Australian Capital Territory Chief Minister, Treasury and Economic Development Directorate

Report on Actuarial Investigation as at 30 June 2017

Statement of Advice

25 May 2018

Towers Watson Australia Pty Ltd
ABN 45 002 415 349 AFSL 229921

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Section 1: Executive Summary

Introduction and Scope

1.1 This report presents the results of the triennial actuarial investigation conducted as at 30 June 2017 of the ACT Government's superannuation liability in respect of current and former employees who are members of the Commonwealth Superannuation Scheme (CSS) or the Public Sector Superannuation Scheme (PSS) to the ACT Chief Minister, Treasury and Economic Development Directorate ("the Directorate").

1.2 From 1 July 1989, the ACT Government became a separate body politic. From that date the ACT Government, including all ACT Government Agencies, has an ongoing financial obligation in respect of its current or former employees who are or have been members of the CSS or the PSS. The total estimated value of these obligations as determined by the actuary at a particular point in time is referred to as the Accrued Superannuation Liability[1].

1.3 A triennial investigation is conducted every three years and includes detailed analysis of the CSS and PSS experience of ACT Government employees, review of the assumptions adopted and projection of the Accrued Superannuation Liability and Emerging Cost Payments. The previous triennial investigation into the Accrued Superannuation Liability of the ACT Government was carried out by Tony Miller at 30 June 2014. The results of that investigation were set out in our "Report on the Actuarial Investigation as at 30 June 2014" dated 2 April 2015 (the "2014 Triennial Report").

1.4 In addition to triennial investigations, an update of the valuation results ("annual actuarial review") is also conducted in each of the years during which no triennial investigation is performed. An annual actuarial review was conducted as at 30 June 2016 ("2016 Annual Report") and the results presented in my report dated 8 May 2017.

1.5 This report sets out the following key results:

- An estimate of the annual payments expected to be made by the ACT Government to the Commonwealth Government to discharge its superannuation obligations. These estimated annual payments are known as the "Emerging Cost Payments" (Appendices F and I);
- An estimate of the Accrued Superannuation Liability (as at 30 June 2017 and the projected liabilities in future years) in respect of ACT Government employees and former employees who are or have been members of the CSS or the PSS, including liabilities in respect of their dependants (Appendices D and G); and
- Determination of the net balance of the amount owed to the Commonwealth Government by the ACT Government as at 30 June 2017 in respect of benefits already paid to that date by the Commonwealth Government. This is known as the "Emerging Cost Surplus/Deficit" (more details of this amount are provided in Appendix J).

1.6 This investigation has been carried out by Matthew Burgess, FIAA, of Willis Towers Watson and reviewed by Kate Maartensz, FIAA to ensure Willis Towers Watson professional excellence standards were applied.

[1] Appendix M contains a Glossary that includes a definition of Accrued Superannuation Liability.

Membership Data

1.7 The results in this report are based on membership data as at 30 June 2017 provided by Commonwealth Superannuation Corporation (CSC). A summary of the membership is shown in the following table:

Table 1.1 - Membership Summary as at 30 June 2017

	CSS	PSS	Total
Group A			
Contributors	444	6,910	7,354
Deferred Beneficiaries	169	8,230	8,399
Current Pensioners	5,619	4,483	10,102
Dependent Pensioners	532	221	753
Group B			
Contributors	225	3,009	3,234
Deferred Beneficiaries	120	3,020	3,140
Current Pensioners	1,030	1,521	2,551
Dependent Pensioners	51	48	99

1.8 Details of the data and the reconciliation process used to verify the data are contained in Section 3 and Appendix B of the report. Data limitations, assumptions and/or methodologies to deal with them are also documented in Section 3 and Section 4.

Assumptions

1.9 As requested, separate results have been prepared on two sets of financial assumptions, one for ACT Government budgeting purposes and the other to meet the reporting requirements of applicable accounting standards.

1.10 The two sets of assumptions may differ in three critical areas:

- Discount Rate – in order to place a value on the Accrued Superannuation Liability it is necessary to allow for the investment return that could be earned on money set aside at the valuation date to meet a future payment obligation. For accounting purposes a Government bond yield must be used with a term consistent with the term of the liabilities;
- Expected Rate of Salary Growth; and
- Expected Rate of Price Increases (CPI).

1.11 The following assumptions were made for each of the two bases.

a **Budget Assumptions**: For the purpose of the ACT Government's future budgeting, a discount rate of 5.0% per annum was used, as advised, for the purpose of reflecting the estimate of the Commonwealth Government bond yield over the long term. Also as advised, a long term salary inflation assumption of 3.0% per annum (with a short term salary inflation assumption of 2.5% p.a. until 30 June 2022) and long term price increases (CPI) assumption of 2.5% per annum were adopted for use in conjunction with this discount rate. These are known as the Budget assumptions.

b **Disclosures Assumptions at 30 June 2017**: The Australian Accounting Standard requires the yields on Commonwealth Government bonds to be used for setting the discount rate. These assumptions (which were set in July 2017 when preliminary AASB 119 results were provided to the Directorate) include a discount rate of 3.51% per annum, reflecting the yield on the 21 March 2047 Commonwealth Government bonds as at 30 June 2017. A long term salary inflation assumption of 2.75% per annum and long term price increases (CPI) assumption of 2.0% per annum were also adopted for use in conjunction with this discount rate. These are known as the Disclosures assumptions.

1.12 For the Budget assumptions in the most recent annual review conducted as at 30 June 2016, a discount rate of 6.0% per annum, long term salary inflation of 3.0% per annum and long term price increases (CPI) assumption of 2.5% per annum were used.

1.13 For the Disclosures assumptions in the most recent annual review conducted as at 30 June 2016, a discount rate of 2.69% per annum, salary inflation of 3.0% per annum from 1 July 2016 to 30 June 2020 and 3.5% per annum thereafter and long term price increases (CPI) assumption of 2.5% per annum were used.

1.14 All assumptions used in preparing this report have been discussed and agreed with the Directorate.

1.15 The assumptions used for this report are further discussed in Section 5 and set out in detail in Appendix C.

Methodology

1.16 All methodologies have remained the same as those applied for the 2014 Triennial Report and the 2016 Annual Report.

1.17 Further information on the methodology used is contained in Section 4 and additional information in respect of the Emerging Cost Payments and Surplus/Deficit calculations is in Appendix J.

1.18 Since the 2016 Annual Report a Memorandum of Understanding (the Memorandum of Understanding) between the ACT Government and the Commonwealth was agreed on 6 October 2017. This documents the agreed approach used for the calculation of the Emerging Cost Payments, including the Surplus/Deficit, and is consistent with the approach already being used and adopted in this and prior reports.

Results and Recommendations

Projected Accrued Superannuation Liability

1.19 On the basis of the selected actuarial assumptions we have determined that the values of the Accrued Superannuation Liability as at 30 June 2017 were:

a Budget Assumptions - $ 7,263.8 million; and

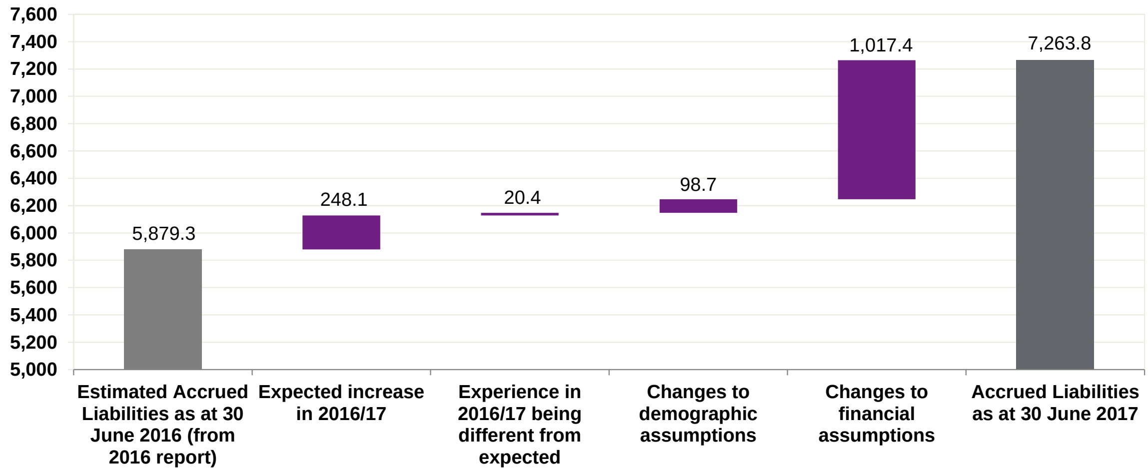
b Disclosures Assumptions - $ 8,817.2 million.

1.20 The Accrued Superannuation Liability at 30 June 2017 of $7,263.8 million on the Budget assumptions is $1,136.4 million higher than the estimated value at 30 June 2017 of $6,127.4 million provided in the 2016 Report. The main reasons for the variation are:

- Reduction of the assumed future salary inflation rate from 3.0% per annum to 2.5% per annum until 30 June 2022;
- Reduction of the discount and crediting rate assumption from 6.0% per annum to 5.0% per annum;
- Higher than expected rates of salary growth and investment return in 2016/17;
- Lower than expected pension indexation in 2016/17;
- Changes in the benefit retention and pension election rate assumptions;
- Increase to PSS resignation assumptions;
- Increases in short term mortality improvement factors for retirement pensioners; and
- Increases in proportions married for female pensioners.

1.21 The following chart shows the reconciliation of the movement in the Accrued Superannuation Liability from 30 June 2016 to 30 June 2017:

Movement in Accrued Superannuation Liability ($M)



1.23 The following table provides a summary of the Accrued Superannuation Liabilities at 30 June 2017 and the projected Accrued Superannuation Liabilities for the next five years based on the Budget assumptions:

Table 1.2 – Accrued Superannuation Liability

As at	Total Accrued Superannuation Liabilities (Budget Assumptions) ($M)
30 June 2017	7,263.8
30 June 2018	7,539.4
30 June 2019	7,801.6
30 June 2020	8,048.7
30 June 2021	8,281.4
30 June 2022	8,497.0

1.24 Appendices D and G in this report set out estimates of the Accrued Superannuation Liability at 30 June for each of the next 40 years on the Budget and Disclosures assumptions respectively.

Emerging Cost Payments

1.25 The Emerging Cost Payments are the estimates of the annual amounts which the ACT Government is expected to pay to the Commonwealth Government. We have determined the estimated values of the Emerging Cost Payments for each of the next 40 years. The results are set out in Appendices F and I.

1.26 The Emerging Cost Payments for the period beginning 30 June 2017 are set out below:

Table 1.3 – Emerging Cost Payments

Year Ending	Emerging Cost Payments* (Budget Assumptions) ($M)
30 June 2018	251.149^
30 June 2019	269.070
30 June 2020	288.846
30 June 2021	308.163
30 June 2022	329.869

* A quarter of each annual payment is assumed to be made at the end of each quarter.

^ Actual annual payment amount agreed with the Commonwealth Government for the 2017/18 financial year, based on the Emerging Cost Payment estimate from the 2016 Annual Report.

Emerging Cost Surplus/Deficit

1.27 The Emerging Cost Payments made by the ACT Government for the year ending 30 June 2017 have been reconciled with the payments incurred for individual members who actually left the CSS or the PSS and the pension payments over that period.

1.28 As at 30 June 2017 there is an estimated accumulated surplus, the Emerging Cost Surplus, of $9.073 million due to the actual benefit payments being less than expected. The Emerging Cost Surplus as at 30 June 2016 was estimated to be $10.053 million.

1.29 Full details of the Emerging Cost Payments and the Emerging Cost Surplus/Deficit are provided in Section 6 and Appendix J of the report.

Standards

1.30 We confirm that this actuarial investigation and report meet the requirements of the relevant Professional Standards of The Institute of Actuaries of Australia, to the extent they apply.

Reliances and Limitations

1.31 This report is based on information available to Willis Towers Watson at the date of this report and takes no account of subsequent developments after that date. In preparing this report we have relied on the information supplied by CSC and the Directorate. In particular we have discussed and agreed the assumptions with the Directorate and relied on the accuracy of the membership data. As agreed with the Directorate, estimates have been used for some calculations. Whilst reasonable care has been taken to gauge the reliability of the data, we provide no guarantee as to its accuracy or completeness and Willis Towers Watson and its affiliates and their respective directors, officers and employees accept no responsibility and will not be liable for any errors or misrepresentations in the data made by any third party.

1.32 This report was prepared for the Directorate to use in the context described above under the terms of our engagement with you and for the purpose indicated. It may not be suitable for use in any other context or for any other purpose and we accept no responsibility for any such use.

1.33 This report was prepared for the sole and exclusive use of the Directorate and on the basis agreed with you. It was not prepared for use by any other party and may not address their needs, concerns or objectives. This report should not be disclosed or distributed to any third party other than as agreed with you in writing. Willis Towers Watson and their respective Directors, officers and employees accept no responsibility, or accept any duty of care or liability to any third party who may obtain a copy of this advice and will not be liable for any consequence howsoever arising from any third part's use of or reliance on this material or the opinions we have expressed.

Matthew Burgess
Fellow of the Institute of Actuaries of Australia
25 May 2017

Professional Excellence Standards Review

I confirm that Willis Towers Watson's Professional Excellence standards have been applied in the preparation of this report.

Kate Maartensz
Fellow of the Institute of Actuaries of Australia
25 May 2017

Towers Watson Australia Pty Ltd
Level 23, 55 Collins Street
Melbourne VIC 3000

ABN: 45 002 415 349 AFSL: 229921

DO: AZ | TR: EZ | CR: MB | ER:MB | SPR: KMs

Section 2: Introduction

2.1 Superannuation arrangements for ACT Government employees vary due to the type of superannuation scheme available at the time of commencing employment. The relevant arrangements for employees commencing as noted below are:

- prior to 1 July 1990, the Commonwealth Superannuation Scheme (CSS);
- between 1 July 1990 and 30 June 2005, the Public Sector Superannuation Scheme (PSS);
- from 1 July 2005 to 5 October 2006, the Public Sector Superannuation Accumulation Plan (PSSap); and
- from 6 October 2006, the superannuation fund of choice arrangements, with First State Super as the default arrangement.

CSS and PSS

2.2 From 1 July 1989, the ACT Government became a separate body politic.

2.3 An agreement was reached with the Commonwealth Government that permanent ACT Government employees (those transferring from the Commonwealth Government or new employees) could continue to access the Australian Government CSS arrangement. Casual employees were not eligible to join the CSS. The CSS was closed to new members from 1 July 1990.

2.4 The Public Sector Superannuation Scheme (PSS) was opened on 1 July 1990, and was compulsory for all ACT Government employees employed in a permanent capacity, unless the employee was an existing CSS member. CSS members could chose to transfer from the CSS to the PSS. Casual employees could elect to join PSS. The PSS was closed to new members from 1 July 2005.

2.5 The CSS and the PSS are both defined benefit schemes in which the benefits payable to members are defined in advance according to a set of formulas which are linked to factors such as years of service, final average salary and level of member contribution. Details of the benefits provided by the CSS and the PSS are set out in Appendix A.

2.6 The CSS was introduced on 1 July 1976. Its operations are governed by the Superannuation Act 1976, as amended, and associated regulations. The CSS provides an indexed pension and member and productivity financed lump sum benefits that can be converted into a non-indexed pension.

2.7 The PSS was established on the basis of a Policy Statement made by the then Commonwealth Minister for Finance on 15 October 1989. Its operations are governed by the Superannuation Act 1990 and a Trust Deed and Rules. In the PSS, the primary benefit is expressed as a lump sum based on a multiple of final average salary that is related to the average member contribution rate and total service. On exit, the benefit may be wholly or partially taken as an indexed pension.

2.8 The CSS and PSS are administered by the Commonwealth Superannuation Corporation (CSC). All benefits of the CSS and PSS are paid to members by CSC.

2.9 With effect from 1 July 1989 the ACT Government became responsible to the Commonwealth Government for the employer financed portion of superannuation benefits provided to employees of the ACT Government and their dependants. This requirement now applies to benefits provided from both the CSS and PSS.

2.10 Under the arrangements agreed to by the Commonwealth Government and the ACT Government, the ACT Government is to reimburse the Commonwealth Government for the cost of superannuation benefits paid in respect of ACT Government employees and former employees who are or were members of the CSS or PSS. This requirement applies to benefits in respect of employment with the ACT Government after 1 July 1989 or such later date as may be agreed between the Commonwealth Government and the ACT Government for agencies that become part of the ACT Government Service after 1 July 1989.

2.11 As part of this requirement the ACT Government has a liability in respect of productivity contributions accruing after 1 July 1990. This liability is discharged by contributions made directly to the CSC.

2.12 The remaining liability to the Commonwealth Government in respect of benefit payments is discharged by payments from the ACT Government's Superannuation Provision Account (SPA) to CSC. These payments are represented by:

a The estimated annual "Emerging Cost Payments" of the employer financed component of superannuation benefit payments; and

b The balancing payment/credit which adjusts the accumulated value of the Emerging Cost Payments with the estimated value of the employer financed component of actual benefit payments for the year.

PSSap and Other Superannuation Schemes

2.13 From 1 July 2005, all new ACT Government employees were required to become members of the Public Sector Superannuation Accumulation Plan (PSSap). Existing CSS and PSS members were not able to transfer. The scheme design is a defined contribution arrangement where employer contributions are made regularly to the scheme on behalf of members.

2.14 From 6 October 2006, the ACT Government introduced superannuation fund of choice arrangements for all new employees. Employees can elect to join a superannuation fund of their choice and employees who do not elect a fund will become members of the default superannuation fund, which is currently provided by First State Super.

2.15 The ACT Government's superannuation liability for employees who have either joined PSSap, the default fund or other approved superannuation schemes, is fully funded by regular payments to the schemes and hence they have been ignored for the purposes of this report.

Superannuation Provision Account

2.16 The Superannuation Provision Account (SPA) was established in 1991 to assist the ACT Government in managing its CSS/PSS defined benefit employer superannuation liabilities. The SPA is not a superannuation scheme for ACT Government employees, nor does it receive contributions from ACT Government employees.

2.17 The SPA is an ACT Government account which receives appropriations and makes payments to the CSC in connection with the ACT Government's defined benefit CSS/PSS employer superannuation liabilities.

2.18 The operations of the SPA are subject to the legislative requirements of the Territory Superannuation Provision Protection Act 2000 and the Financial Management Act 1996.

2.19 The Emerging Cost Payments are made by the ACT Government to CSC, from the SPA, and are the means by which the ACT Government's share of the employer financed superannuation benefits is reimbursed. The Memorandum of Understanding dated 6 October 2017 sets out the approach used for this calculation.

Actuarial Reports and Standards

2.20 A triennial investigation is conducted every three years and includes detailed analysis of the CSS and PSS experience of ACT Government employees, review of the assumptions adopted and projection of the Accrued Superannuation Liability and Emerging Cost Payments. The previous triennial investigation into the Accrued Superannuation Liability of the ACT Government was carried out by Tony Miller at 30 June 2014. The results of that investigation were set out in the 2014 Triennial Report dated 2 April 2015.

