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PSS and CSS Long Term Cost Report 2023

A Report on the Long Term Cost of the Public Sector Superannuation Scheme and the Commonwealth Superannuation Scheme

Department of Finance

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A business of Marsh McLennan

Contents

Section 1

Executive Summary

We are pleased to present this report on the actuarial investigation of the long term costs of the Public Sector Superannuation Scheme (PSS) and the Commonwealth Superannuation Scheme (CSS), prepared at the request of the Department of Finance. This report has been carried out based on membership data as at 30 June 2023.

Previous Long Term Cost Report

The previous actuarial investigation into the long term costs of the PSS and CSS was undertaken as at 30 June 2020 by Richard Boyfield, FIAA and Guy Holley, FIAA on behalf of Mercer Consulting (Australia) Pty Limited. The outcomes of that investigation are outlined in our report entitled *PSS and CSS Long Term Cost Report 2020*, dated 24 June 2021 (2020 LTCR).

Purpose of the Report

This report estimates the long term cost of providing superannuation benefits to members of the PSS and CSS and monitors progress of the unfunded defined benefit liability. The costs of the Schemes have been estimated in three ways:

- unfunded liability as at 30 June 2023;
- projected net annual outlays; and
- the notional employer contribution rates.

Unfunded Liability

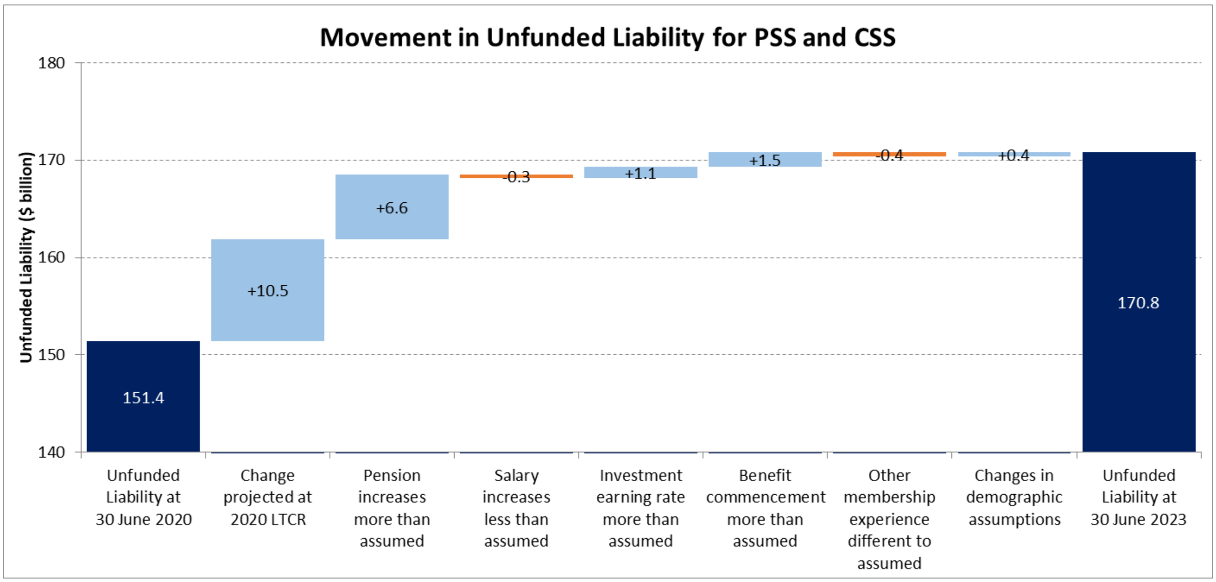
The unfunded liability represents an estimate of the present value of the benefit entitlements in respect of service already rendered, less the value of assets held by the Schemes. The unfunded liability relates to all employers in the Schemes, including entities that are no longer part of the Australian Government (i.e. the Australian National University and the ACT and NT Governments).

The total unfunded liability of the PSS and CSS at 30 June 2023 was $170.8. billion. This compares with the unfunded liability calculated as at 30 June 2020 of $151.4 billion.

The unfunded liability was expected to increase during the investigation period as further benefit accruals and notional interest on accrued liabilities were expected to more than outweigh the reduction in liabilities as a result of benefits payments.

The 2020 LTCR projected that the unfunded liability would be $161.9 billion as at 30 June 2023, $8.9 billion less than the current estimate.

The factors contributing to the change in the unfunded liability are quantified in the following chart:



Further details on the changes in demographic assumptions are provided in Section 4 and on the overall movement in the unfunded liability in Section 5.

Projected Outlays

The annual projected outlays represent the future net cash cost of PSS and CSS benefit payments to current and past employees and their dependants.

Projected outlays are calculated as:

- productivity superannuation contributions paid by employers to the PSS and CSS; plus
- benefit payments made from the Australian Government's Consolidated Revenue Fund (CRF); less
- transfers of Scheme assets in respect of an individual member to the CRF at the time that benefits first become payable.

The transfers of assets from the PSS to the CRF have been temporarily deferred. Deferred amounts remain invested in the PSS and accumulate with investment earnings until ultimately paid to the CRF. In this report, these are treated as an amount payable by the Scheme and are not shown as a net asset of the Scheme. The projected outlays make no allowance for timing differences arising from the deferral of transfers.

In addition, no allowance is made for the reimbursement of the CRF for benefit payments made in respect of service with an employer that is no longer part of the Australian Government. The Australian Government has arrangements in place to be reimbursed directly by those employers.

The projected outlays are expected to reduce as a percentage of projected Gross Domestic Product (GDP) from 0.28% in the year ending 30 June 2024 to 0.04% in the year ending 30 June 2063.

Further detail regarding the projected outlays is contained in Section 6 and Appendix E.

Notional Employer Contribution Rate

The notional employer contribution rate (NECR) represents the estimated contribution rate as a percentage of salary that would be required to finance the benefits accruing to contributors over the next three years (from 1 July 2023 to 30 June 2026). That is, if the Schemes were fully funded at the valuation date and contributions were made to the Schemes at the NECRs, the Schemes would be expected to remain fully funded at the end of the period.

The NECR is determined using long term assumptions as the rates are notional in nature. Only the productivity contribution component of the NECR is actually paid by the employers to the PSS and CSS to be invested as Scheme assets by the trustee.

The NECRs (including allowance for contributions towards the productivity superannuation benefit) are:

PSS	CSS	Combined
33.2	14.7	32.9

Further details are provided in Section 7.

Post Valuation Date Events

Economic activity and Scheme experience is expected to be volatile from year to year. Whilst this can have an impact on short term outcomes, the purpose of this report is to focus on the Scheme’s longer term costs and to enable comparison with the position at the previous valuation date. Over the long term, there will be periods where actual experience is either above or below the assumed long term averages.

We believe that the economic experience since the valuation date is within the normal expected range of variation and so will not materially affect the longer term projections.

The sensitivity analysis included in Section 8 is intended to demonstrate the potential impacts should actual experience remain above or below the long term assumptions.

Section 2

Scheme Information

The Commonwealth Superannuation Scheme (CSS) was established on 1 July 1976 by the *Superannuation Act 1976* (as amended). The CSS was closed to new members from 1 July 1990. All CSS contributors at 1 July 1990 were given the option of transferring to the Public Sector Superannuation Scheme (PSS). A further option to transfer to the PSS was provided for a limited period of time in 1996. The current membership of the CSS consists of current and former employees of the Australian Government, or participating employers, who were members on 30 June 1990 and who have not elected to transfer to the PSS.

Prior to July 1976, superannuation for Australian Government public servants was covered by the *Superannuation Act 1922* (the 1922 Scheme). Although contributors were transferred from the 1922 Scheme to the CSS on its establishment, some pensioners remain entitled to benefits under the 1922 Scheme. In this report, references to the CSS also include the 1922 Scheme, as the context requires. The liabilities in respect of pension payments under the 1922 Scheme are included in the results for the CSS.

The PSS was established on 1 July 1990 by the *Superannuation Act 1990* (as amended). Its operations are also governed by a Trust Deed dated 21 June 1990 (as amended). The PSS was closed to new members from 1 July 2005.

Most employees of Australian Government agencies who commence employment on or after 1 July 2005 are eligible to join the Public Sector Superannuation Accumulation Plan (PSSap). PSSap is an accumulation plan and is not considered further in this LTCR.

References in this report to the Scheme or Schemes refers to one or all of the CSS, PSS and 1922 Scheme.

Governance and Operations

The Australian Prudential Regulation Authority (APRA) is responsible for the licensing and supervision of regulated superannuation schemes.

The PSS and CSS are regulated superannuation funds and are required to comply with the *Superannuation Industry (Supervision) Act 1993* (SIS Act). The SIS Act governs the superannuation industry and provides the framework within which superannuation schemes operate.

APRA *Prudential Standard SPS 160 Defined Benefit Matters*, which relates to the prudential management of defined benefit funds, explicitly does not apply to either the PSS or the CSS. SPS 160 is primarily focused on fully funded private sector superannuation funds.

The Commonwealth Superannuation Corporation (CSC), a corporate Commonwealth entity established on 1 July 2011, is the trustee of the Schemes. CSC is responsible for:

- administration of the Schemes, including payment to beneficiaries when eligible in accordance with the rules of each Scheme;
- management and investment of the Schemes' assets;
- compliance with relevant law and other applicable regulations.

CSC is supported by a custodian and other specialist service providers.

Benefits

The PSS is a defined benefit scheme – benefits are generally linked to final average salary. The CSS is a hybrid accumulation-defined benefit scheme – some benefits are linked to final salary and other benefits are based on an accumulation of contributions with investment earnings.

Benefits payable from the CSS include a lifetime CPI indexed pension, and the option to choose between a lifetime non-indexed pension and a lump sum. The main retirement benefit is an employer-financed CPI indexed pension which is calculated by a set formula based on a member's length of contributory service, age and final salary. Members' basic contributions and employer productivity contributions, together with investment earnings, can be taken as a lump sum or an additional non-indexed lifetime pension. The non-indexed pension is calculated by converting accumulated contributions using age-based conversion factors.

The primary benefit from the PSS is expressed as a lump sum and is calculated based on the member's length of contributory service, their rate of member contributions and final average salary (average of a member's superannuation salary on their last three birthdays). Generally, members can convert 50% or more of their lump sum to a lifetime CPI indexed pension. The indexed pension is calculated by converting the lump sum benefit using age-based conversion factors.

Benefits may also be payable to a surviving eligible spouse and children on the death of a member or pensioner.

Further details of the benefits are set out in Appendix A.

Funding and Scheme Assets

The PSS and CSS are partially funded to the extent that member and employer productivity superannuation contributions are paid to, and invested by, the trustee.

The unfunded liability is that portion of the total accrued superannuation liability in excess of the assets held in the Schemes.

In general, when a member becomes entitled to a benefit, the amounts held in the PSS or CSS for the member (i.e. member and productivity contributions, accumulated with investment earnings) are transferred to the CRF, and all benefit payments are made to the member from the CRF.

Transfers of assets from the PSS to the CRF have temporarily been deferred. As at 30 June 2023, the total deferred amount was $2.7 billion. The deferred transfer amount has been excluded from the value of net assets shown in the Scheme's audited financial statements and is not treated as an asset of the Schemes in this report.

Arrangements exist for the direct reimbursement of the CRF for benefit payments made in respect of service with an employer that is no longer part of the Australian Government (i.e. long serving employees of the Australian National University and the ACT and NT Governments).

The assets of the Australian Government's Future Fund are ultimately intended to contribute towards the financing of the unfunded superannuation liabilities in the PSS and CSS, as well as other unfunded schemes. However, since these assets are not held by the Schemes, no allowance has been made for the Future Fund in this report.

The change in the net assets of each Scheme is summarised below:

	PSS ($ billion)	CSS ($ billion)	Combined ($ billion)
Net Assets at 30 June 2020	**20.4**	**2.0**	**22.4**
Investment revenue	+4.7	+0.3	+5.0
Member contributions	+1.7	+0.1	+1.8
Employer productivity contributions	+0.5	+0.0	+0.5
Net appropriation from Consolidated Revenue Fund	+4.8	+12.8	+17.6
Benefits paid	-9.6	-14.0	-23.6
Income tax	-0.1	-0.0	-0.1
Net Assets at 30 June 2023	**22.4**	**1.2**	**23.6**

Source: Audited PSS and CSS financial statements for the years ended 30 June 2021, 30 June 2022, and 30 June 2023.

Investment and Earning Rate Policy

For PSS contributors, the primary benefit is a defined benefit based on service and final average salary. It does not depend on investment earnings. Member contributions and employer productivity contributions, accumulated with investment earnings, are normally paid from the PSS into the CRF at the time that a benefit first becomes payable to a member and offset the cost of benefit payments from the CRF. Hence, positive investment returns reduce the cost of the Schemes to the Australian Government.

For preserved PSS members, and CSS contributors and deferred members, the member and employer productivity contributions are accumulated with investment earnings, a significant proportion of which is expected to ultimately be converted to a pension benefit.

The accumulated contributions paid from the Schemes into the CRF for these members are generally lower than the expected value of the future pension payments to be made. Hence, positive investment returns for these members increase their benefit entitlements and the higher benefit entitlement, when converted to pension, will increase the cost to the Australian Government of providing the benefits.

The Schemes' assets are jointly invested in one pooled investment trust, with professional external investment managers responsible for the management of the investments. Assets for PSS contributors are invested in the Default investment option. Preserved PSS members, and CSS contributors and deferred members, may choose to invest in the Default option or a Cash option.

The trustee's investment objective for the Default option is to outperform the Consumer Price Index (CPI) by 3.5% per annum, after fees and taxes, over 10 years. To achieve this objective, a target asset allocation and asset allocation ranges are set. The current target allocation is:

Asset Class	Target Allocation	Target Range
Equities	57.0%	15-75%
Property	6.0%	0-25%
Infrastructure	7.0%	0-25%
Alternatives	5.0%	0-30%
Fixed interest	12.5%	0-65%
Cash	12.5%	0-65%

Source: Updates to the Product Disclosure Statements of PSS and CSS issued 1 March 2024.

We consider the trustee's current target asset allocation to be suitable, taking into account the nature and term of the Schemes' benefit liabilities and the Australian Government's approach to financing the benefits.

The earning rate applied to members' benefits is effectively the actual rate of investment return. The earning rate policy is documented and included on the trustee's website. We consider the trustee's earning rate policy to be suitable.

Earning rates for the Default option over the three years to 30 June 2023 are shown in the table below:

Financial Year	PSS	CSS
2020-21	18.3%	18.4%
2021-22	-3.4%	-3.3%
2022-23	9.0%	9.3%
3-year average (per annum)	**7.6%**	**7.8%**

Source: CSC Annual Reports for the years 2020-21, 2021-22 and 2022-23.

While the assets of the PSS and CSS are invested in the same underlying investment pool, the actual rates of return may differ because of differences in the timing of cash flows.

Insurance Arrangements

Standard death and invalidity benefits in the PSS and CSS are self-insured. We consider this to be appropriate, given the unfunded nature of the Schemes, the credit rating of the Australian Government, the ability to spread any risk over a sizeable population, and that benefits are generally paid as a pension so that payments are spread over many years.

PSS contributors have the option of taking out additional death and invalidity cover. This additional benefit is covered by an insurance policy held between the trustee and an external commercial insurer. The cost of the insurance premiums is shared between the member and employer.

Changes to Benefits Since 2020

There have been a number of amendments to the Scheme rules since the 2020 LTCR as noted below, but these have not had a material impact on the value of the unfunded liability, projected outlays or NECRs.

- References in the *Superannuation Act 1922*, *Superannuation Act 1976* and *Superannuation Act 1990* to the *Family Law Act 1975* were updated via the *Family Law Amendment (Western Australia De Facto Superannuation Splitting and Bankruptcy) Act 2020*. The amendments provided for recognition of Western Australia de facto relationships for family law splitting purposes including by amending the definition of the family law value, member and non-member spouse and the operative time.
- The Public Sector Superannuation Scheme Trust Deed was amended by the *Superannuation Amendment (PSS Trust Deed) Instrument 2021* to support the implementation of superannuation splitting for separating de facto couples in Western Australia.
- The Public Sector Superannuation Scheme Trust Deed was amended by the *Superannuation Amendment (PSS Trust Deed) Instrument 2021 (No.2)* to remove rules or parts that had no ongoing application, to make minor clarifying amendments to some rules and to provide for interest to be payable on amounts payable from the PSS to the CRF that are deferred.
- The *Superannuation (CSS) Salary Amendment (Housing Allowance and Rent-free Housing) Regulations 2022* prospectively amended the default definition of salary to not include the value of rent-free housing.
- The *Public Sector Superannuation Salary Legislation Amendment Act 2022* clarified that individuals who were provided with rent-free housing on and after 1 July 1986 do not have the value of that housing included in their default CSS super salary.

