

# LUTHERAN SUPER

STATEMENT OF ADVICE

## REPORT TO THE TRUSTEE ON THE ACTUARIAL INVESTIGATION AS AT 31 DECEMBER 2017

4 JUNE 2018



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## 1

## Key Results and Recommendations

This report on the actuarial investigation of the Fund as at 31 December 2017 has been prepared to meet the requirements of the Fund's governing rules and the SIS legislation. This report should not be relied upon for any other purpose or by any party other than the Trustee of the Fund. Mercer is not responsible for the consequences of any other use. This report should be considered in its entirety and not distributed in parts. The Trustee should share this report with the Employers who contribute to the Fund. The Employers may consider obtaining separate actuarial advice on the recommendations contained in the report.

### 1.1. Change in Financial Position

Defined Benefits Only*	Position at 31 December 2017		Position from 31 December 2014 Investigation Report	
	\$000	Asset Coverage	Projected Coverage at 31 December 2017	Coverage at 31 December 2014
Assets <sup>#</sup>	18,430			
Liability for Vested Benefits	16,581	111.2%	109%	109.8%
Liability for Actuarial Value of Accrued Benefits	17,182	107.3%	100%	101%
Liability for SG Minimum Benefits	13,129	140.4%	n/a	138%

\*The above totals exclude accumulation liabilities of \$541,839,000 and additional accumulation balances for defined benefit members of \$4,106,000 as at 31 December 2017.

# The Defined Benefit Assets exclude the Operational Risk Reserve of \$1,550,000, the Accumulation Reserve of \$2,100,000 and Investment Reserves of \$6,181,000. For details see section 9.1.

The coverage levels at 31 December 2017 were higher than both the levels at the previous actuarial investigation and those projected to this investigation date, due to the following items of positive experience:

- Salary growth of 2.2% pa which was lower than the long term expected rate (4.0% pa); and
- Contributions paid at a rate higher than the long term cost of the benefits calculated at the previous investigation and higher than those recommended at the previous investigation.

This has been partially offset by the following item of negative experience:

- Investment earnings of 2.2% p.a., which were lower than the long term expected rate (2.9% p.a.)

Coverage of the Actuarial Value of Accrued Benefits has also increased due to changes in the actuarial assumptions adopted for this investigation (refer to Section 10.3).

## 1.2. Recommended Contribution Rates and Projections

At 31 December 2017, the Fund was in a satisfactory financial position. The 111.2% coverage of Defined Benefit Vested Benefits was also above the financing objective of 105% (with an additional margin of 2.5% at 31 December each year to allow for the impact of 1 January salary increases) coverage adopted for this investigation. See section 4.1 for further details.

Additionally, the 107.3% coverage of Actuarial Value of Defined Benefit Accrued Benefits was above the requirement of 100% coverage.

Based on the financial position at 31 December 2017, I recommend that the Employers contribute to the Fund as follows:

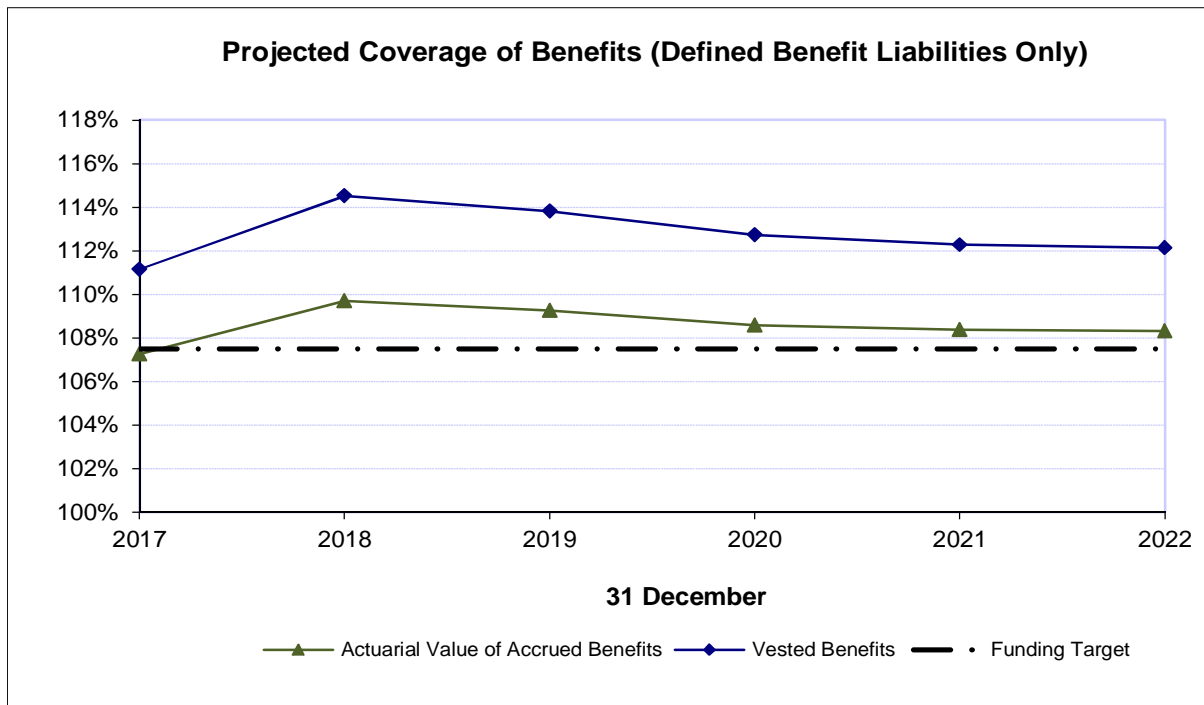
- Defined Benefit members:

Benefit Category	Recommended Contribution Rate
A1 and H1	18.5% of salaries from 1 January 2018 to 30 June 2018; 10.0% of salaries from 1 July 2018.

The Employer should also contribute 5.88% of salaries for defined benefit members who pay 5% member contributions by way of salary sacrifice.

- Accumulation members:
  - 9.5% of Ordinary Time Earnings (or such other amount as required to meet the Company's obligations under Superannuation Guarantee legislation or employment agreements), and
  - Any additional employer contributions agreed between the Company and a member (e.g. additional salary sacrifice contributions)

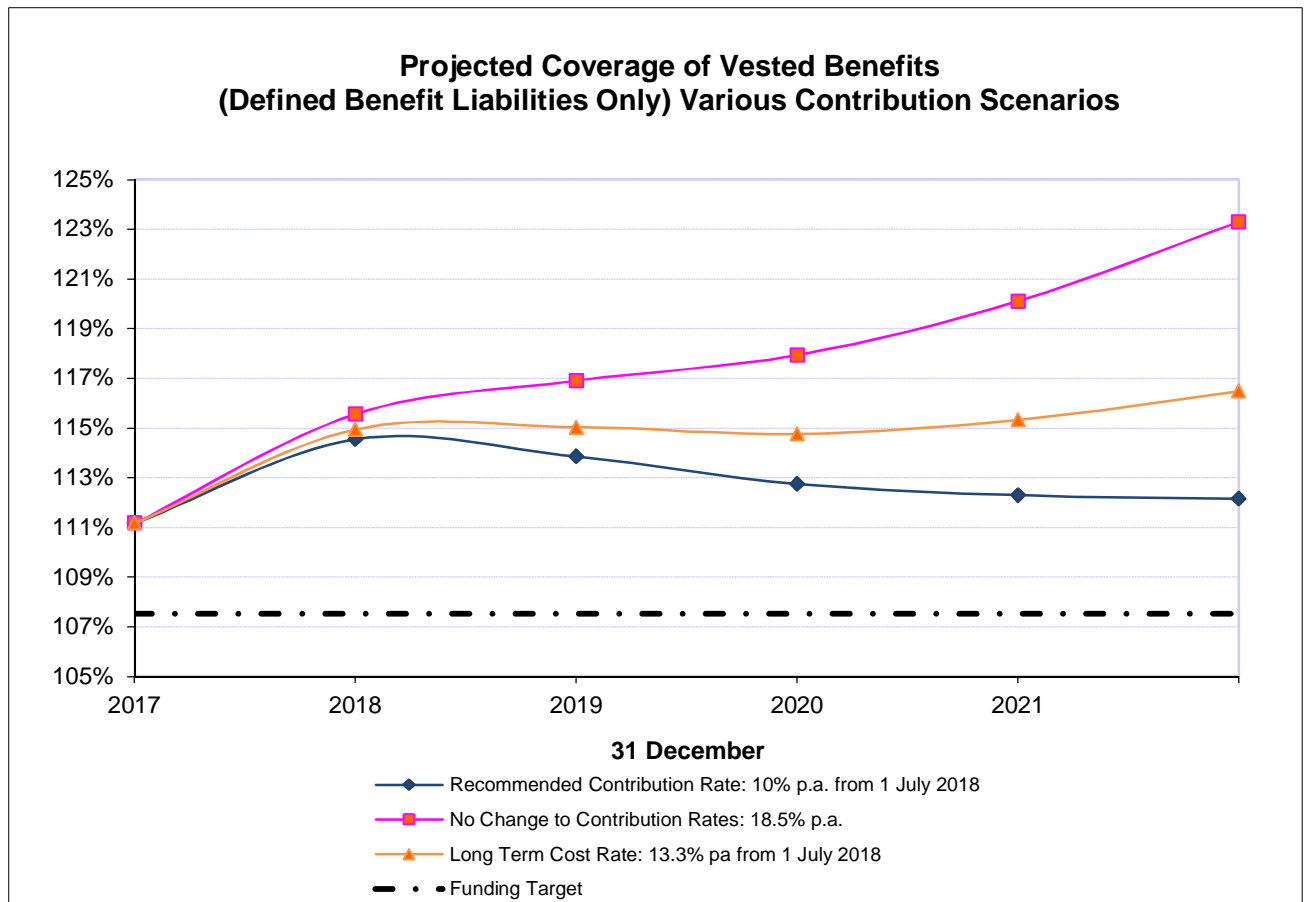
Based on the assumptions adopted for this investigation we have prepared the following projection of Fund assets and benefit liabilities:



The graph above shows that the recommended employer contributions are anticipated to result in assets of at least 105% (with an additional margin of 2.5% at 31 December each year) of Defined Benefit Vested Benefits by 31 December 2020 and 100% of Actuarial Value of Accrued Benefits by 31 December 2020 (both of which form the financing objective adopted in this investigation).

We understand that the Trustee would like to consider the implications of contributing at other contributions levels, including the current rate of 18.5%. The contribution rate of 18.5% exceeds both our recommended contribution rate and the long term cost rate of future benefits (approximately 13.3% of defined benefit member' salaries).

Based on the assumptions adopted for this investigation and allowing for any material experience after the investigation date as detailed in this report, we have prepared the following projection of Fund assets and benefit liabilities under three different employer contribution scenarios. All scenarios assume that the 18.5% contribution rate is maintained till 30 June 2018. Continuation of the 18.5% rate and contribution at the long term cost rate of future benefits from 1 July 2018 is compared against the recommended contribution program.



The above graph illustrates that a significant surplus is expected to accumulate by 31 December 2020, if the Trustee were to continue to require employers contribute at 18.5% of member salaries from 1 July 2018.

If the 18.5% contribution rate is maintained, we request that the Trustee articulate its intentions in relation to the build-up and maintenance of the surplus and how this fits in with the long term objective of the Defined Benefit funding arrangement.

### 1.3. Other Findings and Recommendations for the Trustee

#### Suitability of Policies

- The investment policy for the defined benefit section of the Fund is suitable.
- The crediting policy for the defined benefit section of the Fund is suitable.
- The insurance arrangements for the defined benefit section of the Fund are suitable.
- The Shortfall Limit (for the purposes of SPS 160) is suitable.
- The Trustee’s process for monitoring the Fund’s financial position is suitable.

