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Super SA

Triple S Insurance Review as at 30 June 2019

May 2020

Strictly private and confidential

1. Executive summary

1.1 This actuarial investigation of the insurance arrangements of the Triple S Scheme is required by Section 17 of the Southern State Superannuation Act 2009 (the Act). This is the seventh actuarial investigation; the previous investigation having been carried out by Catherine Nance in a report dated February 2017 (2016 review).

1.2 We were provided with electronic data by Super SA. We adjusted the data to include allowance for claims which had been incurred prior to 30 June 2019, but which had not been finalised.

1.3 The change of administration system (from Superb to Bluedoor) in May 2018 meant that additional data items were available for this investigation, which enabled us to update our approach, particularly in relation to incurred but not reported (IBNR) assumptions. This is discussed further in the report.

1.4 The change in administration system posed challenges for the fund in compiling a complete and consistent record of insurance member data and claims for the four-year period to 30 June 2019. We are aware the transition has meant information has been extracted from both systems (Superb and Bluedoor) for this investigation. We have observed data inconsistencies, however we do not believe these would fundamentally change the conclusions of this review. If the information provided is subsequently determined to be substantially inaccurate, you may need to seek advice as to whether this would materially impact on the findings of this investigation.

1.5 We are aware that Super SA is currently considering the future delivery model for insurance in superannuation, one option of which is to outsource the insurance arrangements to a registered life insurer. This report is based on the self-insurance arrangements in place at the valuation date.

Overall conclusions

1.6 The industry is continuing to experience significant increases to total and permanent disablement (TPD) and income protection claims. This is due to increased member engagement and awareness of superannuation related insurance benefits, and a continued presence of legal firms in claims.

1.7 A number of product changes occurred in September 2018 as part of “Project Protect”, including:

a. the introduction of age-based premiums for income protection

b. introduction of a new fixed benefit product

c. removal of the subsidy on voluntary cover

d. extension of cover ages for 5 years for death and TPD (ages 65 to 70) and income protection (ages 60 to 65).

1.8 The premium subsidy for standard default cover only on death and TPD was $4.4 million at 30 June 2019. We believe this is sufficiently supported by free reserve of $42.1 million and could continue to be supported for the next three years.

1.9 As a result of changing to age-based premiums, income protection premiums are expected to exceed claims cost by $0.5 million in 2020, based on the average claims rate over the four-year period from 2016 to 2019, including an allowance for expenses. This contrasts with the expected ongoing depletion of income protection reserves observed in the previous investigation.

1.10 A reserve of $10 million in respect of the legacy fixed cover product was established at the 2013 review to allow for the expected future subsidy it required. Although members can no longer apply for this product there are approximately 5,000 members who retain this type of cover. Legacy fixed cover claims are still expected to exceed premiums and we believe the current reserve of $10 million continues to be appropriate.

1.11 Given the analysis presented in this report, we do not believe there is an immediate need to change the premium structure at this time, as the existing premiums remain appropriate given the current membership profile and claims experience for 2016-19.

1.12 If, before the next review is due to be completed (as at 30 June 2022), any of the following events occur whilst the fund continues to self-insure we recommend the ongoing appropriateness of the self-insurance arrangements and premiums be reassessed:

a. A significant change in the insured membership profile (e.g. 20% increase/decrease)

b. A significant change to the benefit design

c. The Board assesses that there has been a significant change in the cost of administrating the insurance arrangements that could potentially impact on the premiums of all members

d. There is subsequently determined to be material changes in the data on which this investigation has been based (where that information would have been known at the date of this investigation).

Death and TPD

1.13 The average cost of standard cover (claims plus expenses) remains approximately $1 per unit per week, but this is lower for younger members.

1.14 If standard default cover premiums remain at $0.75 per unit per week in order to subsidise default premiums for Triple S members, the expected premium subsidy is $4.4 million per annum. The reserves remain sufficient to cover the premium subsidy.

1.15 Members can no longer apply for the previous fixed cover benefit (legacy fixed cover) at a fixed premium. However, members who already have legacy fixed cover prior to the cessation retain their current level of cover. Expected claims exceed the fixed cover premiums by $0.7 million, or 18%. A reserve of $10 million was established in 2013 to allow for the expected future subsidy required for fixed cover, and we believe this remains appropriate. If the current relationship between claims and premiums continues, it is expected the fixed cover reserve will be sufficient for approximately 10 years.

Income protection

1.16 The cost of cover over the review period (2016-19) has increased to 0.40% of salary after expenses (0.31% over 2013-16), which is slightly below the current premium (weighted average of 0.43% of salary). The amount of premiums collected in 2019 exceeded benefits paid during the year for the first time since 2013. Allowing for IBNR and IBNER it is expected that premiums will exceed claims by approximately $2.0 million for 2020, based on claim rates for 2016-19.

Reserves

1.17 The insurance reserves remain substantial at $165.2 million at 30 June 2019 (compared to $141.3 million at 30 June 2016).

1.18 Free reserves increased from $36.8 million to $42.1 million due to strong investment returns, offset by the increased prudential reserves ($48.3 million to $50.5 million) required to cover increasing levels of expected claims.

1.19 We believe the Board is entitled to take the view that the free reserves remain adequate to support the current premium subsidy of death and TPD claims for the next three years. Based on the change to age-based premiums and 2019 claims experience the projected profitability of income protection is more favourable than in prior years. However, as income protection claims continue to increase it is important to note this will require ongoing monitoring.

1.20 Contingency reserves are held in respect of the risk of exceptional events. These reserves are particularly important for Triple S, as the self-insurance risk of the fund ultimately rests with the South Australian government and there is no formal reinsurance arrangement in place. In addition to self-insurance risk, the scheme also bears the following risks:

a. Catastrophe

b. Asset fluctuation

c. Underestimation of claim rates

1.21 With the current level of free reserves estimated to cover an additional ~1,000 claims (or an increase in the claims for one year of five times) the existing reserves will likely be sufficient to protect against any impacts of the current COVID -19 pandemic, especially given Australia’s low infection/mortality rate to date. However, the nature of “one in 100 year” events is that they are generally independent of the length of time since the last event, so it is prudent to ensure a suitable catastrophe reserve allowance is maintained for future events.

Post 30 June 2019 events

1.22 The ongoing financial position of Triple S scheme is impacted both by the investment performance of the reserves and the claims experience. The recent investment market downturn and impact of the COVID-19 pandemic on the scheme’s claims experience may reduce the level of free reserves available since 30 June 2019.

1.23 Given the low level of COVID-19 infection rates reported in South Australia to date it is unlikely that Triple S has experienced many claims relating to COVID-19, although it is possible this may change in the future.

1.24 Experience for income protection is expected to worsen as ongoing claimants may have to be extended as there are few jobs available to prove on-going capacity to work. Also, due to lockdown regulations across Australia it is expected there will be an increase in claims relating to mental illnesses conditions

1.25 We note that the since the valuation date the reserves are likely to have reduced, with Super SA's Balanced fund (where the reserves are invested) reporting a -7.2% return from 30 June 2019 to 31 March 2020. This would have reduced the free reserves by approximately $12 million, from $42.1 million to $30 million.

Death and TPD

1.26 As at 30 June 2019, 116,887 members held death and TPD cover, with the amount of cover totalling $19.8bn.

1.27 The death and TPD claim cost (including IBNR) increased from 0.09% of sum insured for 2013-16 to 0.11% for 2016-19.

Claims as % of sum insured

2013-16* total	2016[1]	2017	2018	2019	2016-19* total
0.09%	0.09%	0.12%	0.08%	0.13%	0.11%

* The 2013-16 and 2016-19 totals are four-year averages and are inclusive of 2013 and 2016 respectively. All references to 2013-16 and 2016-19 throughout this report reflect the respective four-year period.

1.28 Observations of TPD claim experience are that:

a. TPD claims are continuing to increase across the industry

b. There remains a strong presence of legal firms in claims and an increase in mental health claims

c. The previous claim experience may reflect apathy of members and may not be the case in the future.

1.29 The cost of standard cover remains approximately $1 per unit per week but is lower for younger members (i.e. they are paying more than the cost of claims given the current premium rates). For example, the cost of claims ranges from approximately $0.21 per unit per week at ages 20 to 25 up to approximately $1.15 per unit per week for ages 35 to 40, compared to the subsidised premium of $0.75 per unit per week.

1.30 If standard cover premiums remain at $0.75 per unit per week for the member's first 3 standard units (6 for police and ambulance members), the expected premium subsidy is $4.4 million per annum. Given free reserves of $43.5 million, a subsidised premium is sustainable.

1.31 A new fixed cover product was launched in September 2018. Members can purchase units of death & TPD cover of $10,000. As there is a limited number of members with this cover (345 members at 30 June 2019) and premium rates are based on standard cover, we have included these members in the results of standard members.

1.32 Legacy fixed cover is no longer available to new members. However, members covered prior to the cessation retain their current level of cover. The expected claims exceed the current fixed cover premiums by $0.7 million, or 18%. Claims are expected to increase further as these members age. Therefore, the excess premium should be considered as a contribution to reserves and hence, a reserve ($10 million as at 30 June 2016) has been maintained for this group.

[1] This figure is different to the 2016 claim rate in February 2017 report (which showed a claim rate of 0.11%). It is based on actual claims reported for 2016 (rather than estimates for Incurred But Not Reported claims) and incorporates any updates to insured member information since the last review.

Income protection

1.33 As at 30 June 2019, 92,543 members had income protection cover, with a total salary of $7.3bn.

1.34 The rate of income protection claims has been steadily increasing from 2016 to 2019, with the claim rate as a percentage of insured members as below:

Claims as % of members

	2013-16	2016[2]	2017	2018	2019	2016-19
Claims	1,699	456	500	542	534	2,032
Claim rate	0.55%	0.54%	0.59%	0.63%	0.60%	0.59%

1.35 The cost of income protection claims has been increasing and this is consistent with experience across the industry.

1.36 Claims as a percentage of salary insured was 0.33% for 2016-19 but has been increasing through 2016-19. The claim as a percentage of salary insured experience is lower than the claim rate experience (shown above) mainly due to low average duration of claims (including adjustment for Incurred But Not Enough Reported, IBNER[3]).

Claims as % of salary insured

	2013-16	2016[4]	2017	2018	2019	2016-19
Claims as % of salary insured	0.25%	0.27%	0.30%	0.35%	0.39%	0.33%
Average duration (yrs.)	0.65	0.68	0.68	0.79	0.85	0.75

1.37 The cost of income protection benefits for 2013-16 was 0.25% of salaries (after allowing for IBNER and IBNR). Since 2016, claims experience has continued trending upwards, averaging 0.33% for 2016-19, and reaching 0.39% for 2019. The claims costs were 0.40% for 2016-19 and 0.44% for 2019 after allowing for insurance administration fees[5].

Reserves

1.38 The insurance reserves increased by 17% from 2016 to 2019 to $165.2 million (5.4% per annum). This was mainly due to favourable investment returns, which averaged 9.5% per annum for 2016 to 2019 (11.0% in 2017, 9.5% in 2018 and 8.1% in 2019).

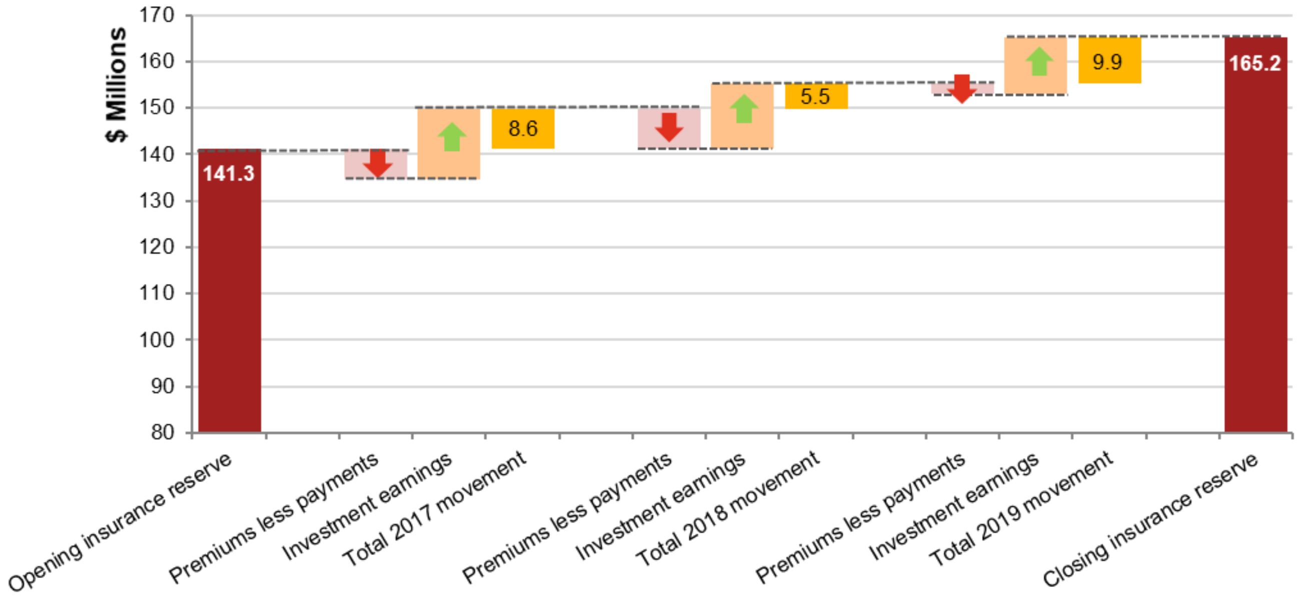
1.39 Premiums were less than payments and expense outflows for each of the past 3 years. Most notably total insurance expenses have increased considerably from $2.4m in 2016 to $8.7m in 2019 (230%) mainly due to non-operational project costs ($5.1m for 2019).

