension; and
- an increase in the average amount of reductions or suspensions.

As a result of the above increases we have increased the assumed amount of future reductions to pensions. The impact of this change was to reduce the value of accrued liabilities as at 30 June 2014 by approximately \$6.5 million. Further details are provided in Section 5.

5. Assumptions

Economic Assumptions

The economic assumptions of greatest significance in the valuation process are:

- future increases in the basic parliamentary salary, which also determines future pension increases; and
- the rate used to discount the liabilities.

The relationship between these assumptions has a greater bearing on the long term cost estimate than do the individual assumptions. This is due to the effect of one assumption being used to project the liability into the future (e.g. future salary increases) and another assumption being used to discount that liability to current day values (discount rate).

The key economic assumptions adopted for this report are shown in the table below. The assumptions adopted for the previous report are shown for comparative purposes.

	Assumption as at 30 June 2014 (per annum)	Assumption as at 30 June 2011 (per annum)
Discount rate	6.0%	6.0%
Salary and pension increases	4.0%	4.0%
Gap	2.0%	2.0%

These assumptions are consistent with those which have been adopted for the *PSS and CSS Long Term Cost Report 2014*, which covers the Australian Government's main civilian superannuation schemes, the Public Sector Superannuation Scheme (PSS) and the Commonwealth Superannuation Scheme (CSS).

Consistent with the approach adopted for the CSS and PSS, the discount rate has been determined based on the expected return on Government bonds over the long term, as this would be the cost to the Australian Government were it to "fund" the scheme via borrowings.

The assumed rate of salary and pension increase has been determined having regard to the expected long term outlook for national wage inflation.

It should be noted the assumed rate of salary increase represents increases in the basic parliamentary salary only. As noted in Section 4, individual members may experience higher (or lower) increases in their total salary, due to changes in additional officeholder allowances.

Whilst changes in additional officeholder allowances will affect the rate at which members will accrue benefits in the future, they are not relevant to the valuation of accrued liabilities, as benefits which have already accrued to members increase only in line with basic salary.

The assumptions in respect of officeholder allowances (which are relevant to the calculation of NECR and projected liabilities) are described below.

Demographic Assumptions

Officeholder Allowances

For the last report, we used each member's actual officeholder allowance as at the valuation date, and assumed that each member's officeholder allowance would continue at the same percentage of salary until the date of leaving the PCSS. Although in practice it is expected that members will change officeholder positions from time to time, this is considered to provide a reasonable approximation of the overall impact of officeholder allowances.

We have retained this method for the current report.

Contributor Mortality

As the number of deaths of PCSS contributors has been small, the experience is insufficient to form a reliable guide and the assumptions are based on the experience of larger public sector schemes.

The mortality of contributors has been assumed to be the same as that used for the 2014 PSS/CSS Long Term Cost Report, which is the same as that used for the 2011 PSS and CSS Long Term Cost Report. These are the same assumptions as those which were adopted for the last report.

Contributor Invalidity

As the number of invalidity retirements from the PCSS has been small in the past, the experience is insufficient to form a reliable guide and the assumptions are based on the experience of larger public sector schemes. We have assumed that there are no invalidity retirements after 12 years service as all members are then eligible for a pension benefit.

The invalidity rates of contributors with less than 12 years service have been assumed to be the same as those used in respect of the CSS for the 2014 and 2011 PSS and CSS Long Term Cost Report, and all invalid retirees are assumed to be Class 1. These are the same assumptions as those which were adopted for the last report. In practice, the number of Class 2 and 3 invalids is expected to be very small, and the impact of allowing for these types of benefits in the valuation would be negligible. (Class 1, 2 and 3 are defined in Appendix A)

Contributor Resignation/Retirement

Based on the experience of the Scheme outlined in Section 4 above, we have used the same rates of resignation and retirement as was used for the previous report.

The assumptions adopted are as follows:

(i)

Years of Membership at election date	Percentage of members retiring at each election
0 to 8 ³	n/a
8 to 12	20%
12 to 18	30%
Greater than 18	50%

(ii) Retirements are only allowed for at election dates, which are assumed to occur once every three years. As Senators are elected for a six year term, the probability of retirement at the first or third election after their appointment is assumed to be zero.

(iii) Prior to completion of 12 years service, all retirements are assumed to be involuntary. In practice, the number of members retiring voluntarily with between 8 and 12 years service who do not qualify for a pension is small enough to ignore this possibility; and

(iv) For valuation purposes, any members remaining in the PCSS at age 70 are assumed to retire at the election following their 70th birthday. Although some members may continue beyond that date, the financial impact of this is not material.

Commutation of Pension

The percentage of pension entitlements commuted at the four most recent elections was:

Election Year	Percentage of pensions commuted
2004	4%
2007	8%
2010	6%
2013	10%

For the 2011 report we assumed that 5% of pension entitlements would be commuted. It can be seen that the experience has been quite variable. We would expect this variation to continue, as in practice only a very small number of members elect to commute any part of their benefit. Therefore, we have not changed the assumption for members commuting their pension benefits to a lump sum; being 5% of the pre-commutation pension.