2.21 In addition to triennial investigations, an annual actuarial review is also conducted in each of the years in which no triennial investigation is performed. The previous annual actuarial review was carried out by myself as at 30 June 2016. The results of the review were set out in the 2016 Annual Report dated 8 May 2017.

2.22 This report complies with relevant Professional Standards of the Institute of Actuaries of Australia. This report is however not required by the Superannuation Industry (Supervision) Act nor APRA's Prudential Standard SPS 160, nor is it an actuarial investigation of a public sector superannuation scheme (although it considers funding obligations under such a scheme), and therefore is not required to comply with Professional Standard 400 of the Institute of Actuaries of Australia.

Section 3: Data

3.1 The results in this report were based on data as at 30 June 2017 provided by CSC and the subsequent responses from CSC to our data queries.

3.2 We were provided with the data extract for actuarial purposes, consistent with data provided in previous years. Limitations with the data provided, and the assumptions or methodologies adopted to overcome the limitations, are discussed below.

3.3 CSC supplied the following data, for the period from 1 July 2016 to 30 June 2017:

Data in respect of "Group A" members:

- Data of CSS and PSS contributors who were employees of the ACT Government at 30 June 2017, including data in respect of prior memberships; and
- Data of CSS and PSS pensioners and deferred beneficiaries who were employees of the ACT Government on the termination of their employment (or dependants of such employees).

Data in respect of "Group B" members:

- Data of CSS and PSS contributors who were not employees of the ACT Government at 30 June 2017, but were so previously; and
- Data of CSS and PSS pensioners and deferred beneficiaries who were not employees of ACT Government on the termination of their employment, but were so previously (or dependants of such employees).

3.4 CSC has also provided details of the ACT Employment Ratio for current and previous ACT Government employees, being the ratio of the member's ACT service period(s) after 1 July 1989 to their entire service. As a result, the Accrued Superannuation Liability calculations recognise estimated service with ACT Government of both current and former employees.

3.5 A listing of the ACT Government Agencies as at 30 June 2017 is set out in Appendix B. The listing contains the number of Group A members and their salaries as at 30 June 2017 for each agency. Similar data was provided as at 30 June 2015 and 30 June 2016 for the 2015 and 2016 reports, respectively, and has also been used in this report.

3.6 A summary of the membership of the contributors, deferred beneficiaries and pensioners as at 30 June 2017 is set out below (only members with non-zero ACT employer ratios are shown):

Table 3.1 – Membership by category as at 30 June 2017

	CSS	PSS	Total
Group A			
Contributors	444	6,910	7,354
Deferred Beneficiaries	169	8,230	8,399
Current Pensioners	5,619	4,483	10,102
Dependent Pensioners	532	221	753
Group B			
Contributors	225	3,009	3,234
Deferred Beneficiaries	120	3,020	3,140
Current Pensioners	1,030	1,521	2,551
Dependent Pensioners	51	48	99

3.7 Detailed statistics for the membership data are set out in Appendices K and L.

3.8 Tables 3.2 and 3.3 summarise the key statistics for the membership as at 30 June 2016 and 30 June 2017.

Table 3.2 – Group A: Membership Summary as at 30 June 2016 and 30 June 2017

		CSS 30 June 2017	CSS 30 June 2016	PSS 30 June 2017	PSS 30 June 2016
Contributors					
Number of Members		444	547	6,910	7,359
Salaries	**Total**	$49,580,371	$59,255,762	$727,993,231	$745,042,071
	Average	$111,668	$108,329	$105,354	$101,242
Average Age		55.5	55.1	50.1	49.6
Average Service		27.2	26.6	15.5	14.9
Average ACT Employment Ratio		0.855	0.852	0.909	0.911
Deferred Beneficiaries					
Number of Members		169	206	8,230	8,366
Average Age		55.9	55.4	48.8	48.2
Average Service		15.5	15.6	4.5	4.4
Average ACT Employment Ratio		0.732	0.724	0.896	0.895
Pensioners					
Number of Pensioners		5,619	5,558	4,483	4,115
Average Age		71.1	70.5	66.6	66.1
Total Indexed Pension*		$112,784,435	$106,697,792	$103,124,073	$89,391,324
Average ACT Employment Ratio		0.585	0.578	0.878	0.875
Dependent Pensioners					
Number of Pensioners		532	505	221	199
Average Age		73.4	72.8	64.7	63.2
Total Indexed Pension*		$4,700,561	$4,305,403	$2,846,656	$2,347,009
Average ACT Employment Ratio		0.471	0.468	0.841	0.844

* This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

Table 3.3 – Group B: Membership Summary as at 30 June 2016 and 30 June 2017

		CSS 30 June 2017	CSS 30 June 2016	PSS 30 June 2017	PSS 30 June 2016
Contributors					
Number of Members		225	256	3,009	3,150
Salaries	**Total**	$29,374,705	$32,734,373	$327,982,457	$337,738,258
	Average	$130,554	$127,869	$109,000	$107,218
Average Age		53.9	53.4	48.2	47.7
Average Service		27.7	26.6	14.2	13.7
Average ACT Employment Ratio		0.239	0.245	0.246	0.255
Deferred Beneficiaries					
Number of Members		120	134	3,020	3,106
Average Age		54.9	54.1	48.7	48.1
Average Service		14.7	14.1	5.1	5.0
Average ACT Employment Ratio		0.411	0.406	0.559	0.565
Pensioners					
Number of Pensioners		1,030	999	1,521	1,353
Average Age		66.0	65.3	61.9	61.5
Total Indexed Pension*		$9,121,115	$8,286,961	$12,190,285	$9,634,132
Average ACT Employment Ratio		0.211	0.205	0.259	0.245
Dependent Pensioners					
Number of Pensioners		51	46	48	38
Average Age		63.6	61.9	60.2	57.7
Total Indexed Pension*		$167,374	$136,420	$223,027	$152,317
Average ACT Employment Ratio		0.177	0.152	0.222	0.204

* This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

3.9 Detailed checks have been carried out to test the integrity of the data. In addition we carried out a detailed reconciliation of the current data with the data used for the previous valuation as at 30 June 2016. The reconciliations are contained in Appendix B and, combined with the reconciliations in the 2015 and 2016 Annual Reports, reconcile the data with that used for the 2014 Triennial Report.

3.10 Our data checking and reconciliation process resulted in a number of queries in relation to the data supplied by CSC and these queries were raised with CSC.

3.11 We believe all queries raised have been resolved such that we are satisfied that the data is sufficiently reliable for the purposes of this report. Please refer to Section 4 for details of assumptions made in respect of data, noting that they are the same as at 30 June 2016. The assumptions has been agreed with the Directorate.

3.12 The results of our reconciliation of the membership data are set out in Appendix B.

Section 4: Methodology

Accrued Superannuation Liability

4.1 The ACT Government has financial obligations in respect of its current or former employees (and their dependants) who are, or have been members of the CSS or the PSS. The obligation is to meet the employer financed component of the benefits paid from CSS or PSS to members and their dependants that is attributable to service with the ACT Government on or after 1 July 1989 (or such later date as may apply for specific agencies).

4.2 To meet these obligations the ACT Government provides an annual payment to CSC of the estimated amount of the employer financed benefits attributable to the ACT Government for that year. This payment is known as the Emerging Cost Payment. A further balancing payment/credit is subsequently determined to adjust the payments to CSC once the employer financed cost in respect of actual benefit payments has been determined for the year. This payment is known as the Emerging Cost Deficit/Surplus.

4.3 The total estimated value of these obligations as determined by the actuary at a particular point in time, taking into account relevant service with the ACT Government up to the valuation date, is referred to as the Accrued Superannuation Liability at that time.

4.4 The Accrued Superannuation Liability is therefore an estimate of the amount expected to be paid by the ACT Government to the Commonwealth Government (or CSC) in accordance with the Emerging Cost Payments, but only taking into account relevant service with the ACT Government to the date of valuation.

4.5 For the purpose of this determination and consistent with the methodology used to calculate the Emerging Cost Payments, the employer financed component is the total benefit payable (i.e. lump sum benefit and the value of the pension) excluding the following components:

- The amount of the benefit derived from the member financed component, being the accumulated member contributions with interest; and
- The amount of the benefit derived from the productivity component, being the accumulated productivity contributions with interest.

4.6 The portion of the employer financed component recognised in the Accrued Superannuation Liability is based on the service with the ACT Government from the later of:

a 1 July 1989;

b the date at which the ACT agency started; and

c the date the member's employment commenced.

Actuarial Method

4.7 The method used by the actuary to determine the value of Accrued Superannuation Liability is known as the 'actual accruals' basis, and is consistent with current practice of the Australian Accounting Standard AASB119 and its requirement to use a projected unit credit valuation approach.

4.8 The approach has not changed since the 2014 Triennial Actuarial Investigation unless stated and is consistent with that set out in the Memorandum of Understanding.

Determination of Service with ACT Government

4.9 CSC provides the “ACT Employment Ratio” for each member in the CSS and PSS. The ACT Employment Ratio in respect of a member is the ratio of the member’s ACT service period(s) after 1 July 1989 (or relevant later date) to their entire service.

4.10 The ACT Government’s Accrued Superannuation Liability for each member in the CSS and PSS is valued based on the ratios provided.

4.11 Accordingly the determination of the Accrued Superannuation Liability includes:

- Group A - CSS and PSS members who were employed by the ACT Government at the valuation date (or for whom the ACT Government was their last employer) and their dependants; and
- Group B - CSS and PSS members who are not currently employed by the ACT Government but had previously been employed (or the ACT Government was not their last employer before they became entitled to a deferred benefit or a pension but was a previous employer) and their dependants.

Assumptions under the Current Methodology

4.12 As a consequence of data limitations, in undertaking the valuation it was necessary to make a number of assumptions regarding the membership. The assumptions set out below and in the remainder of Section 4 affect the Accrued Superannuation Liability, Emerging Cost payments and Emerging Cost Surplus/Deficit:

a **Uniform accrual of benefits**: In both the CSS and PSS the accrual of benefits can vary for different periods of service. For example in the CSS, a higher accrual rate applies for the first 20 years of membership. But the methodology (which applies the ACT Employment Ratio to the total accrued benefit) apportions the benefit by assuming that the accrual of benefits while employed by the ACT Government is the same as while employed by the Commonwealth Government. A similar issue applies to PSS where the employer funded accrual varies depending upon the member contribution rate but the methodology apportions the benefit assuming a uniform accrual of benefits;

b **Uniform salary increases**: The methodology is based on apportioning the member’s final benefit (which is based on their Final Average Salary), in proportion to their length of employment with the ACT Government and Commonwealth Government. For those employees who have had a change of employer, this approach does not reflect the historical salaries earned during their employment with the ACT Government. In other words, the impact of salary increases are shared uniformly among the employers; and

c **Uniform part-time history**: For those employees who have both changed employers and who have a period of part-time employment, the methodology assumes that part-time employment has applied uniformly for the whole period of employment with different employers.

4.13 We consider that any approach to deal more accurately with the above assumptions would be complex, requiring further detailed data capture and transfer while noting the difficulties already associated with obtaining satisfactory data. These assumptions are the same as those adopted previously.

10 Year Rule

4.14 In the PSS the employer's share of the benefit multiple cannot be greater than that which would have accrued if the member contributions had been made at 5% for 10 years (or total membership if less) and 10% for any membership period in excess of 10 years.

4.15 This cap is recognized in the 30 June 2017 benefit multiple provided by CSC and therefore will be reasonably reflected in the 30 June 2017 Accrued Superannuation Liability. However, we currently aren't able to allow for the 10 year rule's cap impact on future accruals as there is insufficient information to identify the affected members and determine the cap.

4.16 Therefore, the estimated Accrued Superannuation Liability for some PSS members in some future years has been overstated. In our opinion this is not a material difference and we have continued with this practice in this investigation particularly given the PSS has been closed to new members for over 10 years.

CSS Non-Indexed Pensions

4.17 CSS members can elect to take a lump sum or a non-indexed pension with their member and productivity financed benefits. A majority of the CSS members convert their member and productivity financed benefits into a lump sum.

4.18 For those who elect a non-indexed pension, the amount of pensions being paid is provided by CSC. However, CSC has not provided an apportionment of the non-indexed pensions being paid between the employer-financed component and the member-financed component. An employer financed component exists because the present value of the pension payments is greater than the amount of the member-financed benefit used to purchase the pension.

4.19 As agreed and consistent with our previous analysis, we have retained our assumption that the employer financed component of the non-indexed pensions is 25% of the overall value. This assumption is as specified in the Memorandum of Understanding. Accordingly we have adopted this ratio in valuing the liabilities.

4.20 Basic contributions for CSS members are either 0% or 5% of salary. Members can contribute more than 5% of salary and the excess balance does not directly impact the employer financed benefit. However members can convert these supplementary contributions into a non-indexed pension which, as outlined above, are assumed to be 25% employer financed. Combined with the assumed proportion of members who elect a non-indexed pension, the impact of the contributions above 5% on the employer-financed component has not been included in the estimate of the Accrued Superannuation Liability and the estimated Emerging Cost Schedule. The impact of this approximation is estimated to be immaterial relative to the amounts involved.

PSS Indexed Pensions

4.21 CSC has supplied the lump sum employer financed component, productivity component and member financed component that were converted to a pension at the date the pension commenced. This allows us to estimate the employer financed component of their PSS pensions. This data is available for approximately 80% of the existing pensioners and is now also provided for all emerging pensioners.

4.22 When a PSS member converts his/her member or productivity component into a pension, the value of the pension (based on the assumptions used to develop the approach in the Memorandum of Understanding) is expected to be higher than the lump sum value of the benefit due to the generous pension conversion factor. We have continued to assume that 40% of the member/productivity funded pension will be employer financed. This assumption is as specified in the Memorandum of Understanding.

4.23 This approach is applied consistently for contributors, deferred beneficiaries and pensioners. It is applied for the Accrued Superannuation Liability, Emerging Cost Payments and Emerging Cost Surplus/Deficit.

4.24 For the remaining approximately 20% of current pensioners for whom the pension component information is not provided, 75% of retirement pension and 90% of invalidity pension is assumed to be employer financed. This is based on the average employer financed proportion derived for those with the relevant information provided and is consistent with the assumption adopted last year. This is consistent with the Memorandum of Understanding, which also specifies these percentages be updated annually and rounded to the nearest 5%.

PSS Indexed Pensions – Disclosure valuation

4.25 A separate employer-financed percentage assumption was used in the 2014 Triennial Investigation for the Disclosure valuation, however since the 2015 valuation we have aligned the methodologies used for both the Budget and Disclosure valuations.

4.26 The employer financed proportion of the PSS indexed pension is determined based on the projected benefit components (i.e. employer financed component, member component and productivity component) for each member. The projection is made using the Disclosure assumptions for the Disclosure valuation and the Budget assumptions for the Budget valuation.

4.27 For both the Disclosure and Budget assumptions, 40% of the projected member/productivity pension is assumed to be employer financed. This is consistent with the approach used to calculate the Emerging Cost Payments made by the ACT Government and is specified in the Memorandum of Understanding.

ACT Employment Ratio

4.28 As noted previously in this report the portion of a member's benefit attributable to service with the ACT Government is determined as the product of the member's benefit and their ACT Employment Ratio. The ACT Employment Ratio is calculated as:

$$\frac{\text{ACT service post 1 July 1989 (or later as applicable)}}{\text{Total Service}}$$

4.29 In the absence of an accurate employment history of members, this method is considered to be a suitable means of apportioning a member's benefit. However, because many members do not accrue benefits uniformly over their working life, its use gives rise to a number of matters requiring further attention.

4.30 For contributing members no longer employed by the ACT Government i.e. Group B members, the ACT Employment Ratio will gradually reduce over time. For members employed by the ACT Government, i.e. Group A, the ACT Employment Ratio will either gradually increase over time or be fixed at 100%.

4.31 For the purpose of determining both Emerging Cost Payments and the Emerging Cost Surplus/Deficit, benefits are apportioned using the member's ACT Employment Ratio at the date of payment. However for the purpose of determining the value of Accrued Superannuation Liability, benefits are apportioned using the members' ACT Employment Ratio at the date of valuation.

4.32 In the CSS, the accrual of retirement benefits is highest in the first 20 years of service. This also means that as service increases the average retirement accrual of CSS members with greater than 20 years of service will reduce. As identified under paragraph 4.12, use of the ACT Employment Ratio (in lieu of more detailed information being available) means that liabilities are apportioned uniformly between employers with the result that:

- For Group B members the accrued retirement benefit apportioned to the ACT at 30 June 2017 in respect of service to 30 June 2017 for the purpose of determining the value of the Accrued Superannuation Liability may be greater than the corresponding benefit apportioned to the ACT Government in future years. As a consequence, the Accrued Superannuation Liability determined at 30 June 2017 in respect of these members may be higher than the value which may apply in future years.

- For Group A members the reverse is true for members with an ACT Employment Ratio of less than 100%. The accrued retirement benefit apportioned to the ACT at 30 June 2017 in respect of service to 30 June 2017 may be less than the corresponding benefit apportioned to the ACT in future years.

4.33 Accounting Standards allow the approach we have adopted for valuing the Accrued Superannuation Liability and we consider it an appropriate method to value benefits accrued in respect of service to the valuation date. In the past we have tested the sensitivity of the Accrued Superannuation Liability to this approach by allowing for the changes in the ACT Employment Ratio in calculating the accrued retirement benefit and it was found that the impact is not significant.

4.34 The assumption of uniform accrual is not expected to be as material for the PSS due to the more even accrual of benefits over the service period. However, the accrual of the employer financed benefit can be uneven because of factors such as:

- Members changing their contribution rates; and

- Variable crediting rates affecting the amount of the member financed benefit being deducted from the total benefit to calculate the employer financed benefit.

Preservation Rules

4.35 In both the CSS and PSS, legislated preservation requirements impact when members can receive their benefits. In particular, the benefits for PSS members joining on or after 1 July 1999 must be preserved and it continues to be assumed that all resignation benefits must be retained within the Scheme. For members who joined prior to 1 July 1999 the preservation requirements have not explicitly been allowed for, but are implicitly allowed for because the assumptions around benefit options taken by members reflect experience (refer to Appendix C).

PSS Pre 1996 Transfer Amount

4.36 Transfer amounts received prior to 1 January 1996 from another superannuation fund into the PSS can be taken as either a pension or a lump sum with amounts equal to:

- For pensions: calculation based on the “transfer multiple amount” being the transfer multiple multiplied by Final Average Salary. The transfer multiple is calculated at the transfer date by dividing the transfer amount into the PSS by the Final Average Salary at that date.

- For lump sums: the greater of the “transfer multiple amount” and the accumulated transfer amount (i.e. the original transfer amount increased with earnings).

4.37 For current pensioners we continue to assume that:

- 40% of the pension converted from the transfer amount is assumed to be funded by the employer (i.e. the same treatment as member or productivity components);
- Any shortfall (where the transfer multiple amount is greater than the accumulated transfer amount) is funded by employer; and
- Any excess amount (where the accumulated transfer amount is greater than the transfer multiple amount) is used to offset the employer liability.