[2] This figure is different to the 2016 claim rate in February 2017 report (which showed 471 claims and a claim rate of 0.55%). It is based on actual claims reported for 2016 (rather than estimates for Incurred But Not Reported claims and Incurred But Not Enough Reported claims) and incorporates any updates to insured member information since the last review.

[3] Incurred But Not Enough Reported allows for additional payments to be made for income protection claims in progress.

[4] This figure is different to the 2016 claim rate in February 2017 report (which showed claims cost of 0.29%). It is based on actual claims reported for 2016 (rather than estimates for Incurred But Not Reported claims and Incurred But Not Enough Reported claims) and incorporates any updates to insured member information since the last review.

[5] Estimated based on operational cost estimate as at 30 June 2019 advised by Super SA ($3.2m for 2019).



1.40 The level of recommended Prudential Reserves ($50.5 million) and self-insurance reserves ($72.6 million) leave free reserves of $42.1 million, increased from $36.8 million in 2016. Going forward, free reserves will meet the cost of the death, and TPD premium subsidies, and any additional costs in the event that prudential and self-insurance reserves are insufficient.

$ million	Death and TPD	Income Protection	Total at 30/06/19	Total at 30/06/16
Insurance reserve[1]	**159.6**	**5.6**	**165.2**	**141.3**
Prudential Reserves				
IBNR & IBNER[2]	13.1	17.4	30.5	28.3
Fluctuation reserve	5.0	5.0	10.0	10.0
Fixed Cover Reserve[3]	10.0	0.0	10.0	10.0
Total Prudential Reserves	**28.1**	**22.4**	**50.5**	**48.3**
Self-insurance Reserves				
Asset resilience reserve	4.2	3.4	7.6	7.2
Contingency reserve	26.3	38.7	65.0	49.0
Total Self Insurance Reserves	**30.5**	**42.1**	**72.6**	**56.2**
Total Prudential and Self Insurance Reserves	**58.6**	**64.5**	**123.1**	**104.5**
Expected ‘free reserves’	**101.0**	**(58.9)**	**42.1**	**36.8**
Total subsidy	**4.4**	**-**	**4.4**	**7.7**

[1] Insurance reserve of $141.3m was split into death and TPD and income protection based on Triple S accounts (audited).

[2] Includes allowance for higher than expected IBNR & IBNER at 50%.

[3] Estimated based on current member cohort.

1.41 The insurance reserves remain substantial, at $165.2 million at 30 June 2019. With free reserves of $42.1 million, we believe they remain adequate to support the current premium subsidy of death and TPD claims for at least the next three years.

1.42 In light of market returns since 30 June 2019 (Super SA's balanced fund fell 7.2% to 31 March 2020), the ability of the free reserve to support the subsidy remains sustainable.

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2. Introduction

Purpose and scope of report

2.1 This report has been prepared at the request of the Department of Treasury and Finance of South Australia, acting on behalf of Super SA as required by Section 17 of the *Southern State Superannuation Act 2009* (see Appendix A).

2.2 The valuation date for this report is 30 June 2019.

2.3 The previous triennial report was prepared as at 30 June 2016 by Catherine Nance of PwC, dated February 2017.

Changes since the last investigation

2.4 A new administration system, Bluedoor, was implemented in May 2018 replacing Superb. As a result, for this investigation we have received more information compared to that available for previous investigations (e.g. the "incident date" for many death and TPD claims is now available). We have therefore adjusted our approach to analysing the insurance experience, including making fewer assumptions, and have been able to refine our IBNR approach compared to the previous investigations. We also observed some inconsistencies with the data, discussed in section 3.

2.5 A number of product changes have been implemented since the 2016 review. Extensive changes recently took place in September 2018 as part of the "Project Protect" changes. The key changes in respect of Project Protect include (see appendix C for more details):

a. The number of default death and TPD units was increased from 2 standard units to 3 (excluding Police and Ambulance members who remain with 6 default units).

b. The age for standard cover increased from age 65 to 70.

c. The subsidy of $0.25 per unit per week now applies to the default cover only, any additional units are purchased at the full rate of $1 per unit per week.

d. A new fixed death and TPD benefit option was launched which provides cover in units of $10,000, with aged based premiums.

e. Terms and conditions were updated to better align with Superannuation Industry (Supervision) Regulations 1994.

f. The income protection benefit was increased to include a contribution replacement benefit (at 9.5% of insured income); cover was extended to age 65 and the option of a 90-day waiting period was introduced. Income protection premiums are also now based on the member's age.

g. All members (except police or ambulance members) can reduce or cancel their cover at any time. Police and ambulance members can opt-out of death and TPD after age 65, and out of income protection after age 60.

Insurance arrangements provided by Triple S

Death and total and permanent disablement

2.6 Triple S provides death and total and permanent disablement insurance (with TPD including terminal illness) paid as a lump sum. All members, including those who work part time or who are employed on a casual basis, are entitled to insurance cover. All members may choose not to have insurance, with the exception of police and ambulance members who can only cancel their cover from age 65.

2.7 There are two types of cover:

a. Standard cover which comprises:

i. Default benefits - for a fixed weekly premium of $1 per unit per week (which is subsidised from reserves such that the member only pays $0.75 per unit per week), the insurance is a specific dollar amount of insurance which varies with age, up to age 70. The default insurance is three units of standard cover (6 units for police and ambulance members).

ii. Additional/voluntary benefit - members may apply for units in addition to their default cover, subject to evidence of good health. The insurance is a specific dollar amount of insurance which varies with age, up to age 70; premiums are a fixed $1 per unit per week, without any subsidy applied.

b. Fixed cover which comprises:

i. Fixed benefit cover – as part of Project Protect, a new fixed benefit option was introduced. Members can select a fixed level of cover, in units of $10,000, with premiums based on the member's age, up to age 70. Premiums are in line with the standard cover rates.

ii. Legacy fixed cover – this fixed cover offers insurance up to age 65, in units of $75,000 each. The premium is also fixed and is based on the age at which the cover is taken out. Since 13 November 2014 members are no longer able to apply for fixed units of cover at a fixed premium. Members can only increase their level of cover by opting out of this product.

2.8 The maximum insurance cover a member can hold is $1,500,000 or $750,000 if the member is employed on a casual basis.

2.9 Police and ambulance members, who are also members of Triple S, automatically receive six units of standard cover. Police and ambulance members can opt-out of death and TPD after age 65, and out of income protection after age 60.

2.10 Spouse members have the option of applying for voluntary death insurance cover, subject to evidence of good health. The maximum insurance cover a spouse member can hold is $1,500,000.

2.11 The insurance cover and premiums for standard and fixed cover are included in Appendix C.

2.12 Death and TPD insurance does not cover medical conditions that existed at the time of joining Triple S, for a period of six months.

2.13 Approval of a TPD benefit is based on the Superannuation Industry (Supervision) Act 1993 definition, however the member must still terminate employment. TPD claims must be lodged within two years of terminating employment.

Income protection insurance

2.14 Triple S provides income protection insurance, payable as a fortnightly income for a limited period following temporary disablement.

2.15 The benefit is:

a. 75% of salary plus a contribution replacement benefit (CRB, benefits payable from 3 September 2018 only), bringing the total benefit to 82.125% of pre-disability income (i.e. 75% multiplied by (1 + 9.5%) for the CRB),

b. Payable for a period of up to 24 months, or for the equivalent of 24 months during a 48 month period,

c. Payable up to age 65, and

d. Subject to a waiting period of 30 days (default) or 90 days.

2.16 Premiums for income protection benefits are based on the member's age (previously 0.2% of salary for all members prior to September 2018). The premiums for income protection are included in Appendix C.

2.17 Income protection insurance is provided automatically to most members of Triple S. Casual members are not automatically provided with income protection insurance but can elect to be covered (subject to evidence of good health), and members with income protection elsewhere may opt out of income protection insurance (excluding police and ambulance members until age 60).

Future changes to insurance offering and experience

2.18 We are aware that Super SA is currently considering the future delivery model for insurance in superannuation, one option of which is to outsource the insurance arrangements to a registered life insurer. This report is based on the current products and self-insurance arrangements as at 30 June 2019.

2.19 Effective 1 July 2019, the government introduced the Protecting Your Super (PYS) Package. This package was intended to protect members' superannuation accounts from being eroded by fees and insurance costs. The key change to insurance was that inactive accounts (inactive greater than 16 months) must have their insurance cover cancelled.

2.20 The government added further measures, effective 1 April 2020, when they introduced the Putting Members' Interests First (PMIF) legislation. PMIF requires that members can only be automatically provided basic cover if they are age 25 or over, have an account balance of $6,000 or greater and are receiving employer contributions. RSE Licensees may exclude members from these if they have been certified with a dangerous occupation certificate.

2.21 If Super SA were to implement the PYS and PMIF changes, any impacts would not have been observable in this review as they come into effect after the valuation date. However, the broad impact across the industry has been that these measures have resulted in increased premiums and reduced cross-subsidies as the risk pooling ability of funds has diminished due to younger members not being provided with insurance cover until much later (or until they actively opt-in to cover).

2.22 There is likely to be significant impacts and losses to the life insurance industry as a result of the COVID-19 pandemic, including indirect effects. Given the low level of infection rates experienced in South Australia it is unlikely that Triple S has experienced many claims relating to COVID-19 to date, although this may change in the future. In the wider insurance industry there will likely be an increase of death and disability claims as a direct result the virus and as a result of the rising unemployment and economic slowdown. Studies have shown that the level of disability claims are correlated with the unemployment rate and with an expected economic slowdown the number of claims is expected to increase.

2.23 Similarly, experience for income protection is expected to worsen as ongoing claimants may have to be extended as there are few jobs available to prove on-going capacity to work. Also, due to lockdown regulations across Australia it is expected there will be an increase in claims relating to mental illnesses conditions.

2.24 With ongoing uncertainty in the economy, the life industry expects an increase in applications for cover as a result of community concern around the future impacts of COVID-19. It remains unclear what the impact of pandemic exclusions (or absence of) will be on premium rates, and any flow-on effects such as to the availability and affordability of reinsurance.

2.25 As the COVID-19 pandemic occurred after 30 June 2019, the impacts of this are not covered in this investigation. However, it is likely that there will be an increase in insurance claims as a result of either the virus or resulting economic environment for FY2020 at least, though the extent of this is too early to determine. We note that the associated investment market downturn has already impacted reserves. Since 30 June 2019 Super SA's balanced fund (where the reserves are invested) has fallen 7.2% to 31 March 2020.

Next review

2.26 The next review will take place at a date no later than 30 June 2022, to be completed within 12 months as required by the Act .

2.27 If, before the next review is due to be completed, any of the following events occur whilst the fund continues to self-insure we recommend the ongoing appropriateness of the self-insurance arrangements be reassessed:

a. A significant change in the insured membership profile (e.g. 20% increase/decrease)

b. A significant change to the benefit design

c. The Board assesses that there has been a significant change in the cost of administrating the insurance arrangements that could potentially impact on the premiums of all members

d. There is subsequently determined to be material changes in the data on which this investigation has been based (where that information would have been known at the date of this investigation).

Statement of compliance

2.28 The report has been prepared in accordance with the Code of Conduct and having consideration for Professional Standard 400, issued by the Institute of Actuaries of Australia.

3. Data

Data provided

3.1 The data was provided by Super SA via excel files, containing details of all members of Triple S who were covered for insurance between 1 July 2014 and 30 June 2019, as well as claims that were incurred (or commenced in the case of income protection benefits) since 1 July 2014.

3.2 The change of administration system (from Superb to Bluedoor) in May 2018 meant that additional data was available for this investigation compared to that from prior years. This additional information enabled us to refine our analysis approach, particularly in relation to IBNR assumptions. This is discussed further in the next section.

3.3 The change in administration system posed challenges for the fund in compiling a complete and consistent record of insurance member data and claims for the four-year period to 30 June 2019. We are aware the transition has meant information has been extracted from both systems (Superb and Bluedoor) for this investigation. We have observed data inconsistencies, however we do not believe these would fundamentally change the conclusions of this review. If the information provided is subsequently determined to be significantly inaccurate, you may need to seek advice as to whether this would materially impact on the findings of this investigation.

3.4 The claims data was advised to contain details of all members who claimed between 1 July 2014 and 30 June 2019 and were paid up to when the data was received (March 2020). In addition, we received claims management data in January 2020 which contained information for claims in various stages of processing (including approved but not paid, pending and declined claims).

3.5 We carried out some high-level data validation checks and note some possible data inconsistencies as follows:

a. The death and TPD claims data[6] for the year to 30 June 2015 showed 146 claims, compared with 151 claims in the data received for the 2016 investigation (before an allowance for incurred but not reported claims). We are not aware of a reason for claim numbers in 2015 to have reduced retrospectively. The 2015 claims data has not been used to determine the claims experience for this investigation (we have used a four-year period 2016-19) so this has not had an impact on the results of the investigation

b. The death and TPD claims data for the year to 30 June 2018 showed 130 incurred claims. This compares to 182 claims in 2016, 171 claims in 2017 and 131 claims which have already been reported to the fund for 2019 (noting there will be a delay for 2019 claims which can be reported up to 2 years following an incident so this figure will increase). We are not aware of a reason for this dip in claims in 2018, however we note claims can be expected to fluctuate from year to year.

3.6 Subject to the comments above, we believe that the data used for the investigation is reasonable. However we do not assume any responsibility for the accuracy or completeness for the data provided to us.

3.7 If the information provided for this investigation is subsequently determined to be substantially inaccurate, you may need to seek advice as to whether this would materially impact on the findings of this investigation.

Approach

3.8 This investigation covered the four-year period to 30 June 2019 (investigation period). The previous investigation covered the four-year period up to 30 June 2016, so the investigations overlap by one year. We considered this useful as a way of checking on the consistency of the two investigations.

3.9 We note that some information provided for the period before 30 June 2016 has been updated since the previous investigation, and hence the 2016 results have been updated from those in the February 2017 report. We don't believe this will have a material impact to the overall results and consider the update to be a refinement on the 2016 results as it is based on more up-to-date information.