³ All members have greater than 8 years of membership as at 30 June 2014.

Pensioner Mortality

For retiring members and spouses of former members, we have adopted pensioner mortality rates and improvements in mortality that are the same as those used for the 2014 PSS and CSS Long Term Cost Report.

These mortality rates are similar to those adopted for the 2011 report, adjusted for improvement at the rates assumed in the 2011 report.

The mortality improvement rates reflect the short and long term improvement rates published in Australian Life Tables 2005-07⁴. Mercer's analysis of the experience of the PSS and CSS, as well as other public sector pensioners, shows that recent mortality improvements have been broadly in line with the short term rates. Based on this, we have extended the period of short term improvements from 2018 (assumed in the 2011 report) to 2021.

As described in Section 4 the actual pensioner mortality experience for the PCSS was lower than assumed for former member pensioners and slightly lower than assumed for spouse pensioners. However, given the small number of pensioners in the scheme the experience can vary significantly due to random fluctuations. Over the longer term the experience has been very close to that of the CSS/PSS. Therefore we consider it appropriate to continue to use the same assumptions as those adopted for the larger schemes.

Invalid Pensioner Mortality

In respect of invalid pensioners, there is insufficient experience to make an analysis, and an approximation is necessary. Previously, we assumed:

- For existing invalid retirees, mortality at the same rates as for other former members; and
- For future invalid retirees, the long term invalid pensioner mortality rates used for the 2011 PSS and CSS Long Term Cost Report.

For this report, we have assumed:

- For existing invalid retirees, mortality at the same rates as for other former members; and
- For future invalid retirees, the long term invalid pensioner mortality rates used for the 2014 PSS and CSS Long Term Cost Report.

The financial impact of these assumptions is negligible.

⁴ Australian Life Tables 2010-12 have now been published but were not available at the time calculations were being undertaken for this report.

Pensioner Marital Status

For the last report the assumptions adopted for pensioner marital status were age dependent, and varied for males and females. We have retained these rates for this valuation.

We have also continued to assume that males will be 4 years older than their spouse.

Offices of Profit and Membership of State Parliament

In certain circumstances, the pension benefit of a pensioner is reduced if the pensioner receives income from an office of profit or membership of State Parliament.

As at 30 June 2011, we assumed that these reductions would:

- increase from the current (as at 30 June 2011) level of \$640,000 per annum, in line with assumed pension increases; and
- decrease by 10% of the original amount each year, meaning that in 10 years by 30 June 2021, there would be no further reductions.

The 10 year period was an approximation, based on an underlying assumption that the pensioners who were subject to reductions would, over time, cease to hold the positions resulting in reductions to their pension, and that no new reductions would commence.

The above method resulted in a reduction to the accrued liability in respect of pensioners by \$3.2 million at 30 June 2011. In the projected liability figures prepared at 30 June 2011, this reduction reduced to \$1.9 million as at 30 June 2014 and zero at 30 June 2021.

As described in Section 4, the level of reductions and suspensions has increased significantly since the previous report. It is very difficult to predict the future level of these reductions and suspensions in the short term. However, over the longer term the level of reductions will inevitably reduce, as the average age of members increases and members retire from the positions giving rise to the reductions or suspensions.

For this report, we have updated our calculations to reflect the current level of reductions, and we have extended the period over which the reductions are assumed to continue. However, we have retained the same underlying assumptions.

That is, we have assumed that the reductions will:

- increase from the current level of \$1,663,000 per annum, in line with assumed pension increases; and
- decrease by 10% of the original amount each year, meaning that by 30 June 2024 there would be no further reductions.

This results in a reduction to the accrued liability in respect of pensioners by \$8.4 million at 30 June 2014, In the projected liability figures at 30 June 2014, this

reduction reduces over time, reducing to \$4.9 million at 30 June 2017 and zero at 30 June 2024.

New Entrants

As the Scheme is now closed to new members, no assumptions regarding new members are required.

Impact of Changes in Assumptions

The change in pensioner mortality rates increases the liability by \$10.1 million.

The increase in the assumed levels of reductions and suspensions decreases the liability at 30 June 2014 by \$6.5 million.

6. Accrued liabilities

Accrued Liabilities

The accrued liabilities are the liabilities for superannuation entitlements in respect of service already rendered to the Australian Government. They do not fall due until the benefits are payable which, generally, is when members retire and so they are spread over many years into the future. The present value represents the amount which would need to be set aside at the valuation date to provide for these benefits at the time they are payable, assuming the valuation assumptions were borne out in practice.

Method of Valuing

The valuation method evaluates, for each member, expected future benefit payments for each future year multiplied by the probability that the benefit will be payable in that year. The accrued liability is determined as the part of the total benefit which has accrued to the valuation date. The present value of the accrued liability is determined by discounting these expected payments back to the valuation date.

Results

The following table shows the present value of accrued liabilities of the PCSS, as at 30 June 2014.