4.38 For current contributors, due to data limitations, in calculating the Accrued Superannuation Liability we have assumed that the transfer amounts will fully fund the additional transfer benefits irrespective of whether they are taken as a pension or a lump sum. This may understate the employer financed component when the transfer amount is converted to a pension or if the accumulated transfer amount is less than the transfer multiple amount. Based on our estimation, the potential impact as at 30 June 2017 on the Accrued Superannuation Liability would not be material relative to the amount of liabilities.

4.39 For deferred members, CSC has advised that:

- The accumulated transfer amount is included in the member and productivity components provided; and
- The excess of the transfer multiple amount over the accumulated transfer amount (if any) is reflected in the employer financed component provided.

Therefore, the Accrued Superannuation Liability allows for the impact of the pre 1996 transfers for deferred members.

New CSS and PSS Contributors

4.40 Because CSS and PSS are closed to new entrants, no allowance has been made for new entrants for the purpose of this valuation.

4.41 However, new entrants for ACT liability recognition could emerge when:

a The ACT Government re-employs a former ACT Government employee who retains a PSS/CSS deferred/preserved benefit. Such members are able to commence a new contributory PSS/CSS membership. Eventually the deferred/preserved benefit membership record will be consolidated with the new contributory record.

b The ACT Government employs a former Commonwealth Government employee who retains a PSS/CSS membership. Such members are also able to commence a new contributory membership and eventually all past memberships will be consolidated.

c Former ACT Government employees who retain a deferred/preserved benefit are employed by the Commonwealth Government. Such members are able to recommence their contributory PSS/CSS membership and eventually all past memberships will be consolidated.

d ACT Government employees with multiple linked memberships are consolidated into a new membership record during the year.

e A number of other minor causes including members being reinstated or having a new record created as a result of a change in their surname.

1.7 In each of these cases, the increase in superannuation liability will relate only to the future employment with the ACT Government, as the liability in relation to their previous deferred/preserved benefit or PSS/CSS membership is already appropriately reflected in the Accrued Superannuation Liability.

4.42 Because we have not allowed for the future service liability of new entrants, the Accrued Superannuation Liability projections at future dates may be understated. The liability of the new entrants will, of course, be recognised in the Accrued Superannuation Liability calculation following their joining and their impact (if significant) identified in the reconciliation with the projected liability calculated in the previous year.

4.43 The membership reconciliations in Appendix B show that there were 285 new CSS and PSS contributory members in Group A over the year to 30 June 2017.

4.44 The number of new entrants has reduced over time. This is expected for schemes which have been closed for a long time, resulting in a reducing pool of existing CSS/PSS members or deferred members from which new entrants may arise. For this reason we expect that the number of new entrants to the ACT Government's superannuation liability will continue to reduce. Further, the age of the group of possible new entrants is increasing, so that the possible future service with the ACT Government is consequently also reducing.

4.45 The impact of new entrants will in any case be recognised gradually as they occur.

Other Data Assumptions

4.46 We noted a number of data issues and limitations which required the use of estimates in calculations:

a We have 148 contributors and 59 deferred beneficiaries (i.e. 0.9% of contributors and deferred beneficiaries membership) with a family law split and data associated with their former spouses. We do not have sufficient information to accurately reflect the effect of the family law split for contributors and deferred beneficiaries. For the purpose of valuing the Accrued Superannuation Liability and Emerging Cost Payments, we have valued the benefits for these members based on their entitlements prior to the family law split. Based on our assessment, we do not expect this approach to have a material impact relative to the total amounts.

Out of the 59 deferred beneficiaries with a family law split, 51 PSS members had their productivity and employer components already reduced by their family law amounts in the data extract. In order to value these members' entitlements for the purpose of calculating the Accrued Superannuation Liability prior to the family law split (we have not valued the separate non-member spouse entitlement), we estimated the productivity and employer components without the family law split for these members by rolling forward last year's amounts with CPI. The relevant data is available to enable the Emerging Cost Surplus/Deficit to be more accurately estimated when the deferred benefits are paid.

b No information was available in relation to the service ratios for Casual employees and additional salary information was used to estimate the service ratios for these employees (i.e. we used the actual salary paid and the amount of the full time equivalent salary for the year to 30 June 2017 to estimate the service ratio). As there is a relatively small number of casual members, this is not expected to have a material impact relative to the total amounts.

c Prior to 2005 some members may have accrued a surcharge debt. For any such members a surcharge debt account is maintained and credited with interest at the ten year Commonwealth Government bond yield. The balance of the surcharge debt account is paid to the Australian Tax Office when the relevant member's benefit becomes payable and the amount of their benefit is reduced by the amount of the surcharge debt. We do not have sufficient data to ensure we are calculating the amount of employer financed benefits correctly for members who have had a surcharge liability. While we expect that the amounts would be immaterial, we do not have the data to confirm this.

Emerging Cost Payments

4.47 The Emerging Cost Payments schedule sets out the estimated future cash flows resulting from the employer financed component of superannuation benefits payable after 30 June 2017.

4.48 The Emerging Cost Surplus/Deficit arises from the difference between the Emerging Cost Payments made by the ACT Government to the Commonwealth Government (based on the estimates) and the ACT financed benefit payments derived from actual benefit payments data. The Emerging Cost Surplus/Deficit at 30 June 2017 consists of:

a That part of the Emerging Cost Surplus/Deficit as at 30 June 2016, as calculated in the 2016 Annual Report, which had not been paid at 30 June 2017, with interest; and

b The Emerging Cost Surplus/Deficit arising during the period 1 July 2016 to 30 June 2017, with interest.

4.49 The Emerging Cost Surplus/Deficit arising during the period 1 July 2016 to 30 June 2017 is estimated based on the ACT financed benefit payments (determined using exit information and pensioners data at 30 June) and ACT Employment Ratios provided by CSC. The ACT financed benefit payments are multiplied by the relevant ACT Employment Ratio, and the total compared to the Emerging Cost Payments for the year.

4.50 Because of limitations in the data provided, assumptions are required to determine the employer financed portion of PSS pension payments that were converted from the member financed component and the productivity component. Similarly, assumptions are required to determine the employer financed portion of the unindexed CSS pension payments that were converted from the member financed component and the productivity component. These assumptions are specified in the Memorandum of Understanding.

4.51 In Section 3 and earlier in Section 4 of this report various limitations in the data were identified and the method used to overcome these limitations discussed, those methods often involving estimates. Where relevant these estimates also apply to the calculation of the Emerging Cost Surplus/Deficit.

4.52 In the determination of the Emerging Cost Surplus/Deficit as at 30 June 2017, interest is applied to take into account the different timing of the starting Emerging Cost Surplus/Deficit as at 30 June 2016, the Emerging Cost Deficit Payment (or Surplus Credit), the Emerging Cost Payments made by ACT during the year, and the ACT financed benefit payments during the year. The effective interest rate applied in the calculation is the geometric average yield on one year Australian Commonwealth Government bonds at the end of each month over the year to 30 June 2017.

4.53 Please refer to Appendix J for more information on the method and assumptions used to calculate the Emerging Cost Surplus/Deficit.

Section 5: Financial and Demographic Assumptions

5.1 The calculation of the Accrued Superannuation Liability and Emerging Cost Payments require assumptions about the future experience of the membership of the CSS and PSS and the future financial experience, due to the long term nature of the liabilities.

5.2 These financial and demographic assumptions are detailed in Appendix C. The assumptions in respect of the data and methodology used are summarised in Sections 3 and 4.

5.3 All assumptions used in preparing this report have been discussed and agreed with the Directorate.

Financial Assumptions

2. Separate results have been prepared on two sets of financial assumptions:

   a **Budget Assumptions:** For the purpose of the ACT Government's future budgeting, a discount rate of 5.0% per annum was used, as advised, for the purpose of reflecting the estimate of the Commonwealth Government bond yields over the long term. Also as advised, a long term salary inflation assumption of 3.0% per annum (with a short term salary inflation assumption of 2.5% p.a. until 30 June 2022) and long term price increases (CPI) assumption of 2.5% per annum were adopted.

   b **Disclosures Assumptions 30 June 2017:** The Australian Accounting Standard requires the yields on Commonwealth Government bonds to be used for setting the discount rate in respect of public sector entities. These assumptions (which were set in July 2017 when preliminary AASB 119 results were provided to the Directorate) include a discount rate of 3.51% per annum, reflecting the yield on the 21 March 2047 Commonwealth Government bond as at 30 June 2017. A long term salary inflation assumption of 2.75% per annum and long term price increases (CPI) assumption of 2.0% per annum were adopted.

5.4 For the Budget assumptions in the most recent annual review conducted as at 30 June 2016, a discount rate of 6.0% per annum, long term salary inflation of 3.0% per annum and long term price increases (CPI) assumption of 2.5% per annum were used. Considered in isolation, the decrease in discount and crediting rate has increased the Accrued Superannuation Liability for the Budget results. This is slightly offset by the reduction in the salary inflation from 3.0% p.a. to 2.5% p.a. until 30 June 2022 in this investigation.

5.5 For the Disclosures assumptions in the most recent annual review conducted as at 30 June 2016, a discount rate of 2.69% per annum, salary inflation of 3.0% per annum from 1 July 2016 to 30 June 2020 and 3.5% per annum thereafter and long term price increases (CPI) assumption of 2.5% per annum were used. The increase in discount rate, reduction in long term salary inflation and reduction in long term price increases has decreased the Accrued Superannuation Liability for the Disclosures.

Demographic Assumptions

5.6 We have carried out a detailed analysis of the CSS and PSS membership experience of ACT Government employees over the three years from 1 July 2014 to 30 June 2017. A summary of the results is provided in the Report on the Experience Analysis for the Actuarial Investigation as at 30 June 2017, dated 25 May 2018.

5.7 Based on the results of our analysis, several demographic assumptions have been adjusted from those adopted for the 2014 Triennial Report to better reflect the experience to 30 June 2017.

Changes to Demographic Assumptions

5.8 The key changes to the demographic assumptions were as follows:

- a Increased resignation rates by 20% across all ages for PSS contributors;
- b Continued to apply the higher short term mortality improvement rates for a further three years until 30 June 2020 on retirement pension mortality rates; and
- c Increased the assumed proportions married for female pensioners from 45% to 55% at age 73 and by 25% from age 74.

Changes to Benefit Options

5.9 In addition to the demographic assumptions, it is also necessary to make assumptions regarding the benefit options selected by members. These assumptions are set out in detail in Appendix C. Based on our analysis of the experience of the membership and actual benefit payments over the last three years and consideration of the potential future trends, we have made a number of changes to the assumptions regarding benefit options.

- a Increased the retention rate upon resignation for PSS contributors from 90% to 100%;
- b Decreased the retention rate upon retrenchment for PSS contributors under age 55, from 60% to 40% for those who joined before 1 July 1999; and from 80% to 50% for those who joined after 1 July 1999;
- c Increased the pension election rate upon retirement and retrenchment for PSS contributors over age 55, from 75% to 80%; and
- d Increased the non-indexed pension take-up rate from 15% to 20% for the member component of CSS contributors and preservers at retirement.

5.10 Full details of the experience analysis are set out in a separate Report on the Experience Analysis for the Actuarial Investigation as at 30 June 2017 dated 22 May 2018 and the assumptions adopted for this valuation are set out in Appendix C.

Section 6: Results

Projected Accrued Superannuation Liability

6.1 On the basis of the assumptions set out in Appendix C, we have determined that the value at 30 June 2017 of the Accrued Superannuation Liability attributable to the ACT Government in respect of current and former members of CSS and PSS was as follows:

a. Budget Assumptions - $7,263.8 million; and

b. Disclosures Assumptions - $8,817.2 million.

6.2 The Accrued Superannuation Liability at 30 June 2017 on the Budget Assumptions of $7,263.8 million is $1,136.4 million (or 18.5%) higher than the estimated value at 30 June 2017 provided in the 2016 Annual Report. The main factors contributing to the variation in the liability are summarised below:

a. **Experience in 2016/17 being different from expected**

i. **Salary growth was marginally higher than assumed:** The salary increase rate over the 2016/17 financial year was 3.2% for CSS contributors and 3.5% for PSS members which includes both inflationary and promotional increases. These increases in salary are 0.2% and 0.1% higher than the assumptions for CSS and PSS respectively after taking into account the inflationary increases of 3.0% and the promotional salary increases.

ii. **Crediting Rates on Member and Productivity Accounts were higher than assumed:** Investment of the Member and Productivity Accounts in CSS and PSS is managed by the CSC. The default fund earning rate over the financial year 2016/17 credited to member and productivity accounts was 9.3% and 9.2% for CSS and PSS respectively. It was higher than the assumed rate of 6.0% per annum. This leads to:

- Higher accumulated member contributions for CSS members, which increases the employer financed liabilities which are linked to the members' account (for example the 54/11 benefit); and

- A decrease in the employer financed PSS liability which is determined by deducting the member and productivity components from the total benefit. Higher than expected earning rates increases the value of the member and productivity components which in turn decreases the overall employer financed liability.

iii. **Pension indexation was lower than expected:** The pension indexation rate over the 2016/17 financial year was 2.1% which was lower than the assumed rate of 2.5%. This has the effect of decreasing the pension liabilities for current pensioners and the employer financed component for PSS deferred beneficiaries.

iv. **New members:** The impact of new entrants/re-joiners. This has the impact of increasing the liability.

v. **Other experience different from expected:** For example the higher pension take up on retirement for PSS contributors or the number of exits being different to assumed.

b. **Assumptions changes**

i. **Increases in resignation rates for PSS contributors:** To reflect the experience, we have increased the resignation rates for PSS contributors by 20% across all ages. The effect of this change is an increase in liability of approximately $3.8 million.

ii. **Changes in short term mortality improvements for retirement pensioners and spouse assumptions for female pensioners:** As noted in paragraph 5.8, we have continued to apply the higher mortality improvement factors to the mortality rates for retirement pensioners for a further three years to 30 June 2020. We have also increased the proportions married for female pensioners from age 73. The combined effect of these changes is an increase in liabilities by approximately $28.2 million.

iii. **Changes in benefit options:** As set out in paragraph 5.9, a number changes were made to the assumed rates of benefit retention upon resignation and retrenchment, and also to increase pension election rates. The combined impact of these changes is an increase in liability by approximately $66.7 million.

iv. The salary inflation assumption reduced from 3.0% per annum to 2.5% per annum for next five years (1 July 2017 to 30 June 2022). The effect of this change is a decrease in liability of approximately $51.8 million.

v. The discount and crediting rate assumption reduced from 6.0% per annum to 5.0% per annum. The effect of this change is an increase in liability of approximately $1,069.2 million.

Overall, the combined effect of these experience and assumption items was to increase the liabilities by $1,136.4 million over the year to 30 June 2017.

6.3 The estimated impact of the changes in the Accrued Superannuation Liability due to the reasons stated above are presented in the table below:

Table 6.1 - Explanation of change in Accrued Superannuation Liability (Budget Assumptions) as at 30 June 2017

	($ Million)
Projected Accrued Superannuation Liability at 30 June 2017 (based on 30 June 2016 membership data)	6,127.4
Changes due to experience and membership movements being different from expected:	
Salary growth higher than expected	12.8
Crediting rates higher than expected	(18.1)
Pension indexation lower than expected	(11.8)
New and appearing contributors	15.0
Other variations	22.4
Changes due to demographic assumptions:	
Increase in PSS resignation rates	3.8
Increase in short term mortality improvement factors for retirement pensioners and proportions married for female pensioners	28.2
Changes to the benefit retention and pension election rates	66.7
Changes due to financial assumptions:	
Salary inflation assumption reducing from 3.0% p.a. to 2.5% p.a. for next five years (1 July 2017 to 30 June 2022)	(51.8)
Discount and Crediting rate assumption reduced from 6.0% p.a. to 5.0% p.a.	1,069.2
Accrued Superannuation Liability at 30 June 2017 (based on 30 June 2017 membership data)	7,263.8

Future Values of Accrued Superannuation Liability

6.4 The tables in Appendices D and G of the report show the estimated values of the Accrued Superannuation Liability at 30 June for each of the next 40 years beginning 30 June 2017, for the Budget and Disclosure assumptions. The results in the tables have been split between the CSS and the PSS, and further sub-divided between active and inactive members.

6.5 The following table provides a summary of the Accrued Superannuation Liabilities at 30 June 2017 and the projected Accrued Superannuation Liabilities for the next five years based on the Budget and Disclosure assumptions:

Table 6.2 - Accrued Superannuation Liability

	Total Accrued Superannuation Liabilities (Budget) ($M)	Total Accrued Superannuation Liabilities (Disclosures) ($M)
30 June 2017	7,263.8	8,817.2
30 June 2018	7,539.4	9,099.1
30 June 2019	7,801.6	9,360.0
30 June 2020	8,048.7	9,599.1
30 June 2021	8,281.4	9,817.5
30 June 2022	8,497.0	10,012.8

6.6 The expected duration of the liabilities (based on the Budget assumptions) as summarised in the table below gives the weighted average term until benefit payments are expected to occur. It provides a measure of how sensitive the movement of liability is to the movement of interest rates. For example, the value placed on a liability with a longer duration tends to move up or down more (in relative movement) as interest rates change than one with a shorter duration. The duration of the CSS liability is lower than for the PSS liability because it has been closed to new members for a longer period.

Table 6.3 - Expected Duration of Liabilities (Budget Assumptions)

	Current Contributors	Current Deferred Beneficiaries	Current Pensioners	Total
CSS	18.8	17.5	11.6	13.0
PSS	23.8	22.8	12.5	20.7

Projections of Emerging Cost Payments

6.7 On the basis of the assumptions set out in Appendix C, we have estimated the annual Emerging Cost Payments in respect of the CSS and PSS members for each of the next 40 years beginning 30 June 2017. The tables in Appendices F and I show the results of these determinations. Appendix J sets out the methodology used.

6.8 The results for the first five years are summarised below in Table 6.4 which also shows the Emerging Cost Payments arising from the three membership categories within CSS and PSS of contributors, pensioners (including dependent pensioners) and deferred beneficiaries.

Table 6.4 - Projection of emerging cost payments (Budget Assumptions)

Year Ending	Current Contributors		Current Pensioners	Current Deferred Beneficiaries	Total
	CSS ($M)	**PSS ($M)**	**($M)**	**($M)**	**($M)**
30 June 2018^	5.594	35.021	201.809	8.724	251.149
30 June 2019	4.998	33.339	222.403	8.331	269.070
30 June 2020	7.748	43.772	226.484	10.842	288.846
30 June 2021	10.719	54.117	230.469	12.858	308.163
30 June 2022	13.642	66.039	234.318	15.869	329.869

^ Actual annual payment amount agreed with the Commonwealth Government for the 2017/18 financial year, based on the Emerging Cost Payment estimate (Budget) from the 2016 Report.

Emerging Cost Surplus/Deficit as at 30 June 2017

6.9 The Emerging Cost Payments made by the ACT Government in any year are based on estimates in prior years' reports. The actual benefits payable to the CSS and PSS may be different to the estimated amount. Hence, the Emerging Cost (Surplus)/Deficit calculation is performed on a yearly basis to account for the difference between the amount paid by the ACT and the actual benefit payments incurred during the year.