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[6] Note: references to "TPD claims" throughout this report include terminal illness

3.10 We extracted relevant data from the information provided and analysed the claims experience separately for death and TPD insurance and income protection, for each of the four years of the investigation, and for the whole period.

3.11 We compared the claims management data with the paid claims data in order to make an allowance for pending and approved but not paid claims in the analysis.

3.12 As mentioned above, Bluedoor stores two key date fields in relation to death and TPD claims which were not previously available; claim incident date and claim notification date.

3.13 In previous investigations we estimated incident date based on the last date of employer contributions or insurance premiums paid. For this investigation we have used the incident date provided in the claims data and, where not available, we have used the earliest date recorded in relation to the claim (e.g. notification date, date of last contribution received).

3.14 The availability of the claim notification date has allowed us to refine our IBNR approach, where we previously used payment date as a proxy for reported date. This is discussed in more detail with section 4.

3.15 As data extracted from Bluedoor is per policy (e.g. default cover and voluntary cover is separated), rather than per member (as was the case with Superb), we have combined members with multiple policies for 2018 and 2019 (for both membership and claims data) so that it is consistent with previous years. We believe this is appropriate as it is likely when a member is eligible for a claim that the claim will cover all of the member's policies (e.g. default and voluntary cover).

3.16 Members with "Death Cover ##" of more than zero in the data are considered insured members for death and TPD for the applicable year (where "##" refers to the applicable financial year and "Death Cover ##' contains the amount of cover). This resulted in the exclusion of 8,989 members where their "Death Cover ##" was zero for the four year period to 30 June 2019.

3.17 Members with a salary of more than zero and an income protection flag of "Y" (based on the "cl_ttd##" data field) are considered insured members for income protection for the applicable year. This resulted in the exclusion of 1,276 members for at least one year who were covered for income protection over the four-year period to 30 June 2019, where their salary was nil. We note that the number of members excluded for this reason has reduced significantly since moving to Bluedoor in 2018 (631 in 2016 down to 21 in 2019)

3.18 We have assumed death and TPD claims without a benefit type are death benefits (1 claim).

3.19 We have analysed the income protection data together for both waiting periods (30 and 90 days) as the number of policies with 90 day waiting periods was not large enough to warrant separate analysis – out of a total of 92,447 members as at 30 June 2019 only 67 members had a policy with a 90 day waiting period.

3.20 Similarly, as there is a limited number of members with the new fixed benefit cover (345 members at 30 June 2019), and premium rates are based on standard cover, we have included these members in the analysis of standard cover members.

3.21 We grouped the data into five yearly age groups, as in the previous investigations, because there is insufficient data to produce meaningful results for individual ages.

3.22 We have examined the experience both by number of claims, and by amounts of insurance.

Death and TPD

3.23 A summary of the data as 30 June 2019 in respect of death and TPD insurance is set out below, separated by cover type.

	Standard default only							
	3 Units	Police and ambulance[1]	Other units[2]	Voluntary	Total standard	Fixed cover	Legacy fixed cover	Total cover
Number of members[3]	95,707	4,016	3,136	8,539	**111,398**	345	5,153	**116,887**
Total cover ($m)	13,289	1,370	240	2,340	**17,239**	188	2,406	**19,833**
Average cover ($)	138,854	341,053	76,461	274,086	**154,753**	543,623	466,976	**169,664**
Total units	287,121	24,096	6,306	74,417	**391,940**	18,755	32,109	**442,804**

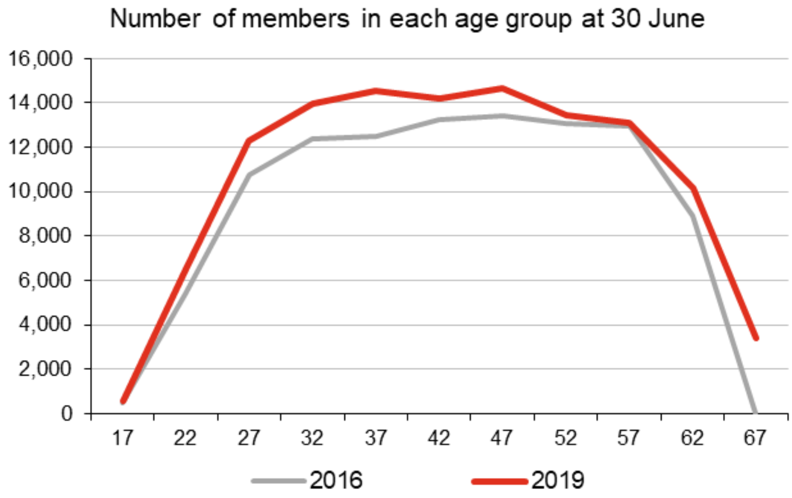
[1] Police and Ambulance members are automatically covered for 6 units of death & TPD.

[2] Other units have been taken as default cover (and therefore eligible for subsidy) where these have been labelled as "BASSDDTPD" (i.e. base standard death & TPD) policies in the data provided.

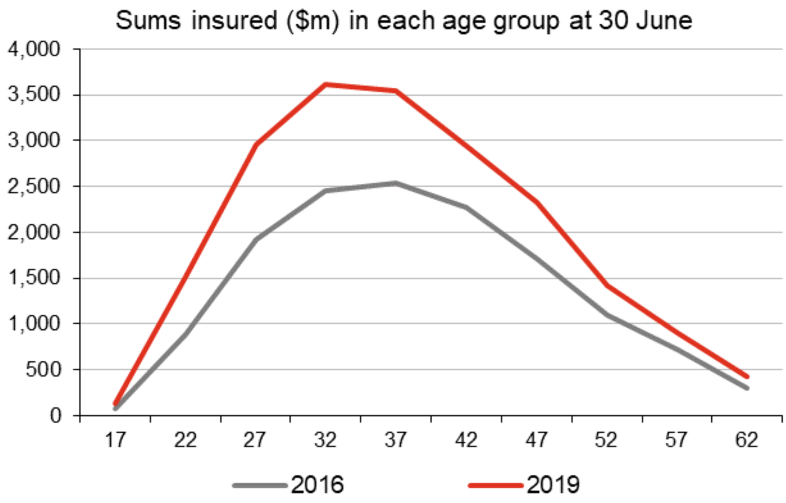
[3] The number of members in each category do not sum to the total due to 9 members having both standard and fixed cover policies.

3.24 The number of insured members increased to 116,887 as at 30 June 2019, compared to 103,112 at 30 June 2016. We note that the number of insured members at 30 June 2016 for the previous review was 106,291 (3,179 higher), which is potentially due to the processing delay for resignations. A similar decrease in the number of insured members may be expected as at 30 June 2019 as updated data becomes available, although due to the delay in receiving the insured member data for this investigation the extent of this decrease is likely to be less pronounced.

3.25 The overall age distribution has remained relatively unchanged, noting the addition of insured members aged 65 to 70 at 30 June 2019, as shown below.



3.26 In contrast, the sum insured by age has increased significantly over the period, as shown below, from an average of $135,376 at 30 June 2016 to $169,677 at 30 June 2019 (25%).



3.27 The total sum insured increased 42% to $19.8 billion as at 30 June 2019, from $14.0 billion as at 30 June 2016:

a. The increase is largely due to a 30% increase in total sum insured from 2018 to 2019, due to default death and TPD increasing from 2 to 3 units

b. A small proportion of the increase is due to cover being extended to members aged 65 to 70 from September 2018 onwards.

Breakdown of cover types

3.28 Standard cover:

a. Represents 95% of total members (95% in 2016)

b. Default members represent 75% of sum insured (61% sum insured in 2016), whereas voluntary represents 12% of sum insured (20% sum insured in 2016)

c. Accounted for 568 claims (93% of total number and 69% of total claim amount) during the investigation period

3.29 Legacy Fixed cover members:

a. Represent 4% of total members, but 12% of the total sum insured (6% of total members, 19% of total sum insured in 2016)

b. Accounted for 47 claims (7% of total number and 31% of total claim amount) during the investigation period (37 claims and 6% of total number and 26% of total claim amount in 2016).

3.30 New fixed benefit members:

a. Represents close to 1% of total members and 1% of sum insured

b. Accounted for no claims during the investigation period.

3.31 The Triple S Insurance Scheme consists mainly of active members in the Triple S fund (approx. 99%). Other groups include:

a. Flexible rollover product

b. Spouses

c. Salary sacrifice

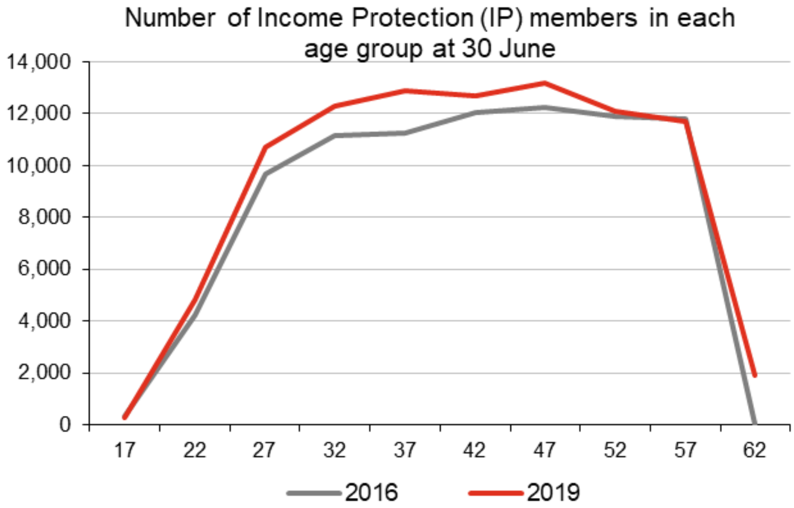
d. SA Select.

3.32 Throughout the report, the claims experience refers to all members unless stated, as the number of members (and claims) in each subgroup (fixed, voluntary and other groups) is too small to be statistically significant if analysed separately.

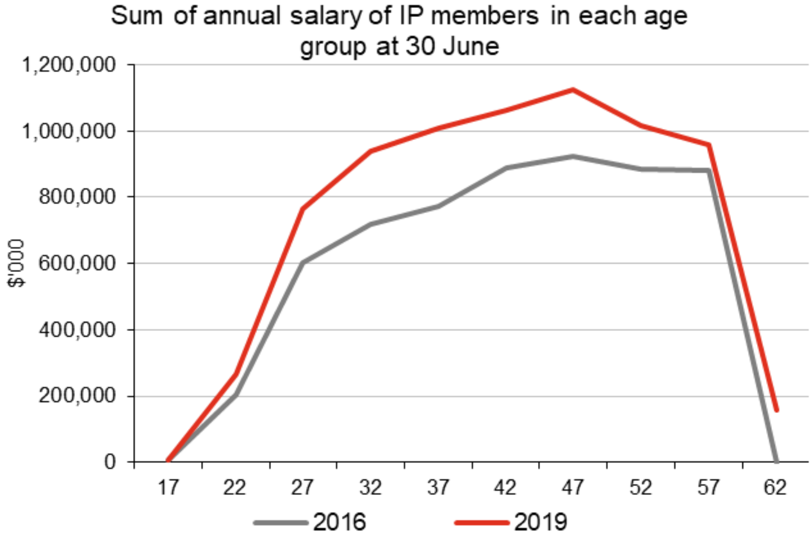
Income protection

3.33 The number of members with income protection cover has increased 9% from 84,588 members as at 30 June 2016 to 92,543 members as at 30 June 2019; the total salary of members with cover increased 24% (from $5.9bn to $7.3bn). A small proportion of this increase is due to the extension of cover to members up to age 65 from September 2018, previously age 60 (total of 1,884 members as at 30 June 2019)

3.34 We note that the number of insured members at 30 June 2016 for the previous review was 87,516 (2,928 higher) which is potentially due to the processing delay for resignations. A similar decrease in the number of insured members may be expected as at 30 June 2019 as updated data becomes available, although due to the delay in receiving the insured member data for this investigation the extent of this decrease is likely to be less pronounced.



3.35 The average income protection benefit for insured members is $64,848 per annum as at 30 June 2019, based on 82.125% of the average salary of $78,963. This has increased 4.3% per annum from 30 June 2016 when the average benefit (based on 75% of salary) was $52,175 (average salary $69,566). Part of this increase is due to the introduction of the contribution replacement benefit .



4. Death and TPD experience analysis

Adjustment for incurred but not reported (IBNR) claims

4.1 The data provided was effective at 30 June 2019 and was produced in April 2020. This means that a number of claims which occurred prior to 30 June 2019 are not included in the data, because they have yet to be reported, or are still being processed. We need to estimate and include the value of these claims, to ensure we capture all claims occurring in the period under review. This is similar to the way in which accounts need to include expenses which have been accrued but not yet incurred.

4.2 The claims data included claims which were incurred prior to 30 June 2019, that were not known at this date, but had been reported by the time the data was produced in April 2020. As a result, when setting our IBNR allowance we have assumed that the claims data provided includes all claims reported to 31 December 2019, to avoid double counting the claims over this period. This is a conservative approach as the claims data also includes some claims to 31 March 2020. The reason for using 31 December 2019 rather than 31 March 2020 is that some claims may be delayed in being transferred from the claims management data to Bluedoor (e.g. claims with longer processing times due to delays or disputes). The exact implications of this approach are discussed in more detail below.

4.3 We analysed the historic delay between the date a claim was incurred and the date it was reported to the fund, using the notification date held in Bluedoor. This is an update to the previous approach, which used date of payment as a proxy for reported date, as notification date was not available. This means that the claim processing time is no longer included in the delay period used for IBNR and overall this change has resulted in a lower IBNR allowance.

4.4 Funds are continuing to receive more late claims, particularly for TPD. This is due in part to increased member engagement and awareness, and a continued presence of legal firms in claims. Triple S has a unique “sunset” condition regarding the delay with which TPD claims can be reported to the fund (two years) which limits the notification period for these claims.