	\$ million
Contributors	169.6
Pensioners	663.8
Total Accrued Liabilities at 30 June 2014	833.4

Analysis of Change Compared with previous report

Based on the assumptions adopted for the previous report and actual cash flows during the period, we would expect the accrued liabilities to have changed as follows:

	\$ million
Liability at 30 June 2011	778.9
Employer Contributions at Notional Rate	20.6
Member Contributions	5.0
Benefits	-115.2
Interest (at discount rate)	143.8
Expected Liability at 30 June 2014	833.1

The difference between the expected liabilities and actual liabilities as at 30 June 2014 can be approximately broken down as follows:

	\$ million
Expected Liability at 30 June 2014	833.1
Salary Increases less than assumed	-22.6
Change in Pensioner Mortality assumptions	10.1
Change in OOP reduction	-6.5
Change in valuation methodology ⁵	10.3
Other	9.0
Total Accrued Liabilities at 30 June 2014	833.4

The main item included in “Other” is the difference in the actual membership profile compared with that which would be expected, if the assumptions adopted for the last report were borne out in practice. This includes the impact of members leaving earlier (or later) than assumed, the impact of pensioner mortality, and the impact of commutations being higher than assumed.

Projected Accrued Liabilities

Based on the assumptions used for this valuation, we have projected the value of accrued liabilities in the scheme over the next 40 years:

Projected Accrued Liabilities		
As at 30 June	Nominal Costs (\$ millions)	Discounted Costs (\$ millions)
2014	833.4	833.4
2015	849.9	801.8
2016	866.9	771.5
2017	874.8	734.5
2018	883.2	699.6
2019	891.1	665.9

⁵ We have updated our valuation system. The main difference between the previous system and the updated system is that benefit payments are assumed to occur at the start of the year. The previous valuation system assumed that payments occurred half way through the year. Given that elections can happen at any time, both methodologies are assumed to be reasonable.

Projected Accrued Liabilities		
As at 30 June	Nominal Costs (\$ millions)	Discounted Costs (\$ millions)
2020	892.9	629.5
2021	894.3	594.8
2022	894.6	561.3
2023	889.8	526.7
2024	884.2	493.7
2025	877.0	462.0
2026	866.2	430.5
2027	854.7	400.7
2028	841.8	372.3
2029	826.6	344.9
2030	810.0	318.9
2031	792.1	294.1
2032	772.4	270.6
2033	751.5	248.4
2034	729.3	227.4
2035	705.8	207.6
2036	681.3	189.1
2037	655.7	171.7
2038	629.1	155.4
2039	601.7	140.2
2040	573.7	126.1
2041	545.2	113.1
2042	516.2	101.0
2043	487.0	89.9
2044	457.6	79.7
2045	428.3	70.3
2046	399.1	61.8
2047	370.1	54.1
2048	341.5	47.1
2049	313.6	40.8
2050	286.4	35.2
2051	260.1	30.1
2052	234.8	25.6
2053	210.5	21.7

Note: The discounted costs in the above table have been calculated using a discount rate of 6% per annum, which has been used to calculate the present value of the liability at each date.

7. Projected Outlays

The projected outlays are the benefit payments to be made to members either as a lump sum or pension amount each year.

We have projected the expected outlays each year for the next 40 years based on the assumptions used for this valuation in the table below.

Projected Outlays		
Year ending 30 June	Nominal Costs (\$ millions)	Discounted Costs (\$ millions)
2015	39.0	37.9
2016	39.9	36.6
2017	46.5	40.2
2018	46.2	37.7
2019	47.1	36.2
2020	51.8	37.6
2021	51.8	35.5
2022	53.0	34.2
2023	57.1	34.8
2024	57.5	33.1
2025	58.5	31.7
2026	61.5	31.5
2027	61.5	29.7
2028	62.2	28.3
2029	63.7	27.4
2030	64.2	26.0
2031	64.5	24.7
2032	65.1	23.5
2033	65.1	22.2
2034	65.2	20.9
2035	65.2	19.7
2036	64.8	18.5
2037	64.4	17.4
2038	63.9	16.2
2039	63.1	15.1
2040	62.1	14.1

Projected Outlays		
Year ending 30 June	Nominal Costs (\$ millions)	Discounted Costs (\$ millions)
2041	61.0	13.0
2042	59.7	12.0
2043	58.3	11.1
2044	56.8	10.2
2045	55.0	9.3
2046	53.2	8.5
2047	51.2	7.7
2048	49.2	7.0
2049	46.9	6.3
2050	44.5	5.6
2051	42.1	5.0
2052	39.7	4.5
2053	37.1	3.9
2054	34.6	3.5

8. Notional Employer Contribution Rate

The Notional Employer Contribution Rate (NECR) represents the estimated contribution rate that would be required to fund the benefits accruing to contributors over the next three years (from 1 July 2014 to 30 June 2017) based on current projections. That is, if the scheme was fully funded at the valuation date and contributions were made at the NECR, then the liability for contributors would be expected to be fully funded at the end of the period.

The NECR is determined using long term assumptions as this rate is notional in nature. No employer contributions are paid to the Scheme.

