Australian Capital Territory Chief Minister, Treasury and Economic Development Directorate

Report on Actuarial Investigation as at 30 June 2018

Statement of Advice

25 February 2019

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 actuarial investigation conducted as at 30 June 2018 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 Matthew Burgess at 30 June 2017. The results of that investigation were set out in our "Report on Actuarial Investigation as at 30 June 2017" dated 25 May 2018 (the "2017 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. This is the first annual actuarial investigation since the 2017 Triennial Report.

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 2018 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 2018 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.

Membership Data

1.7 The results in this report are based on membership data as at 30 June 2018 provided by Commonwealth Superannuation Corporation (CSC). A summary of the membership is shown in the following table:

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

Table 1.1 – Membership Summary as at 30 June 2018

	CSS	PSS	Total
Group A			
Contributors	379	6,572	6,951
Deferred Beneficiaries	186	9,038	9,224
Current Pensioners	5,627		10,484
Dependent Pensioners	563	233	796
Group B			
Contributors	193	2,818	3,011
Deferred Beneficiaries	68		2,295
Current Pensioners	1,073	1,667	2,740
Dependent Pensioners	58	57	115

[1] Includes 201 PSS Family Law members (which were previously not valued separately) as agency details were not provided for those members.

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 2.75% p.a. until 30 June 2023) 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 2018**: 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 2018 when preliminary AASB 119 results were provided to the Directorate) include a discount rate of 3.11% per annum, reflecting the yield on the 21 March 2047 Commonwealth Government bonds as at 30 June 2018. 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 triennial actuarial investigation conducted as at 30 June 2017, a discount rate of 5.0% per annum, long term salary inflation 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 used.

1.13 For the Disclosures assumptions in the most recent triennial actuarial investigation conducted as at 30 June 2017, a discount rate of 3.51% per annum, salary inflation of 2.75% per annum and long term price increases (CPI) assumption of 2.0% 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 2017 Triennial 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 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 2018 were:

a Budget Assumptions: $ 7,541.9 million; and

b Disclosures Assumptions: $ 9,762.7 million.

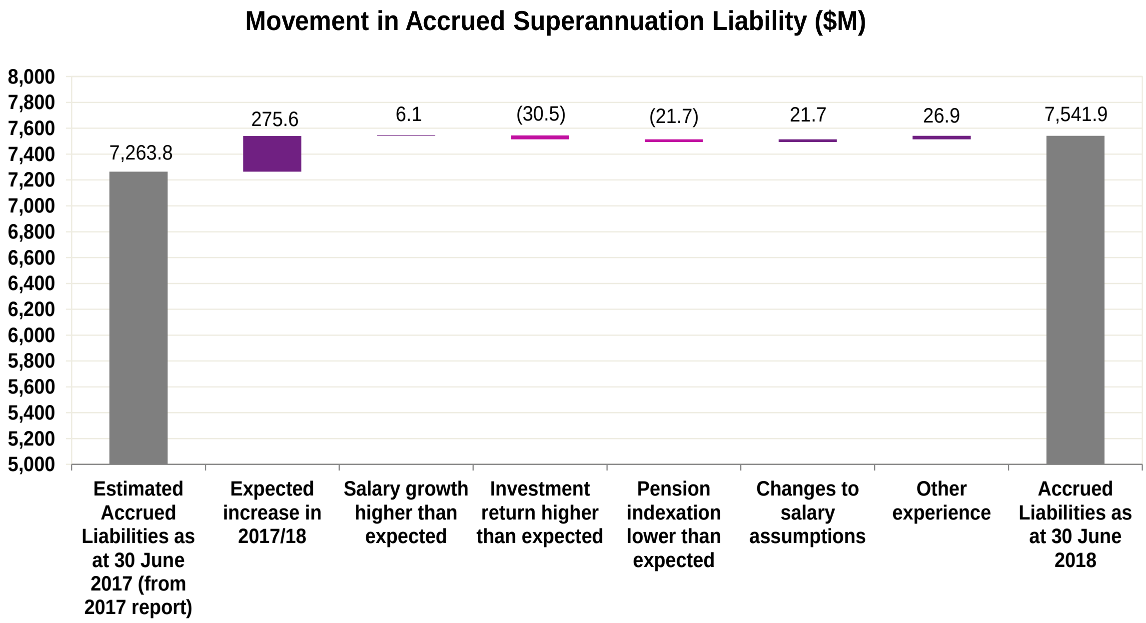
1.20 The Accrued Superannuation Liability at 30 June 2018 of $7,541.9 million on the Budget assumptions is $2.5 million higher than the estimated value at 30 June 2018 of $7,539.4 million provided in the 2017 Report. The main reasons for the variation are:

- Increase in the assumed short term future salary inflation rate from 2.5% per annum until 30 June 2022 to 2.75% per annum until 30 June 2023;
- Higher than expected rates of salary growth in 2017/18;

partially offset by

- Higher than expected investment returns over 2017/18; and
- Lower than expected pension indexation in 2017/18;

1.21 The following chart shows the reconciliation of the movement in the Accrued Superannuation Liability from 30 June 2017 to 30 June 2018:



1.23 The following table provides a summary of the Accrued Superannuation Liabilities at 30 June 2018 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 2018	7,541.9
30 June 2019	7,809.0
30 June 2020	8,061.5
30 June 2021	8,299.8
30 June 2022	8,520.8
30 June 2023	8,725.9

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 2018 are set out below:

Table 1.3 – Emerging Cost Payments

Year Ending	Emerging Cost Payments* (Budget Assumptions) ($M)
30 June 2019^	269.070
30 June 2020	289.811
30 June 2021	308.740
30 June 2022	330.624
30 June 2023	350.770

* 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 2018/19 financial year, based on the Emerging Cost Payment estimate from the 2017 Annual Report.

Emerging Cost Surplus/Deficit

1.27 The Emerging Cost Payments made by the ACT Government for the year ending 30 June 2018 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 2018 there is an estimated accumulated surplus, the Emerging Cost Surplus, of $13.338 million due to the actual benefit payments being less than expected. The Emerging Cost Surplus as at 30 June 2017 was estimated to be $9.073 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

Matthew Burgess
Fellow of the Institute of Actuaries of Australia
18 February 2019

Professional Excellence Standards Review

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

Kathryn Maartensz

Kate Maartensz
Fellow of the Institute of Actuaries of Australia
18 February 2019

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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 myself at 30 June 2017. The results of that investigation were set out in the 2017 Triennial Report dated 25 May 2018.

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. This is the first annual actuarial investigation since the 2017 Triennial Report.

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 2018 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 2017 to 30 June 2018:

Data in respect of "Group A" members:

- Data of CSS and PSS contributors who were employees of the ACT Government at 30 June 2018, 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 2018, 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 2018 is set out in Appendix B. The listing contains the number of Group A members and their salaries as at 30 June 2018 for each agency. Similar data was provided as at 30 June 2017 for the 2017 Triennial Report, which 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 2018 is set out below (only members with non-zero ACT employer ratios are shown):

Table 3.1 – Membership by category as at 30 June 2018

	CSS	PSS	Total
Group A			
Contributors	379	6,572	6,951
Deferred Beneficiaries	186	9,038	9,224
Current Pensioners	5,627	4,857	10,484
Dependent Pensioners	563	233	796
Group B			
Contributors	193	2,818	3,011
Deferred Beneficiaries	68	2,227[1]	2,295
Current Pensioners	1,073	1,667	2,740
Dependent Pensioners	58	57	115

[1] Includes 201 PSS Family Law members (which were previously not valued separately, refer to paragraphs 4.44 to 4.45) as agency details were not provided for those members.

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 2017 and 30 June 2018.