4.5 A 2016 study of group risk insurance undertaken by Rice Warner showed that the average delay in reporting a TPD claim for a Public Sector fund was 15 months, and over 20 months across Industry funds. For income protection claims the study found that the average notification delay was over 3 months for Public Sector funds and 11 months for Industry funds.

4.6 Super SA’s experience mirrors this, as we have seen TPD and death claim delays indicating an increasing number of late claims in more recent years. The results are summarised in Appendix B.

4.7 A review of claims advised to have been incurred in 2016 (based on data in 2019) showed the potential claims (23 claims) and IBNR (84 claims or 66% of claims) allowance that was included for the 2016 investigation was higher than the resulting experience (85 claims in addition to the 97 already notified at 2016, resulting in 182 actual claims for 2016).

	2015	2016	Total
Claims in 2016 data (unadjusted for IBNR)	151	97	**248**
Potential claims[1] (% of claims in 2016 data)	4 (3%)	23 (24%)	**27**
IBNR claims[2] (% of claims with potential)	23 (15%)	84 (70%)	**107**
Number of expected claims[3] (% increase of unadjusted claims)	**179 (18%)**	**204 (110%)**	**383**
Actual claims in 2019 data[4]	146	182	**328**
Actual/Expected	82%	89%	**86%**

[1] Potential claims are claims arising from pending and declined claims at 30 June 2016, assuming 90% of all TPD claims will be approved. 18 claims that were declined or pending to 30 June 2016 were subsequently approved. This compares to an allowance of 27 potential claims.

[2] IBNR claims are determined as 70% of the known 2016 claims and 15% of 2015 claims, after allowing for potential claims, e.g. for 2016: (97 + 23) x 70% = 84 IBNR claims.

[3] Totals may not add due to rounding as IBNRs not applied as whole numbers

[4] Note that 2015 claims in the 2019 data were lower than in the 2016 data (see section 3.4)

4.8 Overall, after allowing for potential and IBNR, actual claims were 18% lower than expected in 2015 and 11% lower in 2016.

4.9 As mentioned previously, we allow for claims incurred but not reported for up to two years prior to the investigation date. As the data was extracted sometime after 30 June 2019 a number of claims incurred prior to and reported after 30 June 2019 are already known and included in the claims data. Therefore, our IBNR allows for claims with delays of 6 to 24 months for 2018 and 2019 (as opposed to 0 to 24 months for previous investigations when data was extracted closer to 30 June)[7].

4.10 Based on the observed delay pattern, review of 2016 IBNR allowance and industry trends, the IBNR allowance for 2019 has been determined as follows:

% of known claims	2018	2019
Death potential claims	0%	22%
TPD potential claims	24%	43%
Death IBNR	2%	15%
TPD IBNR	11%	30%

4.11 So for TPD claims for 2019, allowances for pending and declined claims which may be approved in the future is estimated at 43% of claims known at 30 June 2019, and claims which have been incurred but not reported are assumed to be 30% of the claims known at 30 June 2019.

[7] We note that claims must be reported within two years of the incident occurring.

4.12 The following table shows the impact of potential claims and IBNR assumptions on total death and TPD claim amounts over the review period:

Claims known at 2019 ($'000)	2016	2017	2018	2019	Total
Amount of claims **(unadjusted)**	12,792	17,304	10,002	13,658	**53,755**
Amount of potential claims[1]	0	0	1,470	5,145	**6,615**
Amount of IBNR claims	0	0	700	3,582	**4,283**
Amount of claims[2] **(with potential and IBNR)**	12,792	17,304	12,172	22,385	**64,652**
Total potential and IBNR allowance	-	-	22%	64%	

[1] Potential claims are claims arising from pending and declined claims at 30 June 2019, assuming 95% of all claims will be approved, based on the average claims size ($105,000).

[2] Totals may not add due to rounding as IBNR not applied as whole numbers

4.13 We have increased the average claim size assumption to $105,000 (previously $80,000 for the 2016 investigation) for death and TPD claims when allowing for potential and IBNR claims. This is in line with the increase in average claim size to 2019 and reflects the increase in default cover.

4.14 The potential claim amount of $5.1 million in 2019 is based on 49 potential claims and an average claim size of $105,000. Similarly, the estimated IBNR of $3.6 million in 2019 is determined based on approximately 28 IBNR claims. Please refer to Appendix B for more details on the number of death and TPD claims and allowances for 2016-19.

4.15 The overall claims amount (including potential and IBNR) has increased from $12.8 million for 2016 to $22.4 million for 2019 (75% increase or 21% p.a.). This is somewhat due to the increase in default units which has driven an increase in total sum insured of 42% from 2016 to 2019, or 12% p.a. (from $14.0 bn to $19.8 bn). The remaining increase is due to increased number of insured members and higher claim rate in 2019 compared to 2016 (see 4.29 below).

4.16 The frequency of claims has remained unchanged since the 2016 investigation, with 0.17% of members claiming over 2013-16, the same as over 2016-19.

4.17 The allowance for IBNR claims is $4.3 million of known claims incurred in 2018 and 2019, which is significantly lower than the $8.6 million allowance in 2016, for three main reasons:

a. The claim data has been provided much later for this investigation than for previous investigations, meaning a significant proportion of delayed claims are already known so do not need to be allowed for in the IBNR estimate. The 2019 claims which were notified after 30 June 2019 represent $2.0 million, which would otherwise be allowed for via the IBNR allowance if the data was available closer to the investigation date

b. The IBNR allowance is therefore based on the proportion of claims with longer reporting delays (6+ month delays)

c. The data changes discussed above have meant we now have a more accurate measure of the claim notification delay (based on the period from the date of incident to date of notification to the fund), as opposed to the previous approach which included some time for claim processing also. The effect has been to reduce the delay period and therefore IBNR allowance all other things equal.

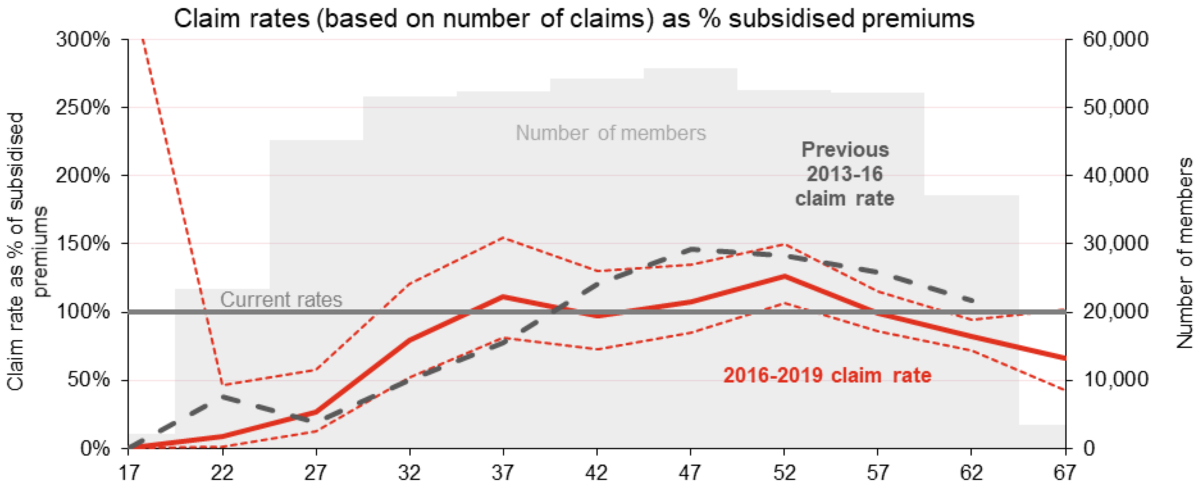
4.18 The actual IBNR could still be higher than $4.3 million (which is based on past experience). As the results are sensitive to this key assumption it is prudent to acknowledge this amount may vary in practice. If it was 50% higher the IBNR allowance would increase by $2.2 million. We have made an allowance equal to this in the IBNR under-estimation reserve. We note this does not represent the upper range of all possible outcomes.

4.19 The number of claims and amount of claims following this point in the report include the IBNR and potential claims allowances (unless advised otherwise).

4.20 The effect of the IBNR on the actual number of claims for death and TPD Insurance for 2016-19 is detailed in Appendix B.

Claims experience by number of claims

4.21 The claim rates for death and TPD Insurance, based on the number of claims and the number of insured members, are shown below:



4.22 By way of explanation:

a. The solid red line shows the 2016-19 claim rate as a percentage of subsidised premiums (subsidisation on default units only). For example, if the red line is showing 50% of subsidised premiums this means the claim rate was half the amount of premiums for that age group. A breakdown is shown in Appendix B

b. The dotted red lines show the “95% confidence interval”, i.e. the true claim rates should be somewhere within the dotted lines with a 95% probability

c. The shaded bars in the background show the number of members in each age group. The dotted confidence intervals are narrowest where there is the most data

d. The grey dashed line shows the previous claim rates from the 2013-16 investigation (average claim rate of 0.17% of number of members). The 2013-16 claim rate is shown as a percentage of $0.75 per unit per week premium (as all units were subsidised).

4.23 Death and TPD cover was extended to cover members aged 65 to 70 from September 2018. The number of insured members aged 65 to 70 is therefore as at 30 June 2019, whilst the number of members at all other ages are based on 4-year averages (2016-19). The claim rate for ages 65 to 70 is based on claims incurred in the year to 30 June 2019 (10 months from September 2018), whilst all other claim rates are 4-year averages. The confidence interval widens for 65 to 70 year olds, reflecting low numbers of insured members and claims.

4.24 The graph shows that the 2016-19 claim rate based on number of claims exceeds the premiums for members aged approximately 35 to 40 and 45 to 55 but is lower than premiums at all other ages.

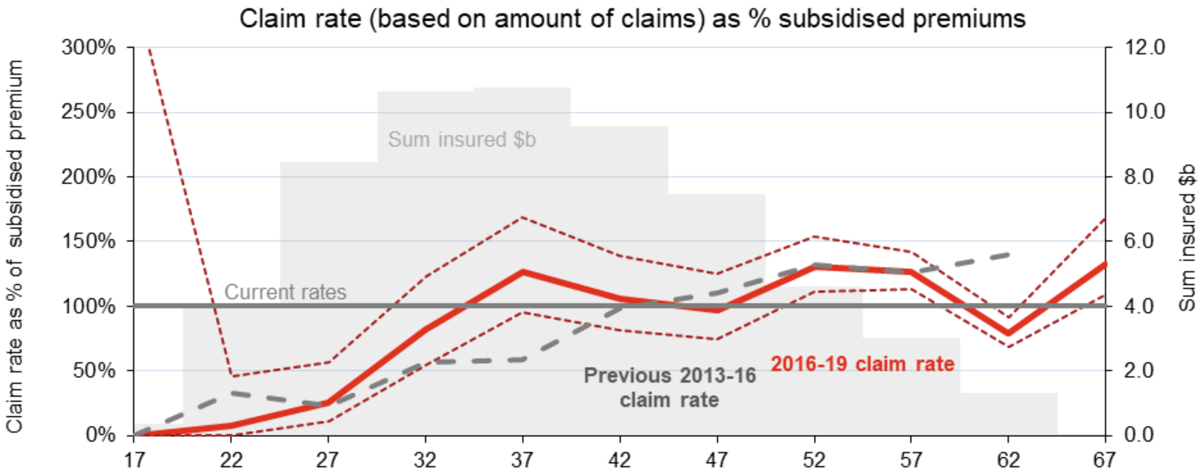
4.25 Over the review period, the claim rate remained relatively stable with a 2016 claim rate of 0.18% of members insured to 0.18% for 2019, noting some volatility in intervening years. Similarly, the average claim rate over the 4-year period (2016-19) remained stable compared to the previous 2013-16 period at 0.17%.

Claims as % of members insured

2013-16 total	2016	2017	2018	2019	2016-19 total
0.17%	0.18%	0.16%	0.15%	0.18%	0.17%

Claims experience by amount of claims

4.26 The claim rates for death and TPD Insurance, based on the amount of claims and the sum insured, are shown below:



4.27 The claim rate based on amount of claims exceeds the premium rate for members aged between 35 and 42 and for the majority of members over approximately age 47. The claim rate based on amount of claims is lower than the premium rate for members under age 35 and for the small number of 60-65 year olds, indicating that these members are paying more in premiums than their expected claim cost.

4.28 The shape of the claim rate for 2016-19 (solid red line) has flattened compared to the 2013-16 claim rate, showing that the claim rate over this period has been closer to premiums paid by the members, and that the age-based cross-subsidy has reduced. While the claim rate remains sloping upwards there remains inherent cross-subsidies in the premium structure.

4.29 The cost of claims (including IBNR) has marginally increased from 0.09% for 2013-16 to 0.11% for 2016-19.

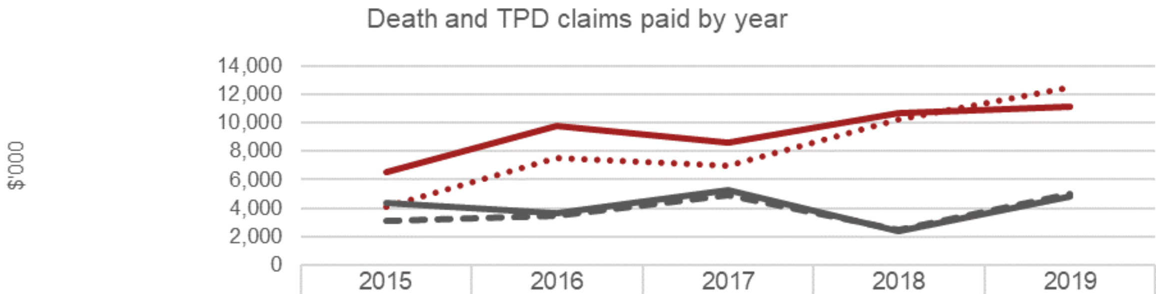
Claims as % of sum insured

2013-16 total	2016	2017	2018	2019	2016-19 total
0.09%	0.09%	0.12%	0.08%	0.13%	0.11%

4.30 We discussed in section 3 the experience observed with regards to claims for 2018 (being inconsistent with surrounding years). We note if there are a number of claims which were not available in the data provided then this will increase the claims rates for 2018 and in turn the overall claim rates for 2016-19.