Section 3
Membership and Data

Data relating to the membership of the PSS and CSS was provided to us by the Commonwealth Superannuation Corporation (CSC), the Schemes' administrator and trustee. Membership is grouped into three broad categories:

Contributors	Deferred / Preserved	Pensioners
Currently employed by a participating Scheme employer and a member of the Scheme.	No longer employed by a participating employer but maintains an account within the Scheme. Can generally recommence contributions if re-employed by a participating employer.	Members in receipt of a pension benefit. Includes dependants who are the eligible spouses and/or children of deceased members or pensioners.

Detailed membership data provided for the purposes of this investigation included:

- benefit entitlements for all contributors, deferred/preserved members and pensioners of the PSS and CSS as at 30 June 2023; and
- contributor and deferred/preserved member exits from the PSS and CSS during the three year period from 1 July 2020 to 30 June 2023.

Following a family law split, an associate record may be established for the former spouse. For the purposes of this investigation, associate records are classified as deferred/preserved members if the entitlement is yet to be paid, or as dependant pensioners if a pension is being paid.

A range of validity data checks is conducted by CSC prior to the data being provided to Mercer. Mercer has reviewed the data for internal consistency and has conducted a range of general reasonableness checks, including member movements, changes in salary and account balances, benefit payments and accruals, but has not verified or audited any of the information provided. We are satisfied that the data is sufficiently accurate for the purpose of this report. If any of the data is subsequently amended (for example, salary amounts or service dates), this will have an impact on members' benefits, projected outlays, and the value of the unfunded liability. The Schemes' administrator and trustee are ultimately responsible for the validity, accuracy and comprehensiveness of this information.

The number of Scheme members as at 30 June 2023 is summarised below:

Headcount	CSS	PSS	Total
Contributors	1,333	54,870	56,203
Deferred / Preserved	2,028	88,268	90,296
Primary Pensioners	74,621*	68,007	142,628
Dependant Pensioners	22,592*	3,648	26,240
Total	**100,574**	**214,793**	**315,367**

* Including members of the 1922 Scheme.

As at 30 June 2023, over half of the Schemes' members were pensioners. The total annual pension payments were $8.0 billion per annum ($3.2 billion for PSS and $4.8 billion for CSS).

Further detail of the membership is set out in Appendix B.

Section 4
Assumptions

In order to value the liabilities, it is necessary to make assumptions regarding the incidence, timing and amount of future benefits. These assumptions fall into two broad categories:

- economic assumptions: relating to the general economic environment and not directly to the membership of the Scheme; and
- demographic assumptions: relating to the experience of the membership of the Scheme.

This section sets out the assumptions used in this report and highlights any changes from those used for the 2020 LTCR. The assumptions are detailed in Appendix D.

While there were no changes to the economic assumptions, the changes in demographic assumptions resulted in an increase in the unfunded liability of $0.4 billion, or +0.2%, as at 30 June 2023.

Economic Assumptions

Key Economic Assumptions

The key economic assumptions include:

- future increases in the Consumer Price Index (CPI) which determines the level of pension increases;
- future increases in salaries (other than those arising from promotions); and
- future rate of investment return / discount rate.

The relationship between the assumptions has a greater bearing on the long term cost estimates of the PSS and CSS than do the individual assumptions themselves. This is due to the effect of one assumption being used to project the liability into the future (future pension and salary increases) and the other assumption being used to discount that liability to current day values (discount rate).

It is therefore the 'gap' between these assumptions that determines the value placed on benefit liabilities i.e. discount rate less CPI and discount rate less rate of salary increases.

Frequent changes in economic assumptions are undesirable since they can overwhelm any examination of the impact of changes in experience or scheme design and impede the understanding of the long term cost of the Schemes. Changes to economic assumptions for the purposes of preparing LTCRs are therefore only expected to be made if there is a material shift in the expectations for economic conditions.

The principles applied in setting the economic assumptions are:

1. These should be based on realistic long term future expectations over the term of the Schemes' liabilities, based on economic forecasts;
2. These should be stable over time, only changing when there has been a material change in long term expectations;
3. These should recognise the interrelationships between the assumptions; and
4. These will take into account short term considerations only where there is a compelling reason to do so.

For the purpose of this LTCR, we have not adopted different economic assumptions for the short term and long term. To adopt, for example, short term inflation assumptions would necessitate the use of other short term assumptions (e.g. salary increases and discount rates). However, as noted above, it is the relationships or 'gap' between the assumptions that determines the value placed on benefit liabilities. Whilst in the short term these rates may vary, in the longer term we expect the relationships to remain stable. Use of short term assumptions may be appropriate for other purposes.

The key economic assumptions remain unchanged from the 2020 LTCR and are set out in the table below:

Assumption as at	30 June 2023	30 June 2020
CPI increases	2.5% per annum	2.5% per annum
General salary increases	3.5% per annum (i.e. 1.0% per annum real)	3.5% per annum (i.e. 1.0% per annum real)
Investment return / discount rate	5.0% per annum (i.e. 2.5% per annum real)	5.0% per annum (i.e. 2.5% per annum real)

Section 8 provides sensitivity analysis of the results under different individual assumptions.

CPI Increases

The assumed long term rate of future increases in the Consumer Price Index (CPI) remains at 2.5% per annum. This rate is set based on the following considerations:

- The Reserve Bank target for CPI increase is 2% to 3% per annum on average, over the medium term.
- The long term assumption for consumer price inflation in the 2023 Intergenerational Report and latest government forecasts is 2.5% per annum.
- Mercer's best estimate of the long term economic outlook for CPI is 2.5% per annum and this is consistent with other market forecasters.

General Salary Increases

The assumed rate for long term future general salary increases (i.e. excluding promotional salary increases) remains at 3.5% per annum (nominal) or 1% per annum (real). This rate is set based on the following considerations:

- Historical rates of salary growth have exceeded 1% per annum above CPI but in more recent periods been below. Government projections expect salary growth to return to CPI + 1% over the forward estimates and potentially exceeding this rate in the longer term.
- This rate of increase is consistent with latest market expectations from a range of economic forecasters and Mercer's long-term modelling.
- The duration of salary linked liabilities is considerably less than the duration of the liabilities for the Schemes as a whole since salary increases are only relevant to benefits while a member is in active service. Whilst the intention when setting assumptions for the long term is to not give too much weight to short term considerations, the shorter term nature of the salary linked liabilities means that short term factors have a greater significance than for the other economic assumptions.
- Wage growth is a function of spare capacity in the labour market, productivity growth, and inflationary expectations. The RBA's May 2024 Statement on Monetary Policy notes that the labour market is assessed to still be tighter than full employment and is easing only gradually.

Investment Return / Discount Rate

The discount rate is used to calculate the present value of projected future benefit payments and provide a summary measure of those cash flows. The unfunded liability represents the present value of the estimated future benefit payments in respect of service already rendered, less the value of Scheme assets. In isolation, a lower discount rate leads to a higher estimate of the unfunded liability, and vice versa.

The present value does not change the ultimate benefit payments, as these are dictated by actual experience, but does however provide a manageable way to assess and compare the value of expected future cash flows, expressed in today's dollars.

For consistency, the discount rate assumption is also used as the assumption for the rate of investment returns at which productivity and member contributions are accumulated for the period up to a member's retirement or exit.

The assumed investment return / discount rate has been set relative to the CPI assumption + 2.5% (i.e. 2.5% per annum real). This rate is set based on the following considerations:

- The Australian Government does not have an obligation to immediately finance the unfunded superannuation liability of the PSS and CSS. Financing is only required as and when benefit entitlements become payable. As the PSS and CSS are largely unfunded, our view is that the best determinant of the discount rate is by reference to the long term expectations for nominal GDP and the expected return on government bonds over the long term. This contrasts to a funded scheme where a discount rate is typically based on an assumption for the investment earning rate on the scheme's assets.

- The long term government bond yield would be the cost to the Australian Government were it to fund future benefit payments via borrowings. The long term expectations for nominal GDP growth essentially represents the earnings of the Government and so sets a reasonable limit on the rate that can be paid on any debt (all other things being equal).
- At the present time, we consider that a realistic expectation for long term GDP growth is likely to be in the order of 5.0% pa (see also next section on GDP) on the assumption that long term price inflation averages 2.5% pa. Increases in productivity and the number of hours worked are assumed to contribute to the growth above CPI.

Whilst this LTCR does not consider the assets of the Australian Government's Future Fund, we note that the current benchmark investment return for the Future Fund is, as set out in the Future Fund Investment Mandate Direction 2017, an average return of at least the Consumer Price Index (CPI) + 4 to 5 per cent per annum over the long term. This is higher than the investment return / discount rate assumption used for this LTCR. If the interest rate / discount rate assumption was higher, the measure of the unfunded liability would be lower. This is demonstrated in the sensitivity analysis presented in Section 8.

GDP

The Department of Treasury has supplied projections of nominal Gross Domestic Product (GDP) specifically for the purposes of this LTCR using assumptions for CPI increases and wages growth consistent with those set out above. These are not official Treasury projections of GDP but enable the unfunded liability and projected outlays to be compared relative to GDP over time on a consistent basis. The projection of GDP has no effect on the measure of unfunded liability or projected outlays. GDP for the 2023-24 financial year is assumed to be $2.6 trillion. The assumed average future increases in GDP are shown below together with the assumptions from the 2020 LTCR:

Assumption as at	30 June 2023	30 June 2020
GDP increases*	5.0% per annum (nominal) 2.5% per annum (real)	5.0% per annum (nominal) 2.5% per annum (real)

* Average of the annual rates over the forty-year period from the investigation date.

Taxation

It is assumed that the current tax rate of 15% continues to apply to the Schemes' assessable income, including tax payable by the Schemes on employer productivity superannuation contributions.

Superannuation Guarantee

Allowance has been made for increases in the Superannuation Guarantee rate as legislated (currently 11% and increasing to 12% by 1 July 2025).

Demographic Assumptions

The demographic assumptions used for this LTCR incorporate the results of a detailed analysis of the membership experience. A summary of the analysis is shown in Appendix C.

The impact on the unfunded liability as at 30 June 2023 of changes made to the demographic assumptions since the 2020 LTCR is an overall increase of $0.4 billion or +0.2%.

Details of the demographic assumptions are set out in Appendix D.

Promotional Salary Increases

Salary increases consist of general salary increases due to salary inflation together with increases due to merit or promotion. General salary increases capture the average salary increase for all government employees, while promotional salary increases capture the increases due to promotion within and between employment bands.

The promotional salary increase assumptions are unchanged from the 2020 LTCR. The experience of the Schemes is generally consistent with an age-based trend for promotional salary increases in excess of general inflationary increases.

PSS Member Contribution Rates

The average rate at which PSS members elect to make contributions is shown to increase with age. These rates have no immediate effect on the value of the unfunded liability. However, the benefits accruing in future are dependent on the rate of members' contributions. The NECRs, projected outlays and the future estimated value of the unfunded liability are influenced by this assumption.

Scheme experience over the investigation period supports the continued use of the member contribution rates assumed for the 2020 LTCR.

Rates of Age Retirement

Assumed rates of contributor retirements have been increased from those used for the 2020 LTCR to match more closely the emerging experience.

There are several offsetting impacts of this change:

- There is a marginal increase in the projected pension payments in the short term but a reduction in pension payments and the future estimated value of the unfunded liability in the longer term. This is because the timing of benefit payments is brought forward, but future benefit accruals are curtailed.
- Amounts transferred from Scheme assets to the CRF will be slightly higher in the short term but lower in aggregate.
- There is a relatively small immediate increase in the unfunded liability.

Rates of Involuntary Retirement (Redundancy)

An assumption for involuntary retirement (redundancy) is required because benefits differ from those payable on voluntary resignation or age retirement and may also be paid immediately. The number of redundancies during the three-year investigation period was less than previously projected. However, the longer term experience has shown that this can be quite cyclical.

The rates of involuntary retirement (redundancy) experienced over the longer term are broadly consistent with the assumptions used for the 2020 LTCR. No change has therefore been made to these assumed rates.

Rates of Resignation

Assumed rates of resignation have become less significant for the projected results with the continued decline in the number of contributors. Assumed rates of resignation are unchanged from the 2020 LTCR.

Rates of Invalidity Retirement (Disablement)

Assumed rates of invalidity retirement (disablement) are unchanged from the 2020 LTCR.

Rates of Death for Contributors and Deferred / Preserved Members

Assumed rates of mortality for contributors and deferred/preserved members before retirement are unchanged from the 2020 LTCR.

Pensioner Mortality

The COVID19 pandemic appears to have had little impact on the overall number of deaths experienced by the Schemes' pensioners. The rates of pensioner mortality were broadly consistent with the assumptions used for the 2020 LTCR.

The assumed rates of pensioner mortality and future improvements (i.e. reductions) are unchanged from the 2020 LTCR.

Based on the mortality assumptions adopted for this investigation, an example of the number of additional years expected to be lived by an age retirement pensioner is shown in the table below:

Projected Future Life Expectancy	As at 30 June 2023	As at 30 June 2043
Male aged 65	22.9 years	24.0 years
Female aged 65	25.1 years	26.2 years

Rates of Deferral / Preservation of Benefits

Members who are made redundant are eligible to be paid pension benefits immediately and therefore have a different pattern of deferral / preservation compared to members leaving due to resignation.

The assumptions used for the 2020 LTCR were that 15% of PSS contributors who are made redundant would preserve their benefit and 85% elect an immediate benefit. All other contributors who resign or are made redundant were assumed to fully preserve or defer their benefit until retirement age, when retirement pension options are available. Scheme experience over the investigation period supports maintaining these assumptions.

Rates of Pension Take-up

For the 2020 LTCR, eligible PSS members were assumed to convert 90% of benefits to a pension. Scheme experience over the investigation period supports maintaining this assumption.

CSS members have the option to convert the funded portion of their benefits from a lump sum to a non-indexed lifetime pension. For the 2020 LTCR, it was assumed that 30% of members would elect to take their funded benefits as a non-indexed pension. This assumption has been maintained although it is now somewhat immaterial.

Spouse Assumptions

Assumptions relating to the proportions of members with a spouse and the age differences between members and their spouses are unchanged from the 2020 LTCR.

Future New Entrants

No allowance is made for future new entrants. The Schemes are closed to new members.

Section 5
Unfunded Liability

The unfunded liability represents the discounted present value of the estimated future benefit payments in respect of superannuation entitlements accrued by virtue of Scheme membership up to 30 June 2023, less the value of the assets of the Schemes.

Benefits are generally paid as lifetime pensions, commencing when members retire, and so they are spread over many years into the future. The present value represents the amount which would need to be set aside at the valuation date to provide for these benefits at the time they are payable, assuming that the valuation assumptions were borne out in practice.

Valuation Methodology

The steps involved in calculating the unfunded liability as at 30 June 2023 are as follows:

1. The membership of each Scheme as at 30 June 2023 is projected into the future based on assumptions relating to the rates of exit of members (as set out in Appendix D).

2. The total amount of benefits payable to the projected exits and pensioners in each future year are determined taking into account assumed member choices, salary growth, pension indexation, and investment returns in each future year.

   For contributory members, the projected benefits are determined based on members' service rendered prior to 30 June 2023 only.

   For example, for the PSS retirement benefit, this involves determining the benefit attributable to service to 30 June 2023 using:

$$\begin{array}{c}\text{Accrued Benefit Multiple}\\ \text{as at 30 June 2023}\end{array} \times \begin{array}{c}\text{Final Average Salary}\\ \text{at future date}\end{array}$$

3. The unfunded liability as at 30 June 2023 is determined as the sum of the present values of the projected benefits over all future years (being the total accrued liability), reduced by funded accumulated member and productivity contribution accounts as at 30 June 2023.

The calculation methodology is consistent with the requirements of Professional Standard No. 402 *"Determination of Accrued Benefits for Defined Benefit Superannuation Funds"* issued by the Institute of Actuaries of Australia.