### 1.4. Action Required

The Trustee should consider this report and confirm its agreement (or otherwise) to the contribution and other recommendations. The Trustee should seek formal agreement from the Employer to contribute in line with the recommendations.

# 2

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## 2. Liability Measures as at 31 December 2017

### 2.1. Vested Benefits

Vested Benefits are the amounts payable as of right should all active members voluntarily resign or, if eligible, retire at the investigation date.

At 31 December 2017, Fund assets were greater than Vested Benefits. Accordingly the Fund was considered to be in a “satisfactory financial position” under SIS legislation. The 111.2% coverage of Defined Benefit Vested Benefits was also above the financing objective of 107.5% coverage adopted for this investigation.

### 2.2. SG Minimum Benefits

SG Minimum Benefits are the minimum benefits required under SG legislation, as defined in the Benefit Certificate (also referred to as Minimum Requisite Benefits or MRBs).

Fund assets at 31 December 2017 were also greater than SG Minimum Benefits and hence the Fund was considered to be “solvent” under SIS legislation.

### 2.3. Actuarial Value of Accrued Benefits

The Actuarial Value of Accrued Benefits is the expected value (as at the investigation date) of all future expected benefit payments, based on membership to date, discounted to the investigation date, taking into account the probability of payment. This value is calculated using actuarial methods and assumptions. In determining the value, I have not applied a minimum of the Vested Benefits.

The 107.3% coverage of the Actuarial Value of Accrued Benefits at 31 December 2017 was also above 100%.

We note that the Actuarial Value of Accrued Benefits is higher than the value of Vested Benefits as it allows for benefit entitlements to grow at an expected salary growth rate which is higher than the expected long term net earnings of the Fund assets.

The calculation of the Actuarial Value of Accrued Benefits has been carried out using a method of apportionment of benefits between past and future membership that satisfies the requirements of Professional Standard No. 402 of the Actuaries Institute and is acceptable for Australian Accounting Standard AASB 1056 purposes.

#### 2.3.1. *Summary of Method of Attributing Benefits to Past Membership*

The calculation of the Actuarial Value of Accrued Benefits has been carried out using a method of apportionment of benefits between past and future membership that satisfies the requirements of Professional Standard No. 402 of the Actuaries Institute and is acceptable for Australian Accounting Standard AASB 1056 purposes.



### **2.3.2. Accumulation Benefits**

The value of accumulation benefits has been taken as the sum of the balances held in accumulation accounts at the date of the investigation.

### **2.3.3. Defined Benefits**

The past membership components of all defined benefits payable in the future from the Fund in respect of current membership are projected forward allowing for assumed future salary increases and credited interest rates and are then discounted back to the investigation date at the investment return rate assumed for the investigation.

The past membership component for each type of benefit is:

<b>Retirement:</b>	based on the member's accrued benefit multiple or relevant account balances at the investigation date
<b>Death and Disablement:</b>	calculated by adjusting the total expected benefit in proportion to the accrued benefit multiple at the investigation date divided by the accrued benefit multiple at the projected date of death or disablement
<b>Resignation:</b>	based on the member's accrued benefit multiple or relevant account balances at the investigation date, allowing, where applicable, for future vesting to the projected date of resignation

### **2.3.4. Changes in Methodology of Calculating the Actuarial Value of Accrued Benefits**

The method used for the determination of Accrued Benefits is the same as that used at the previous investigation.

## 3

## 3. Experience

### 3.1. Change in Financial Position since Previous Investigation

The table below shows the coverage of assets over Vested Benefits, the Actuarial Value of Accrued Benefits and the SG Minimum Benefits as at 31 December 2017, and the corresponding values at the previous investigation date.

	Position at 31 December 2017		Position from 31 December 2014 Investigation Report	
	\$000	Asset Coverage	Projected Coverage at 31 December 2017	Coverage at 31 December 2014
<b>Defined Benefits Only*</b>				
Assets <sup>#</sup>	18,430			
Liability for Vested Benefits	16,581	111.2%	109%	109.8%
Liability for Actuarial Value of Accrued Benefits	17,182	107.3%	100%	101%
Liability for SG Minimum Benefits	13,129	140.4%	n/a	138%

\*The above totals exclude accumulation liabilities of \$541,839,000 and additional accumulation balances for defined benefit members of \$4,106,000 as at 31 December 2017.

# The Defined Benefit Assets exclude the Operational Risk Reserve of \$1,550,000, the Accumulation Reserve of \$2,100,000 and Investment Reserves of \$6,181,000. For details see section 9.1.

The coverage levels at 31 December 2017 were higher than both the levels at the previous actuarial investigation and those projected to this investigation date, due to the following items of positive experience:

- Salary growth of 2.2% pa which was lower than the long term expected rate (4.0% pa); and
- Contributions paid at a rate higher than the long term cost of the benefits calculated at the previous investigation and higher than those recommended at the previous investigation.

This has been partially offset by the following item of negative experience:

- Investment earnings of 2.2% p.a., which were lower than the long term expected rate (2.9% p.a.)

The improvement in coverage level for the liability for the Actuarial Value of Accrued Benefits was also due to the change in the actuarial assumptions resulting in a small decrease in the liability. The impact of the assumption changes is examined in Section 10.3 of this report.

The reasons for the change in the Fund's financial position due to experience since the previous investigation are detailed below.

### 3.1.1. *Investment Returns and Crediting Rates*

The table below shows the rates of investment earnings (after tax, investment fees and asset based administration fees) for assets supporting defined benefits, and crediting rates applied to defined benefit members' accounts, over the period since the previous investigation.

Year Ending	Investment Return (pa)	Crediting Rate(pa)
31 December 2015	2.4%	2.1%
31 December 2016	2.5%	2.4%
31 December 2017	1.8%	1.5%
<b>Compound Average</b>	<b>2.2%</b>	<b>2.0%</b>

The average investment return for the three year period to 31 December 2017 was 2.2% p.a. compared to our longer term assumption at the last actuarial investigation of 2.9% p.a. The lower than assumed return had a negative impact on the Fund's financial position.

### 3.1.2. *Salary Increases*

Salaries for the current defined benefit members increased by an average of 2.2% pa over the three year period compared to our assumption at the last actuarial investigation of 2.0% in the first year and 4.0% pa thereafter. The lower than assumed salary increases had a positive impact on the Fund's financial position.

### 3.1.3. *Changes in Membership/Decrement*

During the period under review the number of defined benefit members within the Fund decreased and the decrease was less than assumed. As the benefits paid were generally higher than the actuarial reserves, the lower than assumed level of payments has had a positive impact on the Fund's overall financial position measured by the Actuarial Value of Accrued Benefits.

### 3.1.4. *Contributions*

The recommended Employer contribution rates since the date of the prior actuarial investigation were as follows:

- Defined Benefit members:

Benefit Category	Contribution Rate(% Salary)
A1 and H1	18.5% until 31 December 2015; 11.0% until 31 December 2017 and 15.0% of salaries from 1 January 2018

The Employer also contributed 5.88% of salaries for defined benefit members who pay 5% member contributions by way of salary sacrifice.

- Accumulation members:
  - 9.5% of Ordinary Time Earnings (or such other amount as required to meet the Company's obligations under Superannuation Guarantee legislation or employment agreements), and
  - Any additional employer contributions agreed between the Company and a member (e.g. additional salary sacrifice contributions)

The Trustee did not adopt the recommended reduction in contributions after 31 December 2015. Therefore, the Employer contribution rates were higher than those recommended in the prior actuarial investigation and subsequent contribution recommendations.

The Employer contributions paid over the review period were also higher than the long term Employer contribution rate (i.e. the estimated employer cost of future service benefits), which had a positive impact on the Fund's financial position.

### 3.2. Recommendations in Previous Actuarial Investigation

The previous actuarial investigation made the following recommendations and the status of these is shown in the table below:

Recommendation	Status
Contribution program	Refer Section 3.1.4
Salary Increase Rules	<p>It was recommended that the Trustee consider implementing a mechanism to charge an Employer specific additional contributions for excessive salary increases over an agreed threshold in order to address the equity issues between employers of the Fund.</p> <p>A discussion paper was subsequently tabled though no mechanism was formally adopted by the Trustee. However, annual monitoring of the salary increase experience has been ongoing and excessive salary increases for individual members has not been observed during the last three years.</p>

# 4

## 4. Contribution Requirements

### 4.1. Financing Objective

The financing objective I have adopted for this investigation is to maintain the value of the Fund's assets at least equal to:

- 100% of accumulation account balances; plus
- 105% of Defined Benefit Vested Benefits on average throughout the year (with an additional margin of 2.5% at 31 December each year) over the period to the next investigation; and
- 100% of Actuarial Value of Accrued Benefits over the period to the next investigation.

We note that the Vested Benefits at 31 December 2017 (as per the table in section 1.2) do not include allowance for salary levels at 1 January 2018. Once 1 January 2018 has passed, any higher salaries are incorporated into the final average salary calculation, resulting in an immediate fall in the Vested Benefits index. Therefore, I recommend a financing objective that targets an additional margin of 2.5% (based on half a year's salary increase assumption of 5% per annum) at 31 December each year to recognise that 31 December is at the bottom stage in the final average salary cycle. Thus the financing objective is to target 105% on average through the year which requires a target of 107.5% at 31 December each year and correspondingly, 102.5% at 1 January each year.

I consider that the target margin of 5% on average through the year (with an additional margin of 2.5% at 31 December each year) strikes a suitable balance between the Trustee's desire to provide security to members and the Employer's desire to avoid an unnecessary build-up of surplus.

Financing objectives are required for both Vested Benefits and the Actuarial Value of Accrued Benefits as the relationship between these benefits is subject to change. As long term expected earnings is below expected salary growth, the Actuarial Value of Accrued Benefits is higher than the Vested Benefits, with this gap increasing the longer the time before members are expected to leave the Fund. As a result, changes in members' ages over time could result in significant changes in the relative values of Vested Benefits and the Actuarial Value of Accrued Benefits. The relativity can also be affected by changes in the actuarial assumptions, which affect the Actuarial Value of Accrued Benefits to a greater extent than Vested Benefits.

Based on the assumptions adopted for this investigation, achieving the financing objective of 107.5% of 31 December Vested Benefits for defined benefit members would also result in a satisfactory margin of coverage over 100% of SG Minimum Benefits. Hence, it is not considered necessary to adopt a specific financing objective in relation to this benefit liability measure.

I have taken into consideration the provisions of the Trust Deed and any professional requirements as set out below.

#### 4.1.1. Professional Requirements

Under Professional Standard 400 issued by the Actuaries Institute, the funding method selected by the actuary "must aim to provide that:

- (a) *members' benefit entitlements (including any pension increases provided by the Trust Deed or in accordance with either precedent or the intentions of the Trustee and/or Fund Sponsor) are fully funded before the members retire; and*
- (b) *the assets of the Fund from time to time, after making full provision for the entitlements of any beneficiaries or members who have ceased to be employed, exceed the aggregate of benefits which employed members would reasonably expect to be payable to them on termination of membership, including the expenses of paying those benefits, and having regard to the provisions of the Trust Deed and the likely exercise of any Options or Discretions.” (Paragraph 5.5.4 of PS400).*

Accordingly the actuary needs to be satisfied that any funding program is expected to provide a level of assets which meets or exceeds immediate benefit entitlements based on members' reasonable expectations. Should assets fall below that level, the funding program needs to aim to lift assets to at least the required level over a reasonable time period and to maintain assets at or above the required level thereafter.