Table 3.2 – Group A: Membership Summary as at 30 June 2017 and 30 June 2018

		CSS 30 June 2018	CSS 30 June 2017	PSS 30 June 2018	PSS 30 June 2017
Contributors					
Number of Members		379	444	6,572	6,910
Salaries	**Total**	$43,285,660	$49,580,371	$710,518,450	$727,993,231
	Average	$114,210	$111,668	$108,113	$105,354
Average Age		56.1	55.5	50.5	50.1
Average Service		27.9	27.2	16.0	15.5
Average ACT Employment Ratio		0.849	0.855	0.903	0.909
Deferred Beneficiaries					
Number of Members		186	169	9,038	8,230
Average Age		56.3	55.9	49.6	48.8
Average Service		15.0	15.5	4.5	4.5
Average ACT Employment Ratio		0.752	0.732	0.899	0.896
Pensioners					
Number of Pensioners		5,627	5,619	4,857	4,483
Average Age		71.8	71.1	67.0	66.6
Total Indexed Pension*		$117,540,954	$112,784,435	$119,874,754	$103,124,073
Average ACT Employment Ratio		0.590	0.585	0.881	0.878
Dependent Pensioners					
Number of Pensioners		563	532	233	221
Average Age		74.2	73.4	65.6	64.7
Total Indexed Pension*		$5,135,494	$4,700,561	$3,085,963	$2,846,656
Average ACT Employment Ratio		0.476	0.471	0.848	0.841

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

Table 3.3 – Group B: Membership Summary as at 30 June 2017 and 30 June 2018

		CSS 30 June 2018	CSS 30 June 2017	PSS 30 June 2018	PSS 30 June 2017
Contributors					
Number of Members		193	225	2,818	3,009
Salaries	**Total**	$25,977,827	$29,374,705	$317,027,418	$327,982,457
	Average	$134,600	$130,554	$112,501	$109,000
Average Age		54.5	53.9	48.8	48.2
Average Service		28.4	27.7	15.0	14.2
Average ACT Employment Ratio		0.235	0.239	0.235	0.246
Deferred Beneficiaries					
Number of Members		68	120	2,227	3,020
Average Age		54.7	54.9	48.8	48.7
Average Service		14.8	14.7	5.5	5.1
Average ACT Employment Ratio		0.228	0.411	0.403	0.559
Pensioners					
Number of Pensioners		1,073	1,030	1,667	1,521
Average Age		66.6	66.0	62.4	61.9
Total Indexed Pension*		$9,891,498	$9,121,115	$13,805,708	$12,190,285
Average ACT Employment Ratio		0.214	0.211	0.259	0.259
Dependent Pensioners					
Number of Pensioners		58	51	57	48
Average Age		65.5	63.6	59.9	60.2
Total Indexed Pension*		$190,225	$167,374	$308,567	$223,027
Average ACT Employment Ratio		0.171	0.177	0.241	0.222

* 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 2017.

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 2017. The assumptions have 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 is consistent with that used for the 2017 Triennial Actuarial Investigation and also as 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 2018 benefit multiple provided by CSC and therefore will be reasonably reflected in the 30 June 2018 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 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 and is consistent with our previous analysis. 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 current and projected 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. Consistent with the Memorandum of Understanding, this is based on the average employer financed proportion derived for those with the relevant information provided. The Memorandum of Understanding, also specifies these percentages be updated annually and rounded to the nearest 5%. The assumptions are unchanged from last year.

ACT Employment Ratio

4.25 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:

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

4.26 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.

4.27 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%.

4.28 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.

4.29 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 2018 in respect of service to 30 June 2018 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 2018 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 2018 in respect of service to 30 June 2018 may be less than the corresponding benefit apportioned to the ACT in future years.

4.30 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.

4.31 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

4.32 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

4.33 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).

4.34 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.

4.35 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 2018 on the Accrued Superannuation Liability would not be material relative to the amount of liabilities.

4.36 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

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

4.38 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.

4.39 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.

4.40 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.

4.41 The membership reconciliations in Appendix B show that there were 282 new CSS and PSS contributory members in Group A over the year to 30 June 2018.

4.42 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.

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

Family Law

4.44 We have 156 contributors and 63 deferred beneficiaries (i.e. 1.0% of contributors and deferred beneficiaries membership) with a family law split and data associated with their former spouses. In previous periods we calculated the Accrued Superannuation Liability by valuing members' entire benefit prior to the family law split. This approach is appropriate for CSS because the split occurs when the benefit is paid. For some PSS deferred members, however, this involved estimating some components of the family law split amount and adding those back on to the members' benefit.

4.45 From 30 June 2018 for PSS members we were provided with sufficient information to value the benefit of the original member (post-split) and the family law beneficiary separately and estimates of family law split components are no longer required. For CSS members we continue to value the member's entire benefit prior to the family law split.

4.46 For the purpose of valuing the Accrued Superannuation Liability and Emerging Cost Payments, the benefit entitlements of the PSS non-member spouses are valued in the same way as other deferred beneficiaries. In particular, for the employer component of the PSS non-member spouse entitlement, we assume the family law entitlement increases in line with CPI instead of the 10-year Commonwealth Government bond rate. Based on our assessment, we do not expect this approach to have a material impact relative to the total liability and payment amounts.

4.47 When the benefits are paid, the relevant data is available for the Emerging Cost Surplus/Deficit to be more accurately estimated

Other Data Assumptions

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

a 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 2018 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.

b 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

4.49 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 2018.

4.50 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 2018 consists of:

a That part of the Emerging Cost Surplus/Deficit as at 30 June 2017, as calculated in the 2017 Triennial Report, which had not been paid at 30 June 2018, with interest; and

b The Emerging Cost Surplus/Deficit arising during the period 1 July 2017 to 30 June 2018, with interest.

4.51 The Emerging Cost Surplus/Deficit arising during the period 1 July 2017 to 30 June 2018 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.

4.52 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.

4.53 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.

4.54 In the determination of the Emerging Cost Surplus/Deficit as at 30 June 2018, interest is applied to take into account the different timing of the starting Emerging Cost Surplus/Deficit as at 30 June 2017, 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 2018.

4.55 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 2.75% p.a. until 30 June 2023) and long term price increases (CPI) assumption of 2.5% per annum were adopted.

   b **Disclosures Assumptions 30 June 2018:** 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 2018 when preliminary AASB 119 results were provided to the Directorate) include a discount rate of 3.11% per annum, reflecting the yield on the 21 March 2047 Commonwealth Government bond as at 30 June 2018. 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 triennial review conducted as at 30 June 2017, a discount rate of 5.0% per annum, long term salary inflation 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 used. Considered in isolation, the change in the short term salary inflation from 2.5% p.a. until 30 June 2022 to 2.75% p.a. until 30 June 2023 in this investigation has increased the Accrued Superannuation Liability for the Budget results.

5.5 For the Disclosures assumptions in the most recent triennial review conducted as at 30 June 2017, a discount rate of 3.51% per annum, a long term salary inflation of 2.75% per annum and long term price increases (CPI) assumption of 2.0% per annum were used. In isolation, the decrease in discount rate has increased the Accrued Superannuation Liability for the Disclosures.

Demographic Assumptions

5.6 The demographic assumptions adopted for this investigation were the same as those adopted for the 2017 Triennial Report.

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 2018 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: $7,541.9 million; and

b. Disclosures Assumptions: $9,762.7 million.

6.2 The Accrued Superannuation Liability at 30 June 2018 on the Budget Assumptions of $7,541.9 million is $2.5 million (or 0.03%) higher than the estimated value at 30 June 2018 of $7,539.4 million provided in the 2017 Triennial Report. The main factors contributing to the variation in the liability are summarised below:

a. **Experience in 2017/18 being different from expected**

i. **Salary growth was marginally higher than assumed:** The salary increase rate over the 2017/18 financial year was 2.6% for CSS contributors and 2.7% for PSS members which includes both inflationary and promotional increases. These increases in salary were 0.1% and 0.2% higher than the assumptions for CSS and PSS, respectively, after taking into account the expected short term salary inflationary increases of 2.5% and 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 2017/18 credited to member and productivity accounts was 9.45% and 9.35% for CSS and PSS respectively. It was higher than the assumed rate of 5.0% 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 2017/18 financial year was 1.9% 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. The assumption of short term salary inflation of 2.5% p.a. to 30 June 2022 was changed to 2.75% p.a. to 30 June 2023. The effect of this change is an increase in liability of approximately $21.7 million.

Overall, the combined effect of these experience and assumption items was to increase the liabilities by $2.5 million over the year to 30 June 2018.

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 2018

	($ Million)
Projected Accrued Superannuation Liability at 30 June 2018 (based on 30 June 2017 membership data)	7,539.4
Changes due to experience and membership movements being different from expected:	
Salary growth higher than expected	6.1
Crediting rates higher than expected	(30.5)
Pension indexation lower than expected	(21.7)
New and appearing contributors	14.5
Other variations	12.4
Changes due to financial assumptions:	
Short term salary inflation of 2.5% p.a. increased to 2.75% p.a. and extended to 2023	21.7
Accrued Superannuation Liability at 30 June 2018 (based on 30 June 2018 membership data)	7,541.9

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 2018, 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 2018 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 2018	7,541.9	9,762.7
30 June 2019	7,809.0	10,036.8
30 June 2020	8,061.5	10,286.0
30 June 2021	8,299.8	10,512.1
30 June 2022	8,520.8	10,712.8
30 June 2023	8,725.9	10,889.8

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	18.4	17.4	11.4	12.7
PSS	23.5	22.5	12.4	20.1

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 2018. 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 2019^	4.998	33.339	222.403	8.330	269.070
30 June 2020	4.729	33.496	242.622	8.964	289.811
30 June 2021	7.589	43.305	246.970	10.877	308.740
30 June 2022	10.394	54.692	251.189	14.350	330.624
30 June 2023	12.712	65.852	255.194	17.012	350.770

^ Actual annual payment amount agreed with the Commonwealth Government for the 2018/19 financial year, based on the Emerging Cost Payment estimate (Budget) from the 2017 Report.