The same methodology was used for the 2020 LTCR.

Results

The following table shows the unfunded liability as at 30 June 2023:

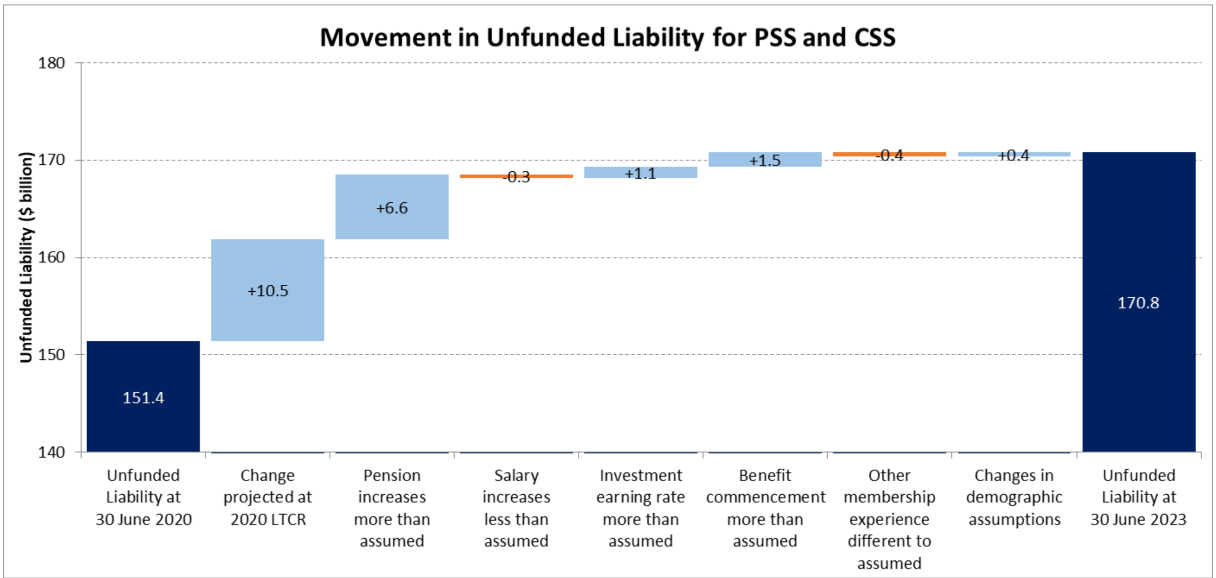
Unfunded Liability as at 30 June 2023	PSS ($ billion)	CSS ($ billion)	Combined ($ billion)
Contributors	35.9	1.9	37.8
Deferred / Preserved	10.1	1.9	12.0
Pensioners	56.4	64.6*	121.0
Total	**102.4**	**68.4**	**170.8**

* Includes $0.3 billion in respect of the 1922 Scheme.

Approximately 4% ($7 billion) of the total unfunded liability is estimated to be attributable to members' service with the Australian National University or the Governments of the ACT or NT.

Analysis of Change Compared with Previous Report

The 2020 LTCR projected that the unfunded liability would be $161.9 billion as at 30 June 2023, $8.9 billion less than the current estimate. The factors contributing to the change in the unfunded liability are quantified in the following chart:



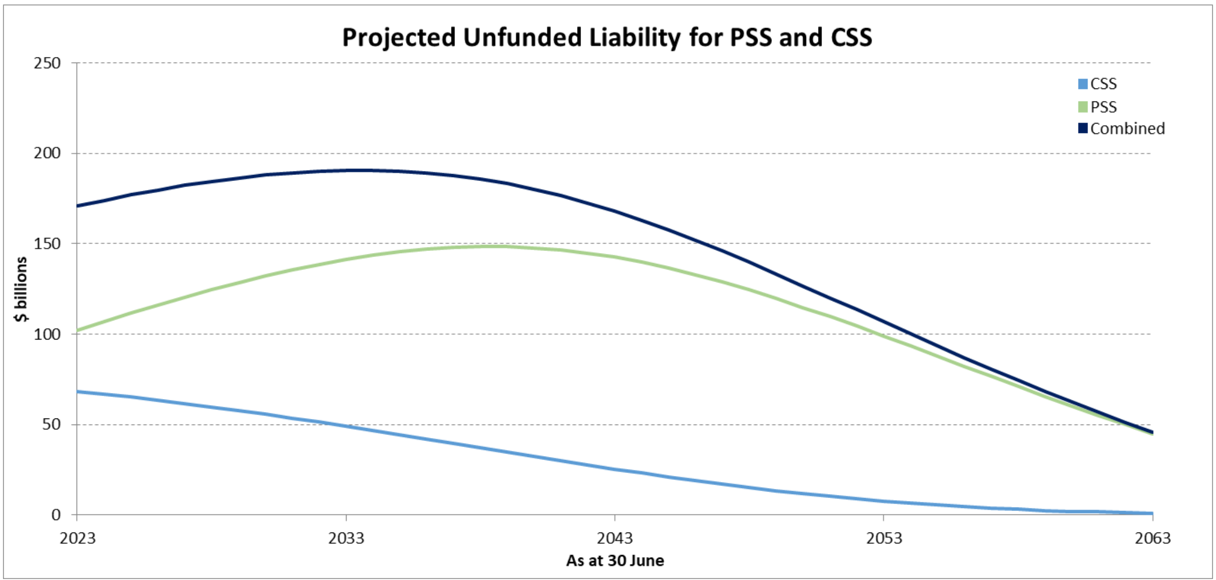
In general, economic experience relative to the previous assumptions has increased the unfunded liability. The impact of actual membership experience relative to the previous demographic assumptions plus the changes made to the demographic assumptions for this LTCR have also increased the unfunded liability by more than previously projected.

The more significant items of the Schemes' experience are:

- CPI increases averaged 4.4% per annum. The amount of CPI indexed benefits to be paid in future is greater than previously projected.
- The average rate of increases in salary was lower than the previous assumption of 3.5% per annum plus promotional increases. The amount of salary linked benefits to be paid in future is less than previously projected.
- The investment earning rates were higher than previously assumed. Whilst the value of the Schemes' assets is higher than was projected for the 2020 LTCR, the impact on members' expected future benefits has been greater.
- More benefits than projected commenced during the period, resulting in $1.5 billion more than anticipated being transferred from the Schemes to the CRF. The reduction in Scheme assets when a benefit first becomes payable ordinarily increases the unfunded liability.

Projected Unfunded Liability

Based on the assumptions used for this investigation, the projected nominal unfunded liability over the next 40 years is shown below:



The chart above illustrates that the general trend is a slow increase in the combined unfunded liability to a peak in 10 years' time, followed by a steady decline to less than one third of the current liability by 2063.

A table with details of the projected unfunded liability each year is included in Appendix E.

Section 6

Projected Outlays

The annual projected outlays represent the future net cash cost of PSS and CSS benefit payments to current and past employees and their dependants.

In general, when a member becomes entitled to a benefit, the member's accumulation accounts (i.e. funded member and productivity contributions, plus investment earnings) are transferred to the CRF. The total benefit payment to the member is then made from the CRF.

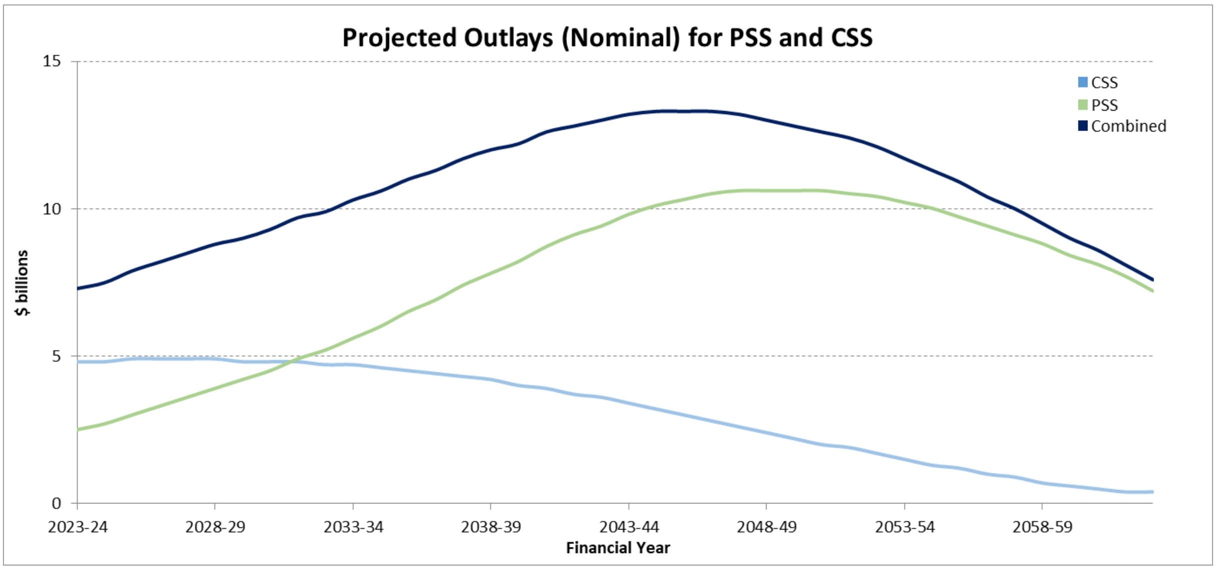
The projected outlays in each year are calculated as:

- productivity superannuation contributions paid by employers to the PSS and CSS; plus
- benefit payments made from the CRF; less
- transfers of Scheme assets in respect of an individual member to the CRF at the time that benefits first become payable.

The transfers of assets from the PSS to the CRF have been temporarily deferred. Deferred amounts remain invested in the PSS and accumulate with investment earnings until ultimately paid to the CRF. The projected outlays make no allowance for timing differences arising from the deferral of transfers. The amount transferred in any individual year will depend on the agreed payment profile.

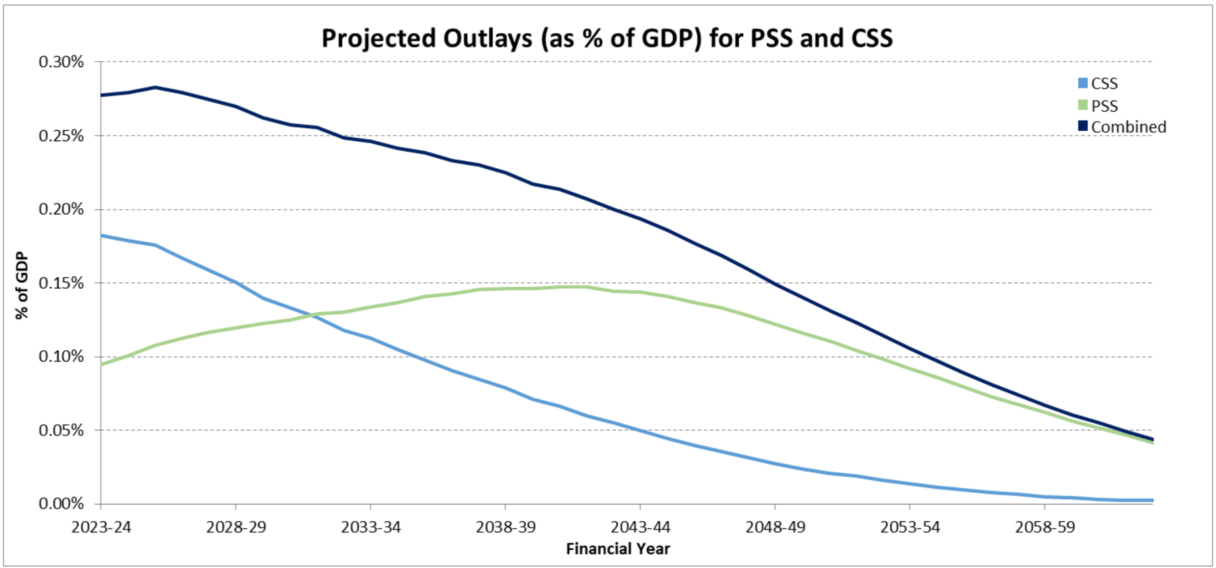
In addition, no allowance is made for the reimbursement of the CRF for benefit payments made in respect of service with an employer that is no longer part of the Australian Government. The Australian Government has arrangements in place to be reimbursed directly by those employers.

The expected nominal outlays each year for the next 40 years are:



Overall nominal outlays are projected to increase during the next 20 to 25 years as contributors leave the workforce and deferred and preserved members commence a pension or receive a lump sum benefit. Total outlays are expected to peak around 2044 to 2047 and then decline because of pensioner mortality.

Outlays as a percentage of GDP are expected to decline over time as shown in the following chart:



Future outlays are expected to reduce as a percentage of projected GDP from 0.28% in the year ending 30 June 2024 to 0.04% in the year ending 30 June 2063.

A table with details of the projected outlays is included in Appendix E.

Section 7

Notional Employer Contribution Rate

The notional employer contribution rate (NECR) represents the estimated contribution rates that would be required to finance the benefits accruing to contributors over the next three years (from 1 July 2023 to 30 June 2026). That is, if the Schemes were fully funded at the valuation date and contributions were made at the NECRs, the liability for contributors would be expected to remain fully funded at the end of the period.

The NECR is therefore a short-term indicator and relates to the cost of funding the future benefit accruals of contributors only (which now make up approximately 1% of CSS membership and 26% of PSS membership).

Only the productivity contribution component of the NECR is actually paid by the employers to the PSS and CSS to be invested as Scheme assets by the trustee. The non-productivity contribution component is notional, and no such contributions are actually paid to the Schemes.

Method of Determining the Notional Employer Contribution Rate

A notional fund with initial assets equal to the accrued liabilities at the valuation date is projected for the three years to 30 June 2026, together with member contributions, notional employer contributions, investment earnings and benefit payments in line with the valuation assumptions. The notional contributions are determined so that the projected notional assets are equal to the projected accrued liabilities after three years. The NECRs are the notional employer contributions expressed as a constant annual percentage of projected salaries.

Results

NECR	PSS	CSS	Combined
As at 30 June 2020	32.5	17.7	31.9
As at 30 June 2023	33.2	14.7	32.9
Movement	+0.7	-3.0	+1.0

The NECR for the PSS is projected to increase over the next 10-15 years as the discounting applied to future expected benefit payments diminishes, and then decline as more of the remaining members reach their maximum benefit limit.

The NECR for the CSS is projected to continue to decrease as the rate of benefit accrual declines with length of membership.

The combined NECR is a weighted average which is influenced by changes in the proportion of contributors in each Scheme.

Section 8

Sensitivity Analysis

Economic Assumptions

The sensitivity of the estimated unfunded liability as at 30 June 2023 and the projected outlays to the key economic assumptions was tested by measuring the effect of varying each key assumption in turn by plus or minus 1% per annum whilst keeping all other assumptions unchanged.

The impact on the unfunded liability as at 30 June 2023 is set out in the following table:

		PSS		CSS		Combined	
Sensitivity Scenario	**Modified Assumption**	**UFL ($billion)**	**% Change**	**UFL ($billion)**	**% Change**	**UFL ($billion)**	**% Change**
Base case		**102.4**		**68.4**		**170.8**	
+1% pa investment return / discount rate	6.0% pa	85.9	-16.1%	62.2	-9.1%	148.1	-13.3%
-1% pa investment return / discount rate	4.0% pa	123.3	+20.4%	75.8	+10.8%	199.1	+16.6%
+1% pa general salary increase rate	4.5% pa	105.5	+3.0%	68.4	-	173.9	+1.8%
-1% pa general salary increase rate	2.5% pa	99.7	-2.6%	68.4	-	168.1	-1.6%
+1% pa CPI increase rate	3.5% pa	118.8	+16.0%	74.9	+9.5%	193.7	+13.4%
-1% pa CPI increase rate	1.5% pa	88.9	-13.2%	62.8	-8.1%	151.7	-11.2%

The results show that the unfunded liability is quite sensitive to the assumed rate of CPI increases and the discount rate assumption.

The unfunded liability is not particularly sensitive to changes in the rate of salary increases because only liabilities for contributors are linked to salaries and this is a small proportion of the total liabilities. In addition, the impact of changes in salaries is only for a relatively short period of time (i.e. the remaining period of service).