The financing objective has been set on the basis that members' reasonable expectations on termination would be to receive their Vested Benefit entitlement.

#### **4.1.2. Provisions of the Trust Deed**

The rules of the Fund require that:

- the Trustee ensures an actuarial investigation of the Fund is conducted when required by legislation. Accordingly actuarial investigations are carried out at three yearly intervals at a minimum; and
- The Employer must contribute at the rate agreed between the Trustee and the Employer

#### **4.2. Financing Method**

There are various financing methods that could be followed in setting the Employer contribution level. This investigation uses a “Target Funding” method.

Under this method, the Employer contribution rate required to provide a target level of coverage of a particular benefit liability measure is determined.

Under this method of financing, the level of the Employer contribution may vary from time to time to ensure that the Fund remains on course towards its financing objective (minimum 105% coverage of Vested Benefits with an additional margin of 2.5% at 31 December each year over the three years to 31 December 2020, or 100% coverage of Actuarial Value of Accrued Benefits over the three years to 31 December 2020).

I consider that the Target Funding method is suitable in the Fund's current circumstances as it allows the recommended contribution rate to be determined specifically to meet the Fund's financing objective.

##### **4.2.1. Changes in Financing Method**

The Target Funding method was also adopted at the last investigation.

### 4.3. Employer's Future Service Cost

Based on the assumptions adopted for this investigation, I estimate that the Employer's long-term defined benefit funding costs (i.e. the normal cost of funding future service defined benefit accruals for each category) are as follows:

Defined Benefit Membership Group	Employer long-term cost (of future benefit accrual) (% of Salary/Wage)
A1	13.2%
H1	15.6%

An averaged rate for current members is 13.3% of salaries. For the purposes of recommending contribution rates, the average rate of Employer long term cost is set at 13.3% of salaries.

The Employer's long-term defined benefit funding cost above excludes expected DB expenses, excludes any award contributions and includes allowance for contributions tax.

The assessed long-term costs have decreased by 0.8% of salaries (Category A1) and by 0.6% of salaries (Category H1) since the last investigation due to the change in assumptions (see Section 10).

Under the Target Funding method, it would be appropriate to reduce the current employer contribution requirements below the long-term defined benefit funding costs based on the relatively strong financial position of the Fund. Therefore, we believe that a reduction in the Employer contribution requirements to 10% of defined benefit members' salaries from 1 July 2018 strikes the right balance between ensuring that the contributions to the Fund are anticipated to continue to exceed the adopted financing objective without building up excessive surplus.

### 4.4. Recommended Contributions

Based on the Trustee's financing objective described and the results of this investigation, I recommend that the Employers contribute as follows:

- Defined Benefit members:

Benefit Category	Recommended Contribution Rate
A1 and H1	18.5% of salaries from 1 January 2018 to 30 June 2018; 10.0% of salaries from 1 July 2018.

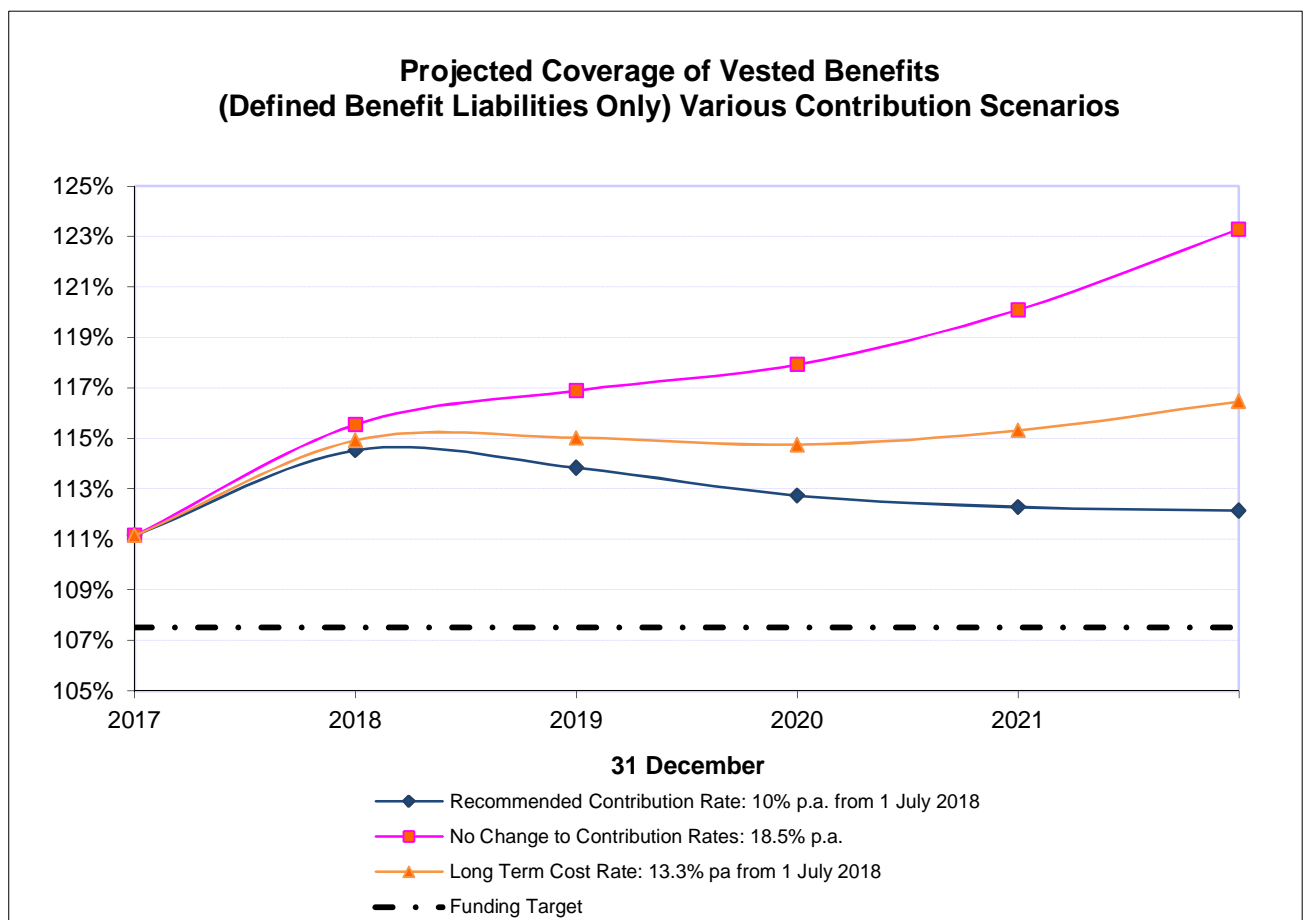
The Employer should also contribute 5.88% of salaries for defined benefit members who pay 5% member contributions by way of salary sacrifice.

- Accumulation members:
  - 9.5% of Ordinary Time Earnings (or such other amount as required to meet the Company's obligations under Superannuation Guarantee legislation or employment agreements), and
  - Any additional employer contributions agreed between the Company and a member (e.g. additional salary sacrifice contributions)

We understand that the Trustee would like to consider the implications of contributing at other contributions levels, including the current rate of 18.5%. The contribution rate of 18.5% exceeds both our recommended contribution rate and the long term cost rate of future benefits (approximately 13.3% of all defined benefit members' salaries).

Based on the assumptions adopted for this investigation and allowing for any material experience after the investigation date as detailed in this report, we have prepared the following projection of Fund assets and benefit liabilities under three different employer contribution scenarios:

1. Recommended contributions: 18.5% of salaries to 30 June 2018, reducing to 10% of salaries from 1 July 2018.
2. Maintain a contribution rate of 18.5% of salaries with no reductions.
3. Maintaining the current contribution rate of 18.5% of salaries to 30 June 2018, reducing to 13.3% of salaries from 1 July 2018.



The above graph illustrates that a significant surplus is expected to accumulate by 31 December 2020 if the Trustee were to continue to require employers to contribute at 18.5% of members' salaries.

If the 18.5% contribution rate is maintained, we request that the Trustee articulate its intentions in relation to the build-up and maintenance of the surplus and how this fits in with the long term objective of the Defined Benefit funding arrangement.



## 4.5. Valuation Balance Sheet

The following table shows the Fund's valuation balance sheet which treats future contributions as an asset and future benefits (based on both past and future service) as a liability.

Item	Actuarial Value \$M
Present Value of future defined benefits payments in respect of membership accrued at the valuation date	17.182
Present Value of future defined benefits payments in respect of membership after the valuation date	4.237
Present Value of future Fund operating costs and tax on contributions	0.990
<b>Total Present Value of future payments out of Fund</b>	<b>22.409</b>
Value of Fund Assets at 31 Dec 2017	18.430
Present Value of future Employer contributions  (at rates recommended )	2.807  (18.5% pa until 30 June 2018; 10% pa thereafter)
Present Value of future Member contributions (at rate(s) specified in Trust Deed)	1.300
<b>Total available Assets (in absence of other contributions)</b>	<b>22.537</b>
Excess/(Deficit) of Assets to value of benefits	0.128

The table shows, based on the recommended contribution rates (18.5% p.a. of salaries until 30 June 2018; 10% p.a. thereafter), that current assets and future contributions from both Employer and members will amount to a discounted value of \$22.537 million. This is \$0.128 million greater than the value of discounted future payments out of the Fund.

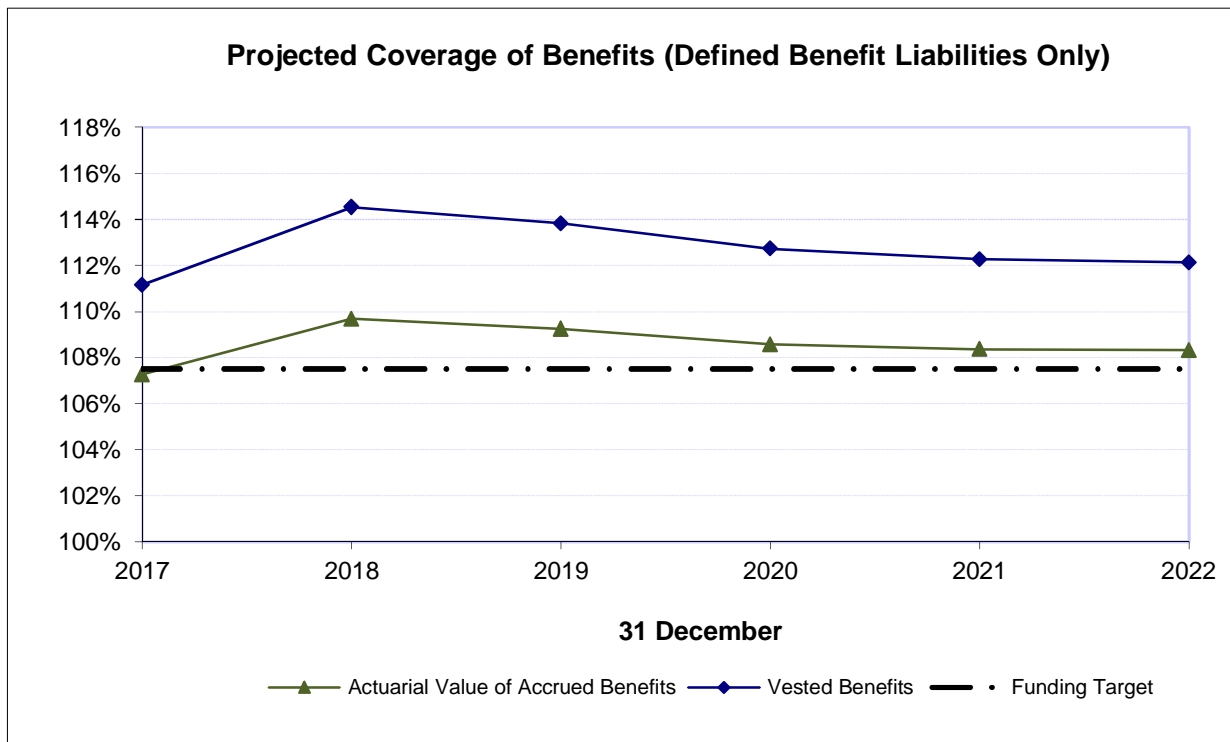
# 5

## 5. Projections

I have prepared a projection of Fund assets and benefit liabilities based on:

- the actuarial assumptions adopted for this investigation; and
- assuming that the Employer contributes on the basis recommended.