Method of Determining the Notional Employer Contribution Rate

A notional fund equal to the accrued liabilities at the valuation date is projected together with member contributions, benefit payments and investment return in line with the valuation assumptions to 30 June 2017. The additional amount over this determined figure required to cover the expected accrued liabilities at 30 June 2017 is to be covered by notional employer contributions with interest. These notional employer contributions are expressed as a constant annual percentage (equal to the NECR) of total salaries payable over the 3 years to 30 June 2017.

Results

For the PCSS as a whole the NECR is 41.6% of total salaries, including additional allowances.

Previous Result

In the previous report, the NECR was calculated as 40.0% of total salaries. There are a number of factors that have affected the NECR, but the main one is the change in membership distribution of contributors, as well as the proportion of members with additional offices between the previous report and this report. For example:

- The average period of membership has increased from 15 years to 17.25 years. Other things being equal, the cost of accruing benefits reduces as the average period of membership increases. This is because the basic benefits (ie excluding those related to additional officeholder allowances) accrue most rapidly during the first 8 years, at a lower rate for the next 10 years, and cease accruing after 18 years.
- The average additional officeholder allowance of contributors has increased from 24% at the date of the previous report to 37% at 30 June 2014. Other things being equal, the cost of accruing benefits increases as the average

additional officeholder allowance increases, because the benefits relating to additional officeholder allowances accrue at a higher rate than the basic benefits (now that all members have more than 8 years service).

- The proportion of members eligible for “deferred” pension benefits rather than immediate pension benefits has increased from 22% to 29%. As these benefits are less costly to the employer, this reduces the average required employer contribution.

The small increase in the NECR indicates that the impact due to increased additional officeholder allowances outweighed the combined impact of the other factors. Other things being equal, the changes in pensioner mortality would have increased the NECR. However, the impact of this is minor relative to the impact of changes in membership distribution described above.

Long Term Cost

Whilst the NECR is suitable for budgeting purposes, it does not provide a good indication of the long term cost as it is expected to change over time, even if experience were in line with the assumptions. The main reason for this is the large variation in accruing cost for different periods of service, i.e. the cost is much greater in the early years of service.

A more appropriate determinant of the long term cost is the cost of providing future service benefits to existing contributor members over their remaining membership.

The cost of providing future service benefits to existing contributor members over their remaining membership, calculated using the assumptions outlined in this report, is 31.4% of total salaries. At the last valuation the calculated future service cost was 28.9% of total salaries. The increase in this rate is due to the same factors identified above.

The fact that this rate is lower than the NECR indicates that the NECR will continue to decrease over time, if the valuation assumptions are borne out in practice.

9. Sensitivity Analysis

Economic Assumptions

The sensitivity of the estimated Unfunded Liability and NECR as at 30 June 2014 to the key economic assumptions was tested by measuring the effect on the Unfunded Liability and NECR of varying each key assumption in turn by plus or minus 1% whilst keeping all other assumptions unchanged. The alternative assumptions used were:

- Discount Rate plus 1%; increased to 7% per annum.
- Discount Rate minus 1%; reduced to 5% per annum.
- Salary and Pension Increases plus 1%; increased to 5% per annum (nominal).
- Salary and Pension Increases minus 1%; reduced to 3% per annum (nominal).

The table below shows the Unfunded Liability of the PCSS under each of the above alternative assumptions.

Assumption	Change	Unfunded Liability (\$ million)	Impact (\$ million)
Discount Rate	plus 1%	734.6	-98.8
	minus 1%	955.7	+122.3
Salary & Pension Increases	plus 1%	952.8	+119.4
	minus 1%	735.3	-98.1

The table below shows the NECR of the PCSS at 30 June 2014 under each of the above alternative assumptions.

Assumption	Change	NECR (% Total Salaries)	Impact (% Total Salaries)
Discount Rate	plus 1%	33.1	-8.5
	minus 1%	52.7	+11.1
Salary & Pension Increases	plus 1%	52.8	+11.2
	minus 1%	32.9	-8.7

Demographic Assumptions

The sensitivity of the estimated accrued liability as at 30 June 2014 to certain demographic assumptions was tested by measuring the effect on the Accrued Liability of varying each assumption in turn whilst keeping all other assumptions unchanged. The assumptions considered were retirement rates and pensioner mortality rates. The alternative assumptions used were:

- Retirement rate (at election) 25% higher or lower; and
- Future mortality improvement in line with short term improvement factors.

The table below shows the accrued liability of the PCSS 30 June 2014 under each of the above alternative assumptions.

Assumption	Change	Accrued Liability (\$ millions)	Impact (\$ millions)
Retirement at Election	Plus 25%	838.9	+5.5
	Minus 25%	825.7	-7.7
Pensioner Mortality improvement	In line with short term improvement factors	846.0	+12.6

The table below shows the NECRs of the PCSS at 30 June 2014 under each of the above alternative assumptions.