6.10 The reconciliation of the Emerging Cost (Surplus)/Deficit amount at 30 June 2017 is provided in the table below:

Table 6.5 – Emerging cost (Surplus)/Deficit at 30 June 2017

	($M)
(Surplus)/Deficit as at 30 June 2016	(10.053)
Surplus Credit/(Deficit) Payment	10.053
Emerging Cost Payments in 2016/17^	(230.525)
Employer Financed Benefit Payments in 2016/17	221.228
Interest Component	0.224
(Surplus)/Deficit as at 30 June 2017	(9.073)

^ The Emerging Cost Payments of $230.525 million for year 2016/17 were based on the projections from the 2015 Report. Accordingly, ACT Government has made the first three quarterly payments of $57.631 million each in 2016/7. However, the last quarterly payment in 2016/17 was adjusted to be $47.578 million to reflect the Surplus Credit of $10.053 million.

Further details including the breakdown of the actual member benefit payments are summarised in Appendix J.

6.11 As at 30 June 2017 the accumulated surplus was $9.073 million. As at 30 June 2016, there was a surplus of $10.053 million.

6.12 The surplus of $9.073 million as at 30 June 2017 was a result of the employer financed component of the actual benefit payments (including interest) during the year to 30 June 2017 being less than the Emerging Cost Payments. The primary reasons for this variation are set out in the table below:

Table 6.6 - Emerging Cost (Surplus)/Deficit Analysis

				($M)
1.	**Variation – CSS Payments**			**(0.821)**
	a.	A difference arising from changes in membership due to the initial Emerging Cost Payments being an estimate from the 2015 valuation (as opposed to the 2016 valuation).	0.018	
	b.	Other experience in 2016/17 compared to that expected.	(0.839)	
2.	**Variation – PSS Payments**			**(8.476)**
	a.	A difference arising from changes in membership due to the initial Emerging Cost Payments being an estimate from the 2015 valuation (as opposed to the 2016 valuation).	3.950	
	b.	Proportion of benefit taken as pension was higher than expected	(8.166)	
	c.	Higher than expected crediting rate	(0.595)	
	d.	Other experience in 2016/17 compared to that expected.	(3.665)	
3.	**Interest Component**			**0.224**
Total				**(9.073)**

Appendix A: Summary of Benefits and Conditions

THE SUPERANNUATION ACT 1990 (PSS)

Membership

The PSS was closed to new members from 1 July 2005.

Superannuation Salary

From July 2003, this is the amount agreed between the member and employer through a certified agreement or Australian Workplace Agreement. If no such agreement is in place, Superannuation salary is basic salary plus any recognised allowances.

Final Average Salary

Final Average Salary is the average superannuation salary on the three birthdays before leaving the PSS.

Member Contributions

Members can choose to contribute at any rate between 2% and 10% of superannuation salary, or not contribute at all. Contributions are paid fortnightly. The rate of contribution can be varied at any time.

Benefit Multiple

A member's Benefit Multiple is the sum of the accrual rate for each year of membership. The accrual rate varies with member contribution rate and is set out in the table below:

Member Contribution Rate	Annual Accrual Rate
0%	0.11
2%	0.15
3%	0.17
4%	0.19
5%	0.21
6%	0.23
7%	0.25
8%	0.27
9%	0.29
10%	0.31

Example: A member who contributes at 5% for 10 years will have a Benefit Multiple of 2.1.

Preservation

For members who joined from 1 July 1999 all benefits must be preserved until a legislated condition of release such as permanent retirement occurs. For members who joined prior to 1 July 1999 preservation may partially restrict the lump sum benefit options available to some members as described below.

Benefits

The benefits from the PSS consist of three parts:

- employer financed component is determined as the Total Benefit net of the productivity and member component. This component is an untaxed benefit.
- productivity component is made up of accumulated productivity contributions with investment earnings. This is a “taxed benefit”.
- member component made up of accumulated member contributions with investment earnings. The investment earnings are a “taxed benefit”.

Total Benefit

A member’s Total Benefit is calculated by multiplying the member’s Benefit Multiple by his or her FAS. A member’s Benefit Multiple increases with each contribution made as follows:

= 2 x Member Contribution Rate + 0.11 (per year of service)

The employer financed component is calculated by deducting the member component and the productivity component from the total benefit.

10 year Rule - Restriction on Employer’s Share of Benefit Multiple

Employer’s share of Benefit Multiple cannot be greater than that which would have accrued if member contributions had been made at 5% for 10 years (or total membership if less) and 10% for any membership in excess of 10 years.

On death or disablement the 5% maximum average applies to prospective service until the 10-year period is notionally completed.

Maximum Benefit

The maximum benefit allowable under the PSS is known as the Maximum Benefit Limit (MBL). On reaching the MBL, a member will cease contributing to the scheme. The MBL for the 2017/18 financial year is set out as below:

Average Salary	Maximum Benefit
Less than $72,000	$720,000
$72,000 and over	10 times average salary

Retirement Benefits

Retirement benefits are payable upon retirement after minimum retiring age (usually age 55).

The options on retirement are as follows:

- **Lump sum benefit** – The three benefit components can be taken as a lump sum;
- **Pension benefit** – The three benefit components can be taken as an indexed pension;
- **Lump sum plus pension benefit** – The benefits can be taken as a pension (subject to a minimum of 50% of the total benefit) and a lump sum; or
- **Preserve total benefit** – The total benefit can be preserved in the PSS and later taken as a lump sum, indexed pension or a combination of both.

While a benefit is being preserved in the PSS, member and productivity components are increased at the Fund allocation rate and the employer financed component is adjusted annually in accordance with the Price Increases (CPI).

Lump sums are converted into indexed pensions by dividing by the factors in the following table.

Age	Factor
70	9.0
65	10.0
60	11.0
55	12.0

Invalidity Retirement

The following benefit choices are available on retirement on medical grounds before reaching age 60:

- **Invalidity pension with no lump sum** – This option provides for the payment of the three benefit components as an indexed pension. Under this option, the total benefit is calculated based on potential service to age 60 (assuming that the member will continue to contribute at their current rate or 5% if more, but subject to a maximum average contribution of 5% for the first 10 years of service, actual or potential). The total benefit is converted to an indexed pension using the same factors used to convert the age retirement pension but assuming that the member is aged 60 at the time of invalidity retirement;

- **Invalidity pension with a lump sum** – Under this option, the member component can be taken as a lump sum. The remainder must be taken as an indexed pension. The total benefit is calculated based on service to age 60 and the amount in excess of the member component is converted to an indexed pension.

After age 60 the retirement benefit is paid on invalidity.

Death of a Contributor

- **Full pension with no lump sum** – A pension payable at the rate of 67% of the invalidity pension that would have been payable to the deceased plus 11% of the invalidity pension for each eligible child (until age 16 or if a full-time student, until age 25) with total pension limited to 100% of the invalidity pension;

- **Part pension and part lump sum** – The spouse can convert up to half of the pension to a lump sum. The lump sum value of any children's pensions for children living with the spouse is deducted from the lump sum. The benefits for the children are paid as a pension;

- **Maximum lump sum and no pension** – This allows the spouse to take the benefit wholly as a lump sum except for the lump sum value of any pension payable to children who are not living with the spouse. The maximum lump sum also applies where a member has no dependants.

Death of a Pensioner

A pension payable based on the percentages (table below) that apply to the pension payable to the deceased at the time of death.

Other than members who retired on invalidity, at commencement members can elect to reduce their pension to 93% of the normal pension in exchange for a higher dependant pension rate payable to spouse and/or eligible children.

The table below sets out the percentages used to calculate the spouse pension under the two options:

Number of dependants	Normal Dependant Pension Option (Amount as % of standard pension rate)	Higher Dependant Pension Option (Amount as % of reduced pension rate)
Spouse only	67%	85%
Spouse and one child	78%	97%
Spouse and two children	89%	108%
Spouse and three or more children	100%	108%

Resignation

Benefit options are as follows:

- Preserve all benefits in the PSS;
- Immediate refund of member financed benefit and preserve all employer financed benefits in the PSS; or
- Transfer all benefits to another eligible superannuation scheme.

Any employer financed benefit preserved in the PSS is indexed to Price Increases (CPI). The member financed component and productivity component are adjusted with the crediting rates calculated from the investment earnings. Pension options apply to preserved benefits once the member reaches age 55 but only if all components of the benefit are preserved.

Members who joined the PSS after 1 July 1999 are required to preserve the whole benefit.

Retrenchment

On retrenchment, a PSS member's benefit options are:

- Preserve all benefits in the PSS;
- Take the entire benefit in the form of an indexed pension;
- Take the member component as a lump sum and take the rest of the benefit as an indexed pension;
- Take the member component as a lump sum and preserve the rest of the benefit in the PSS;
- Take the member component as a lump sum and rollover the rest of the benefit to another fund; or
- Transfer the entire benefit to another eligible superannuation scheme.

Any employer financed benefit preserved in the PSS is indexed to Price Increases (CPI). The member financed component and productivity component are adjusted with the crediting rates based on the investment earnings. Pension options apply to preserved benefits once the member reaches age 55 but only if all components of the benefit are preserved.

The Superannuation Act 1976 (CSS)

Membership

The CSS has been closed to new entrants since 1 July 1990.

Salary

The salary used for contribution purposes is the annual rate of salary, generally the basic salary plus any recognised allowance at member's last birthday.

Final Salary

The salary used for calculating benefits is, in most cases, the annual rate of salary on a member's date of exit.

Member Contributions

Basic contributions are either 0% or 5% of salary. Additional supplementary contributions may be made. Contributions are accumulated with interest based on the earning rates of the CSS Fund.

Employer financed indexed pension

The employer financed indexed pension is calculated as a percentage of final salary based on the period of contributory service and discounted for early retirement before age 65.

The discount factors for retirement prior to age 65 are age-dependent. They reduce at the rate of 0.02 per year from 1 at age 65 to 0.90 at age 60 and then at the rate of 0.03 per year to 0.75 at age 55.

The accrual rates are based on years of contributory service and on whether the member joined the:

- CSS before 1 July 1976,
- Former Provident Account before 1 July 1976, or
- CSS after 30 June 1976.

For membership commencing after 30 June 1976, generally, the accrual rates are 2% per annum for the first 20 years of membership, 1% per annum for the next 10 years, and 0.25% per annum for each of the next 10 years. The maximum percentage is 52.5% of salary.

Retirement Benefits

Retirement benefits are payable upon retirement at maximum retirement age (usually age 65) or early retirement at ages 55 or above.

The amount of retirement benefit is the sum of:

- employer financed indexed pension being a percentage of final salary based on the period of contributory service and discounted for early retirement before age 65;
- productivity component made up of productivity contributions plus earnings which can be taken as lump sum or converted into a non-indexed pension; and
- member component made up of accumulated basic and supplementary contributions plus earnings which can be taken as lump sum or a non-indexed pension.

The factors to convert the productivity component and member component to a non-indexed pension are the same as the factors used to calculate the employer financed indexed pension summarised under resignation below.

Note that non-indexed pensions are limited to 20% of the final super salary if members retire at age 60 or more. If members retire under 60, that percentage is reduced. These limitations do not apply when members preserve their benefit.

Invalidity Retirement

The following benefits are payable on invalidity retirement:

- an employer financed indexed pension being a percentage of final salary depending on the period of prospective service to maximum retirement age (usually 65), or the actual contributory service where this is over 30 years;
- a lump sum of accumulated basic contributions or, at the member's election, an additional non-indexed pension being a percentage of final salary based on the period of prospective service to maximum retirement age (usually age 65);
- a lump sum of accumulated supplementary and productivity contributions.

Death of a Contributor

A spouse pension payable at the rate of a 67% of the invalidity pension that would have been payable to the deceased, plus 11% of invalidity pension for each eligible child (until age 16 or if a full-time student, until age 25) with total pension limited to 100% of the invalidity pension.

The accumulated productivity contributions and any supplementary contributions are also payable.

If the member had no dependants a benefit to satisfy the Superannuation Guarantee legislation is payable.

Death of a Pensioner

A pension payable based on the percentages (table below) that apply to the pension payable to the deceased at the time of death.

Other than members who retired on invalidity, members could elect to reduce their pension to 93% of the normal pension in exchange for a higher dependant pension rate payable to spouse and/or eligible children.

The table below sets out the percentages used to calculate the spouse pension under the two options:

Number of dependants	Normal Dependant Pension Option (Amount as % of standard pension rate)	Higher Dependant Pension Option (Amount as % of reduced pension rate)
Spouse only	67%	85%
Spouse and one child	78%	97%
Spouse and two children	89%	108%
Spouse and three or more children	100%	108%

Resignation

The following benefits are payable on resignation:

- A lump sum benefit of accumulated member and productivity contributions; and
- A top-up amount which is the difference between the minimum Superannuation Guarantee amount and the productivity component.

Alternatively, the member may elect to receive a deferred benefit by preserving the benefit in the CSS. Under this option, after reaching preservation age, the member will receive the following:

- an indexed pension based on 2.5 times the basic contributions plus earnings at the date of payment converted to an indexed pension (refer to conversion factors below);
- productivity component as a lump sum or converted into a non-indexed pension; and
- member component as lump sum or converted into a non-indexed pension.

Alternatively, the member can choose to take a transfer value of 3.5 times the accumulated basic contributions plus supplementary and productivity contributions, to another eligible superannuation arrangement.

The conversion factors used to calculate the employer financed indexed pension and the non-indexed pension are summarized below:

Age at which benefit claimed	Factor
65	0.11
60	0.10
55	0.0925

Retrenchment

Upon retrenchment, CSS members have the following options:

- lump sum benefit (equal to 3.5 times the total of the member's basic contributions plus supplementary and productivity contributions);
- an employer financed indexed pension, and the productivity and member component as lump sum (member component can be converted into a non-indexed pension if member is aged 31 or more, member and productivity component can be converted into non-indexed pension if member is aged 55 or more);
- receive a deferred benefit by preserving the benefit in the CSS.

Where a member elects to preserve their benefit in the CSS, after preservation age the member can elect to receive:

- an indexed pension based on 2.5 times the basic contributions plus earnings at the date of payment converted to an indexed pension;
- productivity component as a lump sum or converted into a non-indexed pension; and
- member component as lump sum or converted into a non-indexed pension.

Indexation

Pensions are indexed half yearly in January and July, in line with changes in the Consumer Price Index (CPI). Pensions purchased with accumulated member contributions and productivity contributions are fixed in dollar terms and are not subject to indexation.

Appendix B: Membership Summary

Listing of ACT Government Agencies

Agency	CSS Contributors	CSS Salary* as at 30 June 2017 ($ Million)	PSS Contributors	PSS Salary* as at 30 June 2017 ($ Million)	Total Contributors	Total Salary* as at 30 June 2017 ($ Million)
ACT ELECTRICITY & WATER CORPORATION LTD	13	1.293	146	17.606	159	18.899
ACT CULTURAL FACILITIES CORPORATION	1	0.078	24	2.006	25	2.085
ACT CALVARY HOSPITAL PUBLIC	10	1.191	291	34.312	301	35.503
ACT TAB LIMITED	-	-	-	-	-	-
ACT LEGAL AID	1	0.124	14	1.756	15	1.880
ACT LEGISLATIVE ASSEMBLY	-	-	4	0.453	4	0.453
ACT LEGISLATIVE ASSEMBLY SECRETARIAT	2	0.235	22	2.138	24	2.373
ACT INTERNAL OMNIBUS NETWORK ADMIN	19	1.463	246	19.370	265	20.833
ACT GOVERNMENT	398	45.196	6,163	650.352	6,561	695.548
Total	**444**	**49.580**	**6,910**	**727.993**	**7,354**	**777.574**

* based on full time adjusted salaries

Group A: Reconciliation of Contributors Data

	CSS	PSS	Total
Contributors as at 30 June 2016	**547**	**7,359**	**7,906**
Transfers from Group B	2	19	21
New Entrants[1]	7	278	285
Exits[2]	(112)	(715)	(827)
Transfers to Group B	-	(31)	(31)
Contributors as at 30 June 2017	**444**	**6,910**	**7,354**

Note:

[1]. 'New Entrants' refer to new membership records in respect of members who transferred to a new ACT Agency during the year. These members may have multiple membership records which will be consolidated in the future. Please refer to Section 4 for more information.

[2]. 'Exits' refer to contributors who ceased employment with the current agency during the year and either:
- received a lump sum or pension payment;
- become entitled to a deferred benefit payable in the future; or
- result of consolidation of memberships.

Group A: Reconciliation of Deferred Beneficiaries data

	CSS	PSS	Total
Members as at 30 June 2016	**206**	**8,366**	**8,572**
Transfers from Group B[1]	-	-	-
New Entrants[2]	58	371	429
Appearing Entrants[3]	1	34	35
Exits[4]	(96)	(539)	(635)
Transfers to Group B[1]	-	(2)	(2)
Members as at 30 June 2017	**169**	**8,230**	**8,399**

Note:
1. Due to the reclassification of agency codes.
2. 'New Entrants' refer to members who ceased active employment and became a deferred beneficiary during the year.
3. 'Appearing Entrants' refer to members who became a deferred beneficiary prior to 1 January 2016 (allows for 6 months processing lag), but had not been advised to us by CSC.
4. 'Exits' refer to deferred beneficiaries who received their benefits during the year or had their membership consolidated with other records during the year.

Group A: Reconciliation of Current and Dependent Pensioners Data

	Current Pensioners		Dependent Pensioners		
	CSS	PSS	CSS	PSS	Total
Pensioners as at 30 June 2016	**5,558**	**4,115**	**505**	**199**	**10,377**
New Entrants[1]	142	405	48	23	618
Appearing Entrants[2]	1	-	-	1	2
Exits[3]	(82)	(37)	(21)	(2)	(142)
Pensioners as at 30 June 2017	**5,619**	**4,483**	**532**	**221**	**10,855**

Note:

1 ‘New Entrants’ refer to members who became a pensioner or a dependent pensioner during the year.

2 ‘Appearing Entrants’ refer to members or dependents who commenced a pension prior to 1 January 2016 (allows for 6 months processing lag), but had not been advised to us by CSC.

3 ‘Exits’ refer to pensioners or dependents who ceased pension payments during the year.

Group B: Reconciliation of Contributors Data

	CSS	PSS	Total
Contributors as at 30 June 2016	**256**	**3,150**	**3,406**
Transfers from Group A	-	31	31
New Entrants[1]	3	195	198
Exits[2]	(32)	(348)	(380)
Transfers to Group A	(2)	(19)	(21)
Contributors as at 30 June 2017	**225**	**3,009**	**3,234**

Note:

1. ‘New Entrants’ refer to new membership records in respect of members who transfer to a new non- ACT Agency during the year. These members may have multiple membership records which will be consolidated in the future. Please refer to Section 4 for more information.

2. ‘Exits’ refer to contributors who ceased employment with the current agency during the year and either:
- received a lump sum or pension payment;
- become entitled to a deferred benefit payable in the future; or
- result of consolidation of memberships.