Claims payment experience

4.31 The chart and table below compares the amount of claims paid from the accounts to the data provided for this investigation.



	2015	2016	2017	2018	2019
Death (2019 data)	3,133	3,458	4,900	2,440	5,005
TPD (2019 data)	4,109	7,534	6,962	10,187	12,449
Death (accounts)	4,396	3,608	5,251	2,358	4,786
TPD (accounts)	6,562	9,740	8,571	10,703	11,125

Claim payments from accounts based on reconciliations with financials provided by Super SA in excel spreadsheets

4.32 We note the paid claim amounts from the data for 2015 and 2016 above are understated as they do not include claims incurred prior to 1 July 2014 whereas the accounts include all paid claims for those years.

4.33 Based on the figures from the accounts there is a clear increase in the number of TPD claims paid. The amount of death and TPD claims paid has increased 32% (from $13.3m in 2016 to $15.9m in 2019). This is partly due to there being more insured members and an increase in the average claim size.

Number of claims (2019 data)[1]	2015	2016	2017	2018	2019
Death paid in year	30	51	57	42	60
TPD paid in year	59	106	96	97	125
Total paid in year	**89**	**157**	**153**	**139**	**185**
Death claims in year	55	49	61	51	52
TPD claims in year	91	133	110	79	79
Total claims in year	**146**	**182**	**171**	**130**	**131**

[1] Payments are the actual payments made in a year, whereas claims incurred are the claims that arise in any year but due to the assessment process may be paid out in later years

4.34 For 2015 and 2016, paid and incurred figures are significantly different to those in the 2016 report because:

a. We only received claims incurred from 1 July 2014 onwards the claims paid (numbers and amounts from the database) in 2015 and 2016 shown above are understated as they do not include claims incurred prior to 1 July 2014 but paid in 2015 and 2016.

b. The number of known claims incurred in 2015 is lower than in the 2016 data (151 claims) as discussed in section 3 above.

c. Updated information reassigning claims to different years, and/or approving previously declined/withdrawn/deferred claims, or vice versa.

d. New claims arising which hadn't been reported at the time of the 30 June 2016 investigation.

Death and TPD analysis by 'Group'

4.36 The insurance data enables analysis by pre-defined groups; however these designations do not allow for occupational analysis. The table and chart below detail the results for each group.

Group	Sum insured 2016-19 ($bn)	Number of claims 2016-19	Total claims 2016-19 ($m)[1]	Claim rate 2016-19 (% of sum insured)	Average claim size
Health	17.0	261	23.7	0.14%	90,600
Education	16.0	203	12.7	0.08%	62,500
Police	6.4	25	5.3	0.08%	211,700
Correctional Services	1.0	20	1.5	0.15%	77,500
Emergency	1.3	3	0.1	0.01%	48,800
Other	18.3	205	20.9	0.11%	102,200
No group	-	2	0.4	-	225,000
Overall	**60.0**	**719**	**64.7**	**0.11%**	**90,000**

[1] Includes potential claims and IBNR allowance.

4.37 The analysis shows, similar results to previous years:

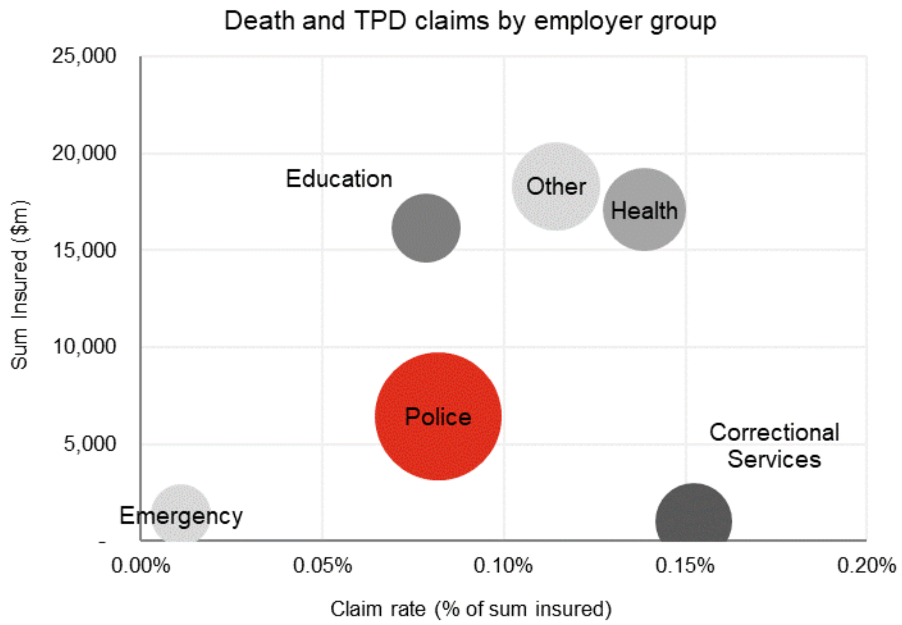
a. Correctional Services had the highest claim rate, though the actual claim rate (once all claims are known) is highly uncertain due to statistically small number of claims

b. Police had the largest average claim size due to higher level of default units (6 units compared to 3 units for other members)

c. Overall average claim rate 0.11% and claim size $90,000 (0.09% and $69,650 in 2016)

d. All rates are indicative only as the small number of claims per group makes rates unreliable.

4.38 The chart below illustrates these results, where the size of the bubble represents the average claim size.



5. Income protection experience analysis

5.1 As with death and TPD, the income protection data provided to us does not include all the claims which were incurred prior to 30 June 2019. We therefore need to adjust the data to allow for additional claims which will be reported to the fund after 30 June 2019 relating to incidents incurred prior to that date.

5.2 There are two types of adjustments for income protection claims:

a. Incurred by not reported (IBNR) provisions are made for claims that are not reported or finalised for some time after they occur, and would otherwise be represented in the claims experience under review

b. Incurred but not enough reported (IBNER) provisions are made where the duration of income protection payments is potentially longer than the date of the next review.

Adjustment for incurred but not reported (IBNR) claims

5.3 As there is no accurate proxy for incident date with income protection claims, IBNR and IBNER are approximated based on observed claim amounts per month and delay patterns.

5.4 For the 24 months to 30 April 2019 income protection claims averaged 44 claims per month. As claims in the later months of 2019 are yet to develop, targeting 44 claims for these months result in an IBNR of 6% of the observed claims for 2019. The IBNR for 2016 was 10% of claims (targeting 38 claims per month for the months leading up to 30 June 2016). As with death and TPD, we expect the IBNR allowance to be lower for this investigation due to the later date the data was provided (and hence more delayed claims are now included in the data).

5.5 The number of income protection claims adjusted for the expected number of incurred but not reported claims is as follows:

Claims to 30 June 2019	2016	2017	2018	2019	Total
Number of claims (unadjusted for IBNR)	456	500	542	504	**2,002**
IBNR claims allowance	0	0	0	30	**30**
Number of claims (with IBNR)	456	500	542	534	**2,032**
IBNR allowance	-	-	-	6%	

5.6 A review of claims advised to have been incurred in 2016 (based on data in 2019) showed the IBNR (43 claims) that was included for the 2016 valuation was higher than the actual experience (28 claims in addition to the 428 already notified at 2016, resulting in 456 actual claims for 2016).

Adjustment for incurred but not enough reported (IBNER) claims

5.7 The claims data includes the date on which income protection payments will cease, or, if the date is beyond the date on which data was extracted[8], the date on which the member's medical condition will next be assessed. Clearly, many claims will continue beyond this date, so we need to adjust the dates to reflect the expected total payment period.

5.8 IBNER is estimated based on observed duration of claims. The average remaining duration for current income protection payments is estimated based the distribution of completed income protection claims.

[8] Taken to be 31 December 2019. This is a conservative date, as some information may have been updated after this date before the data was provided in April 2020, however given potential administrative delays with updating claims statuses we believe this approach is reasonable.

5.9 Claims in payment, with a review date after 31 December 2019, are assumed to continue based on the following table, given their duration (months) to that date:

Current duration (months)	0-3	3-6	6-9	9-12	12-15	15-18	18-21	21-24
Remaining duration (months)	9.0	9.5	9.5	8.5	8.5	7.5	4.5	1.5

5.10 For example, for members who have been receiving income protection payments for 9-12 months it is estimated they will continue to receive income protection for another 8.5 months on average (so an average 19 months in total).

5.11 The IBNR and IBNER allowance equates to 53% of claims for 2019,13% for 2018 and 1% for 2017. That is, $11.5 million in total, up from $8.8 million in 2016, as detailed below.

Claims known at 2019 ($'000)	2016	2017	2018	2019	Total
Amount of claims (unadjusted for IBNR)	15,689	18,048	22,257	18,866	**74,861**
IBNR & IBNER claims allowance[1]	-	125	1,504	9,955	**11,584**
Amount of claims (with IBNR & IBNER)	15,689	18,173	23,761	28,821	**86,445**
IBNR and IBNER allowance		1%	7%	53%	

[1] Allows for the fact that members can receive up to 24 months of IP payments during any 48 month period

5.12 For 2019, the $10.0 million IBNR and IBNER claim allowance comprises:

a. An IBNR allowance of 6% of claims in payment (including IBNER) to 30 June 2019 ($1.6 million), plus

b. An IBNER allowance based on the observed duration of each claim in payment and adjusted for an estimated remaining duration (refer to table under 5.9). This equates to $8.3 million, or 44% of claims paid in the year to 30 June 2019.

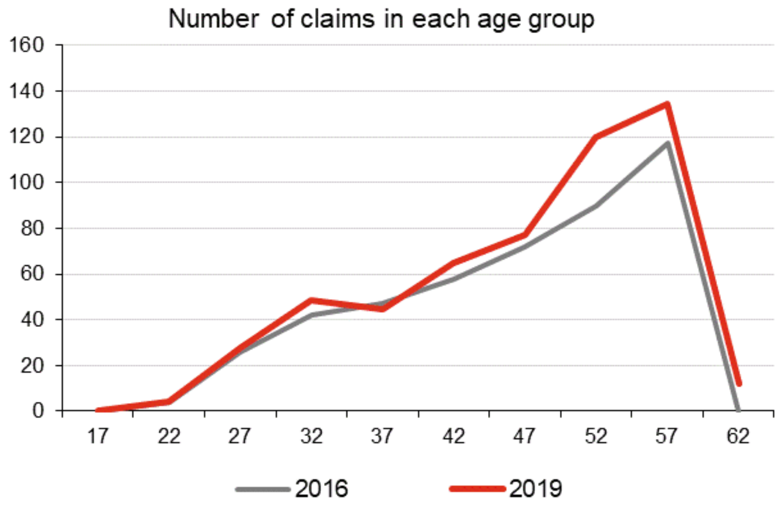
5.13 The level of IBNR and IBNER has reduced since the last valuation (7% for 2018 and 53% for 2019 compared to 6% for 2015 and 81% for 2016). Similar to the change in the death and TPD IBNR, this is due to the data being provided at a later date, and hence the IBNR allowance is lower as more claims reported after the investigation data are now known. However, the dollar amount of IBNR and IBNER allowance applied has increased slightly due to the higher level of known claims. The increase in claims is discussed further below.

5.14 The actual IBNR and IBNER could still be higher than $11.6 million (which is based on past experience). As the results are sensitive to this key assumption it is prudent to acknowledge this amount may vary in practice. If it was 50% higher this allowance would increase by $5.8 million. We have made an allowance equal to this in the IBNR and IBNER under-estimation reserve. We note this does not represent the upper range of all possible outcomes.

5.15 The number of claims and amount of claims following this point in the report include the IBNR and IBNER allowances (unless advised otherwise).

Claims experience by number of claims

5.16 The charts below show the number of income protection claims by age group, after adjustment for IBNR and IBNER, as at 30 June 2016 and 2019.



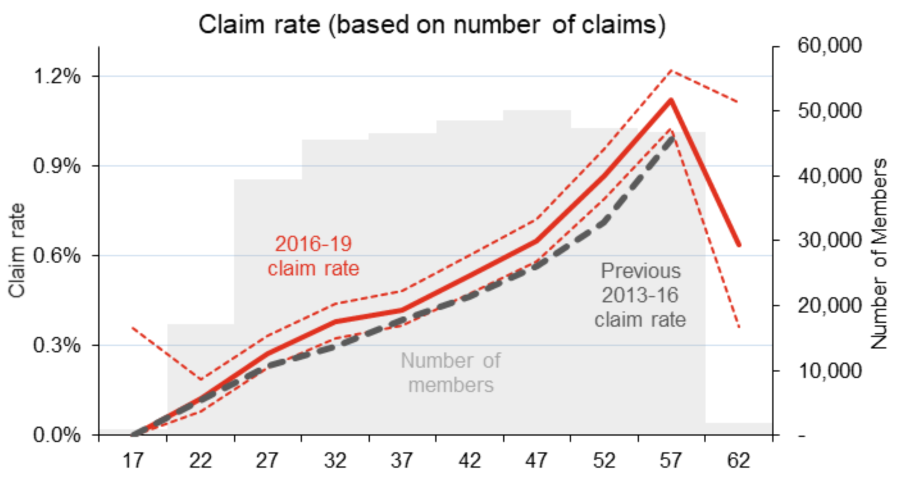
5.17 The number of claims commencing in 2019 is higher at almost every age compared to the number for 2016. This reflects an increase in the number of insured members (6% from 2016 to 2019) but more so the increasing rate of income protection claims being observed for the fund and across the industry.