Emerging Cost Surplus/Deficit as at 30 June 2018

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 2018 is provided in the table below:

Table 6.5 – Emerging cost (Surplus)/Deficit at 30 June 2018

	($M)
(Surplus)/Deficit as at 30 June 2017	(9.073)
Surplus Credit/(Deficit) Payment	9.073
Emerging Cost Payments in 2017/18^	(251.149)
Employer Financed Benefit Payments in 2017/18	237.536
Interest Component	0.275
(Surplus)/Deficit as at 30 June 2018	(13.338)

^ The Emerging Cost Payments of $251.149 million for year 2017/18 were based on the projections from the 2016 Report. Accordingly, ACT Government has made the first three quarterly payments of $62.787 million each in 2017/18. However, the last quarterly payment in 2017/18 was adjusted to be $53.714 million to reflect the Surplus Credit of $9.073 million.

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

6.11 As at 30 June 2018 the accumulated surplus was $13.338 million. As at 30 June 2017, there was a surplus of $9.073 million.

6.12 The surplus of $13.338 million as at 30 June 2018 was a result of the employer financed component of the actual benefit payments (including interest) during the year to 30 June 2018 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**			**0.130**
	a.	A difference arising from changes in membership due to the initial Emerging Cost Payments being an estimate from the 2016 valuation (as opposed to the 2017 valuation).	0.633	
	b.	Other experience in 2017/18 compared to that expected.	(0.503)	
2.	**Variation – PSS Payments**			**(13.743)**
	a.	A difference arising from changes in membership due to the initial Emerging Cost Payments being an estimate from the 2016 valuation (as opposed to the 2017 valuation).	0.248	
	b.	Proportion of benefit taken as pension was higher than expected	(12.706)	
	c.	Other experience in 2017/18 compared to that expected.	(1.285)	
3.	**Interest Component**			**0.275**
Total				**(13.338)**

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 2018/19 financial year is set out as below:

Average Salary	Maximum Benefit
Less than $73,500	$735,000
$73,500 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[1] as at 30 June 2018 ($ Million)	PSS Contributors	PSS Salary[1] as at 30 June 2018 ($ Million)	Total Contributors	Total Salary[1] as at 30 June 2018 ($ Million)
Act Electricity & Water Corporation Ltd	11	1.151	135	16.822	146	17.974
Act Cultural Facilities Corporation	1	*	26	2.184	27	2.263
Act Calvary Hospital Public	7	0.877	266	32.056	273	32.933
Act Legal Aid	1	*	13	1.615	14	1.740
Act Legislative Assembly	-	-	3	0.300	3	0.300
Act Legislative Assembly Secretariat	2	0.246	23	2.375	25	2.620
Act Government	357	40.809	6,106	655.165	6,463	695.974
Total	**379**	**43.286**	**6,572**	**710.518**	**6,951**	**753.804**

[1] based on full time adjusted salaries

[2] We note that this year no members were assigned the Agency Code for the ACT Internal OmniBus Network Admin, despite there being 265 contributors for that Agency last year. A check of relevant members indicated they have now moved to the ACT Government Agency Code.

* Salaries not disclosed for privacy.

Group A: Reconciliation of Contributors Data

	CSS	PSS	Total
Contributors as at 30 June 2017	**444**	**6,910**	**7,354**
Transfers from Group B	-	16	16
New Entrants[1]	5	253	258
Appearing Entrants[2]	-	24	24
Exits[3]	(70)	(610)	(680)
Transfers to Group B	-	(21)	(21)
Contributors as at 30 June 2018	**379**	**6,572**	**6,951**

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]. 'Appearing Entrants' refer to new membership records in respect of members who transferred to a new ACT Agency prior to 1 January 2017 (allows for 6 months processing lag), but had not been advised to us by CSC.

[3]. '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 2017	**169**	**8,230**	**8,399**
Transfers from Group B[1]	38	955	993[5]
New Entrants[2]	30	262	292
Appearing Entrants[3]	-	23	23
Exits[4]	(51)	(427)	(478)
Transfers to Group B[1]	-	(5)	(5)
Members as at 30 June 2018	**186**	**9,038**	**9,224**

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 2017 (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.
5. We note the large number of PSS transfers from Group B to Group A during the year. This reflected a change in the Agency Code of these members from a non-ACT Agency to an ACT Agency. Deferred members are assumed to be not working or not working for a CSS or PSS participating employer, hence they are not currently Contributory members. It is therefore unusual for them to transfer to a new Agency Code related to the ACT. However, as there is no impact on their current or projected liabilities (as the ACT employment ratio is considered fixed in both cases), we did not pursue this data query further with CSC.

Group A: Reconciliation of Current and Dependent Pensioners Data

	Current Pensioners		Dependent Pensioners		
	CSS	PSS	CSS	PSS	Total
Pensioners as at 30 June 2017	**5,619**	**4,483**	**532**	**221**	**10,855**
New Entrants[1]	87	412	51	16	566
Appearing Entrants[2]	-	-	-	1	1
Exits[3]	(79)	(38)	(20)	(5)	(142)
Pensioners as at 30 June 2018	**5,627**	**4,857**	**563**	**233**	**11,280**

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 2017 (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 2017	**225**	**3,009**	**3,234**
Transfers from Group A	-	21	21
New Entrants[1]	1	101	102
Appearing Entrants[2]	1	17	18
Exits[3]	(34)	(314)	(348)
Transfers to Group A	-	(16)	(16)
Contributors as at 30 June 2018	**193**	**2,818**	**3,011**

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. 'Appearing Entrants' refer to new membership records in respect of members who transferred to a new non-ACT Agency prior to 1 January 2017 (allows for 6 months processing lag), but had not been advised to us by CSC.

3. '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 2017	**120**	**3,020**	**3,140**
Transfers from Group A[1]	-	5	5
New Entrants[2]	26	184	210
Appearing Entrants[3]	1	79	80
Family Law members[5]	-	201	201
Exits[4]	(41)	(307)	(348)
Transfers to Group A[1]	(38)	(955)	(993)[6]
Members as at 30 June 2018	**68**	**2,227**	**2,295**

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 2017 (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.
5. As a result of additional information being provided this year, benefits for PSS Family Law non-member spouses are now valued separately to the member benefit. They are therefore included as additional members in the Deferred Beneficiary data.
6. Refer to comment regarding these transfers under the "**Group A: Reconciliation of Deferred Beneficiaries data**" table above.

Group B: Reconciliation of Current and Dependent Pensioners Data

	Current Pensioners		Dependent Pensioners		
	CSS	PSS	CSS	PSS	Total
Pensioners as at 30 June 2017	**1,030**	**1,521**	**51**	**48**	**2,650**
New Entrants[1]	47	153	6	8	214
Appearing Entrants[2]	-	1	1	1	3
Exits[3]	(4)	(8)	-	-	(12)
Pensioners as at 30 June 2018	**1,073**	**1,667**	**58**	**57**	**2,855**

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 2017 (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 2018 Budget	30 June 2017 Budget	30 June 2018 Disclosures	30 June 2017 Disclosures
Discount Rate	5.0% p.a.	5.0% p.a.	3.11% p.a.	3.51% p.a.
General Salary Increases	2.75% p.a. to 30 June 2023; 3.0% p.a. thereafter	2.5% p.a. to 30 June 2022; 3.0% p.a. thereafter	2.75% p.a.	2.75% p.a.
CPI increases	2.5% p.a.	2.5% p.a.	2.0% p.a.	2.0% 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 1.79% per annum. This is the geometric average yield of the one year Australia Commonwealth Government bonds over the 12 months to 30 June 2018.

Detailed Demographic Assumptions used in Valuation

The following assumptions are unchanged from those adopted in the 2017 Triennial Report.

- **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.**

Age	Death and invalidity assumptions (per 1,000 active members at age shown) 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 x $0.89^{(11-10)}$) are expected to resign each year.

Retrenchment Assumptions

	Retrenchment assumptions			
Age Attained	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:

	Pensioner Mortality (per 1,000 pensioners at age shown)			
Age	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.

  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**

  <u>Members under age 55</u>

  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; 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; 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.