Sensitivity of NECRs to Demographic Assumptions			
Assumption	Change	NECR (% Total Salaries)	Impact (% Total Salaries)
Retirement at Election	Plus 25%	43.6	+2.0
	Minus 25%	38.9	-2.7
Pensioner Mortality improvement	In line with short term improvement factors	42.8	+1.2

Please note that the alternative results shown above are illustrations only, and show what may occur under assumed future experiences which differ from our baseline assumptions. These scenarios do not, in any way, constitute upper or lower bounds and the results may differ significantly from the ranges shown above, depending on actual future experience.

0: Member Contributions and Benefits Summary

This report covers liabilities relating to members of the PCSS. Provisions relating to the PCSS are set down in the *Parliamentary Contributory Superannuation Act 1948*. The provisions of the PCSS are complex and a **summary** of the principal provisions of the PCSS is set out below. It should not be used to calculate benefits for individuals.

Definitions

Additional Office Holder Allowance refers to the extra remuneration paid to a Member for holding an Additional Office.

Additional Office refers to a Ministerial or other paid office held by the Member in Federal Parliament.

Member refers to a Senator or Member of the House of Representatives.

Parliamentary Allowance refers to the base level of salary paid to parliamentarians. At 1 July 2014 the Parliamentary Allowance was \$154,400.

Service refers to a Member's period of service in Federal Parliament (which may include previous periods of Federal, State or Territory parliamentary service) or notional service "purchased" with the payment of a superannuation benefit from another scheme.

Term refers to a complete period between elections provided that, for a Senator whose term exceeds 3 years, the Senator shall be deemed to have completed an additional Term at the end of that Term.

Member Contributions

Members must contribute at the rate of 11.5% of their Parliamentary Allowances for the first 18 years of membership and at the rate of 5.75% of their Parliamentary Allowances for subsequent membership. In addition, they must contribute at the rate of 11.5% of their Additional Office Holder Allowances if they have not attained their maximum supplementary pension entitlement and at a rate of 5.75% of their Additional Office Holder Allowances if they have attained their maximum supplementary pension entitlement.

Retiring Allowance

This is a pension benefit which is payable if the Member leaves Federal Parliament and has:

- (i) completed 12 or more years of Service; or

- (ii) served 4 Terms; or
- (iii) retired involuntarily after either 3 Terms or 8 years of Service.

The benefit payable is a base pension plus, where the Member has held Additional Offices, a supplementary pension in respect of each Additional Office held.

The base pension is equal to a percentage of Parliamentary Allowance of 50% plus 2.5% for each year of Service in excess of 8. (The percentage is subject to a maximum of 75%.)

The supplementary pension payable in respect of an Additional Office is equal to 6.25% of the Additional Office Holder Allowance paid in respect of that Office for each year of Service that the Member held that Additional Office. For periods of service less than one year, the 6.25% is pro-rated based on the number of days served. (Supplementary pensions are aggregated where the Member has held more than one Additional Office and the total rate of supplementary pension is subject to a maximum of 75% of the Additional Office Holder Allowance payable in respect of the highest paid Additional Office.)

Invalidity Retirement

On the basis of two medical certificates, a Member retiring for invalidity reasons is classified as a Class 1, Class 2 or Class 3 invalid.

- Class 1 invalidity applies to Members who are considered to be 60% or more incapacitated. The benefit is a pension of 50% of the Parliamentary Allowance.
- Class 2 invalidity applies to Members who are considered to be 30% or more incapacitated but are not Class 1 invalids. The benefit is a pension of 30% of the Parliamentary Allowance.
- Class 3 invalidity applies to Members who are considered to be below 30% incapacitated. The benefit is the higher of, a refund of Member's contributions plus 2 and 1/3 times the Member's contributions paid in the last 8 years of service, or the Superannuation Guarantee safety net amount.

Where a Member's benefit on involuntary retirement is higher than the invalidity benefit, the higher involuntary retirement benefit is payable.

Lump Sum Withdrawal Benefit

A Member who leaves Federal Parliament and who does not qualify for a Retiring Allowance or an Invalidity Benefit will be entitled to receive a lump sum benefit. The benefit will be equal to:

- A + (B x C) where
- A = the total contributions paid by the Member
 - B = 2 1/3, if the retirement was involuntary, or
= 1 1/6, if the retirement was voluntary
 - C = the contributions paid by the Member in the previous 8 years.

This benefit is subject to a minimum of the Superannuation Guarantee safety net amount, which is calculated as:

The voluntary retirement lump sum amount, if any, at 30 June 1992, plus
 The total contributions paid by the Member since 1992, plus
 Contributions at the Superannuation Guarantee rate, plus
 Interest on the above amounts at the rate determined for the PSS.

Death in Service Benefit

- (a) Where the Member is survived by a spouse - an annuity of five-sixths (5/6ths) of the Retiring Allowance that would have been payable to the Member had the Member qualified for a Retiring Allowance on the date of death. (If the Member had not completed 8 years of Service at that time, it is deemed that 8 years of Service had been completed.)
- (b) Where the Member is not survived by a spouse but is survived by dependent children - an annuity payable to each dependent child equal to the annuity which would have been paid to a surviving spouse divided by the greater of 4 and the number of dependent children.
- (c) Where the Member is not survived by a spouse or dependent children - an amount equal to the higher of the Member's contributions plus 2 1/3 times the Member's contributions paid in the last 8 years of Service, or the Superannuation Guarantee safety net amount.