The impact on the projected (nominal) outlays is set out in the following table:

Period Ending 30 June	Change in Combined Nominal Outlays ($ billion)						
	Base case	+1% pa investment return	-1% pa investment return	+1% pa salary increase	-1% pa salary increase	+1% pa CPI increase	-1% pa CPI increase
2024	7.3	-	-	-	-	-	-
2025	7.5	-	-	-	-	+0.1	-
2026	7.9	-	-	-	-	+0.2	-0.2
2027	8.2	-0.1	-	-	-	+0.2	-0.3
2028	8.5	-0.1	-	-	-0.1	+0.2	-0.4
2029 – 33	46.7	-0.6	+0.5	+0.2	-0.4	+3.3	-3.0
2034 – 38	54.9	-0.8	+0.8	+1.0	-0.9	+6.2	-5.5
2039 – 43	62.6	-0.8	+0.6	+1.7	-1.7	+9.3	-8.0
2044 – 48	66.3	-0.2	-0.2	+2.3	-2.4	+12.2	-10.3
2049 – 53	62.9	+0.5	-0.4	+3.0	-2.8	+14.0	-11.3
2054 – 58	54.3	+0.7	-0.5	+3.3	-2.8	+14.3	-11.0
2059 – 63	42.8	+0.7	-0.6	+3.2	-2.8	+13.1	-9.6

The nominal outlays are not significantly impacted by changes in the rate of salary increases for the same reasons as for the unfunded liability above. CPI changes have a more material effect as the majority of the benefit liabilities are linked to these increases.

The investment return impacts upon the amount of funds held for members within the PSS and CSS prior to when a benefit first becomes payable. This amount is transferred to the CRF and offsets the total amount of benefit payments in that year. The ‘Investment and Earning Rate Policy’ in Section 2 describes how investment returns on these funds impact the benefits payable.

In the short term, higher investment returns will reduce total net outlays as offsets will be higher. In the longer term, total net outlays will increase as benefits are typically paid over a long period while offsets are only received in the year that the benefit first becomes payable. The overall amounts of variation are small as there are offsetting impacts and the total benefits payable relating to the assets held are also relatively small.

Demographic Assumptions

The sensitivity of the estimated unfunded liability as at 30 June 2023 and the projected outlays to certain demographic assumptions was tested by measuring the effect of varying each assumption in turn whilst keeping all other assumptions unchanged.

The alternative assumptions used were:

- 5% higher pensioner mortality rates (e.g. a 3% probability of death becomes 3.15%);
- 5% lower pensioner mortality rates (e.g. a 3% probability of death becomes 2.85%); and
- future improvements in pensioner mortality in line with the short term (25 year experience) factors throughout, with no reversion to long term factors (125 year experience) after 2024; and
- pension take-up rate assumed for PSS age and involuntary retirement benefits increased from 90% to 100%.

	PSS		CSS		Combined	
Assumption	**UFL ($billion)**	**% Change**	**UFL ($billion)**	**% Change**	**UFL ($billion)**	**% Change**
Base case	**102.4**		**68.4**		**170.8**	
5% higher pensioner mortality rates	101.3	-1.0%	67.5	-1.4%	168.8	-1.2%
5% lower pensioner mortality rates	103.6	+1.1%	69.4	+1.4%	173.0	+1.2%
25 year experience future mortality improvements	104.9	+2.4%	69.5	+1.6%	174.4	+2.1%
PSS pension take-up increased to 100%	105.5	+3.0%	68.4	-	173.9	+1.8%

Period Ending 30 June	Change in Combined Nominal Outlays ($ billion)				
	Base case	5% higher pensioner mortality rates	5% lower pensioner mortality rates	25 year experience future mortality improvements	PSS pension take-up increased to 100%
2024	7.3	-	-	-	-0.2
2025	7.5	-	-	-	-0.2
2026	7.9	-0.1	-	-	-0.2
2027	8.2	-0.1	-	-	-0.2
2028	8.5	-0.1	-	-	-0.2
2029 – 33	46.7	-0.3	+0.4	+0.3	-0.6
2034 – 38	54.9	-0.6	+0.6	+0.6	+0.4
2039 – 43	62.6	-0.6	+0.7	+1.0	+1.9
2044 – 48	66.3	-1.0	+0.9	+1.7	+3.4
2049 – 53	62.9	-1.1	+1.1	+2.7	+4.4
2054 – 58	54.3	-1.3	+1.2	+3.3	+4.5
2059 – 63	42.8	-1.3	+1.6	+3.3	+3.8

In general, the impact of changes to the demographic assumptions has less of an impact on the accrued liability than changes to the economic assumptions.

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

Section 9

Actuary's Certification

Professional Standards and Scope

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

Use of Report

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

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

Actuarial Uncertainty and Assumptions

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

Future funding and actual costs relating to a scheme are primarily driven by a scheme's benefit design, the actual rate of salary inflation, movements in the CPI, investment returns, any discretions exercised by trustee of the scheme or the Australian Government, or choices made by members. The scheme's actuary does not directly control or influence any of these factors in the context of an actuarial investigation.

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

To prepare this report, assumptions, as described in Section 4 and Appendix D, are used to select a single scenario from the range of possibilities. The results of that single scenario are included in this report.

However, the future is uncertain and a scheme's actual experience will differ from those assumptions; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results based on those assumptions would be different. For this reason, this report also shows the impact on the results of certain changes in assumptions.

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

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

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28 June 2024

Appendix A
Summary of Benefits

The Schemes' benefit entitlements are complex. A **summary** of the principal provisions is set out below. Some details have been omitted where these are no longer relevant to the remaining membership. This summary should not be used to calculate benefits for individuals.

THE SUPERANNUATION ACT 1976 (CSS)

Membership

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

Salary

Salary for contribution purposes is the amount agreed between the member and employer through an agreement such as an Enterprise Agreement. If no such agreement is in place, salary is basic annual salary plus any recognised allowances on a 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 last day of service.

Member Contributions

Basic contributions are 5% of salary. A member can also make supplementary (or voluntary) contributions. Contributions are accumulated with investment earnings rate of the CSS. Members can also choose not to contribute to the CSS.

Productivity Contributions

Most members have fortnightly employer productivity contributions paid to the CSS. The rate at which contributions are paid varies depending on salary. The 2023-24 amounts are:

Fortnightly rate of salary	Fortnightly productivity contribution
Less than $2,710.00	$81.30
$2,710.00 or more but less than $4,366.00	3% of salary
$4,366.00 or more but less than $6,549.00	$130.98
$6,549.00 or more	2% of salary

THE SUPERANNUATION ACT 1976 (CSS) *continued*

Retirement Benefits

Retirement benefits are payable upon retirement at maximum retirement age (usually age 65) or early retirement from minimum retirement age (usually age 55), subject to general superannuation preservation rules.

The retirement benefit comprises:

- an employer-financed indexed lifetime pension being a percentage of final salary based on the period of contributory service and discounted for early retirement before age 65 (refer below).

  Generally, the pension accrual rates are 2% per annum for the first 20 years of contributory service, 1% per annum for the next 10 years, and 0.25% per annum for the next 10 years. A maximum percentage of 52.5% of salary applies after 40 years of contributory membership;
- a productivity component made up of accumulated productivity contributions which can be taken as a lump sum or converted to a non-indexed lifetime pension; and
- a member-financed component made up of accumulated basic and supplementary contributions which can be taken as a lump sum or converted to a non-indexed lifetime pension.

The discount for retirement prior to age 65 depends on age at the time that the pension commences:

Age	Early Retirement Reduction	Age	Early Retirement Reduction
64	0.98	59	0.87
63	0.96	58	0.84
62	0.94	57	0.81
61	0.92	56	0.78
60	0.90	55	0.75

The factors to convert the productivity component and member-financed component to a non-indexed lifetime pension are the same as for resignation (see below). Note that the non-indexed pension is limited to 20% of the final salary if a member retires at age 60 or more, with any excess required to be paid as a lump sum. The maximum non-indexed pension percentage is reduced for retirement before age 60.

THE SUPERANNUATION ACT 1976 (CSS) *continued*

Resignation

A member has three options on resignation as follows:

1. Immediate Lump Sum

An immediate lump sum benefit is payable on resignation equal to:

- the accumulated member and productivity contributions; plus
- an employer-financed top-up amount equal to the difference between the notional accumulation of minimum Superannuation Guarantee contributions and the accumulated productivity contributions.

2. Deferred Benefit

Alternatively, a member may elect to defer receipt of the benefit by preserving it within the CSS until minimum retirement age. Under this option, after both reaching preservation age and having retired from the workforce, the member will receive:

- an employer-financed indexed lifetime pension based on 2.5 times the accumulated basic contributions at the date of commencement of the pension; and
- a productivity component made up of accumulated productivity contributions which can be taken as a lump sum or converted to a non-indexed lifetime pension; and
- a member-financed component made up of accumulated basic and supplementary contributions which can be taken as a lump sum or converted to a non-indexed lifetime pension.

The conversion factors used to calculate the lifetime pensions (at the time of pension commencement) are:

Age	Conversion Factor	Age	Conversion Factor
65	0.110	56	0.0940
64	0.108	55	0.0925
63	0.106	54	0.0910
62	0.104	55	0.0895
61	0.102	54	0.0910
60	0.100	53	0.0895
59	0.0985	52	0.0880
58	0.0970	51	0.0865
57	0.0955	50	0.0850

THE SUPERANNUATION ACT 1976 (CSS) *continued*

3. Transfer Benefit

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

Invalidity Retirement

The following amounts are payable on invalidity retirement:

- an employer-financed indexed lifetime pension being a percentage of final salary depending on the period of prospective service to maximum retirement age, or the actual period of contributory service if this is over 30 years; and
- a lump sum of accumulated basic contributions or, at the member's election, an additional non-indexed lifetime pension being a percentage of final salary based on the period of total service that would have been completed at the maximum retirement age; and
- a lump sum of accumulated supplementary and productivity contributions.

Death of a Contributor

A spouse's 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 the total pension limited to 100% of the invalidity pension.

No ongoing pension is payable if there is no spouse or eligible children.

Accumulated productivity contributions and any supplementary contributions are payable as a lump sum in addition to any ongoing pension benefit.

Death of a Pensioner

A pension is payable to a surviving spouse and any eligible children of an amount equal to a percentage of the pension payable to the deceased at the time of death. The percentages are the same as for the death of a contributor.

Involuntary Retirement (Redundancy)

The benefit options available to a member who is made redundant are similar to the combinations of pension (based on age) and lump sum that are available on age retirement or resignation.

Indexation

Indexed pensions are indexed twice yearly (in January and July) in line with changes in the Consumer Price Index (CPI).

THE SUPERANNUATION ACT 1990 (PSS)

Membership

The PSS has been closed to new entrants since 1 July 2005.

Superannuation Salary

Superannuation salary is the amount agreed between the member and employer through an agreement such as an Enterprise Agreement. If no such agreement is in place, superannuation salary is generally basic annual salary plus any recognised allowances on a member's last birthday.

Final Average Salary

Final Average Salary (FAS) 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. Members can also choose not to contribute to the PSS. The rate of contribution can be varied at any time.

Productivity Contributions

Members have fortnightly employer productivity contributions paid to the PSS. The rate at which contributions are paid varies depending on salary. The 2023-24 amounts are:

Fortnightly rate of salary	Fortnightly productivity contribution
Less than $2,710.00	$81.30
$2,710.00 or more but less than $4,366.00	3% of salary
$4,366.00 or more but less than $6,549.00	$130.98
$6,549.00 or more	2% of salary

Total Benefit

A member's Total Benefit is calculated by multiplying the member's Benefit Multiple by their FAS. The Total Benefit consists of three parts:

- the employer-financed component, determined as the Total Benefit less the productivity and member-financed component;
- the productivity component, made up of accumulated productivity contributions; and
- the member-financed component, made up of accumulated member contributions.

THE SUPERANNUATION ACT 1990 (PSS) *continued*

Benefit Multiple

A member's Benefit Multiple is equal to the aggregate of:

- 11% for each year of service; and
- 2 x the Member’s Contribution Rate (aggregated over the total period of service).

For example, the Benefit Multiple for a member contributing 5% of salary is 21% per annum.

10 year Rule – Restriction on Employer's Share of Benefit Multiple

The maximum employer component of the Benefit Multiple (i.e. 11% per annum plus 1 x the Member’s Contribution Rate) cannot be greater than that which would have accrued if member contributions had been made at 5% for the first 10 years of membership and 10% for membership in excess of 10 years.

Maximum Benefit

The maximum benefit allowable under the PSS is known as the Maximum Benefit Limit (MBL). For most members, the MBL is 10 times their Final Average Salary. On reaching the MBL, member and productivity contributions to the PSS will cease.

Retirement Benefits

Retirement benefits are payable upon retirement on or after minimum retiring age, subject to general superannuation preservation rules.

The four options on retirement are:

(a) Pension benefit – The Total Benefit is taken in the form of an indexed lifetime pension;

(b) Lump sum benefit – The Total Benefit is taken as an immediate lump sum;

(c) Lump sum plus pension benefit – The benefits are taken as a combination of indexed lifetime pension (subject to a minimum of 50% of the Total Benefit) and an immediate lump sum;

(d) Preserved benefit – The benefits are preserved within the PSS and later taken as a lump sum, indexed lifetime pension or a combination of both.

Any employer-financed component preserved within the PSS is indexed to changes in the Consumer Price Index (CPI). The member-financed and productivity components are adjusted with the PSS investment earning rate.

THE SUPERANNUATION ACT 1990 (PSS) *continued*

Lump sums can be converted to indexed pensions by dividing by age-based factors:

Age	Conversion Factor	Age	Conversion Factor
70	9.0	62	10.6
69	9.2	61	10.8
68	9.4	60	11.0
67	9.6	59	11.2
66	9.8	58	11.4
65	10.0	57	11.6
64	10.2	56	11.8
63	10.4	55	12.0

Resignation

There are three benefit options:

(a) preserve the Total Benefit within the PSS until early retirement age and then retirement pension options are available;

(b) immediate refund of the member-financed component, up to the limit allowed under superannuation preservation rules, and preserve the employer-financed and productivity components within the PSS (due to general superannuation preservation requirements, all post 1 July 1999 contributions are preserved under most circumstances) with no pension option; and

(c) transfer the Total Benefit to an eligible superannuation scheme.

Invalidity Retirement

On retirement on medical grounds before age 60, the Total Benefit is calculated based on potential total service at age 60 (assuming that the member will continue to contribute at their current rate until retirement or 5% if more, but subject to a maximum average contribution of 5% for the first 10 years of service). The Total Benefit is converted to an indexed pension using the same factors for age retirement but assuming that the member is aged 60 at the time of invalidity. The member-financed component may be taken as a lump sum.

Death of a Contributor

A spouse's 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 the total pension limited to 100% of the invalidity pension. The spouse can convert up to half of the pension to a lump sum or receive the full amount as a lump sum with no ongoing pension. No ongoing pension is payable if there is no spouse or eligible children.

THE SUPERANNUATION ACT 1990 (PSS) *continued*

Death of a Pensioner

A pension is payable to a surviving spouse and any eligible children of an amount equal to a percentage of the pension payable to the deceased at the time of death. The percentages are the same as for the death of a contributor.

Redundancy

The following benefit options are available to a member who is made redundant:

(a) receive the Total Benefit in the form of an immediate, non-commutable, indexed lifetime pension;

(b) immediate refund of member-financed component, up to the limit allowed under superannuation preservation rules, and receive the remainder as an immediate, non-commutable, indexed lifetime pension;

(c) preserve all benefits within the PSS until early retirement age and then pension options are available;

(d) immediate refund of member-financed component, up to the limit allowed under superannuation preservation rules, and preserve employer-financed and productivity components within the PSS; and

(e) transfer the Total Benefit to an eligible superannuation scheme.

Indexation

Pensions are indexed twice yearly (in January and July) in line with changes in the Consumer Price Index (CPI).