<u>Members aged 55 and above</u>

It has been assumed that 80% of the benefit is taken as a pension 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 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 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 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 2018	369.3	2,333.2	2,702.5	2,359.3	2,480.1	4,839.4	7,541.9
30 June 2019	392.1	2,309.7	2,701.9	2,614.0	2,493.2	5,107.1	7,809.0
30 June 2020	411.8	2,281.8	2,693.6	2,864.4	2,503.5	5,367.9	8,061.5
30 June 2021	428.1	2,249.4	2,677.5	3,111.2	2,511.1	5,622.3	8,299.8
30 June 2022	441.6	2,212.1	2,653.7	3,352.7	2,514.3	5,867.0	8,520.8
30 June 2023	452.6	2,170.3	2,622.9	3,589.4	2,513.6	6,103.0	8,725.9
30 June 2024	461.3	2,124.1	2,585.4	3,819.9	2,508.9	6,328.8	8,914.2
30 June 2025	467.7	2,073.6	2,541.3	4,042.2	2,499.5	6,541.7	9,083.0
30 June 2026	472.2	2,018.7	2,490.8	4,255.9	2,485.5	6,741.4	9,232.2
30 June 2027	474.9	1,959.6	2,434.4	4,459.0	2,465.8	6,924.8	9,359.2
30 June 2028	476.0	1,896.4	2,372.4	4,651.1	2,441.1	7,092.2	9,464.6
30 June 2029	475.6	1,829.5	2,305.2	4,830.9	2,411.1	7,241.9	9,547.1
30 June 2030	473.9	1,759.1	2,233.0	4,996.6	2,376.2	7,372.8	9,605.8
30 June 2031	470.9	1,685.5	2,156.4	5,147.8	2,336.2	7,483.9	9,640.3
30 June 2032	466.7	1,608.9	2,075.6	5,282.4	2,290.3	7,572.7	9,648.3
30 June 2033	461.3	1,529.8	1,991.2	5,399.1	2,239.9	7,639.0	9,630.2
30 June 2034	454.9	1,448.6	1,903.5	5,498.9	2,183.5	7,682.4	9,585.9
30 June 2035	447.4	1,365.8	1,813.2	5,579.0	2,122.1	7,701.1	9,514.3

PROJECTION OF ACCRUED SUPERANNUATION LIABILITIES (BUDGET)							
Liabilities as at		CSS ($M)			PSS ($M)		Total ($M)
	Actives	Inactives	Total	Actives	Inactives	Total	
30 June 2036	438.9	1,281.8	1,720.7	5,639.0	2,056.4	7,695.4	9,416.1
30 June 2037	429.4	1,197.1	1,626.6	5,677.8	1,987.2	7,665.0	9,291.6
30 June 2038	419.0	1,112.4	1,531.4	5,696.5	1,913.9	7,610.4	9,141.8
30 June 2039	407.5	1,028.2	1,435.7	5,694.6	1,837.8	7,532.4	8,968.1
30 June 2040	395.1	945.0	1,340.1	5,672.1	1,759.1	7,431.2	8,771.2
30 June 2041	381.7	863.4	1,245.1	5,629.7	1,678.3	7,308.0	8,553.1
30 June 2042	367.4	784.1	1,151.4	5,567.4	1,596.2	7,163.5	8,315.0
30 June 2043	352.1	707.4	1,059.5	5,485.5	1,513.0	6,998.5	8,058.1
30 June 2044	336.1	633.9	970.0	5,386.5	1,429.6	6,816.2	7,786.2
30 June 2045	319.3	564.0	883.3	5,270.4	1,346.4	6,616.9	7,500.2
30 June 2046	301.7	498.2	799.9	5,138.4	1,263.8	6,402.1	7,202.0
30 June 2047	283.6	436.5	720.1	4,991.8	1,182.6	6,174.4	6,894.5
30 June 2048	264.9	379.4	644.3	4,832.5	1,103.7	5,936.2	6,580.5
30 June 2049	245.9	326.8	572.7	4,662.7	1,027.5	5,690.2	6,262.8
30 June 2050	226.7	278.8	505.5	4,483.0	954.0	5,437.1	5,942.6
30 June 2051	207.4	235.5	442.9	4,295.0	883.5	5,178.4	5,621.4
30 June 2052	188.2	196.8	385.0	4,099.8	816.1	4,915.9	5,300.9
30 June 2053	169.3	162.6	331.9	3,899.7	752.0	4,651.7	4,983.6
30 June 2054	150.8	132.7	283.5	3,694.0	691.1	4,385.1	4,668.6
30 June 2055	133.0	106.9	239.9	3,484.4	633.5	4,117.9	4,357.7
30 June 2056	115.9	84.9	200.8	3,272.3	578.9	3,851.2	4,052.0
30 June 2057	99.8	66.4	166.2	3,058.7	527.4	3,586.2	3,752.4
30 June 2058	84.8	51.2	135.9	2,845.2	478.9	3,324.1	3,460.0

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 2019	6.3	154.8	161.1	132.0	243.1	375.1
30 June 2020	4.7	146.7	151.4	131.8	259.2	391.0
30 June 2021	3.4	140.9	144.3	131.2	271.6	402.8
30 June 2022	2.6	135.2	137.8	130.2	283.6	413.8
30 June 2023	1.9	130.0	131.9	128.8	295.2	424.1
30 June 2024	1.4	124.7	126.1	127.2	306.4	433.5
30 June 2025	1.0	119.1	120.1	125.2	317.0	442.1
30 June 2026	0.7	113.4	114.1	122.9	326.9	449.7
30 June 2027	0.5	107.4	107.9	120.2	336.1	456.4
30 June 2028	0.3	101.6	101.9	117.4	344.5	461.9
30 June 2029	0.2	95.5	95.7	114.2	352.1	466.3
30 June 2030	0.1	89.3	89.4	110.8	358.8	469.6
30 June 2031	0.1	83.0	83.1	107.2	364.6	471.8
30 June 2032	0.0	76.6	76.7	103.3	369.3	472.6
30 June 2033	0.0	70.2	70.3	99.3	371.7	471.0
30 June 2034	0.0	63.9	63.9	95.1	375.5	470.6
30 June 2035	0.0	57.5	57.5	90.8	376.9	467.6
30 June 2036	0.0	51.2	51.2	86.3	377.0	463.3

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 2037	0.0	45.1	45.1	81.7	376.0	457.8
30 June 2038	0.0	39.2	39.2	77.1	373.7	450.9
30 June 2039	0.0	33.6	33.6	72.5	370.4	442.9
30 June 2040	0.0	28.4	28.4	67.8	366.0	433.7
30 June 2041	0.0	23.5	23.5	63.1	360.4	423.5
30 June 2042	0.0	19.0	19.0	58.5	353.7	412.3
30 June 2043	0.0	15.0	15.0	54.0	345.2	399.2
30 June 2044	0.0	11.4	11.4	49.6	337.5	387.1
30 June 2045	0.0	8.4	8.4	45.3	328.2	373.4
30 June 2046	0.0	5.9	5.9	41.1	318.0	359.1
30 June 2047	0.0	3.9	3.9	37.1	307.2	344.3
30 June 2048	0.0	2.4	2.4	33.3	295.1	328.4
30 June 2049	0.0	1.2	1.2	29.7	283.9	313.7
30 June 2050	0.0	0.5	0.5	26.4	271.7	298.1
30 June 2051	0.0	0.1	0.1	23.2	259.2	282.4
30 June 2052	0.0	0.0	0.0	20.2	246.5	266.7
30 June 2053	0.0	0.0	0.0	17.5	234.5	252.0
30 June 2054	0.0	0.0	0.0	15.0	220.7	235.7
30 June 2055	0.0	0.0	0.0	12.8	207.7	220.5
30 June 2056	0.0	0.0	0.0	10.8	194.6	205.4
30 June 2057	0.0	0.0	0.0	9.0	181.7	190.6
30 June 2058	0.0	0.0	0.0	7.4	169.1	176.5

** 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 2019^	4.998	33.339	131.688	90.715	2.183	6.147	269.070
30 June 2020	4.729	33.496	138.033	104.589	1.939	7.025	289.811
30 June 2021	7.589	43.305	140.241	106.728	2.822	8.055	308.740
30 June 2022	10.394	54.692	142.339	108.850	3.778	10.571	330.624
30 June 2023	12.712	65.852	144.283	110.912	4.537	12.475	350.770
30 June 2024	15.026	78.113	146.048	112.934	4.995	14.307	371.423
30 June 2025	17.206	91.536	147.593	114.879	5.415	16.800	393.428
30 June 2026	19.153	104.950	148.904	116.696	5.890	18.979	414.571
30 June 2027	20.920	119.592	149.935	118.426	6.298	22.108	437.279
30 June 2028	22.418	134.216	150.649	119.977	6.632	24.512	458.404
30 June 2029	23.784	149.425	151.008	121.351	6.848	27.106	479.521
30 June 2030	25.030	165.526	150.973	122.524	7.050	29.187	500.290
30 June 2031	26.151	181.352	150.506	123.436	7.246	31.634	520.325
30 June 2032	27.142	198.413	149.573	124.046	7.432	34.754	541.359
30 June 2033	28.012	214.615	148.140	124.313	7.602	36.633	559.315
30 June 2034	28.803	231.523	146.178	124.197	7.759	40.260	578.720
30 June 2035	29.501	249.187	143.670	123.659	7.914	42.844	596.774
30 June 2036	30.129	266.317	140.603	122.662	8.065	44.982	612.759