5.18 The claim rates have increased since the previous valuation, especially for older members. The rate for 2013-16 was 0.51%, with a trend to increasing claims with 2016 at 0.54%. This trend has continued, with the highest being 0.63% in 2018. The claim rates, as a percentage of members, from 2016 to 2019 were as follows (includes IBNR):

Claims as % of members

	2013-16	2016	2017	2018	2019	2016-19
Claims	1,699	456	500	542	534	2,032
Claim rate	0.51%	0.54%	0.59%	0.63%	0.60%	0.59%

5.19 The claim rates for income protection, based on the number of claims and the number of insured members, are shown below:



5.20 By way of explanation:

a. The solid red line shows the rate of claim for each age group, based on the number of insured members in that group.

b. The dotted red lines show the "95% confidence interval", i.e. the true claim rates should be somewhere within the dotted lines with a 95% probability.

c. The shaded bars in the background show the number of members in each age group. The dotted confidence intervals are narrowest where there is the most data.

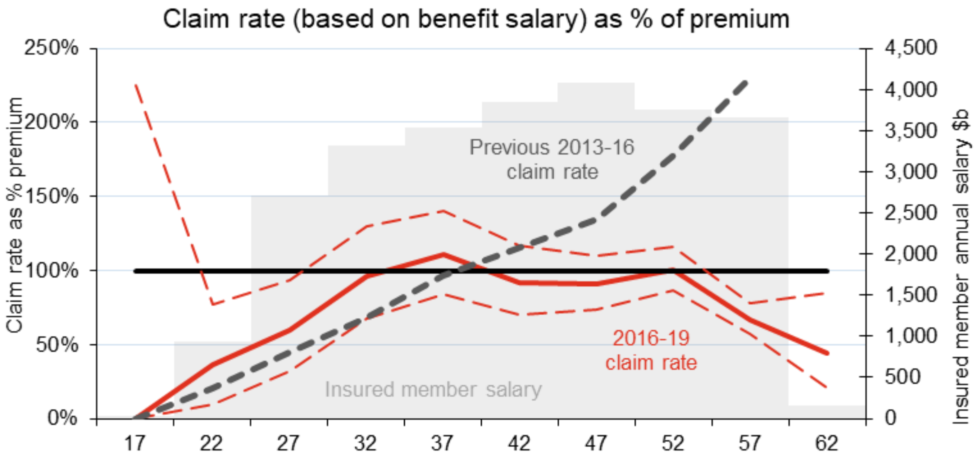
d. The grey dashed line shows previous equivalent rates from the 2013-16 investigation, with allowance for IBNR and IBNER.

5.21 Similar to death and TPD the claim rate for members aged 60 to 65 is based on claims incurred in the year to 30 June 2019, all other claim rates are four-year averages. The confidence interval widens for 60 to 65 year olds, reflecting low numbers of insured members and claims.

5.22 The graph above shows that income protection claim rates based on the number of claims have increased at all ages compared to those at the previous review.

Claim experience by amount of claims

5.23 The claim rates for income protection, based on the amount of claims and the salary of insured members, are shown below relative to the premium rates:



5.24 The claim rate based on amount of claims is lower than the premium rate for members under age 35 and members over age 55, indicating that these members are paying more in premiums than the amount of benefits that were being paid.

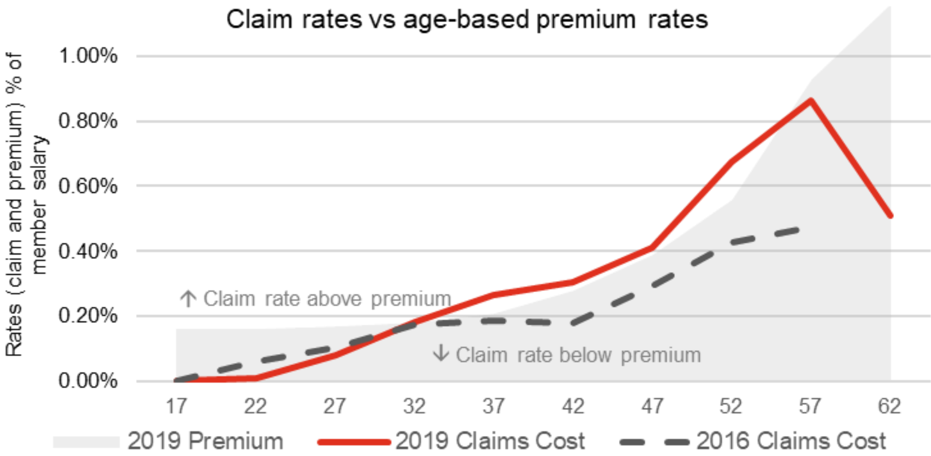
5.25 The shape of the claim rate for 2016-19 (solid red line) has flattened somewhat compared to the 2013-16 claim rate, showing that the claim rate over this period has been closer to premiums paid by the members, and that the age-based cross-subsidy has reduced. Where the claim rate is above and below the 100% line there remains inherent cross-subsidies in the premium structure; this is most evident at younger ages, noting while the claim rate for older members also shows premiums in excess of claim rates there are only a small number of claims in this age group.

5.26 The overall amount of claims was 0.33% of salary for 2016-19 but was as high as 0.39% for 2019. Allowing for insurance administration expenses the total cost was 0.40% for 2016-19 and 0.44% for 2019[9]. The average duration has also increased from 0.65 years to 0.75 years.

Claims as % of salary insured

	2013-16	2016	2017	2018	2019	2016-19
Claims rate as % of salary	0.25%	0.27%	0.30%	0.35%	0.39%	0.33%
Average duration (yrs.)	0.65	0.68	0.68	0.79	0.85	0.75

5.27 The 2016 investigation (as with prior years) highlighted the need to move from a flat percentage of salary premium to age-based pricing so that the premium scale more closely aligned with expected claims rates. This change was implemented in September 2018 and the below graph shows the 2019 claim rates (red line) versus the age based premium rates (grey shaded); we have also shown the 2016 claim rate (grey dashed) for comparison:



5.28 As shown above the age-based premiums more closely match the claim rates at most ages, with the exception of members under 30 and over 57 (suggesting some age-based cross-subsidisation remains).

[9] Estimated based on operational cost estimate as at 30 June 2019 advised by Super SA ($3.2m for 2019).

6. Profitability

Profitability of death and TPD insurance

Industry experience

6.1 TPD claims continue to increase across the industry, as was the case in 2016. This is due to increased member engagement and awareness of superannuation related insurance benefits, and a continued presence of legal firms in claims.

6.2 Super SA's experience has mirrored this trend, with 2019 claims cost of 0.13% of sum insured, higher than the 0.11% average for 2016-19.

6.3 We have estimated the profitability of death and TPD rates as shown below.

Expected cost of death and TPD claims for standard and new fixed benefit cover

6.4 The current premium is $1 per unit per week for standard cover, however default cover (up to first 3 units for regular members, 6 units for police and ambulance members) is subsidised to $0.75 per unit per week from the insurance reserves.

6.5 As there is a limited number of members with the new fixed benefit cover (345 members at 30 June 2019) and premium rates are based on standard cover rates, we have included these members in the results of standard members.

6.6 Based on the claims experience for the last four years, the expected cost of claims and expenses is below $1.00 per unit (approximately $0.86 based on 2016-2019 claim rates) for all members.

6.7 However, based Super SA claims experience for 2019 alone, the expected cost of claims and expenses would be $1.00 per unit across all members.

6.8 The table below illustrates the current subsidised premiums:

Expected values	2019 cover based on subsidised premiums ($'000)	2019 cover based on premiums without subsidy ($'000)	Difference
Default premiums[1]	13,344	17,792	4,448
Voluntary and fixed premiums[2]	2,908	2,908	-
Total premiums[3]	**16,252**	**20,700**	**4,448**
Expected claims	(16,198)[4] to (19,201)[5]	(16,198)[4] to (19,201)[5]	-
Expenses[6]	(2,087)	(2,087)	-
Premiums minus payments	**(2,033) to (5,036)**	**2,415 to (588)**	**4,448**

[1] Based on 342,148 units for members with subsidised premiums (identified as "BASSDDTPD" in the data), including subsidised units for members with voluntary cover.

[2] Based on 49,792 voluntary standard units and 18,755 fixed benefit units (identified as "VOLSDDTPD" (i.e. voluntary standard death and TPD) and "FBDTPD" (i.e. fixed benefit death and TPD) in the data).

[3] Based on our calculation of premiums using insured members as at 30 June 2019. This is significantly higher than premiums of $14.5m actually paid in 2019 as that reflects lower sums insured for members at the beginning of the year compared to the end of the year, due to product changes occurring in September 2018, and may be higher than actual 30 June 2019 premiums due to back-dated changes (e.g. members who have exited or need to be preserved).

[4] Expected claims based on 2016-19 observed claim rate for Super SA and amount of sum insured as at 30 June 2019. Expected claims for standard cover and new fixed benefit cover members are about 80% of overall claims.

[5] Expected claims based on 2019 claim rate and amount of sum insured as at 30 June 2019.

[6] Estimate based on operational cost estimate as at 30 June 2019 advised by Super SA ($2.2m for death & TPD for 2019 and 94% of members having standard and basic fixed cover).

6.9 The premium subsidy from reserves for $0.75 per default unit per week is approximately $4.4 million per annum.

6.10 Given the results above, we do not believe there is an immediate need to change the premium structure at this time, as the existing premiums remain appropriate given the current membership profile, claims experience for 2016-19 and the full cost of current premiums ($1 per unit per week for standard and new fixed benefit cover).

Expected cost of death and TPD claims for legacy fixed cover

6.11 The legacy fixed cover product is no longer offered. However, existing policyholders at the cut-off date can continue to be covered under this policy.

6.12 The table below shows expected premiums currently exceed expected claims and expenses. However, premiums will remain fixed whereas expected claims will increase as the fixed cover members' age.

6.13 The excess premium should be considered as a contribution to reserves, as claims will likely to exceed premiums in the future.

Legacy fixed cover product	$'000
Expected premiums[1]	3,786
Expected claims	(4,539)[2] to (5,506)[3]
Expenses[4]	(130)
Premiums minus payments	**(883) to (1,849)**

[1] Based on 32,109 units and premium data provided by Super SA

[2] Expected claims based on 2016-19 observed claim rate for Super SA and amount of sum insured as at 30 June 2019. Expected claims for legacy fixed cover members are about 20% of overall claims

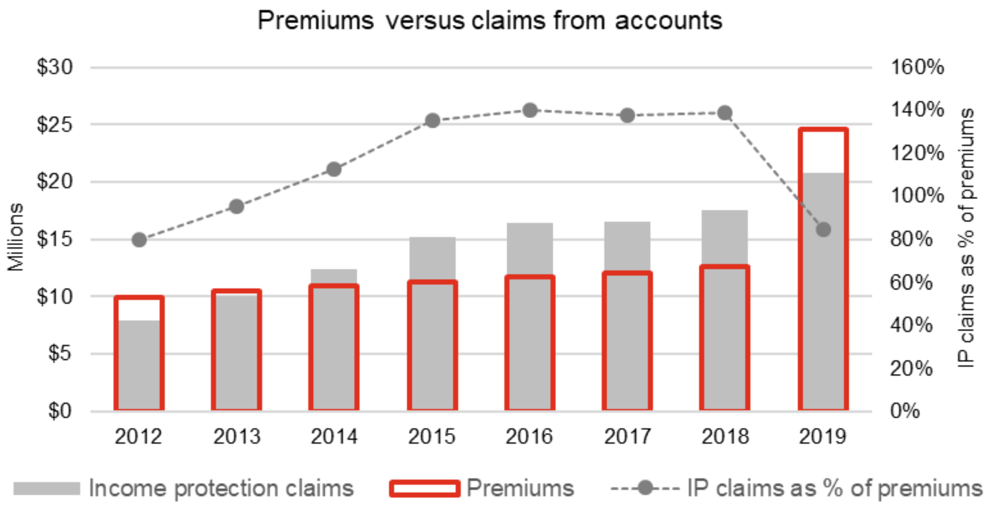
[3] Expected claims based on 2019 claim rate and amount of sum insured as at 30 June 2019

[4] Estimate based on operational cost estimate as at 30 June 2019 advised by Super SA ($2.2m for death & TPD for 2016 and 6% of members having legacy fixed cover)

Profitability of income protection insurance

6.14 Since the previous investigation, income protection premiums have changed from a flat 0.2% of salary to age-based premium rates, as shown in Appendix C. Since 2016, the claims experience has continued trending upwards, averaging 0.43% for 2016-19 and reaching 0.46% for 2019 (with IBNR and IBNER and insurance admin fee allowances).

6.15 As a result of the change to age-based tables, premiums increased significantly in 2019, meaning that for the first time since 2013 premiums have exceed benefits paid in that year. The chart below shows actual claims paid and premiums received based on the accounts[10].



[10] Note: these are actual claim payments as per accounts, and do not include allowances for IBNR and IBNER which are included in expected claims figures in 6.17 below for example.

6.16 The 0.39% claim rate for 2019 is lower than the current premium (0.43% of salary on average). With an allowance for expenses, the cost is expected to increase to 0.46% of salary, with a potential for further increases.

6.17 The table below illustrates the expected contribution to/draw from reserves for income protection insurance. Where claims costs are above premiums, the difference will be met from reserves.

	Based on 2016-19 claim rates	Based on 2019 claim rates
Expected premiums[1]	29,412	29,412
Expected claims	(24,139)	(28,821)
Expenses[2]	(3,247)	(3,247)
Premiums minus payments	**2,026**	**(2,656)**

[1] Based on our calculation of premiums using insured members as at 30 June 2019. This is significantly higher than premiums of $24.6m actually paid in 2019 as that included just under 10 months of the new age-based premiums and reflects lower numbers of insured members at the beginning of the year compared to the end of the year, and may be higher than actual 30 June 2019 premiums due to back-dated changes (e.g. members who have exited or need to be preserved).