Appendix B

Details of Membership Data

Contributors

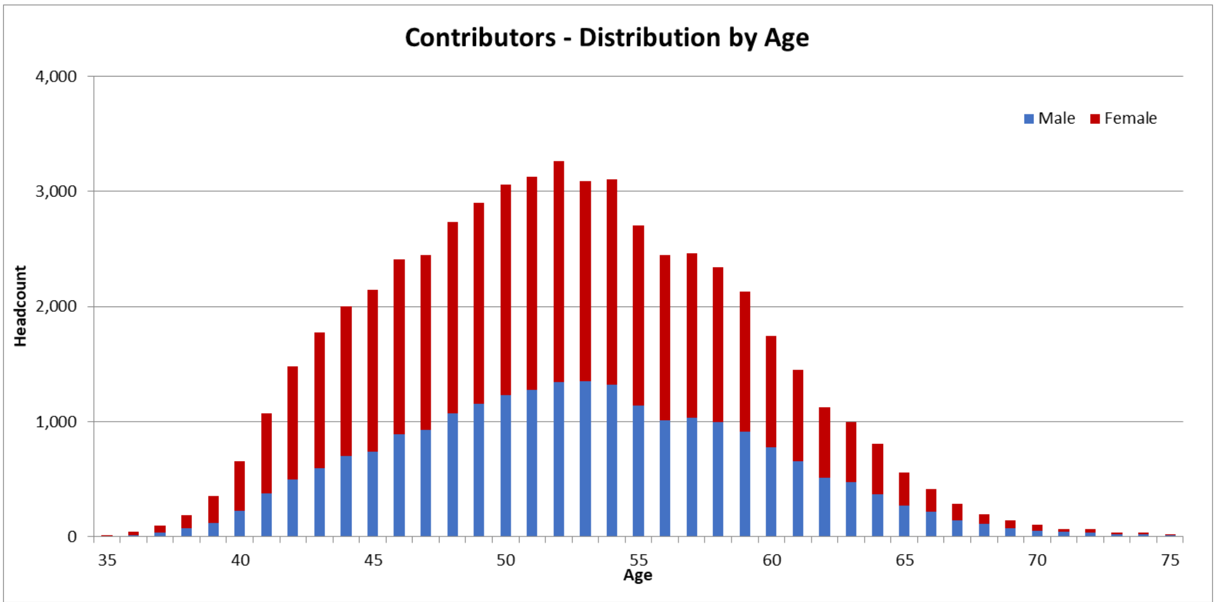
Contributor members' statistics as at 30 June 2023 are:

As at 30 June 2023	Headcount Males	Headcount Females	Headcount Total	Average Age (years)	Average Service (years)	Average Annual Salary
CSS	812	521	1,333	60.1	34.7	$137,502
PSS	22,082	32,788	54,870	52.5	21.4	$123,186
Total	**22,894**	**33,309**	**56,203**	**52.7**	**21.7**	**$123,526**

The equivalent statistics for contributor members as at 30 June 2020 are shown below:

As at 30 June 2020	Headcount Males	Headcount Females	Headcount Total	Average Age (years)	Average Service (years)	Average Annual Salary
CSS	1,853	1,133	2,986	57.4	32.5	$130,225
PSS	27,041	38,524	65,565	50.9	19.7	$111,327
Total	**28,894**	**39,657**	**68,551**	**51.2**	**20.3**	**$112,150**

The distribution of contributors by age as at 30 June 2023 is shown in the chart below. There are more females, and at younger ages on average, than males.



Deferred / Preserved Members

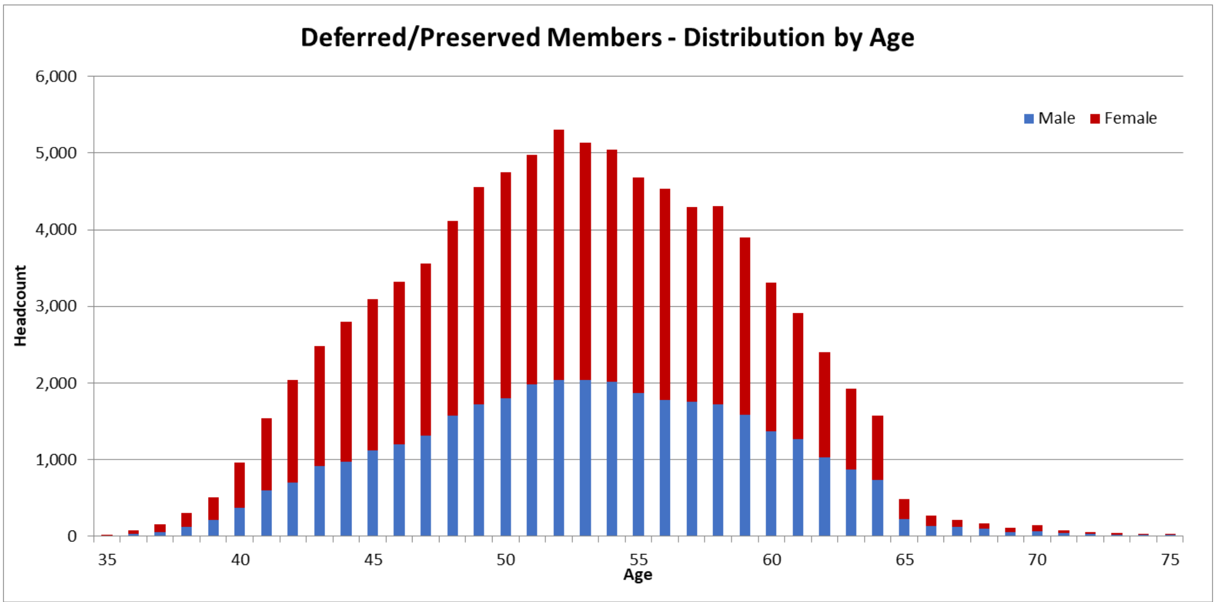
Statistics for deferred CSS and preserved PSS members as at 30 June 2023 are:

As at 30 June 2023	Headcount			Average Age (years)	Average Service (years)
	Males	Females	Total		
CSS	1,202	826	2,028	59.4	12.1
PSS	34,485	53,783	88,268	52.9	5.9
Total	**35,687**	**54,609**	**90,296**	**53.1**	**6.0**

The equivalent statistics for deferred/preserved members as at 30 June 2020 are:

As at 30 June 2020	Headcount			Average Age (years)	Average Service (years)
	Males	Females	Total		
CSS	1,953	1,296	3,249	57.3	13.2
PSS	37,472	57,558	95,030	50.9	5.9
Total	**39,425**	**58,854**	**98,279**	**51.1**	**6.1**

The distribution of deferred/preserved members by age as at 30 June 2023 is shown in the chart below.



Pensioners

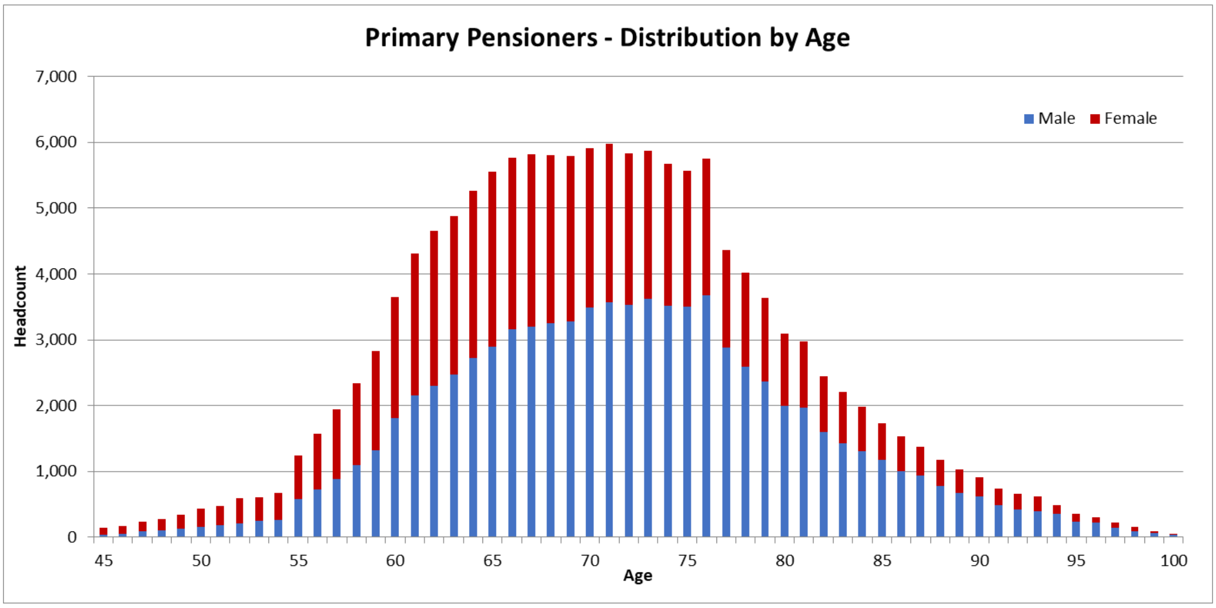
Statistics for age and invalidity retiree pensioners as at 30 June 2023 are:

As at 30 June 2023	Headcount Males	Headcount Females	Headcount Total	Average Age (years)	Average Annual Pension
Primary Pensioners					
1922 Scheme	191	102	293	81.3	$43,932
CSS	51,399	22,929	74,328	75.1	$56,351
PSS	30,652	37,355	68,007	67.0	$45,158
Total	**82,242**	**60,386**	**142,628**	**71.2**	**$50,989**
Dependant Pensioners					
1922 Scheme	26	938	964	87.5	$34,186
CSS	1,688	19,940	21,628	81.8	$28,536
PSS	1,126	2,522	3,648	69.1	$24,769
Total	**2,840**	**23,400**	**26,240**	**80.2**	**$28,220**

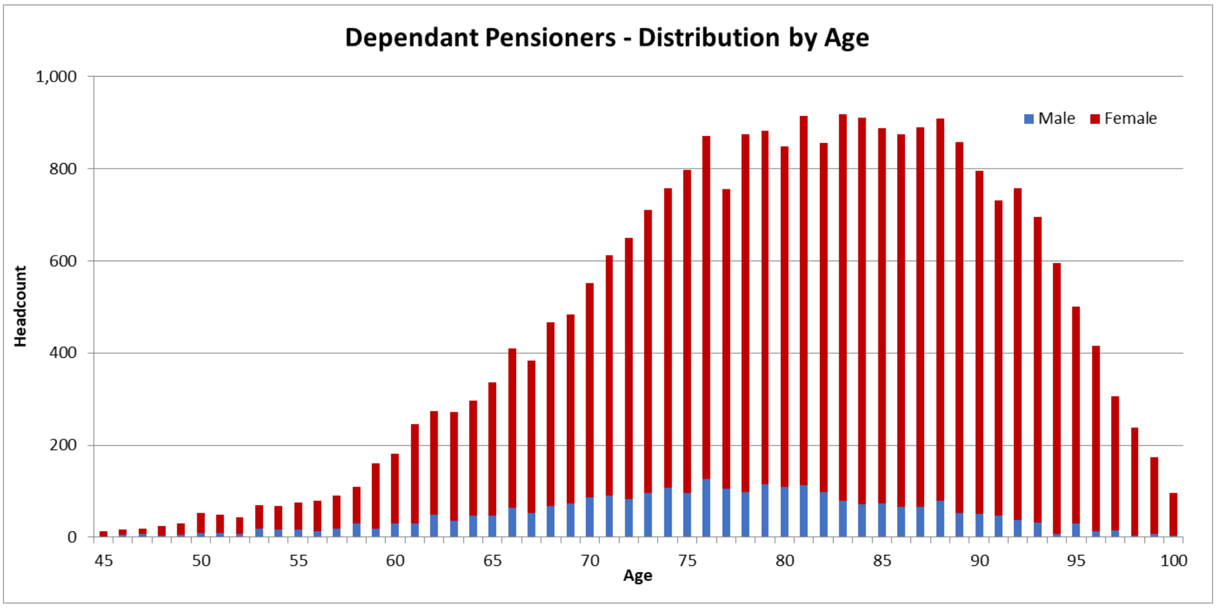
The equivalent statistics for pensioners as at 30 June 2020 are shown below:

As at 30 June 2020	Headcount Males	Headcount Females	Headcount Total	Average Age (years)	Average Annual Pension
Primary Pensioners					
1922 Scheme	282	137	419	80.6	$39,130
CSS	55,588	23,937	79,525	73.8	$47,384
PSS	26,124	31,443	57,567	65.3	$36,712
Total	**81,994**	**55,517**	**137,511**	**70.3**	**$42,891**
Dependant Pensioners					
1922 Scheme	24	1,357	1,381	87.2	$30,029
CSS	1,661	21,385	23,046	81.4	$24,482
PSS	838	1,869	2,707	66.6	$20,702
Total	**2,523**	**24,611**	**27,134**	**80.1**	**$24,387**

The distribution of primary pensioners by age as at 30 June 2023:



The distribution of dependant pensioners by age as at 30 June 2023 is:



Reconciliation of Membership Movements

	CSS (including 1922 Scheme Pensioners)			
	Contributor	Deferred	Pensioner	Total
As at 30 June 2020	**2,986**	**3,249**	**104,371**	**110,606**
New	+38*	+129	+6,421	+6,588
Exit	-1,691	-1,350	-13,579	-16,620
As at 30 June 2023	**1,333**	**2,028**	**97,213**	**100,574**

* Deferred members recommencing contributions on re-employment with a participating employer.

	PSS			
	Contributor	Preserved	Pensioner	Total
As at 30 June 2020	**65,565**	**95,030**	**60,274**	**220,869**
New	+3,679*	+4,163	+13,220	+21,062
Exit	-14,374	-10,925	-1,839	-27,138
As at 30 June 2023	**54,870**	**88,268**	**71,655**	**214,793**

* Preserved members recommencing contributions on re-employment with a participating employer.

Emerging Cost Members

Arrangements exist for the direct reimbursement of the CRF for benefit payments made in respect of service with an employer that is no longer part of the Australian Government (i.e. long serving employees of the Australian National University and the ACT and NT Governments). Reimbursement is typically made on an “emerging cost” basis.

A summary of the number of members as 30 June 2023 identified as having at least part of the cost of their benefits subject to an emerging cost arrangement is shown below:

Category	Headcount
Contributors	7,850
Deferred / Preserved	10,193
Pensioners	22,105

Appendix C
Analysis of Experience

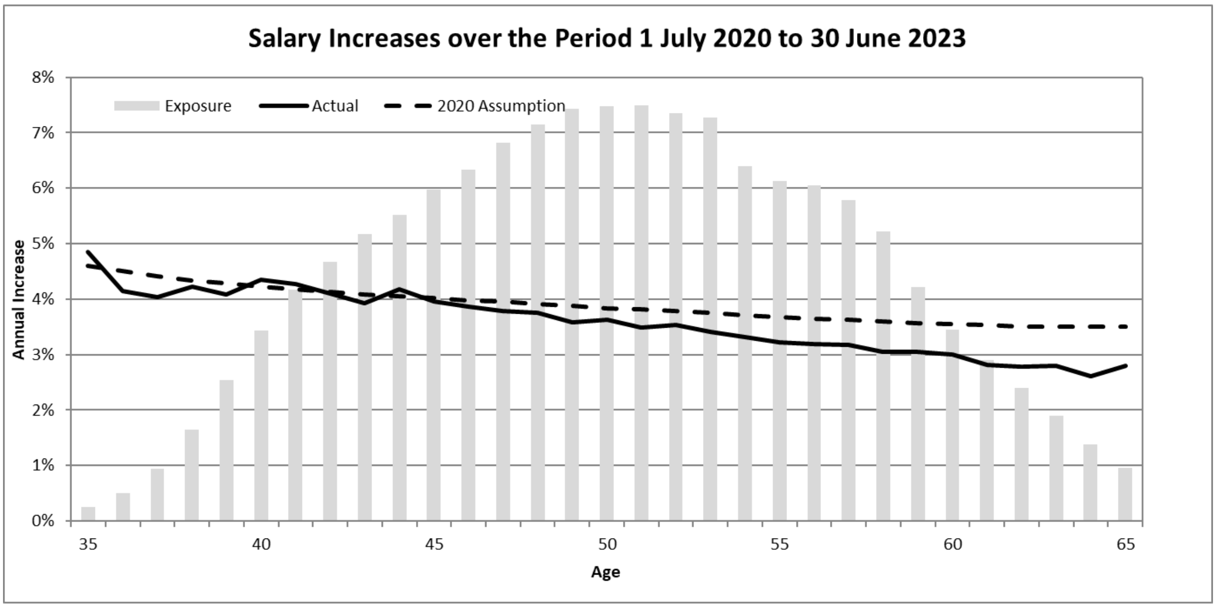
Contributors

Salary Increases

Increases in salary are considered for PSS and CSS members who were contributors at two consecutive 30 June review dates and for whom a valid salary was available.