^ Actual annual payment amount agreed with the Commonwealth Government for the 2018/19 financial year, based on the Emerging Cost Payment estimate (Budget) from the 2017 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 2037	30.693	283.537	136.977	121.175	8.209	46.819	627.409
30 June 2038	31.192	299.068	132.793	119.172	8.345	49.339	639.908
30 June 2039	31.638	314.387	128.061	116.634	8.470	51.079	650.269
30 June 2040	32.026	328.982	122.804	113.549	8.584	52.982	658.927
30 June 2041	32.352	342.268	117.054	109.917	8.683	54.797	665.071
30 June 2042	32.606	355.101	110.862	105.753	8.764	56.365	669.452
30 June 2043	32.780	366.036	104.287	101.084	8.824	58.022	671.031
30 June 2044	32.862	376.115	97.401	95.945	8.857	59.262	670.442
30 June 2045	32.843	384.896	90.283	90.397	8.858	60.609	667.885
30 June 2046	32.709	392.262	83.024	84.508	8.823	61.904	663.230
30 June 2047	32.446	397.919	75.730	78.359	8.749	62.530	655.732
30 June 2048	32.040	400.902	68.494	72.035	8.630	62.711	644.813
30 June 2049	31.484	402.920	61.392	65.641	8.464	62.665	632.564
30 June 2050	30.769	403.485	54.498	59.271	8.247	62.589	618.859
30 June 2051	29.890	402.550	47.887	53.028	7.980	62.426	603.761
30 June 2052	28.848	400.166	41.615	47.005	7.663	61.905	587.201
30 June 2053	27.644	396.275	35.724	41.274	7.295	61.144	569.356
30 June 2054	26.288	391.221	30.266	35.913	6.875	60.194	550.758
30 June 2055	24.786	384.864	25.275	30.989	6.407	59.026	531.348
30 June 2056	23.153	377.157	20.789	26.523	5.897	57.620	511.139
30 June 2057	21.401	368.209	16.804	22.537	5.354	55.983	490.288
30 June 2058	19.547	358.015	13.345	19.026	4.791	54.123	468.847

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 2018	471.6	2,746.1	3,217.7	3,518.0	3,027.0	6,545.0	9,762.7
30 June 2019	492.4	2,692.8	3,185.2	3,840.3	3,011.3	6,851.6	10,036.8
30 June 2020	509.1	2,635.3	3,144.4	4,149.3	2,992.4	7,141.6	10,286.0
30 June 2021	521.7	2,573.6	3,095.3	4,446.6	2,970.2	7,416.8	10,512.1
30 June 2022	531.0	2,507.6	3,038.6	4,730.8	2,943.3	7,674.2	10,712.8
30 June 2023	537.3	2,437.7	2,975.0	5,002.5	2,912.2	7,914.8	10,889.8
30 June 2024	541.1	2,364.1	2,905.1	5,260.2	2,877.0	8,137.3	11,042.4
30 June 2025	542.3	2,287.0	2,829.3	5,502.1	2,837.0	8,339.1	11,168.4
30 June 2026	541.4	2,206.5	2,747.9	5,727.7	2,792.5	8,520.2	11,268.1
30 June 2027	538.6	2,122.9	2,661.5	5,935.1	2,742.6	8,677.7	11,339.1
30 June 2028	534.1	2,036.4	2,570.6	6,124.1	2,688.0	8,812.2	11,382.8
30 June 2029	528.2	1,947.5	2,475.7	6,293.6	2,628.7	8,922.3	11,398.0
30 June 2030	521.0	1,856.3	2,377.3	6,442.0	2,565.2	9,007.2	11,384.5
30 June 2031	512.4	1,763.3	2,275.7	6,569.2	2,497.4	9,066.5	11,342.3
30 June 2032	502.8	1,668.9	2,171.7	6,673.3	2,424.7	9,098.0	11,269.6
30 June 2033	492.1	1,573.4	2,065.5	6,753.2	2,348.5	9,101.8	11,167.3
30 June 2034	480.5	1,477.4	1,957.9	6,810.9	2,267.6	9,078.6	11,036.5
30 June 2035	468.0	1,381.3	1,849.3	6,843.7	2,183.2	9,026.9	10,876.2

PROJECTION OF ACCRUED SUPERANNUATION LIABILITIES (DISCLOSURES)							
Liabilities as at		CSS ($M)			PSS ($M)		Total ($M)
	Actives	Inactives	Total	Actives	Inactives	Total	
30 June 2036	454.7	1,285.6	1,740.3	6,851.6	2,096.0	8,947.6	10,687.9
30 June 2037	440.6	1,190.9	1,631.5	6,834.4	2,006.6	8,841.0	10,472.5
30 June 2038	425.7	1,097.7	1,523.3	6,793.3	1,914.9	8,708.2	10,231.5
30 June 2039	410.0	1,006.4	1,416.4	6,729.1	1,822.0	8,551.1	9,967.5
30 June 2040	393.7	917.5	1,311.2	6,642.1	1,728.2	8,370.3	9,681.5
30 June 2041	376.7	831.7	1,208.4	6,533.8	1,634.0	8,167.8	9,376.2
30 June 2042	359.1	749.3	1,108.4	6,404.7	1,540.1	7,944.8	9,053.2
30 June 2043	341.0	670.7	1,011.7	6,255.6	1,446.9	7,702.5	8,714.2
30 June 2044	322.4	596.4	918.7	6,090.2	1,355.1	7,445.3	8,364.0
30 June 2045	303.3	526.5	829.8	5,908.7	1,265.0	7,173.6	8,003.4
30 June 2046	284.0	461.4	745.4	5,712.8	1,176.9	6,889.7	7,635.0
30 June 2047	264.4	401.2	665.6	5,504.4	1,091.7	6,596.1	7,261.6
30 June 2048	244.7	345.9	590.6	5,285.4	1,009.9	6,295.2	6,885.9
30 June 2049	225.0	295.7	520.7	5,058.9	931.8	5,990.8	6,511.5
30 June 2050	205.5	250.3	455.9	4,825.7	857.5	5,683.3	6,139.1
30 June 2051	186.3	209.8	396.1	4,587.3	787.0	5,374.3	5,770.5
30 June 2052	167.5	174.0	341.5	4,345.3	720.4	5,065.7	5,407.2
30 June 2053	149.3	142.6	291.9	4,101.6	657.8	4,759.5	5,051.4
30 June 2054	131.8	115.5	247.3	3,856.1	599.1	4,455.2	4,702.5
30 June 2055	115.1	92.3	207.4	3,610.5	544.1	4,154.6	4,362.0
30 June 2056	99.4	72.7	172.1	3,365.8	492.7	3,858.5	4,030.7
30 June 2057	84.8	56.4	141.3	3,123.3	444.7	3,568.1	3,709.3
30 June 2058	71.4	43.1	114.5	2,884.1	400.0	3,284.1	3,398.6

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 2019	8.1	231.2	239.2	98.3	205.7	303.9
30 June 2020	6.0	216.9	222.9	97.0	217.6	314.7
30 June 2021	4.3	206.3	210.6	95.6	226.1	321.8
30 June 2022	3.3	196.3	199.5	94.0	234.1	328.1
30 June 2023	2.4	186.9	189.3	92.2	241.6	333.8
30 June 2024	1.7	177.6	179.4	90.1	248.6	338.7
30 June 2025	1.2	168.2	169.4	87.9	254.9	342.8
30 June 2026	0.8	158.7	159.5	85.4	260.6	346.1
30 June 2027	0.6	149.0	149.6	82.9	265.7	348.6
30 June 2028	0.4	139.7	140.1	80.2	270.0	350.2
30 June 2029	0.3	130.1	130.4	77.3	273.6	350.9
30 June 2030	0.2	120.6	120.8	74.4	276.5	350.8
30 June 2031	0.1	111.2	111.2	71.3	278.5	349.8
30 June 2032	0.0	101.7	101.8	68.1	279.8	347.9
30 June 2033	0.0	92.5	92.5	64.9	278.6	343.5
30 June 2034	0.0	83.3	83.3	61.6	279.7	341.4
30 June 2035	0.0	74.4	74.4	58.3	278.5	336.8
30 June 2036	0.0	65.7	65.7	55.0	276.3	331.3