The results of the projection are as follows:



The Trustee should note that this projection is based on the assumptions adopted, which represent a single scenario from the range of possibilities. The future is uncertain and the Fund's actual experience will differ from those assumptions; these differences may be minor in their overall effect, or they may be significant and material. In addition, different sets of assumptions or scenarios may also be within the reasonable range and results based on those alternative assumptions would be different.

### 5.1. Meeting the Financing Objective

The graph above shows that the recommended employer contributions are anticipated to result in assets of at least 105% (with an additional margin of 2.5% at 31 December each year) of Defined Benefit Vested Benefits by 31 December 2020 as well as asset coverage of at least 100% of the Actuarial Value of Accrued Benefits by 31 December 2020 (both of which form the financing objective adopted in this investigation).

# 6

## 6. Investment Policy and Related Risks

### 6.1. Investment Policy

#### *Assets backing accumulation benefit liabilities*

The Fund provides members with a range of investment options for their accumulation benefits (including the additional account balances of defined benefit members). The assets supporting the Fund's accumulation benefit liabilities are invested according to members' selected investment options and the actual returns on those investments (whether positive or negative) are passed on to members via changes in the unit prices by which member account balances are determined. Thus the Fund's accumulation liabilities and related assets are matched.

The Fund's investments are expected to provide a high level of liquidity in normal circumstances.

I consider that the Fund's investment policy for assets relating to accumulation liabilities is suitable, having regard to the nature and term of these liabilities.

#### *Assets backing defined benefit liabilities*

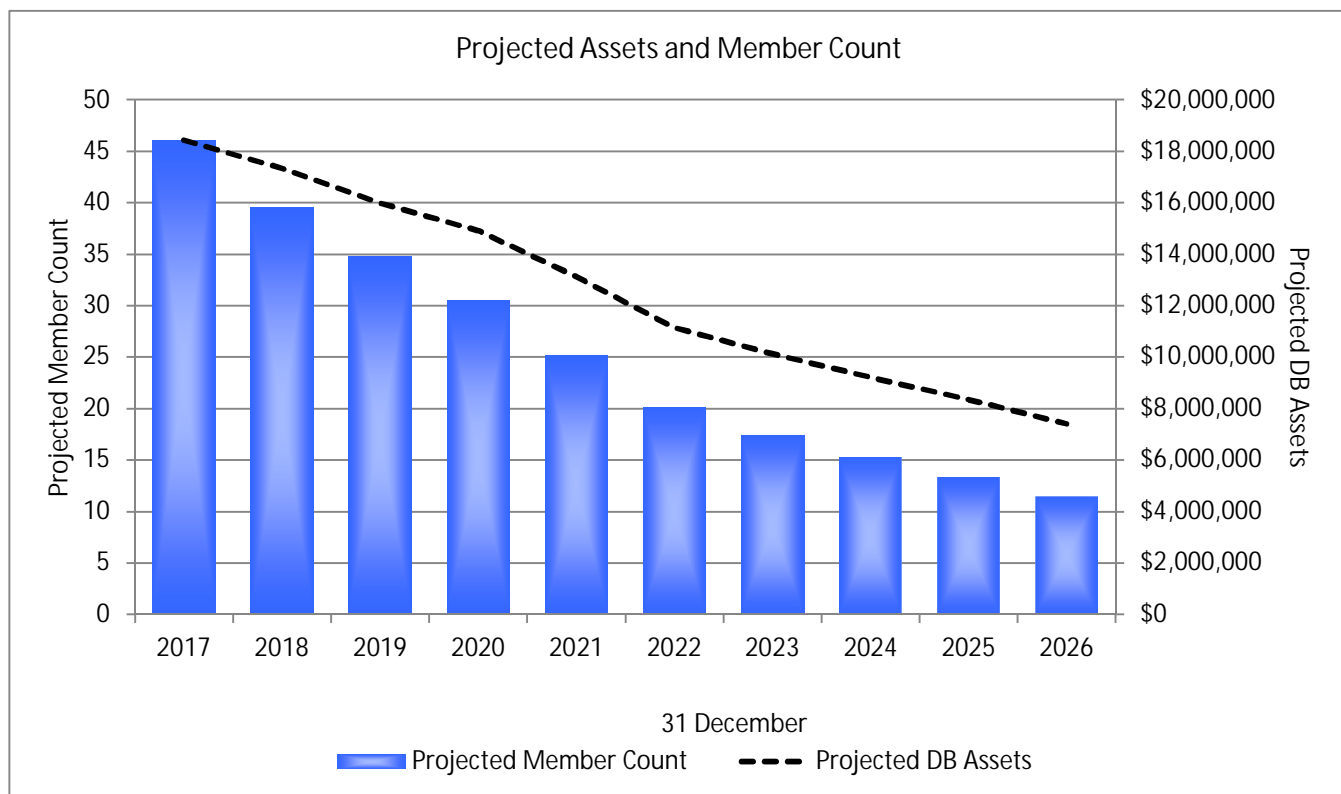
The Fund's investment strategy for assets supporting defined benefit liabilities, currently involves a benchmark 100% exposure to 'defensive' assets such as cash, fixed interest (refer to the table below for the actual and benchmark investment allocations of these assets as at the investigation date). The Fund's investment in Short Duration High Income Absolute Return assets is considered to be Alternative assets. 'Growth' assets are expected to earn higher returns over the long term compared to 'defensive' assets, but at the same time to exhibit more variation in returns from year to year.

<b>31 December 2017</b>	<b>Benchmark Allocation</b>	<b>Actual Allocation</b>
Australian Shares	0.0%	0.0%
Overseas Shares	0.0%	0.0%
Property	0.0%	0.0%
Fixed Interest	43.7%	43.7%
Alternatives	25.0%	25.0%
Cash	31.3%	31.3%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>

The defined benefit liabilities (other than the SG minimum benefit) are not affected by the investment return on the Fund's assets. The volatility of the Fund's investment returns will therefore affect the financial position of the Fund from year to year and is likely to impact on the required level of Employer contributions.

Given that it is not known when members will take their benefit with certainty, the exact term of the Fund's liabilities is unknown. However, with the defined benefits having been closed to new members for some time now and a significant amount of retirement benefits due to become payable

in the next few years (refer age profile in Appendix A), the projections carried out as part of this actuarial investigation indicate that a substantial reduction of defined benefit assets is expected over the next 10 years. The following graph shows projected assets and member count over the next 10 years given the assumptions adopted for this investigation:



This graph shows that the Fund’s assets supporting DB payments are expected to decline steadily over the next 10 years, commensurate with the decline in membership over the same period.

The Fund’s investments are expected to provide a high level of liquidity in normal circumstances. Hence we do not envisage any problem in being able to redeem assets to meet benefit payments as they arise.

Taking into account the Fund’s financial position and the nature and term of the Fund’s defined benefit liabilities, I consider that the current defined benefit investment policy remains a suitable policy at present.

This conclusion takes into account my understanding that the Employer understands and accepts the contribution variability associated with the current investment policy, including volatility associated with falling fixed interest yields that have applied in the recent past. Should the Employer’s risk tolerance change, it would be appropriate to review the current investment policy.

## 6.2. Crediting Policy

### 6.2.1. Accumulation Benefits

The main features of the unit pricing and crediting policy in relation to accumulation member accounts and to the additional accumulation accounts of defined benefit members are summarised briefly below:

- Earnings credited are based on the actual net earning rates (i.e. earnings net of investment costs, asset-based administration fees and provisions for tax) of the members' selected investment options. Net earnings are allocated via changes in unit prices. Unit prices are determined on a weekly basis. Rules relating to the prices at which units are bought and sold are designed to prevent selection against the Fund by members.
- The processing of regular contributions and member exits is based on the latest available unit price (ie historical pricing). The use of historical pricing recognises the need for timely processing in the case of contributions and exits (which are generally not influenced by market performance).
- However, historical pricing does not prevent selection against the Fund by members who are able to switch out of an option with prior knowledge of the most recent market movement. As a result, the next available unit price (forward pricing) is used for processing investment switches.
- Termination of service does not result in any automatic change in a member's investment options. Member accounts remain invested in their selected investment options until paid.
- An investment reserve is held in the Fund. The expectation is that net investment earnings are fully passed on to member accounts via unit prices, however, in practice this is influenced by factors such as a weekly unit pricing cycle and the use of estimated tax rates relative to actual tax rates. A policy relating to the distribution of this investment reserve is in place which limits the reserve to between 0% and 1% of account balances. I consider this reserving policy to be reasonable.

### 6.2.2. Defined Benefits

The main features of the crediting policy in relation to defined benefits are summarised briefly below:

*For the period up to the date of leaving service*

Components of some members' benefits are based on the accumulation of member contributions with investment earnings at the Crediting Rate.

The Crediting Rate is determined based on the actual earning rate of the defined benefit assets, after allowance for tax and investment costs.

For benefits paid during the Review Year, the Trustee determines an Interim Crediting Rate each week which is used to allocate net investment earnings from the last Review Date to the date of exit from the Fund. The Interim Crediting Rate is based on the actual net investment earnings of the assets backing the Fund's defined benefits calculated weekly.

Whilst the weekly update of the interim rate theoretically allows some scope for anti-selection, taking into account the nature of the benefits and that termination of service (with associated notice periods) would generally be required to trigger a payment, we consider that the current frequency of review of interim rates is appropriate.

*For the period from the date of leaving service*

An exited member's Defined Benefit is updated with net investment earnings from the date of ceasing employment (i.e. the Date of Exit) to the date of payment of their benefit from the Fund using the latest interim crediting rate.

The general principles of the crediting rate policy are reasonable.

### **6.2.3. Documentation**

The Fund's crediting and unit pricing policies and related procedures are set out in the Investment Policy Statement dated 28 November 2017.

### **6.2.4. Conclusion**

Based on a review of the main features, I consider that the unit pricing and crediting policy adopted for these benefits is generally suitable taking into consideration the principles of equity between different generations of members and any material risks which may have a significant impact on the Fund (i.e. a market shock or sudden downturn in investment markets).

## **6.3. Investment Risk – Impact on Cost to the Employer**

There is a risk that investment returns will be lower than assumed and the Employer will need to increase contributions to offset this shortfall. This risk is normally borne by the Employer.

For example, if the assumed future investment return was reduced by 1% pa with no change in other assumptions, then:

- (i) the Actuarial Value of Accrued Benefits would increase by \$925,000 (Employer funding cost impact  $\$925,000 / 0.85 = \$1,088,000$ ), with a resulting reduction in the coverage of the Actuarial Value of Accrued Benefits from 107.3% to 101.8% and
- (ii) the estimated employer cost of future service benefits would increase from 13.3% to 14.3% of salaries under this scenario.

The actual investment return achieved by the Fund in future may vary (positively or negatively) from the rate assumed at this investigation by much more than the (negative) 1% pa illustrated in the example above.