[2] Estimate based on operational cost estimate as at 30 June 2019 advised by Super SA ($3.2m for 2019)

6.18 We note income protection claims are increasing across the industry, driven partly by mental health claims. Further increases in income protection claims for Super SA is allowed for as an additional reserve, estimated as 50% of IBNR and IBNER estimates ($58m).

6.19 Given the results above, we do not believe there is an immediate need to change the premium structure at this time, as the existing premiums remain appropriate given the current membership profile and claims experience for 2016-19.

7. Reserves

7.1 In the past, self-insurance was industry practice for State, Territory and Commonwealth schemes and certain large corporate superannuation funds.

7.2 However, the extent of self-insurance has substantially reduced in past years as APRA no longer allows self-insurance for public offer funds, because of the risks related to inadequate and unsegregated reserves and unrealistic pricing of the risks borne by the fund (as catastrophe cover and the cost of reserves is generally ignored in any pricing comparison).

7.3 APRA considers that life insurance companies registered under the Life Insurance Act 1995 are the best mechanism for superannuation funds to provide death and TPD benefits to members and has restricted public offer superannuation funds from self-insuring.

7.4 State schemes such as GESB (and previously RBF) have already converted from self-insurance to external insurance for their accumulation funds.

7.5 However, Triple S remains self-insured and must meet the cost of its own claims and insurance expenses. Ultimately, it is the South Australian government that carries the scheme's self-insurance risk, as there is no formal reinsurance arrangement in place. It is therefore prudent for the Board to hold substantial reserves against this risk.

7.6 In addition to self-insurance risk, the scheme also bears the following risks:

a. Catastrophe

b. Asset fluctuation

c. Underestimation of claim rates

7.7 Year on year fluctuations in claims experience are expected and don't pose a risk in and of themselves.

7.8 The Triple S scheme needs to hold reserves to mitigate these risks because it has no recourse to the employer. We propose that they be as follows.

Prudential reserve

7.9 A prudential reserve may include an allowance for normal statistical fluctuations in claims from time to time, volatility of outstanding claims, and protection against exceptional events.

IBNR and IBNER reserve for claims not finalised

7.10 Our analysis has showed that some claims are not finalised, or even reported, for quite some time after they are incurred. A provision needs to be made in the Scheme accounts for these claims.

Death and TPD

7.11 The previous investigation recommended holding a provision of 57% of annual premiums for death and TPD claims.

7.12 We have calculated a provision of 21% of annual premiums for this investigation, consistent with the approach taken for the last valuation.

7.13 This amounts to $4.3 million at 30 June 2019 ($8.6 million at 30 June 2016).

7.14 In addition, we have made an allowance for potential claims expected to be approved and declined claims that may be approved on appeal in proportion to observed rates. This amounts to $6.6 million at 30 June 2019 (compared to a reserve of $2.2 million in 2016), as can be seen in the amount of potential claims in 4.12 above. The reserve has been increased due to a higher number of potential claims, and a higher average claim assumption.

7.15 In total, the reserve for additional expected claims relating to the investigation period is $10.9 million as at 30 June 2019 (compared to $10.8 million was assumed at 30 June 2016).

Income Protection

7.16 Income protection requires a reserve not only for claims which have not been reported, but also for continuing payments for current claims.

7.17 Based on the approach outlined in this report, we estimate this at about 39% of annual premiums for IBNR and IBNER (compared to 73% for 2016), with the reduction reflecting the premium increase which occurred with moving to age-based premiums (average of 0.43% of salary at 30 June 2019 versus 0.2% of salary at 2016).

7.18 This amounts to $11.6 million at 30 June 2019 ($8.8 million at 30 June 2016).

Volatility of existing claims

7.19 The IBNR and IBNER are estimates based on a number of factors including industry knowledge and observed experience however there is a risk that these estimates may be higher than expected.

7.20 Consistent with the previous investigations, we recommend holding a reserve of 50% of the estimated outstanding claims (IBNER and IBNR). This requires an additional reserve amount of $8.0 million in 2019 (i.e. 50% of death and TPD IBNR of $4.3 million and income protection IBNR and IBNER of $11.6 million; $8.7 million in 2016).

7.21 We have included this reserve with the reserve for IBNR and IBNER, in the table which follows this analysis.

Fluctuation reserve

7.22 We estimated the random statistical variation in claim amounts for a fund of this size for death and TPD and income protection combined, which is based on additional cost arising if claims experience is two standard deviation from the observed rate of claim. This gives claim costs at 95% level of confidence. We recommend the statistical fluctuation reserve to remain at $10 million as at 30 June 2019.

Fixed cover reserve

7.23 Fixed premium is currently operating at a profit but as members' age and premiums stay fixed, claims are expected to increase above the level of premiums.

7.24 Estimation of the reserve to be held in respect of this cohort of members has been based on the expected profit and loss assuming average claim rates will continue at current levels for 5 to 10 years. Based on this, we recommend the reserve for fixed cover members to remain at $10 million.

Self-insurance reserve

7.25 Certain additional reserves are needed for the Triple S scheme because it is a self-insurance scheme.

Asset resilience reserve

7.26 The insurance reserve is substantially invested in equity and property assets, whose value can fluctuate significantly. We suggest that it would be prudent to allow for this by holding an asset resilience reserve which approximates the amount by which the Prudential Reserves could reduce under a modest market fall. This ensures that the true value of the insurance reserve is not overstated, even when market values fall.

7.27 We propose setting the resilience reserve at 15% of the prudential reserves in line with the approach in 2013 and 2016. This results in a reserve of $7.6 million at 30 June 2019 (based on prudential reserves of $50.5 million). This is higher than the asset resilience reserve at 30 June 2016 ($7.2 million), due to the increase in prudential reserves.

Contingency reserves

7.28 The main risk is from exceptional events which can incur large numbers of claims, such as a hospital epidemic, terrorism, or judicial risk (e.g. misinforming members about their benefits). Such rare events are extremely difficult to quantify.

7.29 On the one hand, Triple S is self-insured, and must meet its own claims unless it can obtain financial support from government. It may be prudent for the Board to hold substantial reserves to mitigate this risk. The difficulty is in quantifying the level of protection, and the corresponding reserve required to meet it.

7.30 On the other hand, reserves are financed completely from insurance premiums paid by Triple S members, and it would be unfair to those members to hold excessive reserves that had very little chance of being required.

7.31 The Board needs to balance these two potentially conflicting interests, but the difficulty of quantifying the level of protection means this must be a matter of judgement rather than actuarial calculation.

7.32 As things stand, Triple S has an insurance reserve of $165.2 million at 30 June 2019, which is some $107 million in excess of the reserves required for prudential and asset resilience reserves. This excess represents:

a. 1,020 additional insurance claims based on average death and TPD claim size of $105,000

b. 631 additional insurance claims based on average death and TPD sum insured of $170,000

c. Double the number of death, TPD and income protections claims for 2019, after IBNR and IBNER allowances, noting the prudential reserves include a 50% allowance also for underestimation of IBNR and IBNER allowances.

7.33 The Board has previously considered this risk and decided that a possible worst case would be a catastrophe affecting the buildings in which most Government employees work. This assessment was undertaken at the time of the 2010 review and concluded that the cost of a catastrophic event would be $20-$40 million. The upper bound of this range was equated to an event which affects 260 employees, assuming 130 (half) are death claims and 130 are income protection claims paid for 2 years followed by 130 TPD claims.

7.34 Based on current claim amounts, the contingency reserve would need to increase from $49.0 million in 2016 to $65.0 million as at 30 June 2019. This increase is partly due to the product changes in September 2018 including the additional default units on death & TPD and the inclusion of Contribution Replacement Benefit for income protection claims.

7.35 It is extremely difficult to set a contingency reserve, because by their nature, catastrophes are unexpected and can occur in many different ways, so any estimate can only be very broad and cannot take account of all possible scenarios. We believe the contingency above provides a reasonable compromise between the interests of safeguarding Triple S, and the interests of providing low cost insurance to members. The Board can maintain a contingency allowance at a different level if it believes it is appropriate to do so.

7.36 The current COVID-19 pandemic is another example of a catastrophe which may face the scheme. With the current level of free reserves estimated to cover an additional ~1,000 claims (or an increase in the claims for one year of five times) the existing reserves will likely be sufficient to protect against any impacts of the current pandemic, given Australia's low infection/mortality rate to date. However, the nature of "one in 100 year" events is that they are rarely dependent on the length of time since the last event, so it is prudent to ensure a suitable catastrophe reserve allowance is maintained.

7.37 It is extremely difficult to set a contingency reserve because, by their nature, catastrophes are unexpected and can occur in many different ways. However, we believe that a reserve at this level provides a reasonable compromise between the interests of safeguarding Triple S and the interest of providing low cost insurance to members and therefore would be applicable for at least the next three years.

7.38 We note that reserves are invested in Super SA's Balanced fund. This not an issue in itself but may give rise to potential liquidity issues if a substantial amount of the reserve is required to be drawn down in a short period of time (e.g. if a catastrophic event was experienced).

Reserve allocation

7.39 The existing insurance reserve is $165.2 million at 30 June 2019. If we allow for the reserves above, then we have the following:

$ million	Death and TPD	Income Protection	Total at 30/06/19	Total at 30/6/16
Insurance reserve[1]	**159.6**	**5.6**	**165.2**	**141.3**
Prudential Reserves				
IBNR & IBNER[2]	13.1	17.4	30.5	28.3
Fluctuation reserve	5.0	5.0	10.0	10.0
Fixed Cover Reserve[3]	10.0	0.0	10.0	10.0
Total Prudential Reserves	**28.1**	**22.4**	**50.5**	**48.3**
Self-insurance Reserves				
Asset resilience reserve	4.2	3.4	7.6	7.2
Contingency reserve	26.3	38.7	65.0	49.0
Total Self Insurance Reserves	**30.5**	**42.1**	**72.6**	**56.2**
Total Prudential and Self Insurance Reserves	**58.6**	**64.5**	**123.1**	**104.5**
Expected 'free reserves'	**101.0**	**(58.9)**	**42.1**	**36.8**
Total subsidy	**4.4**	**-**	**4.4**	**7.7**

[1] Insurance reserve has been split into death and TPD and income protection accounts by Super SA (unaudited)

[2] Includes allowance for higher than expected IBNR & IBNR at 50%

[3] Estimated based on current member cohort

7.40 This shows that free reserves have increased since 2016 even with the increase of contingency reserves. This is mainly due to good investment returns, which have been approximately 9.5% per annum over the three-year period from 30 June 2016 to 30 June 2019.

7.41 We note that since 30 June 2019 the reserves are likely to have reduced, with Super SA's Balanced fund (where the reserves are invested) falling by 7.2% to 31 March 2020. This would have reduced the free reserves by approximately $12 million, from $42.1 million to $30 million.

8. Reliance and limitations

8.1 PricewaterhouseCoopers (PwC) has prepared this report solely for the Department of Treasury and Finance of South Australia's (the Department's) use and benefit in accordance with and for the purpose set out in PwC's agreement with the Department dated 16 July 2018. In doing so, PwC has acted exclusively for the Department and considered no-one else's interests.

8.2 Our work did not constitute an audit in accordance with Australian Auditing Standards or a review in accordance with Australian Auditing Standards applicable to review engagements and accordingly no assurance is provided in this report.

8.3 This report is not intended to be read or used by anyone other than the Department or Super SA. PwC accepts no responsibility, duty or liability:

a. to anyone other than the Department or Super SA in connection with this report

b. to the Department or Super SA for the consequences of using or relying on it for a purpose other than that referred to above.

8.4 PwC makes no representation concerning the appropriateness of this report for anyone other than the Department. If anyone other than the Department or Super SA chooses to use or rely on it, they do so at their own risk.

8.5 The advice contained in this report is based on the circumstances of Super SA as a whole. It does not take into account the specific circumstances of any individual.

8.6 We have relied on a range of external sources for the data. As a result we are unable to guarantee the accuracy of the data contained in this report.

8.7 PwC is not obliged to provide any additional information or update anything in this report, even if matters come to our attention which are inconsistent with its contents.

8.8 This disclaimer applies:

a. to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute; and

b. even if PwC consents to anyone other than the Department or Super SA receiving or using this report.

Appendices

Appendix A IBNR calculations for death and TPD insurance

A.1 As noted in the body of the report, historical industry observed delay periods showed approximately:

a. 90% of claims being reported within 6 months and 98% within 12 months for death claims

b. 50% of claims being reported within 6 months, 80% within 12 months and 90% within 24 months for TPD claims.

A.2 TPD claim delays are similar to the historical observations above and are showing increasing numbers of late claims in more recent years.

Cumulative	0-3 mths	3-6 mths	6-9 mths	9-12 mths	12-18 mths	18-24 mths	24-36 mths	36-48 mths
2013-16 % of claims paid Death only	30%	69%	84%	90%	93%	95%	99%	100%
2013-16 % of claims paid TPD only	51%	56%	62%	66%	80%	87%	100%	100%
2016-19 % of claims paid Death only	23%	57%	74%	87%	96%	98%	100%	100%
2016-19 % of claims paid TPD only	58%	66%	71%	75%	81%	90%	97%	100%

A.3 The effect of the IBNR on the actual number of claims for Death and TPD Insurance for 2016 to 2019 is shown below.

Claims known at 2019 ($'000)	2016	2017	2018	2019	Total
Claims in 2019 data (unadjusted for IBNR)	182	171	130	131	**614**
Potential claims[1] (% of claims in 2019 data)	-	-	14 (11%)	49 (37%)	**63**
IBNR claims (% of claims with potential)	-	-	14 (10%)	28 (15%)	**42**
Number of expected claims (% of claims with potential and IBNR)	**182**	**171**	**158 (22%)**	**208 (59%)**	**719**

1 Potential claims are claims arising from pending and declined claims at 30 June 2019, assuming 95% of all claims will be approved.