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 2037	0.0	57.3	57.3	51.7	273.4	325.0
30 June 2038	-	49.4	49.4	48.3	269.3	317.6
30 June 2039	-	42.0	42.0	45.0	265.0	310.1
30 June 2040	-	35.1	35.1	41.8	259.7	301.5
30 June 2041	-	28.8	28.8	38.6	253.8	292.4
30 June 2042	-	23.1	23.1	35.5	247.2	282.7
30 June 2043	-	18.1	18.1	32.5	238.7	271.2
30 June 2044	-	13.7	13.7	29.6	232.3	261.9
30 June 2045	-	10.0	10.0	26.8	224.1	250.9
30 June 2046	-	7.0	7.0	24.1	215.6	239.7
30 June 2047	-	4.6	4.6	21.6	206.7	228.3
30 June 2048	-	2.7	2.7	19.3	196.4	215.7
30 June 2049	-	1.4	1.4	17.0	188.3	205.3
30 June 2050	-	0.6	0.6	15.0	178.9	193.8
30 June 2051	-	0.1	0.1	13.1	169.4	182.5
30 June 2052	-	-	-	11.3	160.0	171.3
30 June 2053	-	-	-	9.7	151.1	160.9
30 June 2054	-	0.0	0.0	8.3	141.2	149.5
30 June 2055	-	0.0	0.0	7.0	131.9	138.9
30 June 2056	-	0.0	0.0	5.8	122.8	128.6
30 June 2057	-	0.0	0.0	4.8	113.8	118.6
30 June 2058	-	0.0	0.0	3.9	105.0	108.9

** 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 2019^	4.998	33.339	131.688	90.715	2.183	6.147	269.070
30 June 2020	4.699	33.680	137.205	103.949	1.919	6.943	288.395
30 June 2021	7.488	43.787	138.733	105.558	2.761	7.921	306.248
30 June 2022	10.187	55.568	140.132	107.132	3.656	10.336	327.011
30 June 2023	12.392	67.128	141.365	108.628	4.346	12.127	345.986
30 June 2024	14.564	79.841	142.408	110.070	4.748	13.824	365.455
30 June 2025	16.579	93.738	143.224	111.419	5.108	16.128	386.195
30 June 2026	18.352	107.530	143.802	112.629	5.509	18.103	405.924
30 June 2027	19.937	122.524	144.102	113.741	5.844	20.950	427.098
30 June 2028	21.259	137.419	144.093	114.668	6.110	23.070	446.620
30 June 2029	22.446	152.864	143.742	115.416	6.273	25.340	466.081
30 June 2030	23.505	169.124	143.018	115.964	6.422	27.096	485.128
30 June 2031	24.435	184.934	141.891	116.256	6.564	29.165	503.245
30 June 2032	25.237	201.986	140.334	116.261	6.696	31.826	522.340
30 June 2033	25.921	217.988	138.321	115.943	6.815	33.309	538.296
30 June 2034	26.523	234.606	135.833	115.270	6.922	36.369	555.522
30 June 2035	27.034	251.906	132.861	114.211	7.025	38.422	571.458
30 June 2036	27.476	268.511	129.401	112.737	7.124	40.047	585.296

^ Actual annual payment amount agreed with the Commonwealth Government for the 2018/19 financial year, based on the Emerging Cost Payment estimate (Budget) from the 2017 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 2037	27.855	285.050	125.458	110.827	7.215	41.385	597.790
30 June 2038	28.169	299.669	121.043	108.464	7.299	43.310	607.953
30 June 2039	28.431	313.994	116.170	105.636	7.372	44.519	616.123
30 June 2040	28.638	327.454	110.868	102.340	7.434	45.862	622.596
30 June 2041	28.784	339.363	105.171	98.584	7.483	47.109	626.494
30 June 2042	28.864	350.733	99.132	94.386	7.515	48.133	628.764
30 June 2043	28.870	360.081	92.808	89.778	7.529	49.227	628.293
30 June 2044	28.794	368.459	86.266	84.799	7.519	49.954	625.791
30 June 2045	28.628	375.487	79.581	79.506	7.483	50.771	621.455
30 June 2046	28.362	381.021	72.835	73.964	7.416	51.531	615.129
30 June 2047	27.985	384.874	66.122	68.247	7.316	51.723	606.267
30 June 2048	27.488	386.038	59.520	62.434	7.180	51.553	594.212
30 June 2049	26.864	386.349	53.096	56.614	7.006	51.209	581.137
30 June 2050	26.110	385.253	46.912	50.871	6.791	50.851	566.788
30 June 2051	25.223	382.784	41.027	45.291	6.537	50.428	551.291
30 June 2052	24.207	378.932	35.486	39.950	6.244	49.715	534.535
30 June 2053	23.066	373.669	30.320	34.908	5.913	48.818	516.694
30 June 2054	21.807	367.447	25.568	30.226	5.544	47.777	498.369
30 June 2055	20.441	360.089	21.252	25.954	5.138	46.573	479.447
30 June 2056	18.980	351.548	17.398	22.106	4.704	45.190	459.926
30 June 2057	17.436	341.946	13.998	18.692	4.248	43.639	439.959
30 June 2058	15.828	331.279	11.065	15.703	3.779	41.929	419.584

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 2018/19 is based on the recommendation in the 30 June 2017 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 2018:

Emerging Cost (Surplus)/Deficit at 30 June 2018 (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	(0.564)	(0.564)	(132.165)	132.295	0.285	0.415
PSS	(8.509)	8.509	(118.984)	105.241	(0.010)	(13.753)
Total	**(9.073)**	**9.073**	**(251.149)**	**237.536**	**0.275**	**(13.338)**

Note (i): Surplus as at 30 June 2017, as estimated in the 2017 Triennial 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 2017/18 ($M)

	CSS	PSS	Total
Lump sum			
Contributors	-	3.956	3.956
Deferred Beneficiaries	0.049	4.966	5.015
Total Lump sum	**0.049**	**8.922**	**8.971**
Pension			
Current Pensioners	127.025	93.643	220.667
Dependent Pensioners	5.221	2.677	7.898
Total Pension	**132.246**	**96.319**	**228.565**
Total	**132.295**	**105.241**	**237.536**

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
45-49	16	117,232	28.23	77.9%	21	102,536	26.01	97.3%	37	108,891	26.97	88.9%
50-54	79	107,145	29.67	83.9%	86	120,539	25.93	80.7%	165	114,126	27.72	82.3%
55-59	32	108,560	27.90	88.1%	59	124,899	24.61	90.0%	91	119,153	25.77	89.3%
60-64	25	129,129	32.93	76.9%	38	110,235	28.07	86.3%	63	117,733	30.00	82.6%
65 or over	10	94,633	34.62	87.0%	13	93,804	31.86	85.2%	23	94,164	33.06	85.9%
Total	**162**	**111,041**	**29.98**	**83.2%**	**217**	**116,576**	**26.31**	**86.1%**	**379**	**114,210**	**27.88**	**84.9%**

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	25	103,342	11.49	90.9%	39	96,370	9.85	87.9%	64	99,093	10.49	89.0%
35-39	183	104,797	12.62	86.4%	541	103,876	12.25	90.6%	724	104,109	12.35	89.5%
40-44	344	109,536	14.83	89.2%	713	107,231	13.24	89.4%	1,057	107,981	13.76	89.3%
45-49	470	114,973	16.20	88.6%	922	108,196	15.68	89.6%	1,392	110,484	15.86	89.3%
50-54	471	114,379	17.77	88.4%	791	108,215	16.43	88.7%	1,262	110,516	16.93	88.6%
55-59	408	117,302	19.03	89.9%	799	104,584	17.70	92.0%	1,207	108,883	18.15	91.3%
60-64	226	106,854	18.45	92.8%	426	101,428	17.95	95.8%	652	103,308	18.12	94.8%
65 or over	81	115,201	19.31	94.5%	133	99,928	18.75	95.6%	214	105,709	18.96	95.2%
Total	**2,208**	**112,632**	**16.84**	**89.4%**	**4,364**	**105,827**	**15.63**	**90.7%**	**6,572**	**108,113**	**16.03**	**90.3%**

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	11.10	60.9%	4	9.04	64.6%	7	9.92	63.0%
50-54	33	15.59	85.4%	36	15.25	82.1%	69	15.41	83.7%
55-59	28	18.12	69.2%	46	16.35	73.7%	74	17.02	72.0%
60-64	12	11.88	60.9%	22	10.88	68.7%	34	11.23	65.9%
65 or over	1	8.10	94.1%	1	6.84	100.0%	2	7.47	97.0%
Total	**77**	**15.66**	**74.8%**	**109**	**14.53**	**75.4%**	**186**	**15.00**	**75.2%**