## **6.4. Investment Volatility**

100% of the current Vested Benefits for defined benefit members are not linked to investment returns (i.e. are salary based benefits) and therefore the Fund's Vested Benefits coverage *is* sensitive to changes in the investment returns.

I have considered the impact of investment volatility on the Fund's financial position over the next few years using a "high return" and a "low return" scenario. The returns under both scenarios have

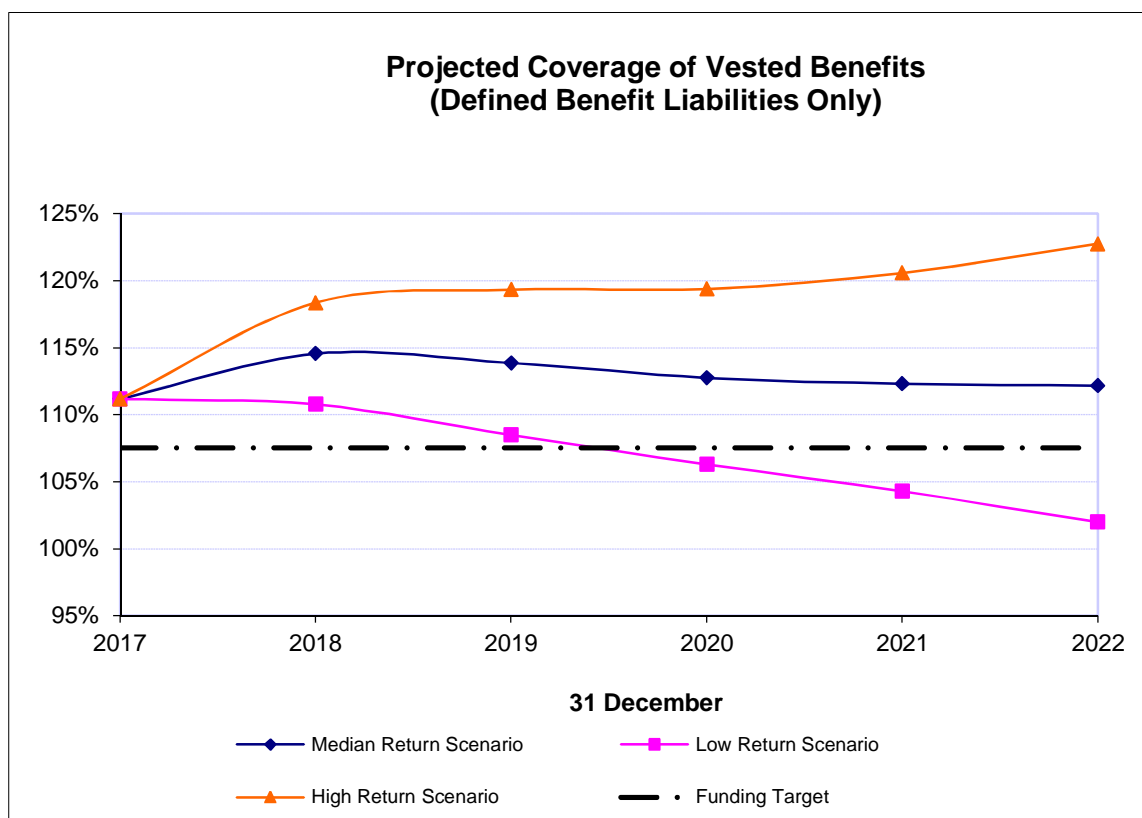
been derived from assumptions about the likely risk attached to the Fund’s defined benefit investment strategy.

Using the investment return model and assumptions adopted, there is approximately a 10% chance of the Fund’s cumulative investment return being less than the “low return” scenario. Similarly, there is approximately only a 10% chance of the Fund’s cumulative investment return being greater than the “high return” scenario. No allowance has been included for the actual return on assets for the period immediately following 31 December 2017.

1 January 2018 to 31 December	Assumed Cumulative Investment Return (%)		
	"Low Return"	Valuation	"High Return"
2018	-0.8%	2.7%	6.2%
2019	0.8%	5.5%	10.2%
2020	2.9%	8.3%	13.9%
2021	5.2%	11.2%	17.5%
2022	7.5%	14.2%	21.3%

The cumulative investment return is the total return from 1 January 2018 up to 31 December in the year shown. The extent of variation allowed for in these projections reflects the Fund’s asset mix and Mercer’s views on potential variability in investment results in various investment sectors.

The graph below shows the effect on the projected ratio of assets to Vested Benefits for defined benefit members under the “high return” and “low return” scenarios, with all other investigation assumptions remaining unchanged.



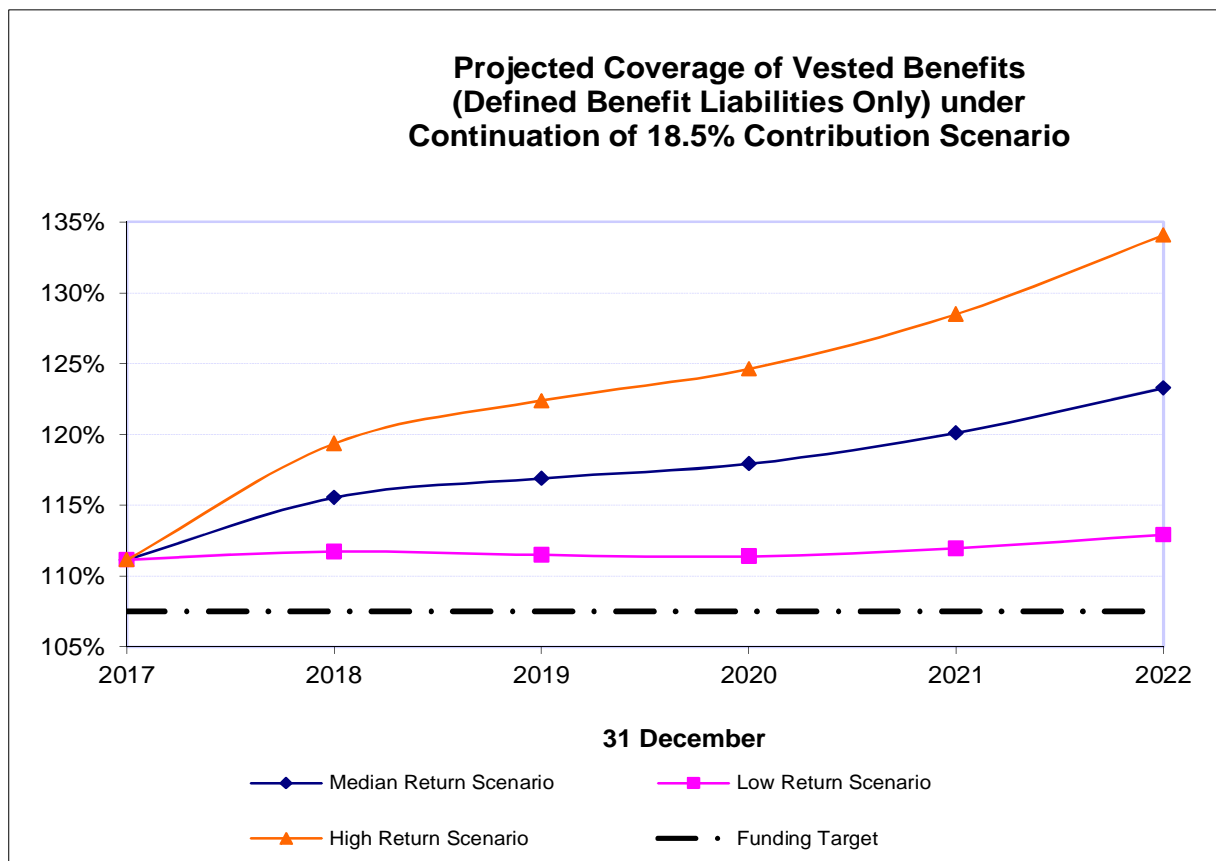
Based on fluctuations in investment returns only, and assuming other experience is in line with the assumptions adopted for this investigation, there is approximately an 80% chance that the coverage of assets over Vested Benefits at 31 December 2020 will fall in the range from 106% to 119%.

Please note that the Low Return Scenario and the High Return Scenario shown above are illustrations only, and show what may occur under assumed future experiences which differ from our baseline assumptions. These scenarios do not constitute upper or lower bounds and the actual future coverage of Vested Benefits may differ significantly from the range shown above, depending on actual future experience.

In my view, the Trustee should be satisfied with the expected level of security over the next few years if the Employer contributes at the recommended levels.

### 6.4.1. Investment Volatility under Continued Contribution Scenario

A graph below shows the effect on the projected ratio of assets to Vested Benefits for defined benefit members under the “high return” and “low return” scenarios assuming projected employer contributions continue at 18.5% of salaries.



Based on fluctuations in investment returns only, and assuming other experience is in line with the assumptions adopted for this investigation, there is approximately an 80% chance that the coverage of assets over Vested Benefits at 31 December 2020 will fall in the range from 111% to 125% if projected employer contributions continue at 18.5% of salaries from 1 July 2018.

In my view, the Trustee should articulate the purpose of funding a large Defined Benefit surplus if the Employers continue to contribute at the current 18.5% level.



## 7

## 7. Insurance Policy and Related Risks

For accumulation members, death and lump sum total and permanent disablement benefits (TPD) in excess of total account balances are fully insured, as are disability income benefits.

For defined benefit members, the group life sum insured formula currently in use (for both death and lump sum total and permanent disablement (TPD) benefits) is:

Death/TPD Benefit – (Accrued Retirement Multiple times Final Average Salary)

The total amount insured should cover the excess of the death/TPD benefits over the Fund's assets, unless there is a funding shortfall. Based on the formula in use at the investigation date, the coverage of death/TPD risk as at 1 January 2018 for the Fund was as follows.

	Defined Benefit members	\$000
	Death/Disablement Benefits <sup>^</sup>	24,516
<b>less</b>	Sum Insured <sup>^</sup>	7,615
<b>less</b>	Assets	18,430
	Uncovered Death/Disablement Benefits	(1,529)

<sup>^</sup> These amounts are as at 1 January 2018 and reflect member's salaries as at 1 January 2018.

There is an amount of over-insurance but it is not at a level where I consider that a change to the current insurance formula is necessary.

For disability income benefits – the benefit provisions are entirely matched by the insurance cover. As such there is no funding gap and any claims or adverse experience will have no immediate financial impact on the Fund.

In my opinion, the current group life insurance arrangements, including the sum insured formula for defined benefit members, are appropriate and provide adequate protection for the Fund.

### 7.1. Documentation

The death and lump sum total and permanent disablement benefits (TPD) insurance arrangements are underwritten by AIA (“the insurer”) and outlined in a policy dated 1 January 2018 between the Trustee and the insurer. The purpose of the insurance policy is to protect the Fund against unexpectedly large payouts on the death or disablement of members.

The salary continuance insurance arrangements are underwritten by AIA (“the insurer”) and outlined in a policy dated 1 January 2018 between the Trustee and the insurer.

### 7.2. Conclusion

I consider that the Fund's current insurance arrangements are suitable.

# 8

## 8. Other Risks

There are a number of other risks relating to the operation of the Fund. The more significant financial risks, other than investment, pension and insurance risk, relating to the defined benefits are:

### 8.1. Salary growth risk

The risk is that wages or salaries (on which future benefit amounts will be based) will rise more rapidly than assumed, increasing benefit amounts and thereby requiring additional employer contributions. This risk is borne by the Employer.

For example, if the assumed future salary increase rate was increased by 1% pa with no change in other assumptions, then

- (i) the Actuarial Value of Accrued Benefits would increase by \$641,000 (Employer funding cost impact  $\$641,000/0.85 = \$755,000$ ), with a resulting reduction in the coverage of the Actuarial Value of Accrued Benefits from 107.3% to 103.4%, and
- (ii) the estimated employer cost of future service benefits would increase from 13.3% to 14.1% of salaries under this scenario.