Benefit on Death Whilst Receiving a Retiring Allowance

- (a) Where the former Member is survived by a spouse - an annuity of five-sixths (5/6ths) of the Retiring Allowance which was payable to the former Member.
- (b) Where the former Member is not survived by a spouse but is survived by dependent children - an annuity payable to each dependent child equal to the annuity which would have been paid to a surviving spouse divided by the greater of 4 and the number of dependent children.
- (c) Where the Member is not survived by a spouse or dependent children - an amount equal to the excess, if any, of:
 - (i) an amount equal to the higher of the Member's contributions plus 2 1/3 times the Member's contributions paid in the last 8 years of Service, or the Superannuation Guarantee safety net amount; less

- (ii) the total Retiring Allowance received by the former Member.

Indexation of Retiring Allowance and Annuities

Generally, Retiring Allowances and annuities payable to dependants are indexed at the rate at which Parliamentary Allowances increase.

Commutation

A former Member who qualified for a Retiring Allowance, other than a person who retired because of ill-health, may elect to commute up to 50% of that allowance to a lump sum. The commutation factor is 10 if the former Member is below age 66 at retirement. The commutation factor, if the former Member's age is 66 or more at the commencement of the most recent term, is 10 reduced by 0.5 for every year the former Member's age exceeds 65.

Deferred Members

With effect from the November 2001 Federal Election, the rules of the PCSS were amended so as to create a new category of members. In this report, we refer to this new category as Deferred Members. Generally speaking, anyone joining the PCSS on or after the November 2001 Federal Election will be a Deferred Member.

The provisions for Deferred Members are the same as those applying to other Members, with the following exception. If a Deferred Member leaves Federal Parliament and is eligible to receive a Retiring Allowance, payment of the Retiring Allowance does not commence until the Deferred Member has attained age 55, or is deemed to be an invalid. Similarly, if the Deferred Member wishes to commute any part of the Retiring Allowance, the commuted amount is not payable until the Deferred Member has attained age 55. Note that the commuted amount would be subject to preservation requirements, as described below.

Preservation of Benefits

All benefits payable from the Scheme are subject to the preservation requirements of the Superannuation Industry (Supervision) Act 1993. These requirements do not generally affect the payment of benefits in pension form (such as the Retiring Allowance). However, they restrict the amount of lump sum benefit which can be paid to a member before i) reaching preservation age (between 55 and 60, depending on the member's date of birth) and retiring from the workforce OR (ii) turning 65. Where a benefit is subject to preservation, it cannot be paid in cash to the member but must be transferred to another fund within the superannuation system.

Surcharge

From 1996 to 30 June 2005, a surcharge tax was imposed on employer superannuation contributions in respect of members with adjusted taxable incomes greater than a specified threshold.

The surcharge is paid by the Scheme, and members' benefits are reduced to reflect the amount of surcharge paid. However, the total reduction to the benefit cannot exceed:

- 15% of the employer financed benefit arising between 20 August 1996 and 30 June 2003; plus
- 14.5% of the employer financed benefit arising in the year ended 30 June 2004; plus
- 12.5% of the employer financed benefit arising in the year ended 30 June 2005.

Family Law

The Act allows for the splitting of superannuation benefits following marriage breakdown. In such cases, a separate pension or deferred pension entitlement is created for the member's former spouse and the member's benefit is reduced to reflect the value of the pension or deferred pension entitlement created.

Division 293 Tax Liability

An additional 15% contributions tax for high income earners (ie incomes of greater than \$300,000) was introduced from 1 July 2012. This tax is payable by the member rather than the Scheme. However, in certain cases a member may request that the Scheme pay the tax on the member's behalf, in which case the benefit payable to the member is reduced.

Error! Reference source not found.: Membership Movements During the Review Period

Changes in Pensioner Membership

	Former Members		Spouses		Contingent Spouses		Associates		Deferred Benefits (Age 55)		Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
At 1/7/2011*	262	53	1	76		17	1	9	3		422
New Pensioners	28	9		14				1			53
Deaths	(17)	(3)		(13)							(34)
Transfers In				1							1
Transfers Out						(1)					(1)
New Deferred Benefit										1	1
At 30/6/2014**	273	59	1	78		16	1	10	3	1	442

*after change in Senators as a result of the 2010 election

**after change in Senators as a result of the 2013 election

Changes in Contributor Membership

	Male	Female	Total
At 1/7/2011*	72	25	97
Deaths			
Invalidity			
Retirement (lump sum benefit)			
Retirement (pension benefit)	(28)	(9)	(37)
Deferred to age 55		(1)	(1)
At 30/6/2014**	44	15	59

*after change in Senators as a result of the 2010 election

**after change in Senators as a result of the 2013 election

Contributor Retirements

The assumptions adopted are as follows:

(i)

Years of Membership at election date	Percentage of members retiring at each election
0 to 8 ⁶	n/a
8 to 12	20%
12 to 18	30%
Greater than 18	50%

(ii) Retirements are only allowed for at election dates, which are assumed to occur once every three years. For Senators, the probability of retirement at the first or third election after their appointment is assumed to be zero.