The assumptions made for the 2020 LTCR were that salaries would increase by an average of 3.5% per annum plus an allowance for promotional increases which vary by age.

The chart below shows a comparison of the actual rates of salary increases over the three-year period to 30 June 2023, together with the previous assumptions adopted for the 2020 LTCR:



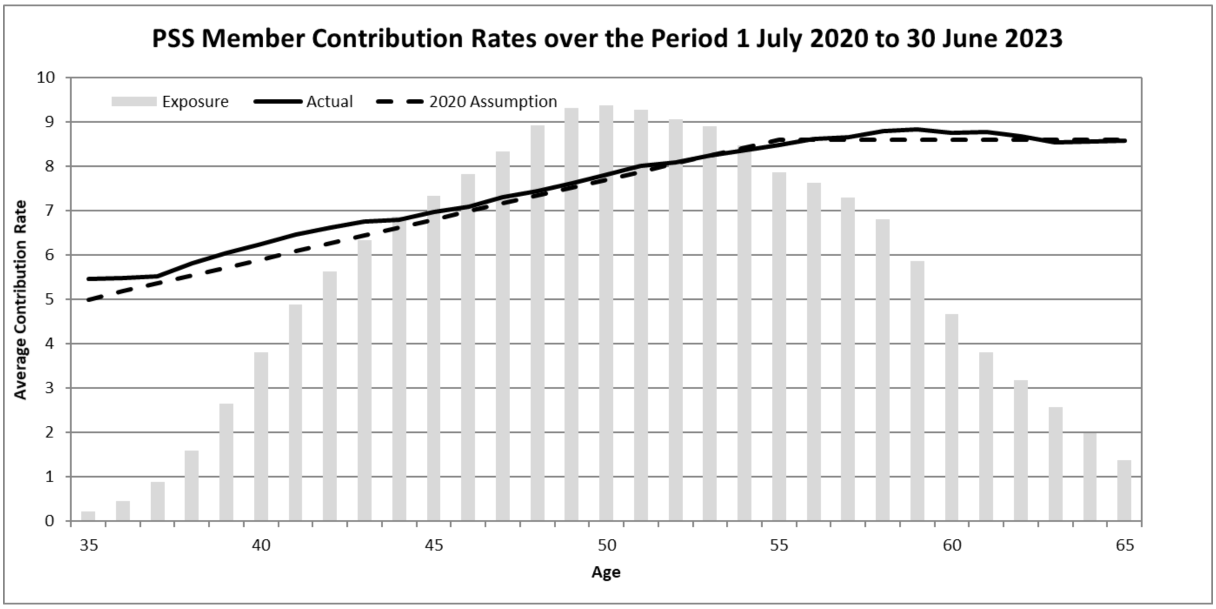
Observations:

- increases are higher at younger ages, indicating that there have been promotional increases in addition to general inflationary increases;
- actual overall salary increases have been below those previously assumed for members over the age of 45.

PSS Member Contributions

Benefits from the PSS are based on each member's rate of contribution. The assumption made for the 2020 LTCR was that members would increase their rate of contribution as they become older.

The chart below shows a comparison of the average rates of member contribution at each 30 June review date, and the previous assumptions adopted for the 2020 LTCR:



Observations:

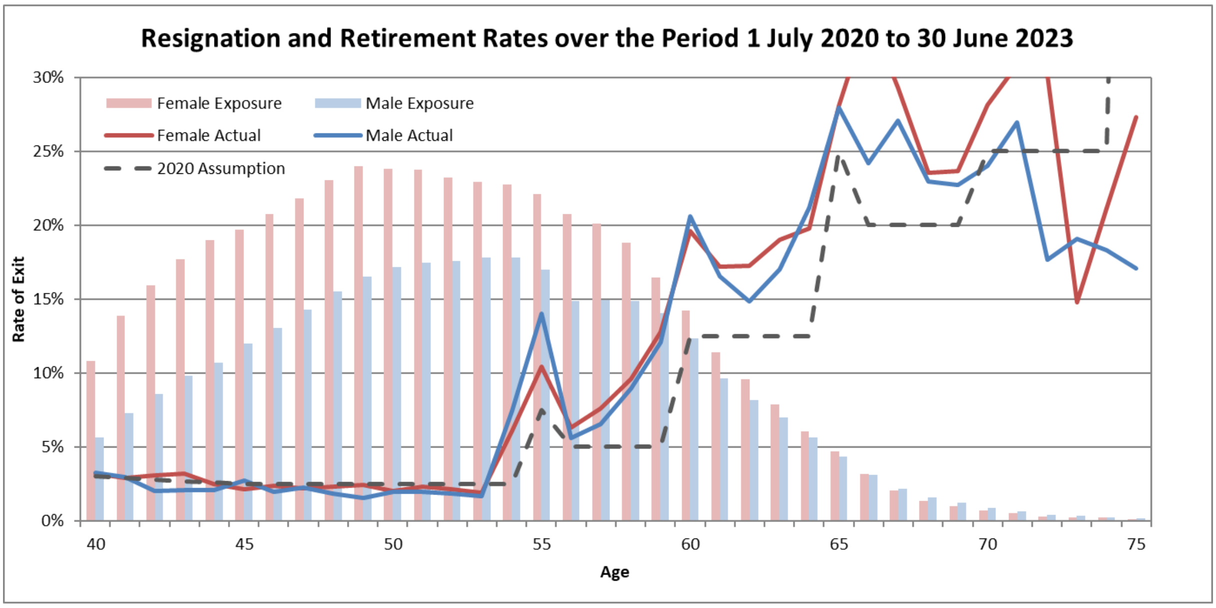
- members at older ages contribute at higher rates than younger members;
- actual member contribution rates have been marginally higher than those previously assumed;
- the overall average member contribution rate is expected to continue to increase as the (closed group of the) contributory members age.

The average rate of member contributions as at 30 June 2023, and corresponding value for the two prior LTCRs, is shown in the following table:

Average Member Contribution Rate (% of salary)	2023 LTCR	2020 LTCR	2017 LTCR
Weighted by headcount	7.79	7.46	7.10
Weighted by salary	7.94	7.59	7.27

Resignation and Age Retirement

The assumed rates of resignation and age retirement, and the actual experience over the three-year period to 30 June 2023, are shown in the following chart:

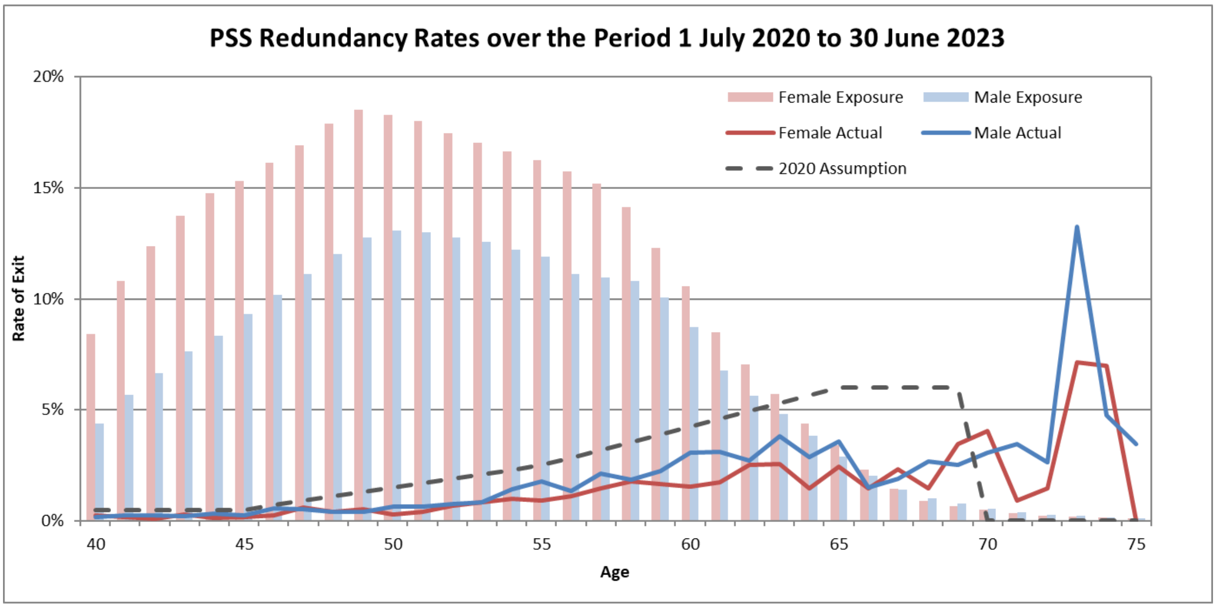


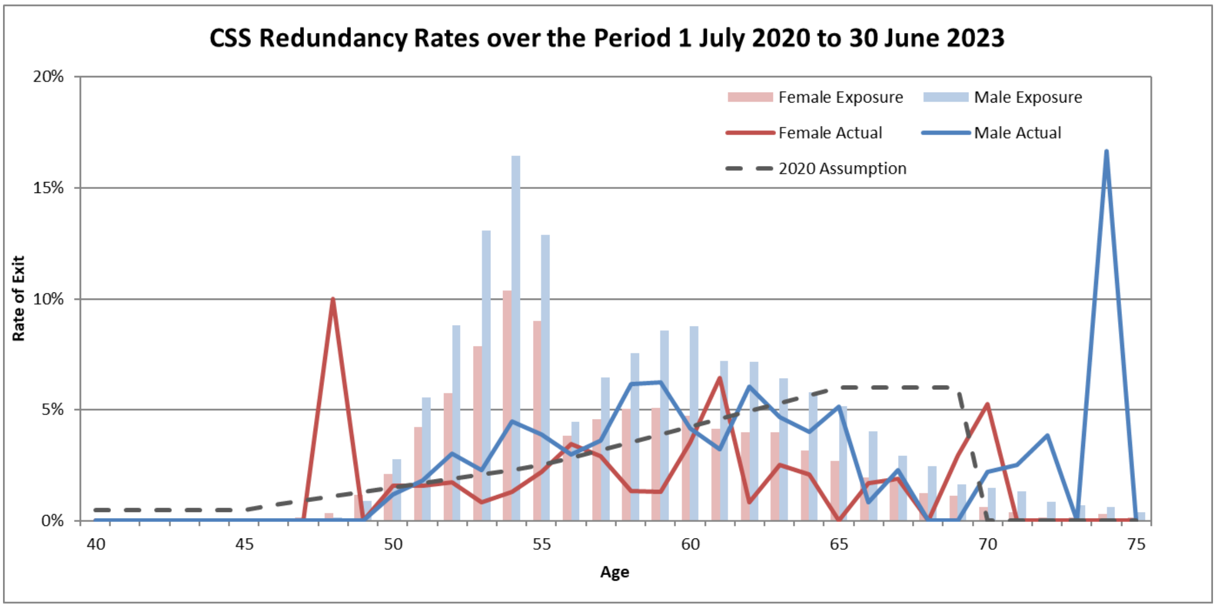
Observations:

- actual rates of resignation below age 54 have been consistent with the 2020 assumptions;
- actual rates of retirement after age 55 have been generally higher than previously assumed although data is limited for the higher ages;
- there are peaks for rates of retirement at milestone ages of 55, 60 and 65.
- a higher rate of resignation occurs (and is assumed to occur) for CSS contributors at age 54 due to the nature of the benefit design (the “54/11” resignation benefit).

Involuntary Retirement (Redundancy)

The assumed rates of redundancy, and the actual experience over the three-year period to 30 June 2023, are shown in the following charts. Note that different assumptions were made for the PSS and CSS.



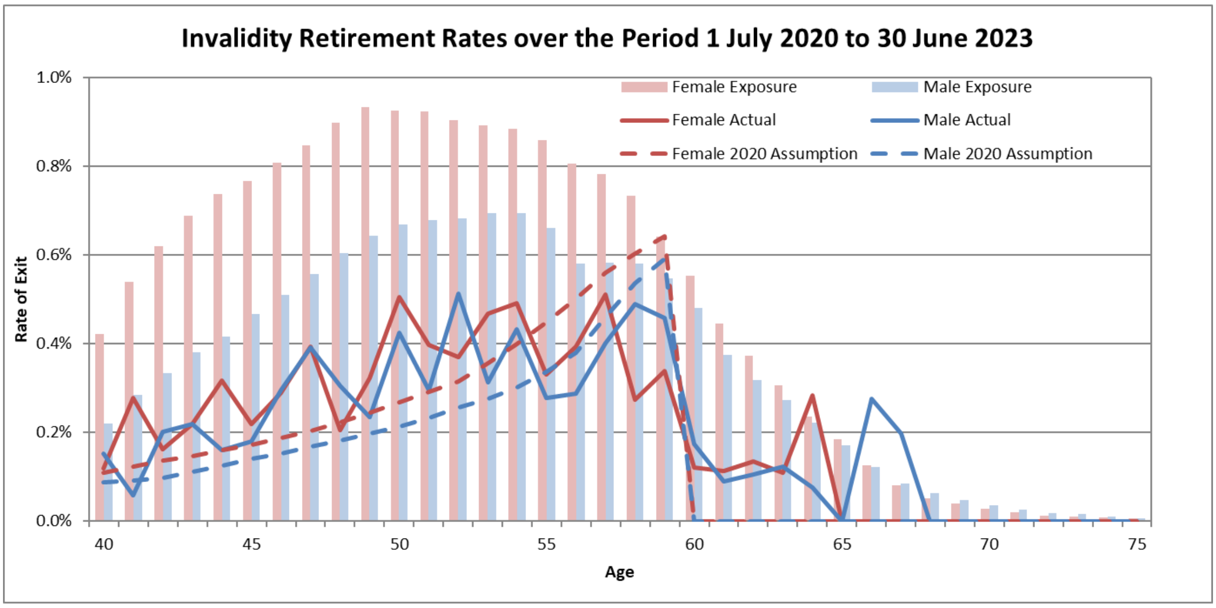


Observations:

- rates of redundancy experienced over the three years to 30 June 2023 have been lower than the 2020 assumptions;
- rates of redundancy experienced over the longer term are broadly consistent with the previous assumptions.

Invalidity Retirement (Disablement)

The assumed rates of disablement, and the actual experience over the three-year period to 30 June 2023, are shown in the following charts. Note that different assumptions were made for males and females.



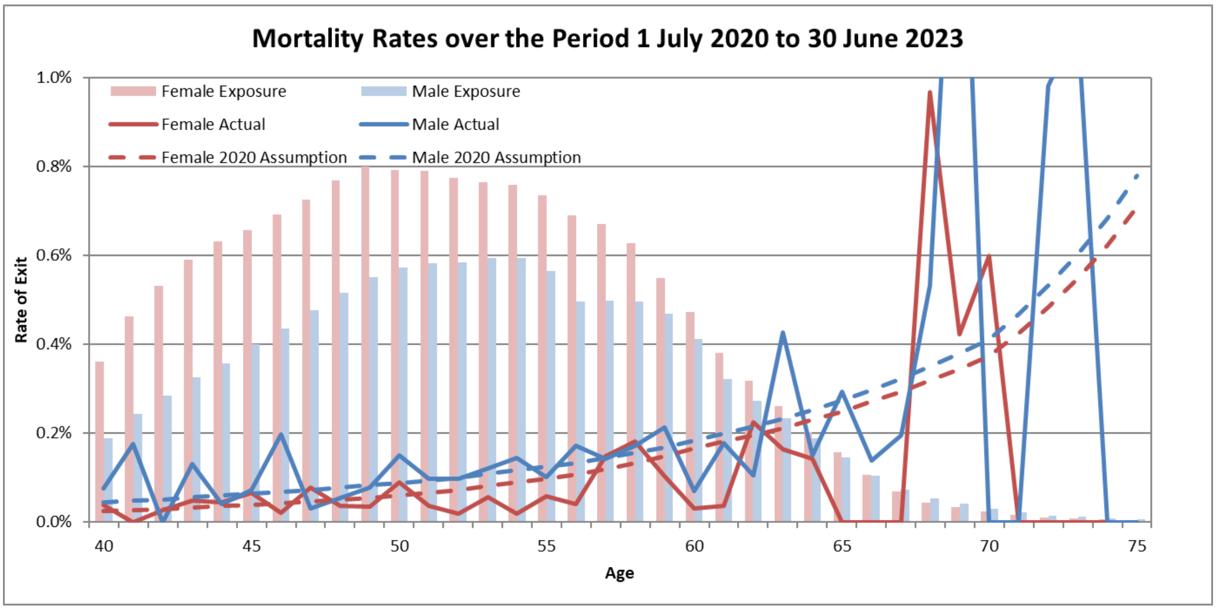
Observations:

- actual rates of invalidity retirement were generally higher than those assumed for the 2020 LTCR;
- actual rates for females were on average higher than for males.