Group B: Reconciliation of Deferred Beneficiaries data

	CSS	PSS	Total
Members as at 30 June 2016	**134**	**3,106**	**3,240**
Transfers from Group A[1]	-	2	2
New Entrants[2]	19	163	182
Appearing Entrants[3]	3	78	81
Exits[4]	(36)	(329)	(365)
Transfers to Group A[1]	-	-	-
Members as at 30 June 2017	**120**	**3,020**	**3,140**

Note:
1. Due to the reclassification of agency codes
2. 'New Entrants' refer to members who ceased active employment and became a deferred beneficiary during the year.
3. 'Appearing Entrants' refer to members who became a deferred beneficiary prior to 1 January 2016 (allows for 6 months processing lag), but had not been advised to us by CSC.
4. 'Exits' refer to deferred beneficiaries who received their benefits during the year or had their membership consolidated with other records during the year.

Group B: Reconciliation of Current and Dependent Pensioners Data

	Current Pensioners		Dependent Pensioners		
	CSS	PSS	CSS	PSS	Total
Pensioners as at 30 June 2016	**999**	**1,353**	**46**	**38**	**2,436**
New Entrants[1]	38	179	6	9	232
Appearing Entrants[2]	-	1	-	1	2
Exits[3]	(7)	(12)	(1)	-	(20)
Pensioners as at 30 June 2017	**1,030**	**1,521**	**51**	**48**	**2,650**

Note:
1 'New Entrants' refer to members who became a pensioner or a dependent pensioner during the year.
2 'Appearing Entrants' refer to members or dependents who commenced a pension prior to 1 January 2016 (allows for 6 months processing lag), but had not been advised to us by CSC.
3 'Exits' refer to pensioners or dependents who ceased pension payments during the year.

Appendix C: Financial and Demographic Assumptions

Financial Assumptions

- **For the Accrued Superannuation Liability and Emerging Cost Payments Calculation**

Item	30 June 2017 Budget	30 June 2016 Budget	30 June 2017 Disclosures	30 June 2016 Disclosures
Discount Rate	5.0% p.a.	6.0% p.a.	3.51% p.a.	2.69 % p.a.
General Salary Increases	2.5% p.a. to 30 June 2022; 3.0% p.a. thereafter	3.0% p.a.	2.75% p.a.	3.0% p.a. from 1 July 2016 to 30 June 2020; 3.5% p.a. thereafter
CPI increases	2.5% p.a.	2.5% p.a.	2.0% p.a.	2.5% p.a.

The crediting rate applied to accumulation accounts is assumed to be equal to the discount rate.

- **For the Emerging Cost Surplus/Deficit Calculation**

  The interest rate used to accumulate the Emerging Cost and Surplus/Deficit payments is 1.61% per annum. This is the geometric average yield of the one year Australia Commonwealth Government bonds over the 12 months to 30 June 2017.

Detailed Demographic Assumptions used in Valuation

- **Promotional Increases in Salaries**

  The following tables show examples of the assumed percentage increase due to promotion (excluding general salary increases due to inflation). Promotional salary increases are assumed to depend on both entry age and membership for the first 8 years of service and on age only thereafter.

Salary progression - Males (% per annum)				
Membership less than 8 years			Membership 8 years or more	
Entry Age	**0- 3 years**	**3-8 years**	**Attained Age**	**8 years or more**
17	14.0%	4.6%	25	4.2%
22	6.7%	3.7%	30	2.7%
27	4.5%	2.7%	35	0.9%
32	3.0%	1.9%	40	1.5%
37	2.8%	1.3%	45	1.0%
42	2.2%	0.8%	50	0.0%
47	0.7%	0.4%	55	0.0%
52	0.4%	0.4%	60	0.0%
57	0.4%	0.4%	65	0.0%

Example:

A male member who joined the scheme at age 32 is assumed to have a promotional salary increase of 3.0% p.a. for the first 3 years, followed by 1.9% p.a. for the next 5 years, 1.5% at age 40 etc.

Salary progression - females (% per annum)				
Membership less than 8 years			Membership 8 years or more	
Entry Age	**0- 3 years**	**3-8 years**	**Attained Age**	**8 years or more**
17	16.0%	3.0%	25	2.4%
22	5.8%	2.3%	30	2.1%
27	4.7%	1.5%	35	1.8%
32	3.5%	1.3%	40	0.0%
37	3.3%	1.1%	45	0.0%
42	3.0%	1.0%	50	0.0%
47	1.6%	1.0%	55	0.0%
52	1.0%	1.0%	60	0.0%
57	1.0%	1.0%	65	0.0%

Example:

A female member who joined the scheme at age 32 is assumed to have a promotional salary increase of 3.5% p.a. for the first 3 years, followed by 1.3% p.a. for the next 5 years and 0% from age 40 onwards.

- **Member Contributions to the PSS**

The following table summarises the assumed contribution rate for PSS members throughout their future membership.

PSS Contribution Rate	
Age	**Contribution Rate (%)**
25	4.0
30	4.1
35	4.6
40	5.3
45	6.2
50	7.2
55	8.4
60	8.8
65	8.8
70	8.8

Example:

A PSS member is assumed to contribute at 5.3% p.a. at age 40 and 6.2% p.a. at age 45.

Other Demographic Assumptions

- **Death and Invalidity Assumptions.**

Death and invalidity assumptions (per 1,000 active members at age shown)						
Age	PSS & CSS Deaths		PSS Invalidities		CSS Invalidities	
	Males	Females	Males	Females	Males	Females
25	0.26	0.07	0.20	0.12	0.20	0.15
30	0.34	0.08	0.35	0.32	0.35	0.40
35	0.44	0.12	0.63	0.61	0.63	0.76
40	0.56	0.16	0.88	1.03	0.88	1.29
45	0.77	0.25	1.45	1.64	1.45	2.05
50	1.08	0.38	2.75	2.55	2.75	3.19
55	1.53	0.64	3.93	3.89	4.45	5.33
60	2.25	1.04	n/a	n/a	8.08	8.08
64	3.09	1.46	n/a	n/a	9.80	10.05

Example:

2.25 out of 1,000 PSS male members aged 60 are expected to die each year.

Age Retirement Assumptions

Age Retirement Assumptions PSS (per 1,000 active members at age shown)				
	Contributors		Preserved Members	
Age	Males	Females	Males	Females
55	85	110	120	160
56	70	80	40	60
57	70	85	20	50
58	70	90	30	50
59	70	95	60	60
60	120	150	130	120
61	100	130	90	100
62	100	150	80	90
63	100	200	100	90
64	100	200	150	120
65	300	300	1,000	1,000
66	300	300	1,000	1,000
67	300	300	1,000	1,000
68	300	300	1,000	1,000
69	300	300	1,000	1,000
70	1,000	1,000	1,000	1,000

	Age Retirement Assumptions CSS (per 1,000 active members at age shown)			
	Contributors		Preserved Members	
Age	**Males**	**Females**	**Males**	**Females**
55	50	120	750	750
56	70	100	250	170
57	80	110	200	160
58	90	120	200	150
59	90	130	250	130
60	160	210	400	220
61	160	170	350	200
62	170	170	330	200
63	180	200	350	300
64	180	300	400	500
65	400	400	1,000	1,000
66	400	400	1,000	1,000
67	400	400	1,000	1,000
68	400	400	1,000	1,000
69	400	400	1,000	1,000
70	1,000	1,000	1,000	1,000

Example:

For every 1,000 CSS male contributors aged 60, 160 are expected to retire each year.

Resignation Assumptions

The PSS resignation rate assumptions are increased by 20% from the assumptions adopted previously.

	Resignation Assumptions – PSS			
Age Attained	Males (per 1,000)		Females (per 1,000)	
	Membership 0	Membership 10	Membership 0	Membership 10
20	157.9	0.0	124.9	0.0
25	174.2	86.5	150.8	44.2
30	153.2	76.5	130.6	73.5
35	134.0	67.3	108.0	52.6
40	117.0	59.2	91.1	40.6
45	99.7	47.0	79.9	33.2
50	86.6	42.6	73.2	32.2
Factor*	**0.86**	**0.89**	**0.92**	**0.95**

	Resignation Assumptions – CSS			
Age Attained	Males (per 1,000)		Females (per 1,000)	
	Membership 0	Membership 10	Membership 0	Membership 10
30	71.5	35.5	49.3	43.3
35	70.3	30.8	47.1	36.5
40	74.0	29.4	41.1	30.2
45	74.9	28.7	33.0	24.4
50	81.7	31.2	30.1	23.2
54**	600.0	600.0	500.0	500.0
Factor*	**0.88**	**0.91**	**0.90**	**0.95**

* These factors are used to determine rates for durations other than 0 and 10. The rate for duration “y” where “y” is in the range 0-9 is derived by multiplying the duration 0 rate by the duration 0 factor raised to the power of “y”. For durations greater than 10 the rate for duration 10 is multiplied by the duration 10 factor raised to the power of “y-10”.

** The factor is not applied to the CSS resignation decrement at age 54.

Example:

For every 1,000 PSS male member aged 30 and with 11 years of membership, 68.1 (i.e. $76.5 \times 0.89^{(11-10)}$) are expected to resign each year.

Retrenchment Assumptions

Age Attained	Retrenchment assumptions Males (per 1,000)		Females (per 1,000)	
	CSS	PSS	CSS	PSS
20	0.0	1.1	0.0	0.5
25	14.2	2.6	7.6	1.8
30	12.1	4.1	8.8	3.5
35	9.4	5.3	7.8	4.2
40	8.4	6.1	6.6	4.1
45	9.2	7.1	7.8	4.0
50	16.3	9.6	10.9	4.5
55	30.8	13.6	17.8	7.4
60	43.7	20.6	25.7	10.5

Example:

For every 1,000 PSS female members aged 45, 4 are expected to be retrenched each year.

Mortality of Pensioners

The table below shows the base mortality rates assumed for pensioners, including mortality improvements since 30 June 2014:

Age	Pensioner Mortality (per 1,000 pensioners at age shown) Males		Females	
	Age Retired	Widow (female)	Age Retired	Widower (male)
20		0.24		0.66
30		0.32		1.04
40		0.60		1.24
50		1.39		2.24
55	1.40	2.27	1.30	3.64
60	2.43	3.47	2.05	6.07
65	4.86	5.41	3.35	10.38
70	9.68	9.06	5.77	18.32
75	18.73	15.64	11.07	30.17
80	38.88	29.78	21.83	52.68
90	142.80	113.16	96.70	157.49
100	340.82	356.52	324.07	358.75

These mortality rates apply from 1 July 2017 and are adjusted in subsequent years to allow for mortality improvement.

Invalid pensioner mortality (per 1,000 pensioners at age shown)								
	Males				Females			
Age	0-1 years	1-2 years	2-3 years	3+ years*	0-1 years	1-2 years	2-3 years	3+ years*
20	65.00	45.00	30.00	0.71	70.00	40.00	25.00	0.32
30	65.00	45.00	30.00	0.97	70.00	40.00	25.00	0.41
40	65.00	45.00	30.00	1.28	70.00	40.00	25.00	0.78
50	65.00	45.00	30.00	2.30	70.00	40.00	25.00	1.76
55	65.00	45.00	30.00	3.64	70.00	40.00	25.00	2.91
60	65.00	45.00	30.00	6.35	70.00	40.00	25.00	4.68
65	65.00	45.00	30.00	11.48	70.00	40.00	25.00	7.63
70	n/a	n/a	n/a	19.71	n/a	n/a	n/a	12.84
75	n/a	n/a	n/a	32.48	n/a	n/a	n/a	22.64
80	n/a	n/a	n/a	58.17	n/a	n/a	n/a	43.57
90	n/a	n/a	n/a	148.56	n/a	n/a	n/a	110.93
100	n/a	n/a	n/a	340.82	n/a	n/a	n/a	324.06

* These mortality rates apply from 1 July 2017 and are adjusted in subsequent years to allow for mortality improvement.

Example:

For female invalid pensioners aged 55, 70 out of 1,000 are expected to die in the first year of payments; but only about 3 out of 1,000 are expected to die if the pensions have been paid for more than 3 years.

- **Improvements in Pensioner Mortality**

The future improvements in pensioner mortality are based on the mortality improvement rates from the Australian Life Table (ALT) 2010-12 where the rates derived from the 25 year experience are used as the short term reduction rates and the rates derived from the 100 year experience are used as the long term reduction rates.

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

	Assumed rates of mortality reduction			
	Males		Females	
Age	Short term 1 July 2017 to 30 June 2020 (% p.a.)	Long term 1 July 2020 onwards (% p.a.)	Short term 1 July 2017 to 30 June 2020 (% p.a.)	Long term 1 July 2020 onwards (% p.a.)
60	3.04	1.26	2.46	1.42
70	3.14	1.07	2.55	1.29
80	2.29	0.77	2.06	1.05
90	0.89	0.37	0.83	0.55
100	-	0.09	-	0.10

Example:

The base mortality rate for male pensioner aged 70 is reduced by 3.14% p.a. until 30 June 2020 and 1.07% p.a. thereafter.

At 30 June 2019 the assumed mortality rate for a male pensioner aged 70 would be 0.908% (base rate of 9.68/1,000 reduced by 3.14% for 2 years).

At 30 June 2021 the assumed mortality rate for a male pensioner aged 70 would be 0.870% (base rate of 9.68/1,000 reduced by 3.14% for 3 years and 1.07% for 1 year).

- **New Entrants**

Both the CSS and the PSS are closed to new members. Therefore no new employees of the ACT Government may become a member of CSS or PSS although ACT Government may employ a person for the first time who is already a member of CSS or PSS. For the purpose of the valuation no allowance has been made for new entrants.

- **Spouse Assumptions**

It has been assumed that the proportion of males who are married at death will gradually increase with age to 75% at age 42, remain constant to age 72 and then reduce.

For females, it has been assumed that the proportion married at death will gradually increase to 55% by age 27, remaining constant to age 55; increase to 60% at age 60 and remain constant to age 70 and then reduce.

It is assumed that male members would, on average, be three years older than their spouses and that female members would be two years younger than their spouses.

Preservation and Benefit Options - Assumptions

PSS

- **Resignation options**

Members who joined the PSS after 1 July 1999 are required to retain all their benefits within the scheme.

For members who joined the scheme before 1 July 1999, it has been assumed that 100% of those who resign will retain the whole benefit within the PSS. This is increased from the previous assumption of 90%.

When members claim the benefit, it has been assumed that 80% of the benefit will be taken as indexed pension and 20% as lump sum.

- **Retrenchment options**

Members under age 55

We have assumed PSS members who are retrenched before age 55 will either preserve their benefit in the PSS, or take their benefit as an immediate pension. None are assumed to take a lump sum benefit option.

For members who joined before 1 July 1999, we have assumed:

40% of members preserve their benefit in the PSS (reduced from the previous assumption of 60%); and

60% of members take the whole benefit as an immediate pension.

For members who joined after 1 July 1999, we have assumed:

50% of members preserve their benefit in the PSS (reduced from the previous assumption of 80%); and

50% of members take the whole benefit an immediate pension.

For those who preserve the whole benefit, it has been assumed that 80% of the benefit will be taken as pension and 20% as lump sum when members claim the benefit.

Members aged 55 and above

It has been assumed that 80% of the benefit is taken as a pension (increased from the previous assumption of 75%) and 20% is taken as a lump sum.

- **Retirement options**

  It has been assumed that 80% of the benefit of contributors will be converted into pension (increased from the previous assumption of 75%) and 20% is taken as lump sum.

- **Death options**

  It has been assumed that on average 30% of the benefits will be converted into spouse pensions and 70% is taken as lump sum.

- **Invalidity options**

  It has been assumed that 70% of the members will take the member component as lump sum with the remainder of the benefit taken as pension and 30% of the members will take the whole benefit as pension.

CSS

- **Resignation options**

  It has been assumed that 100% of all benefits are retained within the Scheme. The employer financed component of the benefit will be taken as indexed pension when members claim the benefit. It has been assumed that on average 20% of members components are converted to a non-indexed pension (increased from the previous assumption of 15%) and 80% taken as a lump sum when members claim the benefit. It has also been assumed that on average 25% of the productivity components are converted to a non-indexed pension and 75% will be taken as a lump sum when the benefit is claimed by members.

- **Retrenchment options**

  Members under age 55

  It has been assumed that 90% of members preserve the whole benefit and the remaining 10% take the employer financed component as a pension. For members who do not preserve their benefit upon retrenchment, it has been assumed that on average 15% of member components are converted to a non-indexed pension and 85% taken as a lump sum. All productivity components are assumed to be taken as a lump sum.

  It has been assumed that upon claiming the benefit, those who preserve the whole benefit will take the employer financed component as a pension. It has also been assumed that on average 20% of member components are converted to a non-indexed pension and 80% taken as a lump sum when members claim the benefit whilst on average 25% of the productivity components are converted to a non-indexed pension and 75% will be taken as a lump sum.

  Members aged 55 and above

  It has been assumed that members take the greater value of deferred pension and retirement pension upon retrenchment. Irrespective of their choice of pension, these members are assumed to claim the benefit immediately.

  It has also been assumed that on average 15% of member components are converted to a non-indexed pension and 85% taken as a lump sum whilst the productivity components will be taken as a lump sum.

- **Retirement options**

  It has been assumed that the employer financed component of the benefit is taken as pension. It has also been assumed that on average 20% of member components are converted to a non-indexed pension (increased from the previous assumption of 15%) and 80% taken as a lump sum whilst the productivity components will be taken as a lump sum.

- **Death options**

  For contributors with dependants, it has been assumed that the employer financed component of the benefit is taken as indexed pension. 25% of member components are assumed to be converted to a non-indexed pension and 75% taken as a lump sum whilst the productivity components will be taken as a lump sum.

  For contributors without dependants, the superannuation guarantee amount and member contributions are payable as lump sum.

- **Invalidity options**

  It has been assumed that the employer financed component of the benefit is taken as a pension. 25% of member components are assumed to be converted to a non-indexed pension and 75% taken as a lump sum whilst the productivity components will be taken as a lump sum.

Other Assumptions

Other assumptions in respect of the data and methodology are set out in Sections 3 and 4 of the report. Where appropriate, assumptions are consistent with those set out in the Memorandum of Understanding.