The actual rate of future salary increases may vary (positively or negatively) from the rate assumed at this investigation by much more than the (positive) 1% pa illustrated in the example above.

#### 8.1.1. Individual member salary growth risk

The Defined Benefit Member salary experience over the last three years has been monitored annually. The incidents of significantly greater salary increases above the long term salary growth rate has reduced compared with past experiences.

The Trustee is currently monitoring the salary growth risk on an annual basis, although no formal mechanism has been adopted to charge an Employer additional contributions for excessive salary increases over an agreed threshold in order to address the equity issues between employers.

### 8.2. Legislative risk

The risk is that legislative changes could be made which increase the cost of providing the defined benefits – for example an increase in the rate of tax on superannuation funds. This risk is borne by the Employer.

The Fund's Risk Management Statement and Risk Management Plan should identify a full range of risks faced by the Trustee.

# 9

## 9. Assets

### 9.1. Assets

The net market value of the Fund's assets as at 31 December 2017 amounted to \$574,206,310 (based on *audited Financial Statements for the Fund at 31 December 2017*).

<b>Calculation of Defined Benefit Assets at 31 December 2017</b>		<b>\$</b>
<b>Net market value of the Fund's assets as at 31 December 2017</b>		<b>\$574,206,310</b>
Less accounts for accumulation members		\$541,838,990
Less accumulation accounts for defined benefit members		\$4,106,021
Less Operational Risk Reserve		\$1,550,000
Less Accumulation Reserve		\$2,100,284
Less Investment Reserve		\$6,181,370
<b>Assets to support the defined benefit liabilities of the Fund</b>		<b>\$18,429,645</b>

### 9.2. Operational risk reserves

The assets to meet the Operational Risk Financial Requirement (ORFR) are held directly by the Fund. Therefore, in the table above, we have deducted these assets when calculating the assets to support the defined benefit liabilities of the Fund.

The scope of this Investigation does not include a review of the adequacy of assets held to meet the ORFR or the ORFR strategy.

# 10

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## 10. Actuarial Assumptions

The ultimate cost to the Employer of providing Fund benefits is:

- the amount of benefits paid out; plus
  - the expenses of running the Fund, including tax;
- less
- members' contributions; and
  - the return on investments.

The ultimate cost to the Employer will not depend on the actuarial investigation assumptions or methods used to determine the recommended Employer contribution rate, but on the actual experience of the Fund. The financing method and actuarial assumptions adopted will however affect the timing of the contribution requirements from the Employer.

The actuarial process includes projections of possible future Fund assets and benefit liabilities on the basis of actuarial assumptions about future experience.

These assumptions include investment returns, salary/wage increases, crediting rates, rates at which members cease service for different reasons, and various other factors affecting the financial position of the Fund.

It is not expected that these assumptions will be precisely borne out in practice, but rather that in combination they will produce a model of possible future experience that is considered a suitable basis for setting contribution rates.

### 10.1. Economic assumptions

The most significant assumption made in estimating the cost of defined benefits is the difference between:

- the assumed rate of investment earnings; and
- the rate of salary increases used in the projections of future benefit payments.

This difference is commonly referred to as the "gap".

The key economic long term assumptions adopted for this investigation are:

	<b>Assumption</b>
Investment returns (after tax, investment and asset based administration fees)	2.7% p.a.
Crediting rate (after tax and investment fees)	2.4% p.a.
General salary increases	2.6% for first year; 3.0% p.a. thereafter.

The assumption for investment returns is based on the expected long-term investment return for the Fund's current benchmark investment mix, calculated using Mercer Investment Consulting's assumptions of the means and standard deviations of returns from the various underlying asset classes and the correlations of returns between those asset classes, less an adjustment which takes into account the term of projected defined benefit liabilities and Mercer's views of the continued impact of the lower medium term investment return outlook. We note the previous long term rate assumed for the 2014 valuation was 2.9% p.a.

The crediting rate assumption was set based on the same method outlined above in respect of the investment returns but the crediting rate makes an allowance for the asset based administration fee of 0.3% pa that is paid by the members.

The first year salary increase assumption is based on the average salary increase that was applied to member salaries as at 1 January 2018 and the general salary increase assumption is based on long term economic forecasts for future increases in average weekly earnings (AWOTE) and discussions with the Trustee. A separate allowance for promotional increases is not considered necessary.

## 10.2. Other assumptions

### ***New members***

The Fund's defined benefit section is closed to new entrants. No allowance has been made for new members.

### ***Expenses***

Administration and management expenses and actuarial consulting fees for defined benefit members are deducted from Fund assets. The annual Defined Benefit expenses have been consistent with expectation in the three years since the previous investigation based on the Trustee approved apportionment approach of allocation of costs and expenses to the defined benefit assets.

Based on this experience, expenses are assumed to be:

- \$117,000 p.a. indexed at the rate of 2.5% from 2018 onwards.

Administration fees and insurance premiums for accumulation members are deducted from member balances.

### ***Tax***

It is assumed that the current tax rate of 15% continues to apply to the Fund's assessable income, along with current tax credits and other concessions.

All future Employer contributions are assumed to be subject to 15% contribution tax, after deduction of any insurance premiums and administration and management costs. All contribution recommendations quoted in this report are gross of contribution tax.

No allowance has been made for:

- Any surcharge liability as members' benefits will be reduced by a surcharge offset amount equal to the surcharge payments made, accumulated at the Fund crediting rate. Surcharge was abolished with effect from 1 July 2005.
- Excess contributions tax, as this is payable by the member.
- Additional tax on contributions (including defined benefit notional contributions) for those with incomes above the threshold (currently \$250,000), which is also payable by the member.

### ***Resignation, Death and Disablement in Service***

I have maintained the same assumptions in relation to rates of resignation, death and total and permanent disablement (TPD) as were adopted at the 31 December 2014 actuarial investigation. Examples of the assumed rates for current employee members are set out below:

Percentage of members age x at beginning of year assumed to leave the Fund during the year on account of:				
Age Last Birthday x	Resignation		Disablement	Death
	Male (%)	Female (%)	%	%
30	7.10	16.00	0.01	0.04
35	4.60	7.80	0.02	0.06
40	3.80	3.00	0.04	0.09
45	2.90	2.00	0.08	0.14
50	1.70	0.00	0.18	0.24
55	0.00	0.00	0.39	0.40
60	0.00	0.00	0.83	0.68

**Retirement**

I have maintained the same assumptions in relation to rates of retirement as were adopted at the 31 December 2014 actuarial investigation. The rates at which members are assumed to leave the Fund due to retirement are set out below:

Age Last Birthday	Percentage of members age x at beginning of year assumed to leave the Fund during the year on account of early retirement
x	%
55	20
56	5
57	5
58	5
59	5
60	20
61	15
62	15
63	20
64	50
65	100

**Retrenchment**

No specific allowance is made for the possibility of future retrenchments, as the benefit payable on retrenchment is no different to a member's Vested Benefit on cessation of service. Modest numbers of retrenchments would not be expected to have a material impact on the Fund's financial position and any substantial retrenchment program would require specific assessment.

### 10.3. Changes in Assumptions since the Previous Investigation

The following table sets out changes in assumptions from those used in the previous investigation and the reasons for the changes:

Assumption	31 December 2017 Investigation	31 December 2014 Investigation	Reason for change
Long Term Investment return (after tax and investment fees)	2.7% p.a.	2.9% p.a.	Mercer Investment Consulting lowered its expected investment return for the Fund's benchmark asset classes.
Long Term Crediting rate (after tax and investment fees)	2.4% p.a.	2.6% p.a.	
Salary increases in respect of first projection year ending 31 December	2.6%	2.0%	To reflect the actual salary increases granted at 1 January 2018.
Long-term salary increase assumption	3.0% p.a.	4.0% p.a.	As agreed with the Trustee.

The overall impact of the changes in assumptions was to:

- decrease the Actuarial Value of Accrued Benefits by \$616,000; and
- decrease the assessed long-term employer cost of future service benefits from 14.0% to 13.3%.



# 11

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## 11. The Regulator and Prudential Standards

The regulator (APRA) has issued a number of Prudential Standards for the superannuation industry, including Prudential Standard (SPS 160) relating to the financial management and funding of defined benefit plans. We have commented below on a number of the requirements arising from SPS 160.

### 11.1. Shortfall Limit

The Trustee must determine a “Shortfall Limit” for each fund, being “the extent to which the fund can be in an unsatisfactory financial position with the Trustee still being able to reasonably expect that, because of corrections to temporary negative market fluctuations in the value of the fund assets, the fund can be restored to a satisfactory financial position within a year”.

We understand that the Fund’s Shortfall Limit, determined by the Trustee on the basis of previous actuarial advice, is a Defined Benefit Vested Benefit coverage of 100%.

The Shortfall Limit is expressed as a percentage coverage level of Defined Benefit Vested Benefits by defined benefit assets and it is appropriate to consider the following when determining if the Shortfall Limit remains appropriate:

- The guidance provided in the Actuaries Institute Information Note: Shortfall Limit in Prudential Standard 160 dated June 2013;
- The investment strategy for defined benefit assets, particularly the overall benchmark exposure of 100% to “defensive” assets;
- The results of this investigation regarding the extent to which the current and projected Defined Benefit Vested Benefits are not linked to the investment return on defined benefit assets (i.e. salary-based benefits) and the current and projected relativity between Vested Benefits and Minimum Requisite Benefits.

Based on the above, we recommend maintaining the current Shortfall Limit.

The projections also indicate that the level of Minimum Requisite Benefits is not expected to be a constraint in determining the Shortfall Limit. We will reassess the suitability of the adopted Shortfall Limit as part of the next regular actuarial investigation. The Shortfall Limit should be reviewed earlier if there is a significant change to the investment strategy for defined benefit assets.

## 11.2. Monitoring Process

SPS 160 also requires the Trustee to determine and implement a process for monitoring the Defined Benefit Vested Benefits coverage against the Shortfall Limit. If this monitoring process indicates that Defined Benefit Vested Benefits coverage has (or may have) fallen below the Shortfall Limit, then under SPS 160:

- An “Interim Actuarial Investigation” may be required (depending on the timing of the next regular actuarial investigation).
- A Restoration Plan is required to be put in place if an Interim Actuarial Investigation finds the Fund has breached its Shortfall Limit. The Restoration Plan must be designed to return the Fund to a “satisfactory financial position”, so that the Vested Benefits are fully covered, within a reasonable period that must not exceed 3 years and this must be submitted to APRA.

We understand that the Trustee has adopted a monitoring process which includes the following:

- An annual assessment of the financial position of the Fund including the Fund’s coverage of the estimated Defined Benefit Vested Benefits after each annual review (31 December) of the Fund to ascertain if an adjustment to the Employer contribution levels is required prior to the next complete actuarial investigation.
- If the Trustee’s estimate indicates that the Shortfall Limit has, or may have been breached, action will be taken as required by SPS 160.

We consider that the adopted monitoring process is appropriate.

The Trustee should also continue to monitor the “Notifiable Events” specified in the Fund’s Funding and Solvency Certificate and advise the Actuary should any actual or potential Notifiable Events occur.

## 11.3. Requirements due to Unsatisfactory Financial Position

### 11.3.1. Restoration Plan

Under SPS 160, a Restoration Plan is also required to be put in place if the actuary finds in a regular Actuarial Investigation that a plan:

- Is in an unsatisfactory financial position (whether or not the Shortfall Limit has been breached);  
or
- Is likely to fall into an unsatisfactory financial position.