A.4 We have compared claims rates against premiums including a subsidised proportion of the death & TPD sum insured covered by the subsidy of $0.25 per standard unit per week on a member's first 3 units (6 units for police and ambulance members). The table below shows the breakdown of subsidised sum insured by 5-year age bands:

Age group	Total Sum Insured ($m)	Default (Subsidised) Sum Insured ($m)	Proportion Default (Subsidised)	Average Premium per unit per week ($)
15 - 19	42	42	100%	0.75
20 - 24	1,096	1,093	100%	0.75
25 - 29	2,773	2,716	98%	0.76
30 - 34	3,477	3,164	91%	0.77
35 - 39	3,663	3,014	82%	0.79
40 - 44	3,082	2,240	73%	0.82
44 - 49	2,465	1,646	67%	0.83
50 - 54	1,616	972	60%	0.85
55 - 59	980	519	53%	0.87
60 - 64	527	251	48%	0.88
65 - 69	112	74	66%	0.84
Total	**19,833**	**15,730**	**79%**	**0.80**

Appendix B Death and TPD insurance cover tables

A.5 The table below shows the value of 1 unit of standard cover, for $1 per week premium.

Age last birthday	One unit cover ($)	Age last birthday	One unit cover ($)	Age last birthday	One unit cover ($)
Up to 34	75,000	**46**	39,000	**58**	11,000
35	72,000	**47**	36,000	**59**	10,000
36	69,000	**48**	33,000	**60**	9,000
37	66,000	**49**	30,000	**61**	8,000
38	63,000	**50**	27,000	**62**	7,000
39	60,000	**51**	24,000	**63**	6,000
40	57,000	**52**	22,000	**64**	5,000
41	54,000	**53**	20,000	**65**	5,000
42	51,000	**54**	18,000	**66**	5,000
43	48,000	**55**	16,000	**67**	5,000
44	45,000	**56**	14,000	**68**	5,000
45	42,000	**57**	12,500	**69**	5,000

A.6 The table below shows the premium for 1 unit of legacy fixed benefit cover (premium per $10,000 unit).

Age last birthday	Premium per week ($)	Age last birthday	Premium per week ($)	Age last birthday	Premium per week ($)
Up to 34	0.13	**46**	0.26	**58**	0.91
35	0.14	**47**	0.28	**59**	1.00
36	0.14	**48**	0.30	**60**	1.11
37	0.15	**49**	0.33	**61**	1.25
38	0.16	**50**	0.37	**62**	1.43
39	0.17	**51**	0.42	**63**	1.67
40	0.18	**52**	0.45	**64**	2.00
41	0.19	**53**	0.50	**65**	2.00
42	0.20	**54**	0.56	**66**	2.00
43	0.21	**55**	0.63	**67**	2.00
44	0.22	**56**	0.71	**68**	2.00
45	0.24	**57**	0.80	**69**	2.00

A.7 The table below shows the value of 1 unit and corresponding premium for fixed benefit death and TPD cover.

Age last birthday	One unit cover ($)	Premium per week ($)	Age last birthday	One unit cover ($)	Premium per week ($)
20 and under	75,000	0.80	**43**	75,000	2.90
21	75,000	0.85	**44**	75,000	3.10
22	75,000	0.85	**45**	75,000	3.30
23	75,000	0.90	**46**	75,000	3.50
24	75,000	0.95	**47**	75,000	3.70
25	75,000	1.00	**48**	75,000	3.90
26	75,000	1.05	**49**	75,000	4.10
27	75,000	1.10	**50**	75,000	4.40
28	75,000	1.15	**51**	75,000	4.70
29	75,000	1.20	**52**	75,000	5.10
30	75,000	1.25	**53**	75,000	5.50
31	75,000	1.30	**54**	75,000	6.00
32	75,000	1.40	**55**	75,000	6.50
33	75,000	1.50	**56**	75,000	7.10
34	75,000	1.60	**57**	75,000	7.70
35	75,000	1.70	**58**	75,000	8.40
36	75,000	1.80	**59**	75,000	9.20
37	75,000	2.00	**60**	75,000	10.10
38	75,000	2.10	**61**	75,000	11.00
39	75,000	2.30	**62**	75,000	12.00
40	75,000	2.40	**63**	75,000	13.00
41	75,000	2.60	**64**	75,000	14.10
42	75,000	2.70	**65+**	Not offered	Not offered

A.8 The table below shows the current premium rates (as a percentage of salary) for income protection cover.

Age last birthday	30 Day Waiting	90 Day Waiting	Age last birthday	30 Day Waiting	90 Day Waiting	Age last birthday	30 Day Waiting	90 Day Waiting
15	0.16%	0.09%	**32**	0.18%	0.10%	**49**	0.46%	0.25%
16	0.16%	0.09%	**33**	0.18%	0.10%	**50**	0.49%	0.27%
17	0.16%	0.09%	**34**	0.19%	0.10%	**51**	0.52%	0.29%
18	0.16%	0.09%	**35**	0.20%	0.11%	**52**	0.56%	0.31%
19	0.16%	0.09%	**36**	0.21%	0.11%	**53**	0.63%	0.35%
20	0.16%	0.09%	**37**	0.21%	0.12%	**54**	0.70%	0.39%
21	0.16%	0.09%	**38**	0.23%	0.13%	**55**	0.78%	0.43%
22	0.16%	0.09%	**39**	0.24%	0.13%	**56**	0.85%	0.47%
23	0.16%	0.09%	**40**	0.26%	0.14%	**57**	0.93%	0.51%
24	0.16%	0.09%	**41**	0.27%	0.15%	**58**	0.97%	0.54%
25	0.16%	0.09%	**42**	0.28%	0.16%	**59**	1.02%	0.56%
26	0.16%	0.09%	**43**	0.31%	0.17%	**60**	1.07%	0.59%
27	0.17%	0.09%	**44**	0.33%	0.18%	**61**	1.11%	0.61%
28	0.17%	0.09%	**45**	0.35%	0.19%	**62**	1.16%	0.64%
29	0.17%	0.09%	**46**	0.37%	0.20%	**63**	1.02%	0.56%
30	0.17%	0.09%	**47**	0.39%	0.22%	**64**	0.44%	0.24%
31	0.17%	0.10%	**48**	0.43%	0.23%	**65+**	Not offered	

Appendix C Summary of 2018 product changes

Death & TPD

Pre effective date (3 September 2018)	Post effective date (3 September 2018)
New members receive **2 standard Basic Units** without limitations.	New members automatically receive **3 standard DTPD Units** by default without limitations.
Existing standard members have **2 basic units** (or 1 if they opted out in 2008).	Members previously with basic standard units will be provided with extra standard units so they have at **least 3 standard units**. Extra units provided will be **limitation free** but members **must have a date last worked after the changeover date** to receive the extra units. Eligible members previously with basic and additional cover will have any **limitations on the first 3 units removed**.
Only casual members and those on LWOP can suspend cover. On re-commencing cover a 12 month accidental death period applies.	**All members (except Police & AMB) can reduce their cover** (including cancelling to nil) but would need to be assessed if they re-apply. Police & AMB can reduce their cover (including to nil) after age 65. Members who suspended their cover prior to the changeover date can re-commence their cover with the 12 month accidental death period.
Cover Ceases at age 65	**Standard Cover ceases at age 70.** Members aged 65 to 70, eligible for automatic cover by default, will automatically receive 3 units. They must have a date last worked after the changeover date to receive the extra units.
Members can apply for **additional units** by completing an application form and health statement, **limitations may be applied**.	**No change**, however the Board delegate will also have the power to decline an application
All standard units subsidised by $0.25 (ie actual cost of $1 per week with a $0.25 subsidy).	**Only first 3 standard units receive the $0.25 subsidy.** Police & Ambulance members will receive the subsidy on first 6 units.
Fixed Insurance only available to those members who had cover **before Nov 2014**. Members cannot increase cover. **Fixed Insurance ceases at age 65.**	**No change to existing Closed Fixed Insurance members.** Where Closed Fixed units cease at age 65, eligible members will automatically receive 3 standard Units by default.

	A new **Fixed Benefit option** launched: ◦ Continues to **age 70**. ◦ $10,000 Units ◦ **Premiums increase** each year with the member's age ◦ Premiums based on standard rate
Police & Ambulance members must have cover to the value of **at least 6 standard units** and cannot suspend cover.	Police & Ambulance members can reduce cover below 6 units (or cancel to nil) after age 65. Cover still ceases at age 70.
TPD definition, member must cease work and be 60% incapacitated for all kinds of work and likely to be permanent.	**New definition based on SIS Act definition; however member must still terminate employment.**
Terminal Illness, insurance payable if member has not terminated employment and is likely to die within 1 year (will be updated to 2 years).	**No change** however terminal illness insurance claim can be assessed if the member terminated employment when they were terminally ill.
Casuals working < 9 hours per week are **not covered** once they leave work.	**Casuals working < 9 hours** per week are considered employed for **1 month** following the date they last worked.
Pre 2002 members may have additional basic units and a $20,000 minimum until age 60.	**$20,000 minimum removed**, as members provided with at least 3 units.
Visiting Medical Officers may have VMO standard & VMO Fixed cover.	VMO insurance will be **replaced with equivalent Triple S standard & Fixed Benefit insurance**.
Salary sacrifice & PSS3 members can apply for additional insurance within Triple S.	**No change** Will receive the subsidy on the first 3 units.

Income protection

Pre effective date (3 September 2018)	Post effective date (3 September 2018)
Police & Ambulance members cannot opt out of IP.	**Police & Ambulance** members **can only opt out of IP once they have reached age 60.**
Limitations may be applied to applications for IP	**Limitations** may be applied to applications for IP and the Board Delegate will have the **ability to decline IP applications**.
IP ceases at age 60	**IP ceases at age 65.** Members aged 60 to 65 at the changeover date will not be provided with IP cover but can apply for cover, limitations may apply. Those who turn age 60 one month before the changeover date can receive back their IP (on application) without underwriting.

IP benefit is 75% of notional salary.	**IP benefit is 75% of notional salary plus a contribution replacement benefit (CRB).**
No CRB is paid.	CRB is **9.5% of the amount of IP paid** (ie 7.125% of salary). CRB is **paid into the member's Employer Account.** The CRB will **not be subject to PAYG.** The CRB will form **part of the Taxable Untaxed component** of any future lump sum benefit. The CRB **may count towards Div. 293** but is not a Reportable Employer Superannuation Contribution (RESC). The CRB benefit is only paid where the member's last day at work was after the changeover date (ie not for existing claims).
There is **no limit or cap** on the notional salary or IP benefit.	Notional salary is limited to an **Automatic Assessment Level (AAL)** of $122,000 p.a., without underwriting. Members can apply for IP cover above the AAL up to the maximum IP cover amount but must complete a medical statement and limitations may apply. The AAL **will not apply to existing Triple S members**. **Maximum IP cover amount** is based on a **salary of $584,000 pa.** Existing members with salaries above the Maximum limit will be capped at the salary held at the changeover date.
Members cannot choose the level of IP cover as it is set to 75% of their salary.	Members cannot choose the level of IP cover however if they are above the AAL limit they **can elect to reduce IP to the AAL level**.
IP premiums are set at **0.2% of salary**, regardless of age.	**IP premiums are determined depending on waiting period and the member's age.**
IP definition	**New IP definition based on SIS definition**. Where a member's last day at work is before the changeover date then the old definition will continue to apply.
30 day waiting period	**90 day waiting period** introduced (30 day remains default option). All members **can switch to the 90 day waiting period** at any time.
IP **claims of under 1 week** cannot be approved	**The 1 week rule will be removed**

IP claims need to be made within 6 months of the date they ceased working, or within 6 months of paid leave or Workcover if this occurred immediately following ceasing work.	**No change** however the Board will give the office the power to extend this up to 2 years
IP is not paid for periods where the member was entitled to regular Workcover payments.	**IP is not paid for periods where the member was entitled to regular Workcover payments.** The Board may recoup IP where a member receives a **lump sum Workcover benefit** in lieu of regular payments.
Graded Return to Work (GRTW)	**No change,** however the delegate will be given the power to **take into account income from outside employment**.
Casuals working >9 hours per week can only receive **11 months IP benefits** (i.e. 12 months continued employment less 30-day waiting period).	**Casuals** working >9 hours per week can receive **up to 12 months IP benefits** regardless of which waiting period they have.

Appendix D Extract from Southern State Superannuation Act 2009

Section 17—Report as to cost and funding of insurance benefits

A.9 The Minister must obtain a report on the cost and funding of insurance benefits (including disability pensions) provided through the scheme within 12 months after 30 June 2010 and thereafter within 12 months after the end of each triennium following that date.

A.10 Each report must be prepared by an actuary (not being a member of the Board) appointed by the Minister and must report on:

c. the cost of insurance benefits

d. the extent to which premiums paid by members and held by the Board are sufficient to meet the scheme's anticipated insurance liabilities

at the time of the report and in the foreseeable future.

A.11 The Minister must, within 6 sitting days after receiving a report under this section, have copies of the report laid before both Houses of Parliament.

Section 22—Insurance benefits

A.12 The following is to be provided through the Triple S scheme on terms and conditions prescribed by regulation:

a. invalidity insurance, death insurance and income protection for members

b. death insurance for spouse members.

A.13 Invalidity or death insurance may also be provided through the scheme for other persons on terms and conditions prescribed by regulation.

A.14 Regulations made for the purposes of this section:

a. may provide

i) for different amounts of invalidity or death insurance depending on a person's age or occupation, or whether the person was employed on a full time, part time or casual basis, or on any other relevant factor; and

ii) for annual increases in the amount of invalidity or death insurance for the benefit of persons who wish to have annual increases in their insurance; and

iii) for the amount of premiums to be fixed by the Board; and

b. may make different provision according to the various classes of members, matters or circumstances to which they are expressed to apply; and

c. may provide that specified members or spouse members, or members or spouse members of a specified class, cannot apply for, or are not entitled to, invalidity insurance, death insurance or income protection.

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