Appendix D: Projection of Accrued Superannuation Liabilities (Budget)

PROJECTION OF ACCRUED SUPERANNUATION LIABILITIES (BUDGET)							
Liabilities as at		CSS ($M)			PSS ($M)		Total ($M)
	Actives	Inactives	Total	Actives	Inactives	Total	
30 June 2017	412.3	2,277.6	2,689.9	2,369.6	2,204.3	4,573.9	7,263.8
30 June 2018	438.7	2,257.6	2,696.3	2,624.9	2,218.1	4,843.0	7,539.4
30 June 2019	462.0	2,233.4	2,695.3	2,876.5	2,229.8	5,106.3	7,801.6
30 June 2020	481.9	2,204.8	2,686.7	3,123.7	2,238.4	5,362.0	8,048.7
30 June 2021	498.4	2,171.8	2,670.2	3,366.9	2,244.3	5,611.2	8,281.4
30 June 2022	511.9	2,134.2	2,646.1	3,604.4	2,246.4	5,850.9	8,497.0
30 June 2023	522.9	2,092.1	2,615.0	3,836.8	2,244.8	6,081.6	8,696.6
30 June 2024	531.4	2,045.8	2,577.2	4,062.2	2,239.3	6,301.5	8,878.6
30 June 2025	537.5	1,995.3	2,532.8	4,279.0	2,229.3	6,508.4	9,041.2
30 June 2026	541.5	1,940.6	2,482.1	4,486.7	2,215.4	6,702.0	9,184.1
30 June 2027	543.6	1,881.8	2,425.4	4,683.2	2,196.2	6,879.3	9,304.7
30 June 2028	544.0	1,819.1	2,363.2	4,868.5	2,172.9	7,041.4	9,404.5
30 June 2029	542.9	1,752.9	2,295.8	5,040.9	2,144.3	7,185.2	9,481.0
30 June 2030	540.2	1,683.3	2,223.5	5,198.9	2,111.4	7,310.2	9,533.7
30 June 2031	536.1	1,610.5	2,146.7	5,341.8	2,073.9	7,415.8	9,562.4
30 June 2032	530.7	1,535.1	2,065.8	5,467.5	2,031.5	7,499.0	9,564.8
30 June 2033	524.1	1,457.2	1,981.3	5,576.6	1,985.1	7,561.7	9,543.0
30 June 2034	516.2	1,377.4	1,893.6	5,667.1	1,933.0	7,600.1	9,493.7

PROJECTION OF ACCRUED SUPERANNUATION LIABILITIES (BUDGET)							
Liabilities as at		CSS ($M)			PSS ($M)		Total ($M)
	Actives	Inactives	Total	Actives	Inactives	Total	
30 June 2035	507.2	1,296.1	1,803.3	5,737.7	1,876.9	7,614.6	9,417.9
30 June 2036	497.0	1,213.8	1,710.8	5,788.0	1,817.2	7,605.1	9,315.9
30 June 2037	485.6	1,131.1	1,616.7	5,818.6	1,754.6	7,573.3	9,189.9
30 June 2038	473.1	1,048.4	1,521.5	5,827.6	1,688.7	7,516.3	9,037.8
30 June 2039	459.5	966.4	1,425.9	5,816.0	1,620.4	7,436.3	8,862.2
30 June 2040	444.8	885.6	1,330.4	5,783.9	1,549.8	7,333.7	8,664.1
30 June 2041	429.0	806.7	1,235.6	5,731.9	1,477.8	7,209.6	8,445.3
30 June 2042	412.1	730.0	1,142.2	5,659.9	1,404.8	7,064.7	8,206.8
30 June 2043	394.3	656.2	1,050.5	5,569.5	1,331.2	6,900.7	7,951.2
30 June 2044	375.5	585.7	961.3	5,461.2	1,257.7	6,718.9	7,680.2
30 June 2045	355.9	519.0	874.9	5,336.1	1,184.5	6,520.6	7,395.5
30 June 2046	335.5	456.3	791.8	5,195.0	1,112.2	6,307.2	7,099.0
30 June 2047	314.5	397.9	712.4	5,040.7	1,041.3	6,082.0	6,794.4
30 June 2048	293.0	344.0	637.0	4,874.0	972.4	5,846.4	6,483.4
30 June 2049	271.2	294.7	565.9	4,696.6	906.0	5,602.6	6,168.4
30 June 2050	249.2	250.0	499.2	4,509.9	842.1	5,352.0	5,851.2
30 June 2051	227.3	209.8	437.1	4,315.5	780.7	5,096.2	5,533.3
30 June 2052	205.5	174.2	379.7	4,115.7	722.1	4,837.8	5,217.5
30 June 2053	184.2	142.9	327.1	3,909.7	666.3	4,576.0	4,903.1
30 June 2054	163.4	115.8	279.2	3,699.5	613.2	4,312.7	4,591.9
30 June 2055	143.5	92.5	236.1	3,486.1	562.8	4,048.9	4,285.0
30 June 2056	124.6	72.9	197.5	3,270.8	515.0	3,785.8	3,983.3
30 June 2057	106.8	56.6	163.4	3,055.2	469.8	3,524.9	3,688.3

Appendix E: Projection of Normal Cost & Interest Cost (Budget)

PROJECTION OF NORMAL COST & INTEREST COST (BUDGET)						
Year Ending	Normal Cost ($M) (Group A and B)			Interest Cost* ($M) (Group A and B)		
	CSS Actives	PSS Actives	Total	CSS	PSS	Total
30 June 2018	7.5	154.9	162.4	131.0	233.3	364.3
30 June 2019	6.1	147.1	153.2	131.7	246.3	378.1
30 June 2020	4.5	141.1	145.7	131.5	258.9	390.3
30 June 2021	3.3	135.7	138.9	130.8	271.0	401.9
30 June 2022	2.5	130.4	132.8	129.8	282.8	412.7
30 June 2023	1.8	125.3	127.1	128.5	294.2	422.7
30 June 2024	1.3	120.0	121.3	126.8	305.1	431.9
30 June 2025	0.9	114.5	115.4	124.8	315.4	440.1
30 June 2026	0.6	108.9	109.5	122.4	325.0	447.5
30 June 2027	0.4	103.1	103.5	119.8	333.9	453.8
30 June 2028	0.3	97.4	97.7	116.9	342.1	459.0
30 June 2029	0.2	91.6	91.7	113.7	349.4	463.1
30 June 2030	0.1	85.5	85.6	110.3	355.8	466.2
30 June 2031	0.1	79.3	79.4	106.7	361.3	468.0
30 June 2032	0.0	73.1	73.1	102.9	365.4	468.2
30 June 2033	0.0	66.8	66.8	98.8	369.2	468.0
30 June 2034	0.0	60.6	60.6	94.6	371.5	466.1
30 June 2035	0.0	54.5	54.5	90.3	372.7	462.9

PROJECTION OF NORMAL COST & INTEREST COST (BUDGET)						
Year Ending	Normal Cost ($M) (Group A and B)			Interest Cost* ($M) (Group A and B)		
	CSS Actives	PSS Actives	Total	CSS	PSS	Total
30 June 2036	0.0	48.6	48.6	85.8	372.7	458.5
30 June 2037	0.0	42.8	42.8	81.3	373.1	454.3
30 June 2038	0.0	37.3	37.3	76.6	369.2	445.9
30 June 2039	0.0	32.0	32.0	72.0	365.8	437.8
30 June 2040	0.0	27.0	27.0	67.3	361.2	428.5
30 June 2041	0.0	22.4	22.4	62.7	355.6	418.2
30 June 2042	0.0	18.1	18.1	58.1	348.8	406.9
30 June 2043	0.0	14.3	14.3	53.6	341.3	394.8
30 June 2044	0.0	10.9	10.9	49.2	332.8	381.9
30 June 2045	0.0	8.0	8.0	44.9	323.4	368.3
30 June 2046	0.0	5.5	5.5	40.7	313.3	354.0
30 June 2047	0.0	3.5	3.5	36.8	303.5	340.2
30 June 2048	0.0	2.1	2.1	33.0	291.3	324.3
30 June 2049	0.0	1.1	1.1	29.4	279.6	309.0
30 June 2050	0.0	0.5	0.5	26.0	267.5	293.5
30 June 2051	0.0	0.2	0.2	22.9	255.1	278.0
30 June 2052	0.0	0.1	0.1	20.0	243.7	263.6
30 June 2053	0.0	0.0	0.0	17.3	229.9	247.2
30 June 2054	0.0	0.0	0.0	14.8	217.1	231.9
30 June 2055	0.0	0.0	0.0	12.6	204.2	216.8
30 June 2056	0.0	0.0	0.0	10.6	191.4	202.0
30 June 2057	0.0	0.0	0.0	8.8	179.1	188.0

** The interest cost for year n is calculated as: Accrued Superannuation Liability (n) - Accrued Superannuation Liability (n-1) – Normal Cost (n) + Emerging Cost Payment (n)*

Appendix F: Projection of Emerging Cost Payments (Budget)

PROJECTION OF EMERGING COST PAYMENTS (BUDGET)							
Year Ending	Contributors		Pensioners		Deferred Beneficiaries		Total
	CSS ($M)	PSS ($M)	CSS ($M)	PSS ($M)	CSS ($M)	PSS ($M)	($M)
30 June 2018^	5.594	35.021	123.857	77.952	2.714	6.010	251.149
30 June 2019	4.998	33.339	131.688	90.715	2.183	6.147	269.070
30 June 2020	7.748	43.772	133.896	92.588	2.989	7.853	288.846
30 June 2021	10.719	54.117	136.016	94.452	3.827	9.031	308.163
30 June 2022	13.642	66.039	138.024	96.294	4.705	11.165	329.869
30 June 2023	16.151	77.577	139.877	98.076	5.346	13.129	350.156
30 June 2024	18.589	90.272	141.548	99.800	5.770	15.214	371.194
30 June 2025	20.872	103.940	142.999	101.453	6.167	17.518	392.948
30 June 2026	22.950	117.859	144.212	102.972	6.608	19.492	414.093
30 June 2027	24.823	132.821	145.144	104.409	6.968	22.452	436.616
30 June 2028	26.438	147.514	145.757	105.649	7.229	24.294	456.883
30 June 2029	27.898	163.184	146.014	106.758	7.446	27.168	478.468
30 June 2030	29.210	179.433	145.875	107.652	7.650	29.192	499.010
30 June 2031	30.403	195.504	145.303	108.293	7.847	31.291	518.641
30 June 2032	31.467	212.574	144.265	108.646	8.037	34.014	539.002
30 June 2033	32.419	228.824	142.726	108.673	8.212	35.797	556.651
30 June 2034	33.269	245.978	140.660	108.339	8.377	39.368	575.992
30 June 2035	34.035	263.602	138.050	107.613	8.539	41.534	593.375

^ Actual annual payment amount agreed with the Commonwealth Government for the 2016/17 financial year, based on the Emerging Cost Payment estimate (Budget) from the 2015 Report.

PROJECTION OF EMERGING COST PAYMENTS (BUDGET)							
Year Ending	Contributors		Pensioners		Deferred Beneficiaries		Total
	CSS ($M)	PSS ($M)	CSS ($M)	PSS ($M)	CSS ($M)	PSS ($M)	($M)
30 June 2036	34.728	280.810	134.888	106.465	8.696	43.435	609.021
30 June 2037	35.348	298.037	131.172	104.869	8.844	44.899	623.169
30 June 2038	35.896	313.465	126.908	102.810	8.982	47.213	635.274
30 June 2039	36.380	328.655	122.108	100.276	9.107	48.840	645.365
30 June 2040	36.794	342.919	116.798	97.260	9.218	50.694	653.683
30 June 2041	37.130	356.042	111.014	93.770	9.311	52.204	659.471
30 June 2042	37.379	368.554	104.809	89.825	9.382	53.527	663.476
30 June 2043	37.530	379.068	98.243	85.457	9.427	54.971	664.695
30 June 2044	37.569	388.698	91.393	80.707	9.441	56.009	663.818
30 June 2045	37.483	396.881	84.342	75.640	9.419	57.167	660.931
30 June 2046	37.258	403.779	77.184	70.323	9.356	58.134	656.033
30 June 2047	36.880	408.739	70.024	64.835	9.247	58.665	648.391
30 June 2048	36.333	410.928	62.957	59.257	9.090	58.769	637.335
30 June 2049	35.609	412.145	56.059	53.685	8.881	58.632	625.010
30 June 2050	34.699	411.929	49.406	48.200	8.617	58.419	611.271
30 June 2051	33.602	410.105	43.069	42.890	8.298	58.086	596.051
30 June 2052	32.320	406.828	37.104	37.828	7.926	57.479	579.485
30 June 2053	30.857	402.007	31.545	33.066	7.499	56.683	561.658
30 June 2054	29.224	396.086	26.447	28.664	7.021	55.673	543.115
30 June 2055	27.432	388.892	21.836	24.664	6.495	54.467	523.787
30 June 2056	25.501	380.378	17.738	21.075	5.931	53.049	503.672
30 June 2057	23.449	370.691	14.143	17.897	5.342	51.426	482.949

Appendix G: Projection of Accrued Superannuation Liabilities (Disclosures)

PROJECTION OF ACCRUED SUPERANNUATION LIABILITIES (DISCLOSURES)							
Liabilities as at		CSS ($M)			PSS ($M)		Total ($M)
	Actives	Inactives	Total	Actives	Inactives	Total	
30 June 2017	494.5	2,558.7	3,053.2	3,223.6	2,540.3	5,764.0	8,817.2
30 June 2018	519.1	2,515.8	3,034.9	3,530.3	2,533.9	6,064.2	9,099.1
30 June 2019	539.9	2,468.7	3,008.6	3,826.4	2,525.0	6,351.3	9,360.0
30 June 2020	556.7	2,417.6	2,974.3	4,112.2	2,512.6	6,624.8	9,599.1
30 June 2021	569.5	2,362.5	2,932.0	4,388.3	2,497.2	6,885.5	9,817.5
30 June 2022	579.0	2,303.2	2,882.2	4,652.8	2,477.8	7,130.6	10,012.8
30 June 2023	585.5	2,240.1	2,825.6	4,905.9	2,454.6	7,360.6	10,186.2
30 June 2024	589.3	2,173.5	2,762.7	5,146.2	2,427.4	7,573.6	10,336.4
30 June 2025	590.6	2,103.4	2,693.9	5,372.0	2,396.0	7,768.0	10,461.9
30 June 2026	589.6	2,029.9	2,619.5	5,582.8	2,360.6	7,943.4	10,562.9
30 June 2027	586.7	1,953.3	2,540.0	5,776.7	2,320.3	8,097.0	10,637.0
30 June 2028	582.0	1,873.9	2,456.0	5,953.9	2,276.3	8,230.2	10,686.2
30 June 2029	575.8	1,792.0	2,367.8	6,112.8	2,227.6	8,340.4	10,708.2
30 June 2030	568.1	1,707.9	2,276.0	6,252.0	2,175.1	8,427.0	10,703.1
30 June 2031	559.1	1,621.9	2,181.0	6,371.1	2,118.8	8,489.9	10,670.9
30 June 2032	548.8	1,534.4	2,083.3	6,467.9	2,058.4	8,526.3	10,609.6
30 June 2033	537.4	1,445.9	1,983.3	6,544.0	1,994.9	8,538.9	10,522.2
30 June 2034	525.0	1,356.7	1,881.6	6,597.4	1,926.8	8,524.2	10,405.9

PROJECTION OF ACCRUED SUPERANNUATION LIABILITIES (DISCLOSURES)							
Liabilities as at		CSS ($M)			PSS ($M)		Total ($M)
	Actives	Inactives	Total	Actives	Inactives	Total	
30 June 2035	511.5	1,267.3	1,778.8	6,627.2	1,855.9	8,483.0	10,261.8
30 June 2036	497.1	1,178.3	1,675.3	6,633.3	1,782.5	8,415.7	10,091.1
30 June 2037	481.7	1,090.0	1,571.8	6,616.8	1,707.4	8,324.1	9,895.9
30 June 2038	465.5	1,003.2	1,468.6	6,576.5	1,630.2	8,206.8	9,675.4
30 June 2039	448.4	918.1	1,366.5	6,513.9	1,552.0	8,065.9	9,432.4
30 June 2040	430.4	835.5	1,265.9	6,429.6	1,472.8	7,902.4	9,168.3
30 June 2041	411.8	755.6	1,167.4	6,324.7	1,393.4	7,718.1	8,885.4
30 June 2042	392.4	679.0	1,071.4	6,199.0	1,314.3	7,513.4	8,584.8
30 June 2043	372.3	606.1	978.5	6,055.9	1,235.8	7,291.8	8,270.2
30 June 2044	351.7	537.3	889.0	5,895.7	1,158.6	7,054.3	7,943.3
30 June 2045	330.6	472.8	803.4	5,719.9	1,082.8	6,802.7	7,606.1
30 June 2046	309.2	412.8	722.0	5,529.9	1,008.9	6,538.8	7,260.7
30 June 2047	287.5	357.5	644.9	5,328.0	937.3	6,265.3	6,910.3
30 June 2048	265.7	306.9	572.6	5,116.6	868.6	5,985.2	6,557.8
30 June 2049	243.9	261.1	505.0	4,897.1	803.0	5,700.2	6,205.1
30 June 2050	222.3	219.9	442.3	4,671.1	740.6	5,411.7	5,854.0
30 June 2051	201.1	183.3	384.5	4,440.2	681.3	5,121.5	5,505.9
30 June 2052	180.4	151.1	331.6	4,206.3	625.2	4,831.5	5,163.1
30 June 2053	160.4	123.1	283.5	3,969.9	572.3	4,542.3	4,825.8
30 June 2054	141.2	99.0	240.2	3,732.4	522.6	4,254.9	4,495.2
30 June 2055	123.0	78.6	201.6	3,494.8	475.8	3,970.5	4,172.1
30 June 2056	105.9	61.5	167.4	3,258.2	431.9	3,690.1	3,857.5
30 June 2057	90.1	47.4	137.4	3,023.7	390.8	3,414.5	3,552.0

Appendix H: Projection of Normal Cost & Interest Cost (Disclosures)

PROJECTION OF NORMAL COST & INTEREST COST (DISCLOSURES)						
Year Ending	Normal Cost ($M) (Group A and B)			Interest Cost* ($M) (Group A and B)		
	CSS Actives	PSS Actives	Total	CSS	PSS	Total
30 June 2018	9.1	211.5	220.6	104.7	207.7	312.4
30 June 2019	7.4	199.3	206.6	104.4	217.6	322.0
30 June 2020	5.4	189.8	195.3	103.3	227.1	330.4
30 June 2021	3.9	181.3	185.2	102.0	236.2	338.2
30 June 2022	2.9	172.9	175.8	100.4	244.8	345.1
30 June 2023	2.1	164.8	166.9	98.5	252.8	351.4
30 June 2024	1.6	156.7	158.3	96.5	260.3	356.8
30 June 2025	1.1	148.5	149.5	94.2	267.2	361.4
30 June 2026	0.7	140.3	141.0	91.7	273.5	365.2
30 June 2027	0.5	131.8	132.3	89.0	279.0	368.0
30 June 2028	0.3	123.7	124.0	86.2	283.8	370.0
30 June 2029	0.2	115.4	115.6	83.3	287.9	371.1
30 June 2030	0.1	107.0	107.2	80.1	291.1	371.3
30 June 2031	0.1	98.6	98.7	76.9	293.6	370.5
30 June 2032	0.0	90.2	90.2	73.6	294.5	368.1
30 June 2033	0.0	81.9	81.9	70.2	295.8	366.0
30 June 2034	0.0	73.8	73.8	66.7	295.7	362.4
30 June 2035	0.0	65.9	65.9	63.2	294.6	357.8