(iii) Prior to completion of 12 years service, all retirements are assumed to be involuntary.

(iv) Any members remaining in the PCSS at age 70 will retire at the election following their 70th birthday.

Commutation of Pension

We have assumed that 5% of every pension will be commuted.

Pensioner Mortality

The tables below set out the number of pensioners per 1,000 assumed to die during each year at selected ages.

⁶ All members have greater than 8 years of membership as at 30 June 2014.

Pensioner Mortality (per 1000 pensioners at age shown)				
	Males		Females	
Age	Former Member	Spouse (female)	Former Member	Spouse (male)
20	0.35	0.24	0.18	0.74
30	0.53	0.32	0.23	1.11
40	0.62	0.59	0.44	1.28
50	1.07	1.42	0.96	2.40
55	1.79	2.31	1.57	3.95
60	2.84	3.56	2.24	6.67
65	5.13	5.56	3.69	11.45
70	9.75	9.30	6.89	20.16
75	18.71	15.98	12.50	32.91
80	38.19	30.13	24.42	56.47
90	142.91	110.21	102.25	161.77
100	419.08	338.67	313.35	358.79

Improvements in Pensioner Mortality

Improvements in pensioner mortality have been taken from Australian Life Tables 2005-07⁷, which is the standard used by the Australian Government Actuary and the Australian Bureau of Statistics for projections of the Australian population.

The following table summarises the assumed rates of improvement in future mortality of age and dependent pensioners.

Assumed Rates of Mortality Reduction (% per annum)				
Age Attained	Short Term (1 July 2014 to 30 June 2021)		Long Term (1 July 2021 onwards)	
	Male	Female	Male	Female
60	3.34	2.52	1.27	1.47
70	3.08	2.45	1.16	1.44
80	2.21	2.07	0.87	1.12
90	1.07	1.04	0.53	0.61
100	0.51	0.47	0.26	0.25

⁷ Australian Life Tables 2010-12 have now been published but were not available at the time calculations were being undertaken for this report.

Pensioner Proportions Married

The table below sets out the proportion married at selected ages.

Age	Males	Females
20	6%	16%
25	49%	53%
30	77%	66%
35	85%	69%
40	87%	70%
45	87%	70%
50	87%	55%
55	86%	41%
60	85%	36%
65	83%	31%
70	80%	25%
75	74%	14%
100+	62%	7%

In addition to the above rates, we have assumed that 1% of members will have a partner of the same sex.

Pensioner Age Difference

We have assumed that male pensioners will be four years older than their female spouse, or the same age as their same sex partner.

Offices of Profit

We have reduced the estimated accrued liability in respect of pensioners by \$8.4 million, as an approximate allowance for the reduction in pension benefits due to pensioners holding offices of profit.

Surcharge and Division 293 Tax

We have assumed that the cost of any surcharge or Division 293 tax paid by the scheme will be recovered via a deduction from the benefits paid to members. Therefore, surcharge and Division 293 tax can be ignored for the purposes of this report.

Appendix C: Detailed Assumptions

Discount Rate

The assumed long term average discount rate is 6% per annum.

Salary/Pension increases

The assumed long term rate of increase in salaries and pensions is 4% per annum.

Officeholder Allowance

We have assumed that each member's officeholder allowance will continue at the same percentage of salary until the date of leaving the PCSS.

Contributor Deaths and Invalidation Retirements

The tables below show the number of contributing members per 10,000 assumed to leave during each year as a result of death or invalid retirement at selected ages.

Age	Deaths		Invalidities	
	Males	Females	Males	Females
25	0.23	0.11	0.18	0.12
30	0.30	0.14	0.32	0.32
35	0.38	0.20	0.57	0.61
40	0.47	0.26	0.79	1.03
45	0.63	0.41	1.27	1.64
50	0.88	0.62	1.94	2.55
55	1.24	1.06	3.05	4.26
60	1.83	1.73	6.01	6.46
64	2.53	2.43	6.93	8.04

Contributor Retirements

The assumptions adopted are as follows:

(v)

Years of Membership at election date	Percentage of members retiring at each election
0 to 8 ⁸	n/a
8 to 12	20%
12 to 18	30%
Greater than 18	50%

(vi) Retirements are only allowed for at election dates, which are assumed to occur once every three years. For Senators, the probability of retirement at the first or third election after their appointment is assumed to be zero.

(vii) Prior to completion of 12 years service, all retirements are assumed to be involuntary.

(viii) Any members remaining in the PCSS at age 70 will retire at the election following their 70th birthday.

Commutation of Pension

We have assumed that 5% of every pension will be commuted.

Pensioner Mortality

The tables below set out the number of pensioners per 1,000 assumed to die during each year at selected ages.