Note that CSS contributors are eligible for invalidity retirement up to age 65 and, while not shown in the graph above (so as not to lose the detail at younger ages), disability rates are assumed to continue to age 65. PSS contributions are not eligible for invalidity retirement from age 60.

Death

The assumed rates of death whilst a contributory member, and the actual experience over the three-year period to 30 June 2023, are shown in the following chart. Note that different assumptions were made for males and females.



Observations:

- actual rates of death for males were generally higher than for females;
- actual rates have been broadly consistent with those assumed for the 2020 LTCR.

Deferral / Preservation of Benefits

On resignation prior to eligibility for retirement, members are generally assumed to fully defer or preserve their benefit until retirement age.

A lower immediate lump sum benefit is available for CSS members. Very few elect this option.

PSS members who resign prior to retirement are required to preserve at least some of their benefit. If the benefit is fully preserved, the lump sum amount can ultimately be converted to an indexed lifetime pension on retirement. Whilst a pre-1 July 1999 member component may be paid as an immediate benefit, any remaining amount can only be paid as a lump sum. Most members prefer to retain the option of a pension benefit.

Members who are made redundant are able to be paid pension benefits immediately. A different pattern of deferral / preservation occurs for retrenchments relative to resignations.

The assumed rates of deferral / preservation, and the actual experience over the three-year period to 30 June 2023, are shown in the following table:

	Resignation		Redundancy	
Scheme	**2020 LTCR Assumption**	**Actual Experience**	**2020 LTCR Assumption**	**Actual Experience**
PSS	100%	99%	15%	13%
CSS	100%	100%	100%	88%

Pension Take-up

CSS members have the option to convert the funded portion of their benefits (i.e. member and productivity component) from a lump sum to a non-indexed lifetime pension. PSS members may elect to convert their age or involuntary (redundancy) retirement benefit from a lump sum to an indexed lifetime pension.

The assumed pension take-up rates, and the actual experience over the three-year period to 30 June 2023, are shown in the following table:

Scheme	2020 LTCR Assumption	Actual Experience
PSS	90%	91%
CSS*	30%	36%

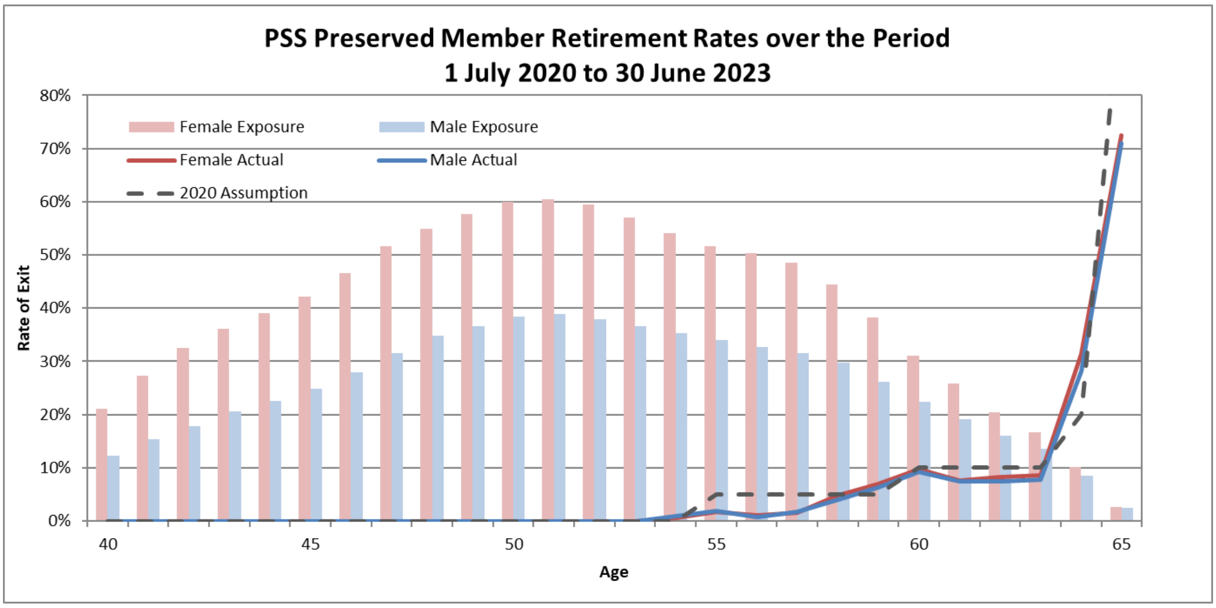
* Member and productivity component.

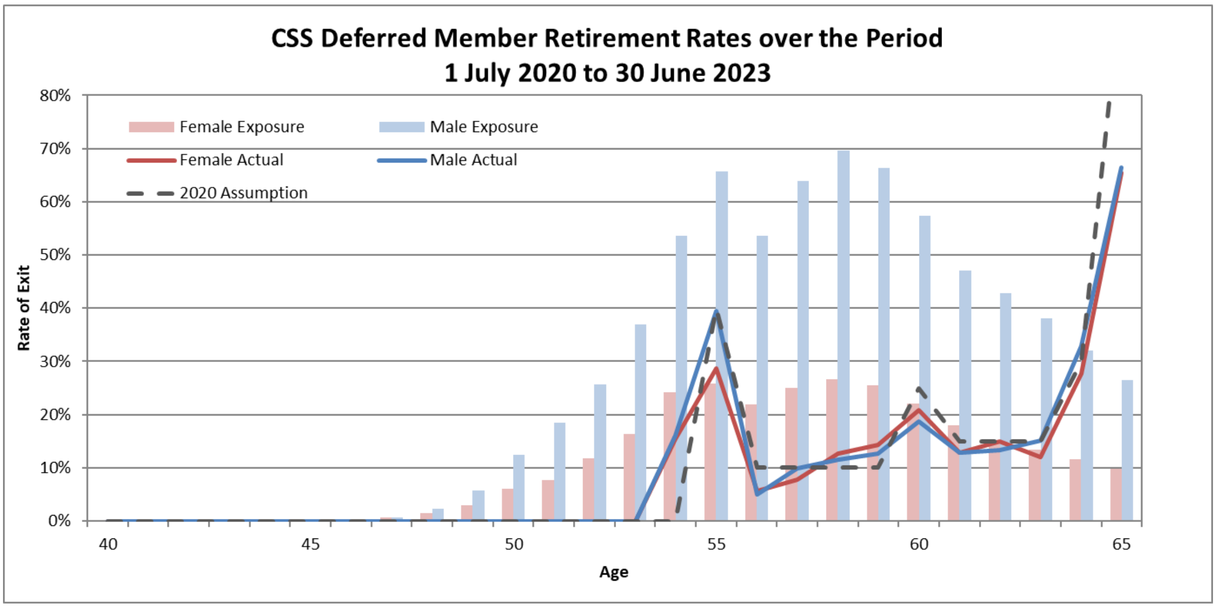
Observations:

- the actual rate of pension take-up for PSS members was consistent with the assumption used for the 2020 LTCR;
- the actual rate of pension take-up for CSS members was higher than previously assumed.

Deferred / Preserved Members

Age Retirement

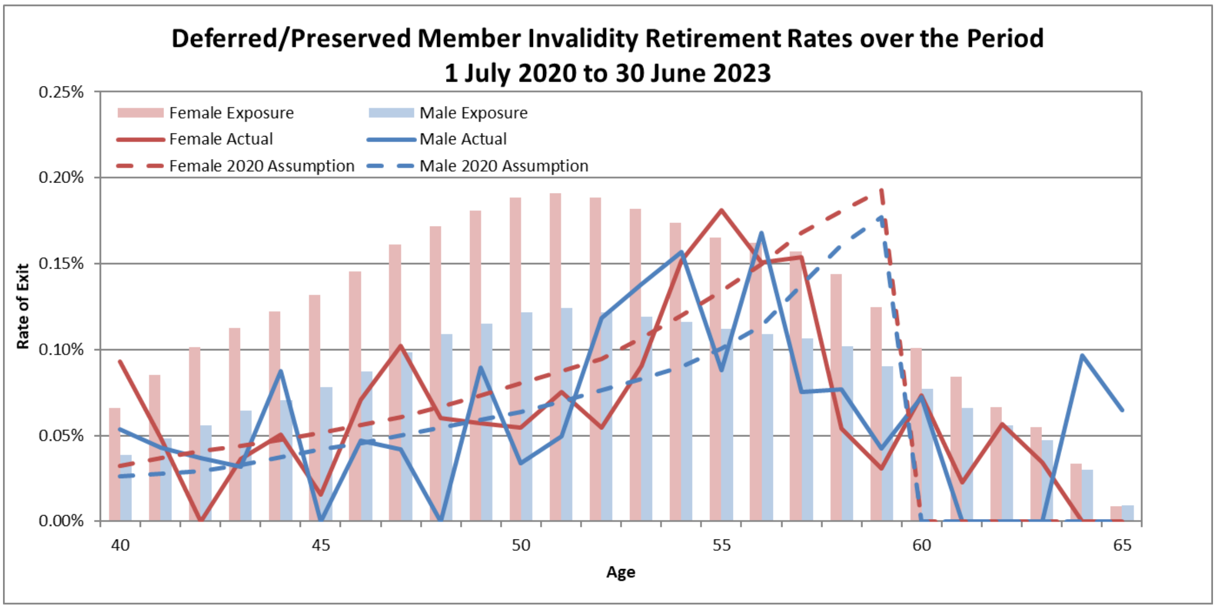




Observations:

- actual rates of retirement for deferred/preserved members have been broadly consistent with those assumed for the 2020 LTCR.

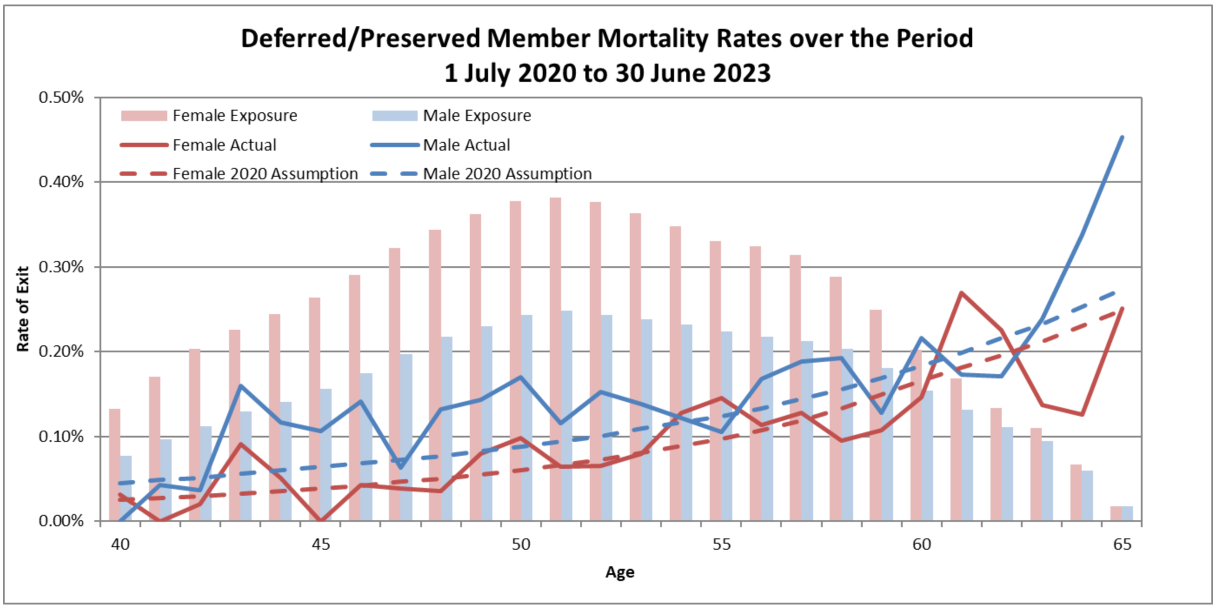
Invalidity Retirement (Disablement)



Observations:

- the actual rates of disability have been broadly consistent with the assumptions used for the 2020 LTCR;
- the actual rates show little difference between males and females.

Death

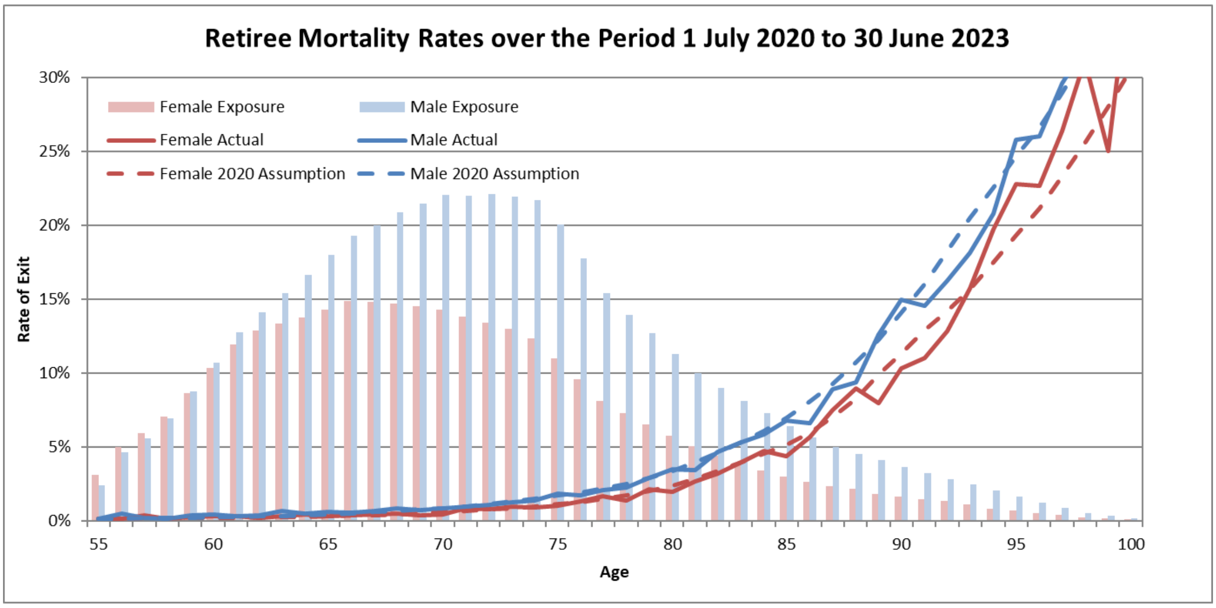


Observations:

- actual rates of death were marginally higher than assumed for the 2020 LTCR.