PROJECTION OF NORMAL COST & INTEREST COST (DISCLOSURES)						
Year Ending	Normal Cost ($M) (Group A and B)			Interest Cost* ($M) (Group A and B)		
	CSS Actives	PSS Actives	Total	CSS	PSS	Total
30 June 2036	0.0	58.3	58.3	59.6	292.6	352.2
30 June 2037	0.0	51.0	51.0	56.0	291.0	347.1
30 June 2038	0.0	44.1	44.1	52.5	286.0	338.5
30 June 2039	0.0	37.6	37.6	48.9	281.4	330.4
30 June 2040	0.0	31.5	31.5	45.4	276.1	321.5
30 June 2041	0.0	25.9	25.9	42.0	270.0	312.0
30 June 2042	0.0	20.8	20.8	38.7	262.6	301.2
30 June 2043	0.0	16.3	16.3	35.4	255.8	291.2
30 June 2044	0.0	12.3	12.3	32.2	247.8	280.0
30 June 2045	0.0	9.0	9.0	29.2	239.3	268.5
30 June 2046	0.0	6.2	6.2	26.3	230.4	256.7
30 June 2047	0.0	3.9	3.9	23.6	221.3	244.9
30 June 2048	0.0	2.3	2.3	21.0	211.5	232.5
30 June 2049	0.0	1.2	1.2	18.6	201.7	220.3
30 June 2050	0.0	0.5	0.5	16.4	191.8	208.2
30 June 2051	0.0	0.2	0.2	14.3	181.8	196.1
30 June 2052	0.0	0.1	0.1	12.4	172.3	184.7
30 June 2053	0.0	0.0	0.0	10.6	161.8	172.4
30 June 2054	0.0	0.0	0.0	9.0	151.9	160.9
30 June 2055	0.0	0.0	0.0	7.6	142.0	149.6
30 June 2056	0.0	0.0	0.0	6.4	132.2	138.6
30 June 2057	0.0	0.0	0.0	5.3	122.6	127.9

** The interest cost for year n is calculated as: Accrued Superannuation Liability (n) - Accrued Superannuation Liability (n-1) – Normal Cost (n) + Emerging Cost Payment (n)*

Appendix I: Projection of Emerging Cost Payments (Disclosures)

PROJECTION OF EMERGING COST PAYMENTS (DISCLOSURES)							
Year Ending	Contributors		Pensioners		Deferred Beneficiaries		Total
	CSS ($M)	PSS ($M)	CSS ($M)	PSS ($M)	CSS ($M)	PSS ($M)	($M)
30 June 2018^	5.594	35.021	123.857	77.952	2.714	6.010	251.149
30 June 2019	4.974	33.495	130.896	90.160	2.164	6.085	267.776
30 June 2020	7.676	44.211	132.452	91.573	2.938	7.734	286.585
30 June 2021	10.562	54.936	133.904	92.961	3.728	8.848	304.939
30 June 2022	13.372	67.341	135.228	94.311	4.541	10.878	325.672
30 June 2023	15.763	79.372	136.384	95.589	5.119	12.720	344.948
30 June 2024	18.055	92.547	137.351	96.794	5.489	14.655	364.890
30 June 2025	20.169	106.653	138.091	97.917	5.827	16.773	385.430
30 June 2026	22.066	120.871	138.592	98.899	6.199	18.551	405.177
30 June 2027	23.751	136.107	138.816	99.789	6.494	21.238	426.195
30 June 2028	25.180	150.958	138.732	100.482	6.699	22.838	444.889
30 June 2029	26.447	166.731	138.306	101.042	6.863	25.383	464.772
30 June 2030	27.559	182.990	137.509	101.391	7.013	27.101	483.564
30 June 2031	28.548	198.913	136.311	101.497	7.157	28.865	501.292
30 June 2032	29.407	215.797	134.685	101.331	7.292	31.185	519.696
30 June 2033	30.155	231.694	132.607	100.861	7.414	32.608	535.339
30 June 2034	30.798	248.403	130.058	100.061	7.526	35.647	552.493
30 June 2035	31.357	265.470	127.030	98.906	7.634	37.358	567.755

^ Actual annual payment amount agreed with the Commonwealth Government for the 2017/18 financial year, based on the Emerging Cost Payment estimate (Budget) from the 2016 Report.

PROJECTION OF EMERGING COST PAYMENTS (DISCLOSURES)							
Year Ending	Contributors		Pensioners		Deferred Beneficiaries		Total
	CSS ($M)	PSS ($M)	CSS ($M)	PSS ($M)	CSS ($M)	PSS ($M)	($M)
30 June 2036	31.842	281.989	123.522	97.373	7.737	38.811	581.274
30 June 2037	32.254	298.358	119.542	95.446	7.829	39.859	593.289
30 June 2038	32.595	312.722	115.100	93.116	7.913	41.648	603.094
30 June 2039	32.872	326.762	110.214	90.377	7.984	42.804	611.014
30 June 2040	33.082	339.739	104.915	87.232	8.042	44.149	617.159
30 June 2041	33.219	351.369	99.241	83.691	8.083	45.175	620.777
30 June 2042	33.274	362.314	93.244	79.779	8.105	46.032	622.747
30 June 2043	33.239	371.156	86.984	75.529	8.103	46.987	621.998
30 June 2044	33.105	379.011	80.532	70.983	8.075	47.587	619.292
30 June 2045	32.860	385.381	73.963	66.202	8.016	48.284	614.706
30 June 2046	32.493	390.422	67.363	61.248	7.922	48.811	608.259
30 June 2047	31.995	393.570	60.823	56.193	7.791	48.965	599.338
30 June 2048	31.354	393.968	54.424	51.108	7.620	48.766	587.240
30 June 2049	30.565	393.499	48.231	46.076	7.406	48.374	574.152
30 June 2050	29.624	391.666	42.305	41.167	7.149	47.929	559.841
30 June 2051	28.531	388.357	36.704	36.453	6.850	47.390	544.285
30 June 2052	27.291	383.674	31.471	31.994	6.508	46.632	527.570
30 June 2053	25.910	377.559	26.631	27.830	6.126	45.728	509.784
30 June 2054	24.400	370.542	22.221	24.007	5.704	44.659	491.534
30 June 2055	22.772	362.418	18.260	20.557	5.249	43.443	472.699
30 June 2056	21.045	353.137	14.764	17.479	4.768	42.068	453.261
30 June 2057	19.237	342.863	11.717	14.771	4.270	40.544	433.403

Appendix J: The Accumulation of Emerging Cost and Actual Payments required for Superannuation Liability

Background

Effective from 1 July 1989 ACT Government became responsible to the Commonwealth Government for the employer financed portion of superannuation benefits provided to employees of the ACT Government. This applies to current or former employees of the ACT Government who are members of the Commonwealth Superannuation Scheme (CSS) or the Public Sector Superannuation Scheme (PSS).

All CSS and PSS benefits are currently paid by the Commonwealth Government from the Consolidated Revenue Fund (CRF). Under the current arrangement, ACT Government discharges its superannuation liability by making regular payments to CSC based on the estimated benefit payments as advised by Willis Towers Watson. This is known as the "**Emerging Cost Payment**". In any year, the Employer financed benefits payable to the CSS and PSS members may be estimated from actual benefit payment data provided by CSC. The difference between the Emerging Cost Payments and the updated estimate based on actual benefit data is known as the **Emerging Cost (Surplus)/Deficit.** It is calculated on a yearly basis to account for the difference between the amount paid by the ACT and the benefit payments incurred during the year.

The Memorandum of Understanding sets out the method and assumptions to be used to calculate Emerging Cost Payments and the Emerging Cost (Surplus)/(Deficit).

Process

1. Determine the Emerging Cost Payments

Every year as part of the annual valuation of the ACT liabilities, we advise the Emerging Costs Payments – the estimated future cash flows resulting from the employer financed component of superannuation benefits. This forms the basis of the Emerging Cost Payments made to CSC.

The schedule is updated every year to reflect any changes in the membership, assumptions and methodologies. This takes into account the likelihood of people leaving under various exit modes (eg. retirement, resignation, death and disablement) and the benefit options chosen by the members. The budget assumptions are used for the purpose of this calculation.

2. The Emerging Cost Payments to CSC

The ACT Government makes the Emerging Cost Payment quarterly in arrears to CSC based on the schedule advised by us. Due to the timing of the report, there is generally a lag between the time of advice and the time of payment. For example, the Emerging Cost Payment made to the Commonwealth Government in FY 2017/18 is based on the recommendation in the 30 June 2016 report.

3. Determine the Employer Financed Benefit Payments

At the end of each year, Willis Towers Watson estimates the amount of employer financed benefit payments incurred during the year, based on the exit information and the pensioners' data at 30 June supplied by CSC.

4. Determine the Emerging Cost (Surplus)/Deficit

The actual benefits incurred in a particular year may be different to the estimated payments in the Emerging Cost Payments schedule as the assumptions are not always borne out in practice. For example there may be more people leaving the scheme during the year; or more people taking out a pension rather than lump sum.

The purpose of the Emerging Cost (Surplus)/Deficit calculation is to account for any variation between the amount paid by the ACT Government (according to the schedule) and the amount which should be paid by the ACT Government (according to the actual benefit data).

A deficit during the year means that the Emerging Cost Payments made to CSC during the year is less than the employer financed benefits paid out to members. On the other hand, a surplus during the year means that ACT Government has overpaid CSC in regard to the employer financed benefits paid out to members in that particular year. At the end of each year, the accumulated (surplus)/deficit amount will be determined.

Data

To calculate the Emerging Cost (Surplus)/Deficit, the following data was supplied by CSC in respect of the current and former employees of the ACT Government:

1. To determine the Emerging Cost Payments:

- Data of the CSS and PSS contributors as at 30 June;
- Data of the CSS and PSS Deferred Beneficiaries as at 30 June;
- Data of the CSS and PSS Pensioners (including dependants) as at 30 June; and
- ACT Employment Ratio - the ratio of the member's post 1 July 1989 ACT service to Total Service.

2. To estimate the actual employer financed benefits paid:

- Data of the CSS and PSS contributors who terminated their employment during the year;
- Data of the CSS and PSS deferred beneficiaries who claimed their benefits during the year;
- Data of the CSS and PSS pensioners (including dependants) at 30 June who received a pension during the year; and
- ACT Employment Ratio – the ratio of the member's post 1 July 1989 ACT service to Total Service.

As set out in Sections 3 and 4 of this report some assumptions and estimates have been made in respect of the data as a result of limitations in the data provided.

Methodology

ACT Employment Ratio

For the calculations of the **Emerging Cost Payments** and **Employer Financed Benefit Payments,** the ACT Employment Ratio provided by CSC is applied to the employer financed benefits to determine the portion of the benefits which relate to the ACT Government.

Pension indexation

CSS and PSS pensions are indexed half yearly which occur in January and July each year. CSC provides the pension amounts as at 1 July instead of the actual pension amount paid during the financial year. In calculating the **Employer Financed Benefit Payment**, we adjusted the pension amount to allow for the half yearly pension indexation.

CSS Employer Financed Benefits

For CSS members, the employer financed benefit is often payable in the form of an indexed pension, which is calculated as a percentage of final salary based on age and service. The employer financed lump sum benefit is only available on certain benefits (e.g. Retrenchment and Resignation) and is less likely to be taken by the members.

CSS lump sum

In determining the **Emerging Cost Payments** we currently assume that all members take their employer financed benefit as an indexed pension and hence no lump sum is payable.

In determining the **Employer Financed Benefit Payments**, the employer financed lump sum was provided in the termination data for those who elected a lump sum.

Member and Productivity components paid as lump sums have no employer component.

CSS indexed pension

In determining the **Emerging Cost Payments** and **Employer Financed Benefit Payments**, the full indexed pension is employer financed.

CSS non-indexed pension

CSS members have the option of converting the member/productivity components into a non-indexed pension. Due to the generosity of the pension conversion factor, the cost of providing the pension often exceeds the value of the member and productivity components, hence the employer is required to fund the additional cost when a member takes out a non-indexed pension.

In determining the **Emerging Cost Payments** and **Employer Financed Benefit Payments** we assume that 25% of the non-indexed pension is employer financed. This assumption is as specified in the Memorandum of Understanding.

PSS Employer Financed Benefits

For PSS members, the employer financed benefit is calculated as the PSS benefit net of member and productivity components. Members may take their benefit as a pension, a lump sum, or a combination of both.

The split of the PSS benefit between the employer financed component, member component and productivity component is provided for all contributors, all deferred beneficiaries and about 80% of the pensioners.

PSS lump sum payments

For the purpose of determining the **Employer Financed Benefit Payments**, the employer financed lump sum was provided in the termination data and hence no calculation was required. For the purpose of projecting the **Emerging Cost Payments**, the employer financed lump sum was the amount of PSS benefit net of member and productivity component. Both methods are consistent in the way the employer financed portion is determined.

PSS indexed pension

For the purpose of determining the **Employer Financed Benefit Payments** and the **Emerging Cost Payments**, we have determined:

- For those with benefits component split into employer, productivity and member component:

  The employer financed proportion of the indexed pension is determined at an individual level based on the split of pension converted from various benefit components and by assuming that 40% of the pension converted from the member and productivity component is funded by the ACT Government to reflect the additional cost required to fund an indexed pension for a typical new pensioner. This assumption is as specified in the Memorandum of Understanding.

- For the remaining members without the benefit components separately provided:

  75% of retirement pension and 90% of invalidity pension is assumed to be employer financed. These percentages are based on the average employer financed proportion of those with the additional information provided (rounded to the nearest 5%, as specified in the Memorandum of Understanding).

How is Emerging Cost (Surplus)/Deficit calculated?

The Emerging Cost (Surplus)/Deficit arises from the difference between the Emerging Cost Payments made by the ACT Government to the Commonwealth Government and the Employer Financed Benefit Payments. The ACT Government is obliged to reimburse the Commonwealth Government to account for the shortfall which arises due to the variation in the actual versus expected benefit payments.

Therefore, the Emerging Cost (Surplus)/Deficit at a particular point consists of:

a The unpaid Emerging Cost (Surplus)/Deficit at the beginning of the year; less

b The Emerging Cost Deficit (Credit)/Payment made by ACT (assumed to occur at the end of the year); less

c The Emerging Cost Payments made by ACT during the year (assumed to occur at the end of each quarter); plus

d The Employer Financed Benefit Payment (assumed to occur mid-year); plus

e Interest

Results

The table below summarises the estimated Emerging Cost Surplus/Deficit for CSS and PSS as at 30 June 2017:

Emerging Cost (Surplus)/Deficit at 30 June 2017 (CSS & PSS)

	Starting (Surplus)/ Deficit(i)	Surplus Credit/ (Deficit Payment)	Emerging Cost Payment	Employer Financed Benefit Payment	Interest Component	Accumulated (Surplus)/ Deficit with interest
	($M)	($M)	($M)	($M)	($M)	($M)
CSS	0.791	(0.791)	(125.640)	124.819	0.257	(0.564)
PSS	(10.844)	10.844	(104.885)	96.409	(0.033)	(8.509)
Total	**(10.053)**	**10.053**	**(230.525)**	**221.228**	**0.224**	**(9.073)**

Note (i): Surplus as at 30 June 2016, as estimated in the 2016 Annual Report.

The following table shows for CSS and PSS the estimated employer financed component of actual benefit payments recognized in determining the Emerging Cost Surplus/Deficit.

Summary of the Actual employer Financed Benefit payments 2016/17 ($M)

	CSS	PSS	Total
Lump sum			
Contributors	-	7.272	7.272
Deferred Beneficiaries	-	5.784	5.784
Total Lump sum	**-**	**13.056**	**13.056**
Pension			
Current Pensioners	120.077	81.045	201.122
Dependent Pensioners	4.742	2.308	7.050
Total Pension	**124.819**	**83.353**	**208.172**
Total	**124.819**	**96.409**	**221.228**

Appendix K: Membership Tables: Group A

CSS Actives – Group A												
	Male				Female				Total			
Age Group	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio
40-44	0	0	0.00	0.0%	1	51,034	27.55	100.0%	1	51,034	27.55	100.0%
45-49	26	112,235	27.70	79.1%	30	104,940	23.98	92.7%	56	108,327	25.71	86.4%
50-54	93	102,632	29.09	86.6%	95	116,634	25.54	83.4%	188	109,708	27.30	85.0%
55-59	39	125,360	27.58	84.6%	67	123,257	24.85	87.5%	106	124,030	25.86	86.4%
60-64	30	106,816	31.29	82.4%	39	106,488	26.60	86.3%	69	106,631	28.64	84.6%
65 or over	11	99,851	34.66	83.6%	13	94,993	30.50	86.1%	24	97,220	32.41	85.0%
Total	**199**	**108,818**	**29.25**	**84.5%**	**245**	**113,982**	**25.60**	**86.3%**	**444**	**111,668**	**27.24**	**85.5%**

PSS Actives – Group A												
	Male				Female				Total			
Age Group	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio
30-34	39	97,270	10.69	88.4%	83	94,103	9.25	85.3%	122	95,115	9.71	86.3%
35-39	219	104,149	12.25	89.4%	617	102,407	11.80	92.6%	836	102,863	11.92	91.8%
40-44	401	105,947	14.34	88.8%	749	104,238	13.36	91.3%	1,150	104,834	13.71	90.4%
45-49	478	113,536	16.12	89.2%	890	104,916	15.31	89.1%	1,368	107,928	15.59	89.2%
50-54	488	112,217	17.24	89.0%	796	104,712	16.03	89.7%	1,284	107,564	16.49	89.4%
55-59	405	113,451	17.83	89.2%	839	101,517	17.04	92.4%	1,244	105,402	17.30	91.3%
60-64	232	105,893	18.11	94.1%	465	100,832	17.24	95.8%	697	102,516	17.53	95.3%
65 or over	82	113,286	18.99	94.6%	127	96,180	18.31	94.6%	209	102,891	18.58	94.6%
Total	**2,344**	**110,036**	**16.19**	**89.8%**	**4,566**	**102,950**	**15.13**	**91.4%**	**6,910**	**105,354**	**15.49**	**90.9%**

CSS Deferred – Group A									
	Male			Female			Total		
Age Group	Number	Average Active Service (Years)	Average ACT Employment Ratio	Number	Average Active Service (Years)	Average ACT Employment Ratio	Number	Average Active Service (Years)	Average ACT Employment Ratio
45-49	3	19.01	94.0%	6	10.88	70.6%	9	13.59	78.4%
50-54	34	16.45	80.8%	26	14.54	75.9%	60	15.62	78.7%
55-59	34	20.26	69.4%	40	15.62	73.1%	74	17.75	71.4%
60-64	11	11.80	56.8%	12	8.82	69.0%	23	10.24	63.2%
65 or over	1	8.10	94.1%	2	4.80	57.1%	3	5.90	69.4%
Total	**83**	**17.39**	**73.6%**	**86**	**13.76**	**72.8%**	**169**	**15.54**	**73.2%**

PSS Deferred – Group A									
	Male			Female			Total		
Age Group	Number	Average Active Service (Years)	Average ACT Employment Ratio	Number	Average Active Service (Years)	Average ACT Employment Ratio	Number	Average Active Service (Years)	Average ACT Employment Ratio
25-29	7	1.60	100.0%	1	0.84	100.0%	8	1.50	100.0%
30-34	90	2.85	93.8%	130	2.29	88.8%	220	2.52	90.9%
35-39	309	3.46	91.2%	667	3.60	94.2%	976	3.56	93.2%
40-44	537	3.82	90.3%	999	4.05	92.4%	1,536	3.97	91.7%
45-49	685	4.53	89.9%	1,216	4.59	90.1%	1,901	4.57	90.0%
50-54	574	5.17	88.1%	1,074	5.07	86.7%	1,648	5.11	87.2%
55-59	434	5.35	82.9%	793	5.19	87.6%	1,227	5.25	86.0%
60-64	245	4.87	88.4%	394	4.48	91.7%	639	4.63	90.4%
65 or over	41	2.78	85.9%	34	3.15	90.3%	75	2.95	87.9%
Total	**2,922**	**4.48**	**88.7%**	**5,308**	**4.48**	**90.1%**	**8,230**	**4.48**	**89.6%**