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	1	2.60	100.0%	1	0.84	100.0%	2	1.72	100.0%
30-34	66	2.85	92.9%	61	2.51	84.8%	127	2.69	89.0%
35-39	285	3.35	93.1%	652	3.38	94.5%	937	3.37	94.1%
40-44	547	3.77	91.4%	1,042	3.96	93.2%	1,589	3.89	92.6%
45-49	761	4.41	89.7%	1,368	4.44	90.8%	2,129	4.43	90.4%
50-54	653	5.25	88.1%	1,265	5.05	87.3%	1,918	5.12	87.6%
55-59	485	5.36	84.6%	958	5.33	87.1%	1,443	5.34	86.3%
60-64	293	4.74	88.1%	490	4.66	92.0%	783	4.69	90.5%
65 or over	44	3.88	86.0%	66	3.12	88.7%	110	3.42	87.6%
Total	**3,135**	**4.52**	**89.1%**	**5,903**	**4.50**	**90.3%**	**9,038**	**4.50**	**89.9%**

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	4	91,663	22,916	96.5%	5	122,985	24,597	76.8%	9	214,648	23,850	85.6%
55-59	185	6,981,822	37,740	77.9%	164	5,457,660	33,278	76.8%	349	12,439,483	35,643	77.4%
60-64	365	11,813,295	32,365	69.0%	322	9,363,299	29,079	73.9%	687	21,176,594	30,825	71.3%
65-69	549	14,980,198	27,286	58.4%	625	15,962,765	25,540	73.3%	1,174	30,942,963	26,357	66.4%
70-74	597	12,258,806	20,534	51.1%	772	15,240,841	19,742	68.7%	1,369	27,499,646	20,087	61.0%
75-79	393	5,831,400	14,838	42.0%	590	8,075,965	13,688	56.0%	983	13,907,365	14,148	50.4%
80-84	244	2,462,979	10,094	37.2%	315	2,521,519	8,005	43.3%	559	4,984,499	8,917	40.6%
85-89	108	720,198	6,669	29.7%	116	677,339	5,839	30.4%	224	1,397,537	6,239	30.0%
90-94	22	67,506	3,068	15.0%	22	65,978	2,999	20.9%	44	133,484	3,034	17.9%
Total	**2,467**	**55,207,868**	**22,379**	**53.4%**	**2,931**	**57,488,352**	**19,614**	**63.6%**	**5,398**	**112,696,219**	**20,877**	**58.9%**

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	58	1,303,535	22,475	85.4%	80	1,436,779	17,960	89.6%	138	2,740,314	19,857	87.8%
55-59	123	4,515,522	36,712	87.9%	300	7,947,928	26,493	86.2%	423	12,463,450	29,464	86.7%
60-64	275	9,893,458	35,976	83.8%	784	22,905,986	29,217	93.3%	1,059	32,799,443	30,972	90.8%
65-69	388	10,731,911	27,660	82.1%	1,004	25,142,668	25,042	93.1%	1,392	35,874,580	25,772	90.0%
70-74	324	7,234,001	22,327	80.7%	658	13,038,115	19,815	88.2%	982	20,272,116	20,644	85.7%
75-79	153	2,506,544	16,383	79.7%	266	3,801,376	14,291	84.6%	419	6,307,920	15,055	82.8%
80-84	48	578,809	12,059	82.0%	76	711,121	9,357	81.3%	124	1,289,931	10,403	81.5%
85-89	10	46,834	4,683	70.3%	11	81,410	7,401	87.6%	21	128,244	6,107	79.3%
Total	**1,379**	**36,810,615**	**26,694**	**82.4%**	**3,179**	**75,065,383**	**23,613**	**90.4%**	**4,558**	**111,875,998**	**24,545**	**88.0%**

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	4	145,697	36,424	89.3%	5	131,519	26,304	78.9%	9	277,216	30,802	83.5%
55-59	9	264,903	29,434	68.2%	10	401,655	40,166	81.6%	19	666,558	35,082	75.3%
60-64	7	227,355	32,479	71.5%	15	387,334	25,822	66.8%	22	614,689	27,940	68.3%
65-69	21	457,008	21,762	64.5%	34	913,338	26,863	71.8%	55	1,370,346	24,915	69.0%
70-74	23	495,825	21,558	55.0%	27	628,537	23,279	76.0%	50	1,124,362	22,487	66.3%
75-79	16	212,303	13,269	44.4%	22	331,990	15,090	53.3%	38	544,293	14,324	49.5%
80-84	11	104,691	9,517	59.7%	16	112,813	7,051	27.9%	27	217,504	8,056	40.8%
85-89	5	17,622	3,524	15.8%	4	12,144	3,036	20.2%	9	29,766	3,307	17.7%
Total	**96**	**1,925,405**	**20,056**	**57.7%**	**133**	**2,919,330**	**21,950**	**63.2%**	**229**	**4,844,735**	**21,156**	**60.9%**

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	22	970,125	44,097	98.3%	38	1,479,312	38,929	93.8%	60	2,449,436	40,824	95.4%
55-59	21	683,715	32,558	92.0%	37	1,178,905	31,862	95.9%	58	1,862,620	32,114	94.5%
60-64	20	470,484	23,524	91.4%	53	1,438,442	27,140	94.1%	73	1,908,926	26,150	93.3%
65-69	23	426,341	18,537	76.5%	39	788,842	20,227	92.6%	62	1,215,183	19,600	86.6%
70-74	14	189,546	13,539	82.6%	21	282,477	13,451	83.6%	35	472,023	13,486	83.2%
75-79	3	19,225	6,408	71.0%	8	71,343	8,918	83.4%	11	90,568	8,233	80.0%
Total	**103**	**2,759,435**	**26,791**	**87.9%**	**196**	**5,239,322**	**26,731**	**92.5%**	**299**	**7,998,756**	**26,752**	**90.9%**

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	25,254	12,627	74.0%	10	179,380	17,938	69.6%	12	204,634	17,053	70.3%
55-59	2	27,618	13,809	63.5%	22	297,818	13,537	64.6%	24	325,436	13,560	64.5%
60-64	8	111,960	13,995	54.1%	41	532,017	12,976	57.1%	49	643,976	13,142	56.6%
65-69	18	229,594	12,755	68.0%	73	965,538	13,227	53.9%	91	1,195,132	13,133	56.7%
70-74	36	419,020	11,639	60.3%	77	806,003	10,468	48.6%	113	1,225,024	10,841	52.4%
75-79	36	354,478	9,847	51.4%	82	549,154	6,697	41.1%	118	903,631	7,658	44.3%
80-84	33	162,456	4,923	46.5%	61	255,357	4,186	29.2%	94	417,814	4,445	35.3%
85-89	18	95,242	5,291	47.1%	37	110,750	2,993	28.7%	55	205,993	3,745	34.7%
90-94	3	7,404	2,468	20.8%	2	4,609	2,304	12.8%	5	12,013	2,403	17.6%
95-99	1	754	754	11.8%	1	1,089	1,089	7.5%	2	1,843	921	9.6%
Total	**157**	**1,433,780**	**9,132**	**53.6%**	**406**	**3,701,714**	**9,118**	**45.3%**	**563**	**5,135,494**	**9,122**	**47.6%**

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	330,635	20,665	96.2%	17	345,354	20,315	97.0%	33	675,989	20,485	96.6%
55-59	8	144,107	18,013	100.0%	21	379,072	18,051	83.8%	29	523,179	18,041	88.3%
60-64	5	63,505	12,701	90.1%	13	180,053	13,850	74.7%	18	243,558	13,531	79.0%
65-69	18	192,658	10,703	97.3%	20	281,516	14,076	74.8%	38	474,174	12,478	85.4%
70-74	24	298,672	12,445	91.6%	37	378,629	10,233	74.2%	61	677,301	11,103	81.0%
75-79	16	190,534	11,908	94.2%	19	149,879	7,888	73.4%	35	340,412	9,726	82.9%
80-84	6	68,347	11,391	86.2%	8	54,450	6,806	81.4%	14	122,797	8,771	83.4%
85-89	2	5,275	2,637	71.6%	1	3,595	3,595	13.6%	3	8,870	2,957	52.2%
90-94	1	6,616	6,616	78.4%	1	13,067	13,067	100.0%	2	19,683	9,841	89.2%
Total	**96**	**1,300,349**	**13,545**	**93.6%**	**137**	**1,785,614**	**13,034**	**78.7%**	**233**	**3,085,963**	**13,244**	**84.8%**

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	12	120,052	27.21	31.0%	16	119,384	27.35	26.5%	28	119,670	27.29	28.4%
50-54	47	123,138	28.19	19.0%	52	128,580	27.04	24.1%	99	125,997	27.58	21.7%
55-59	19	159,874	30.28	20.3%	21	141,774	26.89	25.2%	40	150,372	28.50	22.9%
60-64	16	154,051	33.11	24.0%	9	173,237	31.05	30.5%	25	160,958	32.37	26.3%
65 or over	0	0	0.00	0.0%	1	114,579	28.55	17.5%	1	114,579	28.55	17.5%
Total	**94**	**135,431**	**29.32**	**21.6%**	**99**	**133,811**	**27.44**	**25.2%**	**193**	**134,600**	**28.36**	**23.5%**