The Restoration Plan must be designed to return the plan to a “satisfactory financial position”, so that Vested Benefits are fully covered, within a reasonable period that must not exceed 3 years from the investigation date.

An SPS 160 Restoration Plan is not required if the plan is technically insolvent (in which case the insolvency rules must be followed). If an SPS 160 Restoration Plan is already in place then any changes to the contribution program (including its period) must be made within the framework of that Restoration Plan.

As indicated by the financial position and the projections, we consider that:

- The Fund is not in an unsatisfactory financial position; and
- The Fund is not likely to fall into an unsatisfactory financial position.

Hence the special requirements of SPS 160 for funds in an unsatisfactory financial position do not apply at this investigation.

### **11.3.2. Actuary's Reporting Requirements**

Section 130 of the SIS Act requires that if an actuary forms the opinion that a plan's financial position may be unsatisfactory, or may be about to become unsatisfactory, and that opinion was formed in performing an actuarial function, the actuary must advise both the Trustee and the regulator (APRA) in writing immediately (an unsatisfactory financial position applies where assets are less than Vested Benefits).

These requirements do not currently apply as I am of the opinion that the Fund's financial position is not unsatisfactory (or about to become unsatisfactory).

### **11.4. Statements Required by SPS 160**

*This section provides statements required to be made under APRA Prudential Standard SPS 160. Values cited relate to the Fund as a whole (inclusive of all accumulation members and accounts).*

- (a) The value of the Fund's assets as at 31 December 2017 was \$574,206,310. This value includes assets held to meet the Operational Risk Financial Requirement, the Accumulation Reserve and the Investment Reserve. The value of assets adopted for this actuarial investigation which excludes these reserves is \$564,374,656.
- (b) In my opinion, the value of the liabilities of the Fund in respect of accrued benefits as at 31 December 2017 was \$563,127,000. Hence I consider that the value of the assets at 31 December 2017 is adequate to meet the value of the accrued benefit liabilities of the Fund as at 31 December 2017. Taking into account the circumstances of the Fund, the details of the membership and the assets, the benefit structure of the Fund and the industry within which the Employer operates, I consider that the assumptions and valuation methodology used are appropriate in relation to the determination of the accrued benefit liabilities for the purposes of this report. Further comments on the assumptions and valuation methodology are set out in Section 10 of this report. Assuming that the Employer contributes in accordance with my recommendations, then, based on the assumptions made for this actuarial investigation which I consider to be reasonable expectations for the Fund, I expect that assets will remain sufficient to cover the value of accrued benefit liabilities over the period to 31 December 2020.
- (c) In my opinion, the value of the liabilities of the Fund in respect of Vested Benefits as at 31 December 2017 was \$562,526,000. Hence I consider that the value of the assets at 31 December 2017 is adequate to meet the value of the Vested Benefit liabilities of the Fund as at 31 December 2017. Assuming that the Employer contributes in accordance with my recommendations, then, based on the assumptions made for this actuarial investigation, I expect that assets will remain sufficient to cover the value of Vested Benefit liabilities over

the period to 31 December 2020. Hence I consider that the financial position of the Fund should not be treated as unsatisfactory as defined in SPS 160.

- (d) In my opinion, the value of the liabilities of the Fund in respect of the minimum benefits of the members of the Fund as at 31 December 2017 was \$559,074,000. Hence the Fund was not technically insolvent at 31 December 2017.
- (e) A projection of the likely future financial position of the Fund over the 3-year period following 31 December 2017, based on what I consider to be reasonable expectations for the Fund for the purpose of this projection, is set out in Section 5 of this report,
- (f) Based on the results of this investigation, I consider that the Shortfall Limit does not require change. Comments are set out in Section 11.1 of this report.
- (g) In respect of the 3-year period following 31 December 2017, I recommend that the Employer contribute to the Fund at least:

- Defined Benefit members:

Benefit Category	Recommended Contribution Rate
A1 and H1	18.5% of salaries from 1 January 2018 to 30 June 2018; 10.0% of salaries from 1 July 2018.

The Employer should also contribute 5.88% of salaries for defined benefit members who pay 5% member contributions by way of salary sacrifice.

- Accumulation members:
  - 9.5% of Ordinary Time Earnings (or such other amount as required to meet the Company's obligations under Superannuation Guarantee legislation or employment agreements), and
  - Any additional employer contributions agreed between the Company and a member (e.g. additional salary sacrifice contributions)

- (h) The Fund is used for Superannuation Guarantee purposes:
- all Funding and Solvency Certificates required under Division 9.3 of the SIS Regulations have been issued for the period from the date of the last investigation to 31 December 2017;
  - I expect to be able to certify the solvency of the Fund in any Funding and Solvency Certificates that may be required in the three year period from 31 December 2017.

# 12

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## 12. Actuarial Certification

### 12.1. Purpose

I have prepared this report exclusively for the Trustee of Lutheran Super for the following purposes:

- To present the results of an actuarial investigation of the Fund as of 31 December 2017;
- To review Fund experience for the period since the previous actuarial investigation (effective at 31 December 2014);
- To recommend contributions to be made by the Employer intended to allow the Fund to meet its benefit obligations in an orderly manner, and to reach and maintain an appropriate level of security for members' accrued benefit entitlements;
- To satisfy the requirements of the Fund's Trust Deed for actuarial investigations of the Fund's financial position; and
- To meet legislative requirements under relevant Commonwealth superannuation legislation.

It has been prepared in accordance with the requirements of the Trust Deed, the Superannuation Industry (Supervision) Act 1993 and associated regulations (SIS legislation), Prudential Standard SPS 160 issued by APRA and Professional Standard 400 issued by the Actuaries Institute setting out requirements for actuarial investigations of defined benefit superannuation funds under SIS legislation.

The previous actuarial investigation was conducted as at 31 December 2014 by Stuart Mules, on behalf of Mercer, and the results are contained in a report dated 4 September 2015.

### 12.2. Background information of the Fund

The Fund is operated for the benefit of employees of Lutheran Church of Australia. The Trustee, LCA Nominees Pty Ltd, holds a Registrable Superannuation Entity Licence under the SIS legislation and operates the Fund as required under the Trust Deed.

The Fund is a resident regulated fund and a complying superannuation fund for the purposes of the SIS legislation. The Fund is taxed as a complying superannuation fund.

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

### 12.3. Governing Documents

The governing rules of the Fund are set out in the Deed of Amendment and Consolidation dated 15 December 2005.

## 12.4. Additional information

**Next actuarial investigation** - Required at a date no later than 31 December 2020. At that time, the adequacy of the Employer contribution levels will be reassessed. Note that the monitoring process recommended may lead to an earlier reassessment ahead of the next full actuarial investigation.

**AASB 1056 Summary** - A statement of advice for Australian Accounting Standard AASB 1056 purposes was issued dated 16 March 2018 and does not form part of this report.

**Next Funding and Solvency Certificate** – required at least 12 months before the expiry of the current Funding and Solvency Certificate (which expires on 1 November 2021). This investigation recommends contributions lower than the minimum contributions certified in the current Funding and Solvency Certificate, therefore if the recommended contributions are adopted, the current FSC will need to be replaced.

**Next Benefit Certificate** – required following the expiry of the current Benefit Certificate (which expires 30 June 2020). The current Benefit Certificate is designed to accommodate changes to the legislated Superannuation Guarantee schedule.

## 12.5. Actuary's certifications

### *Professional standards and scope*

This report has been prepared in accordance with generally accepted actuarial principles, Mercer internal standards, and the relevant Professional Standards of the Actuaries Institute, in particular PS400 which applies to “...*actuarial investigations of the financial condition of wholly or partially funded defined benefit superannuation funds.*”

### *Use of report*

This investigation report should not be relied upon for any other purpose or by any party other than the Trustee of the Fund and the Employer(s) who contribute to the Fund. Mercer is not responsible for the consequences of any other use. This report should be considered in its entirety and not distributed in parts.

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

### *Actuarial Uncertainty and Assumptions*

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

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

The Fund's future financial position and the recommended Employer contributions depend on a number of factors, including the amount of benefits the Fund pays, the cause and timing of member withdrawals, plan expense, the level of taxation and the amount earned on any assets invested to pay the benefits. These amounts and others are uncertain and unknowable at the investigation date, but are predicted to fall within a reasonable range of possibilities.

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

However, the future is uncertain and the Fund's actual experience will differ from those assumptions; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results based on those assumptions would be different. For this reason this report also shows the impact on the likely contribution requirements/funding levels if one alternative set of assumptions were to be adopted.

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

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

### ***Data and Fund Provisions***

To prepare this report, we have relied on financial and participant data provided by the Fund's administrator. The data used is summarised in this report. We have reviewed the financial and participant data for internal consistency and general reasonableness and believe it is suitable for the purpose of this report. We have not verified or audited any of the data or information provided. We have also relied upon the documents, including amendments, governing the Fund as provided by the Trustee. The Trustee is ultimately responsible for the validity, accuracy and comprehensiveness of this information. If the data or Fund provisions are not accurate and complete, the investigation results may differ significantly from the results that would be obtained with accurate and complete information; this may require a revision of this report.

**Further Information**

If requested, the actuary is available to provide any supplementary information and explanation about the actuarial investigation.

Prepared by



.....  
**Paul Gilbert**  
**Fellow of the Institute of Actuaries of Australia**

**June 4, 2018**

I have reviewed this report under Mercer's professional Peer Review Policy. I am satisfied that it complies with applicable professional standards and uses assumptions and methods which are suitable for the purpose.



.....  
**Angela Hartl**  
**Fellow of the Institute of Actuaries of Australia**



# APPENDIX A

## Membership Information

The membership of the defined benefit section has changed since 31 December 2014 as follows:

Active members at 31 December 2014	61
Exits	15
New Entrants	0
Active members at 31 December 2017	46

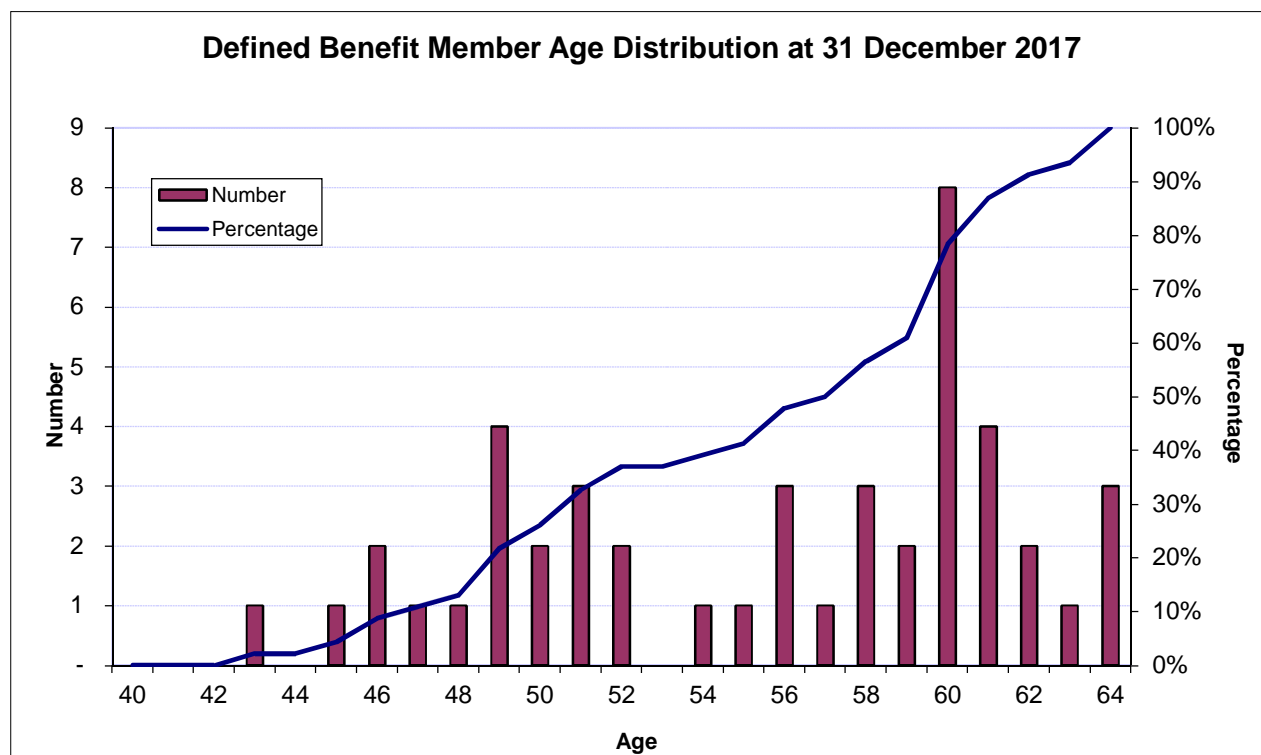
Total salaries at 31 December 2017	\$4,886,000
Average salaries at 31 December 2017	\$106,000
Average age at 31 December 2017	56.1 years

In addition, there were 6,222 members at 31 December 2017 whose benefits are determined wholly on a defined contributions (or ‘accumulation’) basis and 265 allocated pensioners. All new members join the accumulation section of the Fund.