CSS Pensioners Retirement – Group A												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	3	56,083	18,694	97.7%	5	120,681	24,136	76.8%	8	176,764	22,096	84.6%
55-59	203	7,150,359	35,223	76.5%	192	5,810,184	30,261	76.3%	395	12,960,544	32,812	76.4%
60-64	391	12,125,320	31,011	66.0%	360	10,189,692	28,305	73.6%	751	22,315,011	29,714	69.6%
65-69	583	14,580,857	25,010	56.6%	681	16,477,421	24,196	72.8%	1,264	31,058,278	24,571	65.3%
70-74	590	11,278,520	19,116	49.3%	737	13,272,686	18,009	66.8%	1,327	24,551,206	18,501	59.0%
75-79	351	4,648,179	13,243	40.8%	566	6,996,487	12,361	54.2%	917	11,644,666	12,699	49.1%
80-84	234	2,155,200	9,210	36.4%	294	2,115,392	7,195	39.8%	528	4,270,592	8,088	38.3%
85-89	86	541,008	6,291	28.8%	82	414,112	5,050	27.5%	168	955,120	5,685	28.2%
90-94	16	32,769	2,048	11.1%	14	30,937	2,210	17.4%	30	63,706	2,124	14.1%
Total	**2,457**	**52,568,295**	**21,395**	**52.6%**	**2,931**	**55,427,593**	**18,911**	**63.2%**	**5,388**	**107,995,888**	**20,044**	**58.4%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

PSS Pensioners Retirement – Group A												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	57	1,198,233	21,022	88.1%	82	1,339,531	16,336	88.3%	139	2,537,763	18,257	88.3%
55-59	118	3,716,224	31,493	86.4%	310	7,283,185	23,494	87.1%	428	10,999,409	25,700	86.9%
60-64	247	7,897,270	31,973	82.6%	709	19,817,716	27,952	93.2%	956	27,714,986	28,991	90.5%
65-69	377	9,378,865	24,878	80.5%	984	23,001,039	23,375	92.9%	1,361	32,379,905	23,791	89.4%
70-74	293	6,581,545	22,463	81.4%	556	9,720,816	17,483	87.1%	849	16,302,361	19,202	85.1%
75-79	138	2,057,030	14,906	80.5%	214	2,738,665	12,798	83.0%	352	4,795,696	13,624	82.0%
80-84	38	384,580	10,121	73.0%	55	464,025	8,437	81.4%	93	848,604	9,125	77.9%
85-89	8	33,557	4,195	69.9%	6	44,067	7,345	87.2%	14	77,624	5,545	77.3%
Total	**1,276**	**31,247,304**	**24,488**	**81.7%**	**2,916**	**64,409,044**	**22,088**	**90.1%**	**4,192**	**95,656,348**	**22,819**	**87.6%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

CSS Pensioners Invalidity – Group A												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	3	101,733	33,911	89.3%	6	156,978	26,163	79.0%	9	258,711	28,746	82.4%
55-59	10	301,974	30,197	70.2%	13	469,603	36,123	79.1%	23	771,578	33,547	75.2%
60-64	12	308,496	25,708	60.3%	15	395,159	26,344	67.2%	27	703,655	26,061	64.1%
65-69	20	413,453	20,673	65.8%	37	927,994	25,081	70.8%	57	1,341,447	23,534	69.0%
70-74	21	454,766	21,656	54.7%	22	516,256	23,466	78.7%	43	971,021	22,582	67.0%
75-79	17	218,130	12,831	52.8%	21	309,715	14,748	52.8%	38	527,846	13,891	52.8%
80-84	11	83,954	7,632	42.2%	17	117,130	6,890	28.5%	28	201,084	7,182	33.9%
85-89	3	7,719	2,573	11.5%	3	5,486	1,829	14.0%	6	13,205	2,201	12.8%
Total	**97**	**1,890,225**	**19,487**	**57.2%**	**134**	**2,898,322**	**21,629**	**63.4%**	**231**	**4,788,547**	**20,730**	**60.8%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

PSS Pensioners Invalidity – Group A												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	24	962,575	40,107	95.2%	43	1,690,111	39,305	94.1%	67	2,652,687	39,592	94.5%
55-59	18	532,487	29,583	95.3%	37	1,126,558	30,448	95.7%	55	1,659,045	30,164	95.5%
60-64	18	362,770	20,154	88.8%	56	1,337,934	23,892	93.0%	74	1,700,704	22,982	92.0%
65-69	29	514,951	17,757	79.6%	31	546,281	17,622	89.5%	60	1,061,233	17,687	84.7%
70-74	8	88,761	11,095	84.5%	19	240,542	12,660	85.9%	27	329,303	12,196	85.5%
75-79	2	10,613	5,306	56.5%	6	54,141	9,023	81.0%	8	64,754	8,094	74.8%
Total	**99**	**2,472,157**	**24,971**	**87.8%**	**192**	**4,995,568**	**26,019**	**92.1%**	**291**	**7,467,725**	**25,662**	**90.7%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

CSS Dependent Pensioners – Group A												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	2	24,781	12,390	74.0%	12	196,425	16,369	68.0%	14	221,206	15,800	68.8%
55-59	2	27,101	13,550	63.5%	22	304,664	13,848	65.9%	24	331,765	13,824	65.7%
60-64	9	131,397	14,600	55.5%	44	584,080	13,275	55.1%	53	715,477	13,500	55.1%
65-69	18	211,189	11,733	67.8%	70	817,185	11,674	52.0%	88	1,028,375	11,686	55.2%
70-74	43	468,292	10,891	57.9%	69	707,242	10,250	49.1%	112	1,175,534	10,496	52.5%
75-79	31	264,727	8,540	49.5%	76	452,464	5,953	36.6%	107	717,191	6,703	40.3%
80-84	29	119,325	4,115	46.0%	59	229,741	3,894	32.5%	88	349,066	3,967	36.9%
85-89	12	74,586	6,215	49.1%	25	63,375	2,535	20.3%	37	137,961	3,729	29.6%
90-94	6	13,089	2,182	21.5%	2	8,453	4,226	25.2%	8	21,542	2,693	22.5%
95-99	0	0	0	0.0%	1	2,445	2,445	21.3%	1	2,445	2,445	21.3%
Total	**152**	**1,334,486**	**8,780**	**53.1%**	**380**	**3,366,075**	**8,858**	**44.7%**	**532**	**4,700,561**	**8,836**	**47.1%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

PSS Dependent Pensioners – Group A												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	16	355,132	22,196	96.2%	20	404,489	20,224	96.1%	36	759,621	21,101	96.2%
55-59	6	90,344	15,057	100.0%	19	319,881	16,836	78.8%	25	410,225	16,409	83.9%
60-64	10	111,664	11,166	95.1%	11	132,401	12,036	73.2%	21	244,065	11,622	83.6%
65-69	16	206,132	12,883	92.9%	26	286,337	11,013	79.0%	42	492,469	11,725	84.3%
70-74	21	230,589	10,980	94.2%	30	291,309	9,710	70.2%	51	521,897	10,233	80.1%
75-79	14	161,157	11,511	86.9%	17	132,935	7,820	65.7%	31	294,092	9,487	75.2%
80-84	5	59,971	11,994	88.5%	6	39,826	6,638	92.1%	11	99,797	9,072	90.5%
85-89	2	5,176	2,588	71.6%	1	12,822	12,822	100.0%	3	17,998	5,999	81.0%
90-94	1	6,492	6,492	78.4%	0	0	0	0.0%	1	6,492	6,492	78.4%
Total	**91**	**1,226,655**	**13,480**	**92.7%**	**130**	**1,620,001**	**12,462**	**78.1%**	**221**	**2,846,656**	**12,881**	**84.1%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

Appendix L: Membership Tables: Group B

CSS Actives – Group B												
	Male				Female				Total			
Age Group	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio
45-49	23	119,590	26.80	23.2%	19	114,346	25.88	25.1%	42	117,217	26.38	24.1%
50-54	55	124,639	28.11	18.2%	62	126,623	27.19	25.2%	117	125,690	27.62	21.9%
55-59	22	141,442	30.39	27.8%	20	130,142	25.47	29.0%	42	136,061	28.05	28.4%
60-64	13	168,119	31.34	24.0%	10	173,336	28.50	27.8%	23	170,387	30.11	25.6%
65 or over	0	0	0.00	0.0%	1	112,332	27.55	18.1%	1	112,332	27.55	18.1%
Total	**113**	**131,885**	**28.66**	**21.8%**	**112**	**129,212**	**26.78**	**26.0%**	**225**	**130,554**	**27.72**	**23.9%**

PSS Actives – Group B												
	Male				Female				Total			
Age Group	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio	Number	Average Salary ($)	Average Service (Years)	Average ACT Employment Ratio
25-29	1	87,544	8.78	10.9%	0	0	0.00	0.0%	1	87,544	8.78	10.9%
30-34	24	94,918	9.96	23.5%	58	91,310	10.69	25.4%	82	92,366	10.48	24.8%
35-39	113	105,936	11.10	25.0%	290	102,452	11.74	21.9%	403	103,429	11.56	22.8%
40-44	230	111,416	13.08	25.5%	369	107,466	13.64	23.3%	599	108,983	13.42	24.1%
45-49	266	116,804	15.25	23.0%	410	107,079	15.07	25.8%	676	110,906	15.14	24.7%
50-54	218	121,500	14.92	24.1%	399	107,329	15.37	25.8%	617	112,336	15.21	25.2%
55-59	159	116,652	14.68	25.4%	290	108,500	15.51	26.5%	449	111,386	15.21	26.1%
60-64	44	108,321	15.83	23.9%	105	106,125	15.20	25.4%	149	106,774	15.38	25.0%
65 or over	20	99,533	14.52	19.1%	13	89,371	13.67	30.8%	33	95,529	14.18	23.7%
Total	**1,075**	**114,254**	**14.08**	**24.3%**	**1,934**	**106,080**	**14.29**	**24.8%**	**3,009**	**109,000**	**14.22**	**24.6%**

CSS Deferred – Group B									
	Male			Female			Total		
Age Group	Number	Average Active Service (Years)	Average ACT Employment Ratio	Number	Average Active Service (Years)	Average ACT Employment Ratio	Number	Average Active Service (Years)	Average ACT Employment Ratio
45-49	2	13.98	20.2%	8	12.14	39.4%	10	12.51	35.6%
50-54	24	17.00	38.9%	35	14.06	49.2%	59	15.26	45.0%
55-59	19	14.47	29.7%	18	14.37	46.7%	37	14.42	37.9%
60-64	4	22.11	12.4%	10	11.96	47.0%	14	14.86	37.1%
65 or over	0	0.00	0.0%	0	0.00	0.0%	0	0.00	0.0%
Total	**49**	**16.31**	**32.4%**	**71**	**13.63**	**47.2%**	**120**	**14.73**	**41.1%**

PSS Deferred – Group B									
	Male			Female			Total		
Age Group	Number	Average Active Service (Years)	Average ACT Employment Ratio	Number	Average Active Service (Years)	Average ACT Employment Ratio	Number	Average Active Service (Years)	Average ACT Employment Ratio
30-34	21	2.81	51.0%	41	3.72	50.7%	62	3.41	50.8%
35-39	112	3.62	50.2%	228	3.48	57.6%	340	3.53	55.2%
40-44	239	4.14	52.5%	362	4.24	62.4%	601	4.20	58.4%
45-49	229	5.43	52.6%	517	5.73	53.7%	746	5.64	53.3%
50-54	210	5.91	49.8%	412	6.02	57.9%	622	5.98	55.2%
55-59	128	5.96	49.3%	293	5.75	53.4%	421	5.82	52.1%
60-64	66	4.37	55.4%	138	4.30	73.1%	204	4.33	67.4%
65 or over	6	0.90	70.6%	18	4.04	78.4%	24	3.25	76.5%
Total	**1,011**	**4.94**	**51.6%**	**2,009**	**5.12**	**58.0%**	**3,020**	**5.06**	**55.9%**

CSS Pensioners Retirement – Group B												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	2	10,975	5,487	14.0%	10	55,188	5,519	18.4%	12	66,163	5,514	17.6%
55-59	85	1,056,978	12,435	25.6%	91	1,079,838	11,866	28.9%	176	2,136,816	12,141	27.3%
60-64	142	1,658,258	11,678	22.9%	119	1,374,605	11,551	27.7%	261	3,032,862	11,620	25.1%
65-69	122	996,794	8,170	17.6%	171	1,487,640	8,700	23.7%	293	2,484,434	8,479	21.2%
70-74	80	360,829	4,510	10.7%	105	531,513	5,062	15.3%	185	892,342	4,823	13.3%
75-79	30	154,012	5,134	12.1%	34	127,494	3,750	15.9%	64	281,507	4,399	14.1%
80-84	6	14,145	2,357	7.8%	10	17,706	1,771	11.2%	16	31,851	1,991	9.9%
85-89	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
90-94	1	801	801	8.3%	0	0	0	0.0%	1	801	801	8.3%
Total	**468**	**4,252,793**	**9,087**	**19.0%**	**540**	**4,673,984**	**8,656**	**23.0%**	**1,008**	**8,926,777**	**8,856**	**21.1%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

PSS Pensioners Retirement – Group B												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	78	499,747	6,407	21.2%	140	922,833	6,592	21.7%	218	1,422,580	6,526	21.6%
55-59	98	1,067,135	10,889	24.9%	187	1,548,881	8,283	26.2%	285	2,616,016	9,179	25.7%
60-64	117	1,256,168	10,736	25.3%	283	2,795,797	9,879	30.4%	400	4,051,965	10,130	28.9%
65-69	104	660,326	6,349	25.4%	238	1,680,489	7,061	27.9%	342	2,340,815	6,844	27.2%
70-74	67	441,051	6,583	24.2%	92	515,938	5,608	25.6%	159	956,989	6,019	25.0%
75-79	20	76,404	3,820	18.4%	20	67,182	3,359	23.6%	40	143,585	3,590	21.0%
80-84	3	26,097	8,699	32.4%	2	8,977	4,488	34.9%	5	35,074	7,015	33.4%
Total	**487**	**4,026,927**	**8,269**	**24.2%**	**962**	**7,540,098**	**7,838**	**27.1%**	**1,449**	**11,567,024**	**7,983**	**26.1%**

Note: *This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

CSS Pensioners Invalidity – Group B												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	3	18,284	6,095	14.1%	3	22,974	7,658	22.9%	6	41,258	6,876	18.5%
55-59	0	0	0	0.0%	4	60,559	15,140	33.8%	4	60,559	15,140	33.8%
60-64	2	4,308	2,154	3.4%	2	28,275	14,137	24.6%	4	32,582	8,146	14.0%
65-69	2	15,743	7,871	19.1%	1	13,636	13,636	27.7%	3	29,379	9,793	21.9%
70-74	1	6,150	6,150	12.2%	2	20,432	10,216	26.5%	3	26,582	8,861	21.7%
75-79	1	2,221	2,221	6.7%	1	1,756	1,756	10.9%	2	3,978	1,989	8.8%
Total	**9**	**46,707**	**5,190**	**11.8%**	**13**	**147,632**	**11,356**	**26.5%**	**22**	**194,339**	**8,834**	**20.5%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

PSS Pensioners Invalidity – Group B												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	11	91,978	8,362	15.0%	22	193,669	8,803	20.6%	33	285,647	8,656	18.7%
55-59	7	63,251	9,036	17.5%	8	83,363	10,420	27.3%	15	146,614	9,774	22.7%
60-64	3	4,314	1,438	4.2%	13	164,390	12,645	26.4%	16	168,703	10,544	22.3%
65-69	4	16,779	4,195	28.9%	3	2,571	857	5.2%	7	19,350	2,764	18.7%
70-74	0	0	0	0.0%	1	2,947	2,947	13.2%	1	2,947	2,947	13.2%
Total	**25**	**176,321**	**7,053**	**16.6%**	**47**	**446,939**	**9,509**	**22.2%**	**72**	**623,261**	**8,656**	**20.3%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

CSS Dependent Pensioners – Group B												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	0	0	0	0.0%	5	9,682	1,936	12.3%	5	9,682	1,936	12.3%
55-59	3	21,725	7,242	15.2%	8	14,436	1,804	13.2%	11	36,161	3,287	13.7%
60-64	2	9,109	4,554	59.0%	9	42,331	4,703	17.1%	11	51,439	4,676	24.7%
65-69	3	13,097	4,366	31.1%	12	29,747	2,479	14.5%	15	42,844	2,856	17.8%
70-74	1	6,381	6,381	28.4%	1	6,256	6,256	29.3%	2	12,636	6,318	28.8%
75-79	2	2,549	1,274	13.8%	3	9,756	3,252	16.7%	5	12,305	2,461	15.5%
80-84	2	2,307	1,153	8.0%	0	0	0	0.0%	2	2,307	1,153	8.0%
Total	**13**	**55,167**	**4,244**	**25.3%**	**38**	**112,207**	**2,953**	**15.1%**	**51**	**167,374**	**3,282**	**17.7%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

PSS Dependent Pensioners – Group B												
	Male				Female				Total			
Age Group	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio	Number	Total Indexed Pension* ($)	Average Indexed Pension* ($)	Average ACT Employment Ratio
54 or less	7	49,487	7,070	19.8%	5	22,780	4,556	21.7%	12	72,266	6,022	20.6%
55-59	0	0	0	0.0%	6	16,735	2,789	21.5%	6	16,735	2,789	21.5%
60-64	5	26,159	5,232	30.2%	5	16,936	3,387	21.1%	10	43,096	4,310	25.6%
65-69	2	27,851	13,925	50.1%	4	6,811	1,703	13.1%	6	34,662	5,777	25.4%
70-74	8	43,225	5,403	19.7%	5	11,688	2,338	21.4%	13	54,914	4,224	20.3%
75-79	0	0	0	0.0%	1	1,354	1,354	16.7%	1	1,354	1,354	16.7%
Total	**7**	**49,487**	**7,070**	**19.8%**	**5**	**22,780**	**4,556**	**21.7%**	**12**	**72,266**	**6,022**	**20.6%**

Note: * This is the Indexed Pension amount multiplied by the ACT Employment Ratio.

Appendix M: Glossary

Accrued Superannuation Liability

The actuarial value of the ACT Government portion of members' benefits in respect of service up to the date of investigation.

ACT Employment Ratio

The ratio of ACT Government service post 1 July 1989 to Total Service.

Contributor

Member of CSS or PSS who was employed by ACT Government or Commonwealth Government at the date of investigation.

Current Pensioner

Member of CSS or PSS who was receiving a pension at the date of investigation.

Preserved Members/Deferred Beneficiary

Member of CSS or PSS who preserved his/her benefit upon ceasing employment or transfer under Choice of Fund.

Dependent Pensioner

Dependant of a former CSS or PSS member who has deceased, and was receiving a pension at the date of investigation.

Interest Cost

Increase in the Accrued Superannuation Liability resulting from unwinding of discount rate during the period.

Normal Cost

Increase in the Accrued Superannuation Liability resulting from service during the period.