Pensioner Mortality (per 1000 pensioners at age shown)				
	Males		Females	
Age	Former Member	Spouse (female)	Former Member	Spouse (male)
20	0.35	0.24	0.18	0.74
30	0.53	0.32	0.23	1.11
40	0.62	0.59	0.44	1.28
50	1.07	1.42	0.96	2.40
55	1.79	2.31	1.57	3.95
60	2.84	3.56	2.24	6.67
65	5.13	5.56	3.69	11.45
70	9.75	9.30	6.89	20.16
75	18.71	15.98	12.50	32.91
80	38.19	30.13	24.42	56.47
90	142.91	110.21	102.25	161.77
100	419.08	338.67	313.35	358.79

⁸ All members have greater than 8 years of membership as at 30 June 2014.

Improvements in Pensioner Mortality

Improvements in pensioner mortality have been taken from Australian Life Tables 2005-07⁹, which is the standard used by the Australian Government Actuary and the Australian Bureau of Statistics for projections of the Australian population.

The following table summarises the assumed rates of improvement in future mortality of age and dependent pensioners.

Assumed Rates of Mortality Reduction (% per annum)				
Age Attained	Short Term (1 July 2014 to 30 June 2021)		Long Term (1 July 2021 onwards)	
	Male	Female	Male	Female
60	3.34	2.52	1.27	1.47
70	3.08	2.45	1.16	1.44
80	2.21	2.07	0.87	1.12
90	1.07	1.04	0.53	0.61
100	0.51	0.47	0.26	0.25

Pensioner Proportions Married

The table below sets out the proportion married at selected ages.

Age	Males	Females
20	6%	16%
25	49%	53%
30	77%	66%
35	85%	69%
40	87%	70%
45	87%	70%
50	87%	55%
55	86%	41%
60	85%	36%
65	83%	31%
70	80%	25%
75	74%	14%
100+	62%	7%

⁹ Australian Life Tables 2010-12 have now been published but were not available at the time calculations were being undertaken for this report.

In addition to the above rates, we have assumed that 1% of members will have a partner of the same sex.

Pensioner Age Difference

We have assumed that male pensioners will be four years older than their female spouse, or the same age as their same sex partner.

Offices of Profit

We have reduced the estimated accrued liability in respect of pensioners by \$8.4 million, as an approximate allowance for the reduction in pension benefits due to pensioners holding offices of profit.

Surcharge and Division 293 Tax

We have assumed that the cost of any surcharge or Division 293 tax paid by the scheme will be recovered via a deduction from the benefits paid to members. Therefore, surcharge and Division 293 tax can be ignored for the purposes of this report.

Appendix D: Actuary's Certification

Professional standards and scope

This report satisfies the requirements of Professional Standard No. 400 of The Institute of Actuaries of Australia. Professional Standard No. 400 relates to the preparation of reports commenting on the financial condition of defined benefit superannuation funds.

Use of report

This investigation report should not be relied upon for any other purpose or by any party other than the Department of Finance and the schemes' trustee. Mercer is not responsible for the consequences of any other use. This report should be considered in its entirety and not distributed in parts.

The advice contained in this report is given in the context of Australian law and practice. No allowance has been made for taxation, accountancy or other requirements in any other country.

Actuarial Uncertainty and Assumptions

An actuarial investigation report contains a snapshot of a scheme's financial condition at a particular point in time, and projections of the scheme's estimated future financial position based on certain assumptions. It does not provide certainty in relation to a scheme's future financial condition or its ability to pay benefits in the future.

Future funding and actual costs relating to the scheme are primarily driven by the scheme's benefit design, the actual rate of salary inflation and any discretions exercised by the Trustee of the scheme or the Australian Government. The Scheme's actuary does not directly control or influence any of these factors in the context of an actuarial investigation.

The scheme's future financial position and the estimated long term cost depend on a number of factors, including the amount of benefits the scheme pays, the cause and timing of member withdrawals, plan expenses, the level of taxation and the amount earned on any assets invested to pay the benefits. These amounts and others are uncertain and unknowable at the valuation date, but are predicted to fall within a reasonable range of possibilities.

To prepare this report, assumptions, as described in Section 5, are used to select a single scenario from the range of possibilities. The results of that single scenario are included in this report.

However, the future is uncertain and the scheme's actual experience will differ from those assumptions; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results

based on those assumptions would be different. For this reason this report also shows the impact on the results of certain changes in assumptions.

Actuarial assumptions may also be changed from one valuation to the next because of mandated requirements, scheme experience, changes in expectations about the future and other factors. We did not perform, and thus do not present, an analysis of the potential range of future possibilities and scenarios.

Because actual scheme experience will differ from the assumptions, decisions about benefit changes, investment policy, funding amounts, benefit security and/or benefit related issues should be made only after careful consideration of alternative future financial conditions and scenarios, and not solely on the basis of a set of valuation results.

A handwritten signature in black ink that reads "Esther Conway". The signature is written in a cursive style with a large, looping 'y' at the end.

Esther Conway, BSc, FIAA

06 August 2015