The membership data used for this investigation was taken from the database used to administer the Fund. I have carried out some broad “reasonableness” checks on the data and I am satisfied with the quality of the data and its suitability for this purpose.

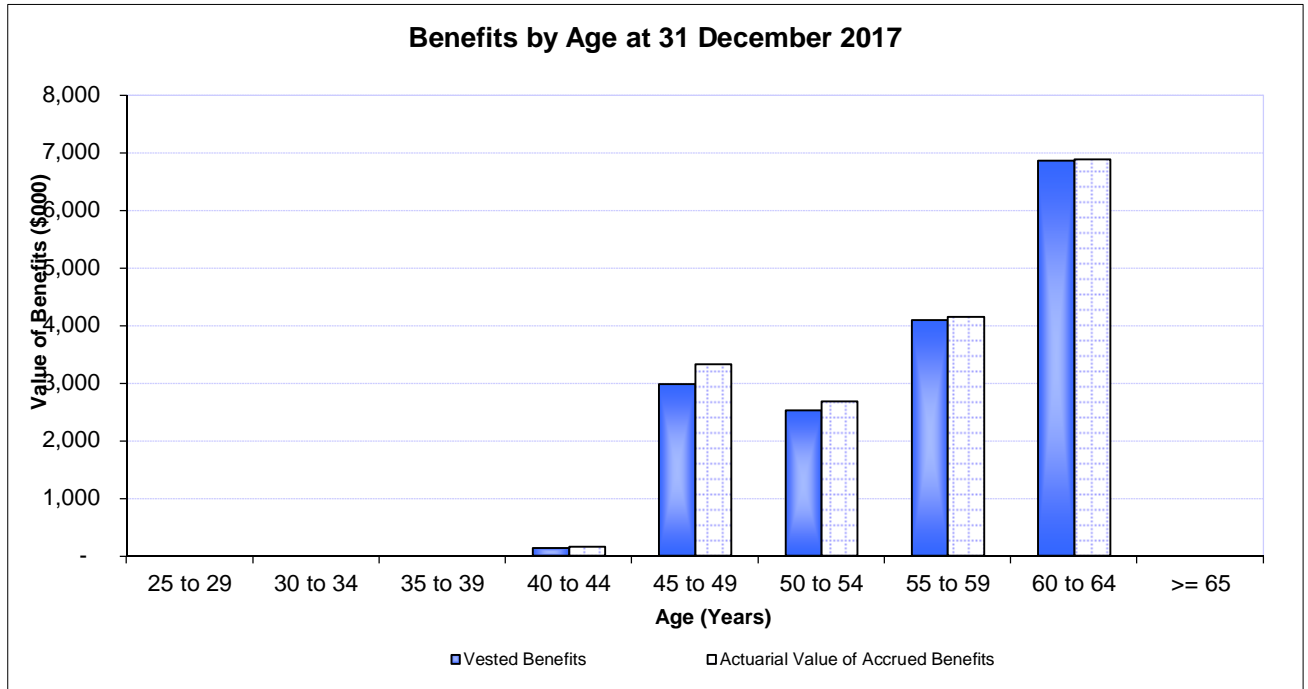
### A.1. Active defined benefit member age profile

The 31 December 2017 defined benefit membership split by age is shown in the following graph:



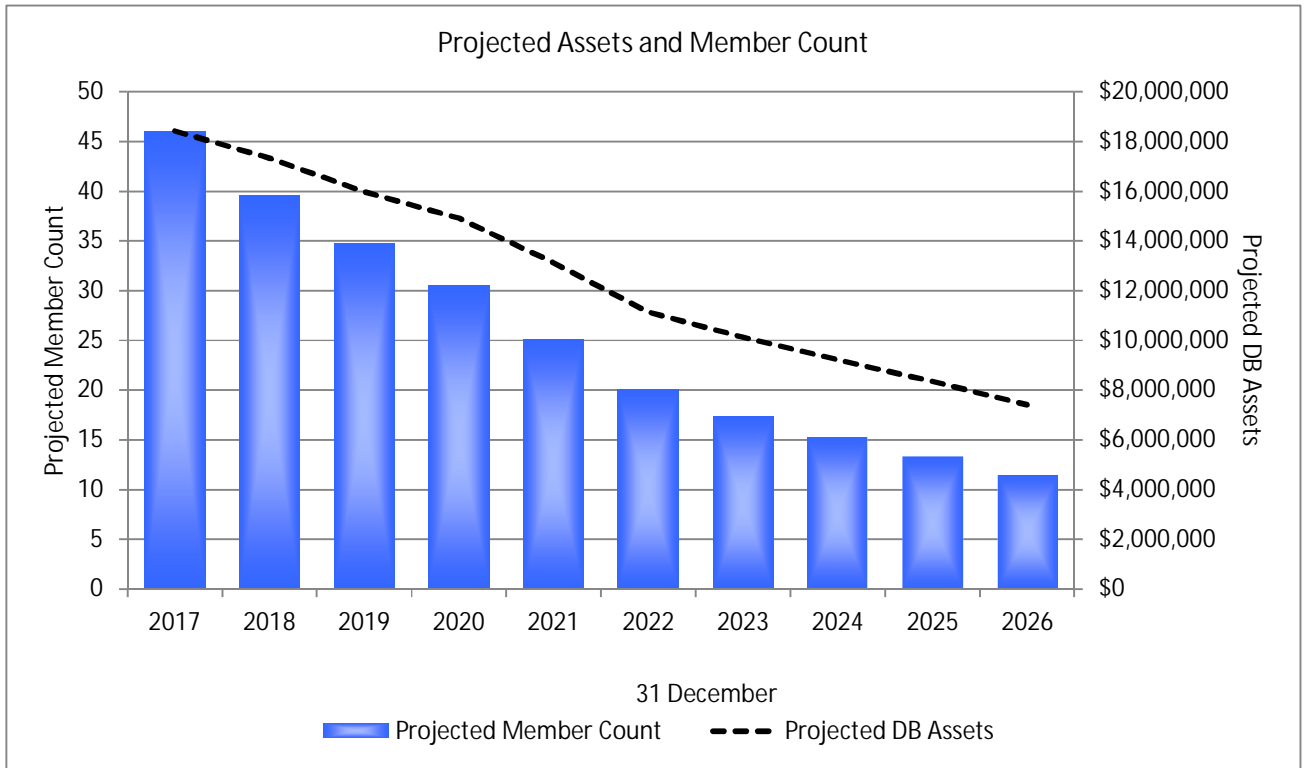
## A.2. Actuarial Value of Accrued Benefits age profile

The following graph shows the Vested Benefits and Actuarial Value of Accrued Benefits of defined benefit members (excluding additional accounts) at 31 December 2017, split by age.



### A.3. Projected Defined Benefit Assets and Membership

The following graph shows projected assets and member count for over the next 10 years given the assumptions adopted for this investigation (on recommended contribution rates):



# APPENDIX B

## Appendix: B.Fund Design

### B.1. Summary of benefits

A summary of the main benefit provisions in respect of defined benefit members is set out below. Reference should be made to the formal governing documents for definitive statements.

<b>Members' Contributions (% of salary)</b>	5% of post-tax salary or 5.88% of pre-tax salary
<b>Accrual Rate</b>	Category A1: 15.9% Category H1: 18.0%
<b>Final Average Salary (FAS)</b>	Average of annual salaries at the salary review dates over the 3 years prior to exit
<b>Salary Review Date</b>	Review to occur on 1 March or such other date as is determined by the Trustee with the approval of the Principal Employer. Salaries to become effective on 1 January in the same year and salary changes backdated to this date as applicable.
<b>Normal Retirement Age</b>	65
<b>Early Retirement Age</b>	55
<b>Membership</b>	Years and complete months between the date of joining the Former Fund to date (excluding any periods of Category C membership in the Former Fund)
<b>Member Account</b>	Accumulation with interest of member contributions to the Former Fund and the Fund, less tax (where applicable), plus half the surrender value (if any) of the policy held on behalf of the member under the previous fund.
<b>Additional Member Account</b>	Accumulation with interest of voluntary member contributions, less tax (where applicable)
<b>Additional Employer Account</b>	Accumulation with interest of voluntary employer contributions, less tax (where applicable)
<b>Rollover Account</b>	Accumulation with interest of rollovers excluding any previous fund transfer value
<b>Surcharge Account</b>	Accumulation with interest of any surcharge tax assessments
<b>Discount Factor</b>	100%, less 1% discount for each year and complete month to age 55, with a maximum discount of 25%

<b>Vesting Factor</b>	20% x membership (completed years), with a maximum of 100%
<b>Retirement Benefit</b>	A lump sum calculated as: Accrual Rate x Membership x FAS
<b>Death/Total and Permanent Disability Benefit</b>	A lump sum calculated as if the member had retired at age 65, but assuming salary remains unchanged;
<b>Resignation Benefit</b>	Lump sum equal to: (i) Member Account (ii) Vesting Factor x the difference between the Discounted Accrued Retirement Benefit and the amount determined in (i) above. Where the Discounted Accrued Retirement Benefit is determined as: Discount Factor x Accrual Rate x Membership x FAS
<b>Additional Accumulation Benefits</b>	In addition to the above benefits the following accounts are paid to members on all forms of exit: Additional Member Account plus Additional Employer Account plus Award Account less Surcharge Account

Different benefit and/or contribution provisions may apply to some existing members.

Neither the Trustee nor the Employer has a right within the Trust Deed to review benefits or member contribution rates.

Benefits on leaving service for any reason are subject to a minimum Superannuation Guarantee benefit described in the Fund's Benefit Certificate.

## **B.2. The Superannuation Guarantee (Administration) Act 1992**

This Act requires employers to provide minimum superannuation benefits that are fully vested in their employees within a complying superannuation fund.

The contribution rates recommended in this report and the projected financial positions allow for benefits being augmented as necessary to meet the minimum Superannuation Guarantee (SG) benefit described in the Fund's current Benefit Certificate.

Legislation was passed in September 2014 to freeze the SG rate at 9.5% until 1 July 2021. The SG rate will then increase by 0.5% pa until it reaches 12% from 1 July 2025.



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