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
30-34	17	95,702	11.38	21.3%	37	89,370	11.20	27.4%	54	91,364	11.26	25.5%
35-39	88	110,310	11.61	23.1%	247	106,410	12.18	20.7%	335	107,435	12.03	21.4%
40-44	198	115,632	13.68	23.3%	332	108,585	14.21	21.6%	530	111,218	14.01	22.3%
45-49	247	120,856	15.80	23.1%	430	111,247	15.77	24.3%	677	114,753	15.78	23.8%
50-54	213	123,831	16.49	21.8%	377	111,802	15.91	25.7%	590	116,144	16.12	24.3%
55-59	172	118,828	15.43	23.7%	269	110,401	16.04	25.0%	441	113,687	15.80	24.5%
60-64	43	115,017	17.09	26.0%	111	109,320	16.54	24.6%	154	110,911	16.69	25.0%
65 or over	22	98,607	15.89	19.0%	15	103,957	16.99	29.6%	37	100,776	16.34	23.3%
Total	**1,000**	**118,010**	**15.08**	**23.0%**	**1,818**	**109,470**	**15.03**	**23.8%**	**2,818**	**112,501**	**15.05**	**23.5%**

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	1	24.79	32.6%	4	11.75	17.8%	5	14.36	20.8%
50-54	18	16.49	22.8%	24	14.16	28.9%	42	15.16	26.3%
55-59	6	14.60	9.1%	6	14.88	20.8%	12	14.74	14.9%
60-64	6	14.22	14.0%	3	11.20	26.2%	9	13.21	18.1%
65 or over	0	0.00	0.0%	0	0.00	0.0%	0	0.00	0.0%
Total	**31**	**15.95**	**18.7%**	**37**	**13.78**	**26.2%**	**68**	**14.77**	**22.8%**

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	11	2.87	29.6%	23	3.44	45.5%	34	3.25	40.4%
35-39	81	4.67	40.8%	146	4.65	38.8%	227	4.65	39.5%
40-44	175	4.41	40.9%	254	5.21	42.5%	429	4.88	41.8%
45-49	205	5.73	40.2%	388	5.90	39.1%	593	5.84	39.5%
50-54	176	6.02	37.7%	313	6.31	41.1%	489	6.21	39.8%
55-59	107	6.46	35.6%	208	6.59	39.6%	315	6.54	38.3%
60-64	54	4.44	43.7%	75	3.40	47.6%	129	3.84	46.0%
65 or over	7	2.94	41.3%	4	2.68	46.0%	11	2.84	43.0%
Total	**816**	**5.35**	**39.4%**	**1,411**	**5.66**	**40.8%**	**2,227**	**5.55**	**40.3%**

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	1	804	804	5.2%	7	24,373	3,482	15.5%	8	25,177	3,147	14.2%
55-59	83	1,118,857	13,480	26.6%	91	1,140,009	12,528	28.9%	174	2,258,866	12,982	27.8%
60-64	134	1,595,432	11,906	24.2%	110	1,187,451	10,795	27.6%	244	2,782,883	11,405	25.7%
65-69	135	1,262,383	9,351	17.3%	171	1,780,768	10,414	26.0%	306	3,043,150	9,945	22.1%
70-74	89	446,725	5,019	12.6%	125	702,384	5,619	16.2%	214	1,149,109	5,370	14.7%
75-79	40	206,347	5,159	12.2%	45	179,856	3,997	15.7%	85	386,202	4,544	14.1%
80-84	10	25,285	2,529	6.9%	9	20,882	2,320	12.0%	19	46,167	2,430	9.3%
85-89	0	0	0	0.0%	1	1,896	1,896	9.4%	1	1,896	1,896	9.4%
Total	**492**	**4,655,832**	**9,463**	**19.2%**	**559**	**5,037,618**	**9,012**	**23.4%**	**1,051**	**9,693,450**	**9,223**	**21.4%**

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	86	585,730	6,811	21.5%	144	939,483	6,524	21.8%	230	1,525,213	6,631	21.7%
55-59	99	1,004,028	10,142	23.2%	188	1,679,631	8,934	25.7%	287	2,683,659	9,351	24.8%
60-64	133	1,438,610	10,817	25.9%	305	2,813,883	9,226	29.3%	438	4,252,493	9,709	28.3%
65-69	111	777,452	7,004	25.8%	272	2,392,210	8,795	30.6%	383	3,169,663	8,276	29.2%
70-74	77	570,150	7,405	24.9%	118	708,037	6,000	24.0%	195	1,278,187	6,555	24.4%
75-79	24	82,325	3,430	16.4%	28	98,665	3,524	23.3%	52	180,991	3,481	20.1%
80-84	4	27,353	6,838	25.9%	2	9,148	4,574	34.9%	6	36,501	6,083	28.9%
Total	**534**	**4,485,648**	**8,400**	**24.1%**	**1,057**	**8,641,058**	**8,175**	**27.2%**	**1,591**	**13,126,706**	**8,251**	**26.2%**

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	18,633	6,211	14.1%	2	22,131	11,066	32.3%	5	40,764	8,153	21.4%
55-59	0	0	0	0.0%	4	28,923	7,231	18.1%	4	28,923	7,231	18.1%
60-64	1	256	256	0.7%	2	62,014	31,007	57.2%	3	62,270	20,757	38.3%
65-69	3	20,178	6,726	14.8%	1	874	874	1.9%	4	21,052	5,263	11.6%
70-74	1	6,268	6,268	12.2%	3	34,718	11,573	26.9%	4	40,986	10,246	23.2%
75-79	1	2,264	2,264	6.7%	0	0	0	0.0%	1	2,264	2,264	6.7%
85-89	0	0	0	0.0%	1	1,790	1,790	10.9%	1	1,790	1,790	10.9%
Total	**9**	**47,598**	**5,289**	**11.8%**	**13**	**150,450**	**11,573**	**26.5%**	**22**	**198,048**	**9,002**	**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	10	82,245	8,224	12.6%	23	222,103	9,657	22.1%	33	304,348	9,223	19.3%
55-59	7	64,347	9,192	16.4%	9	89,021	9,891	25.5%	16	153,368	9,585	21.5%
60-64	5	29,835	5,967	14.8%	13	158,420	12,186	23.2%	18	188,254	10,459	20.9%
65-69	2	10,883	5,442	45.1%	4	12,930	3,232	14.8%	6	23,813	3,969	24.9%
70-74	2	6,216	3,108	12.7%	1	3,003	3,003	13.2%	3	9,219	3,073	12.8%
Total	**26**	**193,525**	**7,443**	**16.5%**	**50**	**485,477**	**9,710**	**22.3%**	**76**	**679,002**	**8,934**	**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	1	482	482	1.3%	5	9,753	1,951	12.3%	6	10,234	1,706	10.5%
55-59	2	21,769	10,884	21.9%	6	12,467	2,078	16.3%	8	34,236	4,280	17.7%
60-64	3	9,643	3,214	39.9%	9	42,406	4,712	16.4%	12	52,049	4,337	22.3%
65-69	4	24,624	6,156	33.8%	14	31,646	2,260	13.0%	18	56,269	3,126	17.6%
70-74	1	6,502	6,502	28.4%	3	12,853	4,284	15.6%	4	19,356	4,839	18.8%
75-79	2	2,597	1,299	13.8%	4	11,209	2,802	14.0%	6	13,806	2,301	13.9%
80-84	3	3,727	1,242	12.2%	0	0	0	0.0%	3	3,727	1,242	12.2%
85-89	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
90-94	0	0	0	0.0%	1	547	547	8.3%	1	547	547	8.3%
Total	**16**	**69,344**	**4,334**	**24.5%**	**42**	**120,881**	**2,878**	**14.3%**	**58**	**190,225**	**3,280**	**17.1%**

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	9	55,824	6,203	18.3%	5	36,427	7,285	31.0%	14	92,251	6,589	22.9%
55-59	0	0	0	0.0%	8	46,055	5,757	18.7%	8	46,055	5,757	18.7%
60-64	3	21,494	7,165	36.9%	7	24,956	3,565	26.2%	10	46,449	4,645	29.4%
65-69	5	33,777	6,755	28.2%	5	12,008	2,402	18.0%	10	45,786	4,579	23.1%
70-74	8	44,050	5,506	19.7%	6	32,597	5,433	34.2%	14	76,647	5,475	25.9%
75-79	0	0	0	0.0%	1	1,380	1,380	16.7%	1	1,380	1,380	16.7%
Total	**25**	**155,146**	**6,206**	**23.0%**	**32**	**153,422**	**4,794**	**25.0%**	**57**	**308,567**	**5,413**	**24.1%**

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.