Pensioners

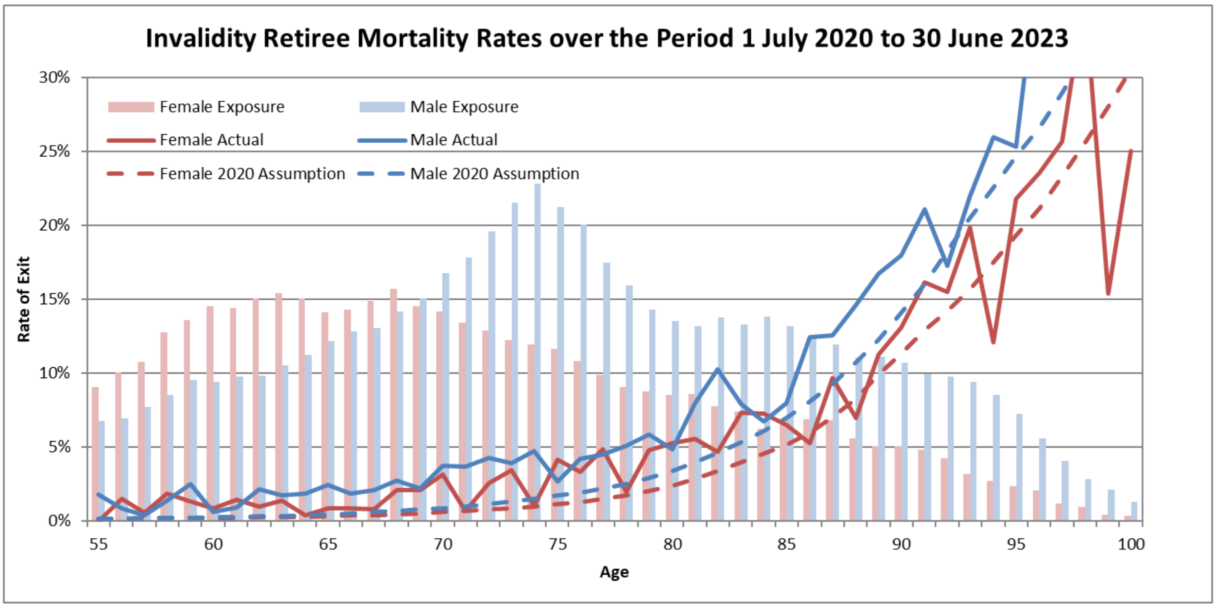
Age Retirement Pensioner Mortality



Observations:

- actual rates of death for males were generally higher than for females;
- actual age retiree mortality rates were broadly consistent with those assumed for the 2020 LTCR.

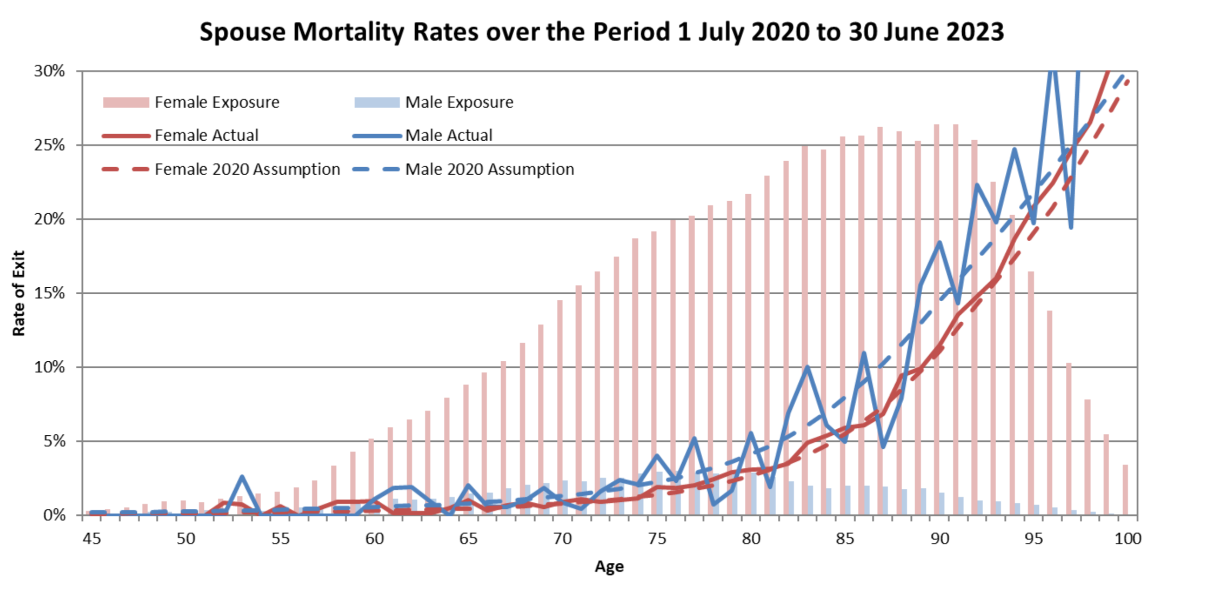
Invalidity Retirement (Disablement) Pensioner Mortality



Observations:

- actual invalidity retiree mortality rates were higher than assumed for the 2020 LTCR.

Spouse Pensioner Mortality



Observations:

- actual rates of death for males were generally higher than for females. There is significantly more variability because of the much smaller exposure;
- actual mortality rates for spouse pensioners were broadly consistent with the assumptions used for the 2020 LTCR.

Age Difference between Member and Spouse

The assumed age difference between members and their spouse, and the actual experience for deceased pensioners with a spouse reversion over the three-year period to 30 June 2023, are shown in the following table:

Age of member relative to spouse	2020 LTCR Assumption	Actual Experience
Male	3 years older	3.3 years older
Female	2 years younger	1.3 years younger

Appendix D
Details of Actuarial Assumptions

Economic Assumptions

The key long term economic assumptions used are set out in the table below:

Parameter	Assumption
CPI increases	2.5% per annum
General salary increases	3.5% per annum (i.e. 1.0% per annum real)
Investment return / discount rate	5.0% per annum (i.e. 2.5% per annum real)

These assumptions remain unchanged from the 2020 LTCR.

GDP Growth

GDP for the 2023-24 financial year is assumed to be $2.6 trillion. The table below shows sample rates (nominal) of projected GDP growth over the next 40 years:

Year Ending 30 June	Annual Growth (nominal)
2024	2.7%
2025	2.0%
2026	3.9%
2027	5.3%
2028	5.3%
2033	5.1%
2043	5.0%
2053	5.0%
2063	5.0%
Average	**5.0%**

Taxation

Allowance has been made for 15% tax payable by the Schemes on assessable income, including employer productivity superannuation contributions. All member contributions are made from after tax salary and are not subject to tax in the Schemes.

No allowance has been made for tax payable by the member such as:

- Superannuation surcharge (which was abolished with effect from 1 July 2005).
- Excess contributions tax.
- Division 293 tax on contributions (including defined benefit notional contributions) for members with incomes above a threshold (currently $250,000).
- Division 296 tax on earnings (including defined benefit notional earnings) from 1 July 2025 for members with superannuation balances above a threshold (proposed $3 million).

In determining the projected outlays, no adjustment is made for any tax payable by members on receipt of a benefit.

Superannuation Guarantee

Superannuation Guarantee legislation requires employers to provide a minimum level of superannuation benefits for their employees. This is known as the Minimum Requisite Benefit (MRB) and is defined in a Benefit Certificate. Benefits from the Schemes must be at least equal to the MRB.

In projecting the MRB, allowance has been made for legislated increases in the Superannuation Guarantee rate (currently 11% and increasing to 12% from 1 July 2025).

Due to the generous nature of the PSS and CSS benefits, the increase in the Superannuation Guarantee rate has a negligible impact on the valuation results.

Demographic Assumptions

Future New Contributory Members

No allowance has been made for future new entrants to the Schemes. The PSS was closed to new members from 1 July 2005. The CSS has been closed to new members since 1 July 1990.

In practice, there may be deferred or preserved members who return to work for the Australian Government or a participating employer and have a right to recommence contributory membership. However, the overall level of such reinstatement is considered to be immaterial to the overall projections.

Promotional Salary Increases

The following table shows examples of the annual assumed percentage increase in salary due to promotion (excluding general salary increases due to inflation):

Age	Promotional Increase
35	1.10%
40	0.72%
45	0.52%
50	0.34%
55	0.18%
60	0.05%

For example, a contributor aged 40 is assumed to have a promotional salary increase in the following year of 0.72% in addition to the assumed level of general salary increases.

PSS Member Contribution Rates

Age	Contribution Rate (% of Salary)
35	5.0%
40	5.9%
45	6.8%
50	7.7%
55	8.6%
60	8.6%
65	8.6%

Resignation and Age Retirement Rates for Contributors

Age	Resignation	Age Retirement
35	3.5%	-
40	3.0%	-
45	2.5%	-
50	2.5%	-
55	-	7.5%
60	-	15.0%
65	-	25.0%
70	-	25.0%
75	-	100.0%

A higher rate (40%) is assumed for CSS contributors at age 54, which reflects the benefit design and Scheme experience.

Age Retirement Rates for Deferred / Preserved

Age	PSS	CSS
55	5%	40%
56 - 59	5%	10%
60	10%	25%
61 - 63	10%	15%
64	20%	30%
65	100%	100%

Involuntary Retirement (Redundancy) Rates

Age	PSS	CSS
35	0.05%	1.00%
40	0.05%	1.00%
45	0.05%	1.00%
50	1.50%	3.25%
55	2.50%	5.50%
60	4.25%	7.75%
65	6.00%	10.00%

Death and Invalidity Retirement Rates

	Death		Invalidity**	
Age	Male	Female	Male	Female
45	0.064%	0.039%	0.140%	0.172%
50	0.088%	0.060%	0.213%	0.268%
55	0.124%	0.097%	0.336%	0.447%
60	0.183%	0.166%	0.625%	0.678%
65	0.274%	0.249%	-	-

* PSS contributors are not eligible for invalidity retirement from age 60 and nil rate is assumed.

** Rates of invalidity retirement for deferred/preserved members are assumed equal to 30% of contributor rates.

Rates of Deferral / Preservation of Benefits

Scheme	Resignation	Redundancy
PSS	100%	15%
CSS	100%	100%

On resignation, all contributors are assumed to fully preserve or defer their benefit until retirement age when retirement pension options are available.

CSS contributors who are made redundant are also assumed to fully defer their entitlement and receive a benefit of greater value than the immediate lump sum.

On redundancy, PSS contributors can elect to preserve their benefits or receive immediately a lump sum, a pension, or a combination of the two. The assumption is that 15% of PSS contributors who are made redundant choose to preserve their benefit, and 85% elect an immediate benefit.

Rates of Pension Take-up

Scheme	% Pension
PSS	90%
CSS (employer-financed component)	100%
CSS (member and productivity component)	30%

Pensioner Mortality Rates

	Male			Female		
Age	Retiree	Invalid	Widower	Retiree	Invalid	Widow
60	0.242%	1.034%	0.544%	0.206%	0.610%	0.305%
65	0.435%	1.488%	0.783%	0.312%	0.906%	0.453%
70	0.841%	2.168%	1.251%	0.591%	1.451%	0.766%
75	1.645%	3.386%	2.161%	1.106%	2.416%	1.350%
80	3.242%	5.564%	3.974%	2.304%	4.243%	2.601%
85	6.790%	10.072%	7.748%	5.026%	7.937%	5.386%
90	13.912%	16.413%	14.273%	11.161%	14.712%	10.962%
95	24.479%	23.782%	21.620%	19.191%	22.938%	18.949%
100	37.614%	33.113%	30.102%	30.526%	31.602%	29.290%
105	51.682%	42.044%	38.222%	41.683%	42.406%	40.286%
110	100%	100%	100%	100%	100%	100%

The mortality rates shown above include assumed improvements to 2023.

Future Mortality Improvements

Allowance is made for assumed future improvements (i.e. reductions) in pensioner mortality.

Improvements in mortality reflect the short term (25 year experience) and long term (125 year experience) factors derived by the Australian Government Actuary and published in the Australian Life Tables 2015-17. The short term improvement factors are significantly higher (i.e. result in lower projected mortality) than the long term improvement factors.

Consistent with the assumptions used for the 2020 LTCR, short term improvements are incorporated for the period to 2024, with long term improvements assumed thereafter.

We anticipate that the Australian Government Actuary will prepare an updated analysis of future improvements in population mortality rates as part of the next Australian Life Tables.

Proportion with Spouses

Age	Male	Female
60	66.0%	59.5%
70	66.0%	54.0%
80	63.0%	36.0%
90	39.0%	8.0%
100	10.0%	2.0%

The above specimen rates include allowance for same sex marriages.

Age Difference between Member and Spouse

It is assumed that male members are three years older than their spouse, and that female members are two years younger than their spouse.

Family Law

Benefits subject to family law splitting order or agreement have been flagged in the membership data as at 30 June 2023. The member's benefit is reduced due to the split and the associate member (former spouse) is included as a dependant pensioner if currently receiving a pension, or as a deferred/preserved member if the entitlement is yet to be paid.

Co-Contributions and LISTO / LISC

Government co-contributions, low income super tax offset and low income super contributions are treated as fully funded additional member accounts and have no effect on the unfunded liability or NECRs.

Appendix E
Details of Projected Results

Projected Unfunded Liability

As at 30 June	Projected Unfunded Liability ($ billion)			% of GDP
	PSS	CSS	Combined	
2023	102.4	68.4	170.8	6.66%
2024	107.1	66.9	174.0	6.61%
2025	111.7	65.3	177.0	6.59%
2026	116.1	63.6	179.7	6.44%
2027	120.4	61.8	182.2	6.20%
2028	124.5	59.9	184.4	5.96%
2029	128.4	57.9	186.3	5.72%
2030	132.1	55.9	188.0	5.48%
2031	135.5	53.7	189.2	5.24%
2032	138.5	51.5	190.0	5.01%
2033	141.3	49.2	190.5	4.78%
2034	143.6	46.9	190.5	4.55%
2035	145.5	44.5	190.0	4.32%
2036	147.0	42.1	189.1	4.10%
2037	147.9	39.7	187.6	3.87%
2038	148.4	37.2	185.6	3.65%
2039	148.3	34.8	183.1	3.43%
2040	147.7	32.4	180.1	3.21%
2041	146.5	30.0	176.5	3.00%
2042	144.8	27.7	172.5	2.79%
2043	142.6	25.4	168.0	2.59%
2044	139.8	23.2	163.0	2.39%
2045	136.5	21.1	157.6	2.20%
2046	132.9	19.1	152.0	2.02%
2047	128.8	17.1	145.9	1.85%
2048	124.4	15.3	139.7	1.69%
2049	119.7	13.6	133.3	1.53%
2050	114.8	11.9	126.7	1.39%
2051	109.6	10.4	120.0	1.25%
2052	104.4	9.1	113.5	1.13%
2053	98.9	7.8	106.7	1.01%
2054	93.4	6.7	100.1	0.90%
2055	87.9	5.6	93.5	0.80%
2056	82.3	4.7	87.0	0.71%
2057	76.7	3.9	80.6	0.63%
2058	71.1	3.2	74.3	0.55%
2059	65.6	2.6	68.2	0.48%
2060	60.3	2.1	62.4	0.42%
2061	55.0	1.7	56.7	0.36%
2062	49.9	1.3	51.2	0.31%
2063	45.0	1.0	46.0	0.27%

Projected Outlays

Year Ending 30 June	Nominal Outlays ($ billion)			% of GDP
	PSS	CSS	Combined	
2024	2.5	4.8	7.3	0.28%
2025	2.7	4.8	7.5	0.28%
2026	3.0	4.9	7.9	0.28%
2027	3.3	4.9	8.2	0.28%
2028	3.6	4.9	8.5	0.27%
2029	3.9	4.9	8.8	0.27%
2030	4.2	4.8	9.0	0.26%
2031	4.5	4.8	9.3	0.26%
2032	4.9	4.8	9.7	0.26%
2033	5.2	4.7	9.9	0.25%
2034	5.6	4.7	10.3	0.25%
2035	6.0	4.6	10.6	0.24%
2036	6.5	4.5	11.0	0.24%
2037	6.9	4.4	11.3	0.23%
2038	7.4	4.3	11.7	0.23%
2039	7.8	4.2	12.0	0.22%
2040	8.2	4.0	12.2	0.22%
2041	8.7	3.9	12.6	0.21%
2042	9.1	3.7	12.8	0.21%
2043	9.4	3.6	13.0	0.20%
2044	9.8	3.4	13.2	0.19%
2045	10.1	3.2	13.3	0.19%
2046	10.3	3.0	13.3	0.18%
2047	10.5	2.8	13.3	0.17%
2048	10.6	2.6	13.2	0.16%
2049	10.6	2.4	13.0	0.15%
2050	10.6	2.2	12.8	0.14%
2051	10.6	2.0	12.6	0.13%
2052	10.5	1.9	12.4	0.12%
2053	10.4	1.7	12.1	0.11%
2054	10.2	1.5	11.7	0.11%
2055	10.0	1.3	11.3	0.10%
2056	9.7	1.2	10.9	0.09%
2057	9.4	1.0	10.4	0.08%
2058	9.1	0.9	10.0	0.07%
2059	8.8	0.7	9.5	0.07%
2060	8.4	0.6	9.0	0.06%
2061	8.1	0.5	8.6	0.06%
2062	7.7	0.4	8.1	0.05%
2063	7.2	0.4	7.6	0.04%

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