Mercer

welcome to brighter

Report to the Trustee on the Actuarial Investigation as at 31 December 2022

BP Superannuation Plan
(an employer plan in the Plum Division of the MLC Super Fund)

30 June 2023

A business of Marsh McLennan

Contents

1

Key Results and Recommendations

I have prepared this report on the actuarial investigation of the BP Superannuation Plan (the Plan), an employer plan in the Plum Division of the MLC Super fund, as at 31 December 2022 for NULIS Nominees (Australia) Ltd, as Trustee of the Plan. The Plan is closed to new defined benefit members.

My report should not be relied upon for any other purpose or by any party other than the Plan's Trustee. 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 BP Australia Group Pty Ltd (the Principal Employer) and Castrol Australia Pty Ltd (the Associated Employer), collectively the Employers who contribute to the Plan. The Employers may consider obtaining separate actuarial advice on the recommendations contained in the report.

Change in Financial Position

I set out below a summary of the Plan's financial position, at both this and the previous actuarial investigation.

	Position at 31 December 2022		
Defined Benefits Only*	$000	Asset Coverage	Coverage at 31 December 2019
Assets	247,708		
Vested Benefits (Lump sum)	207,117	119.6%	120.5%
Vested Benefits (Pension)**	209,709	118.1%	117.1%
Actuarial Value of Accrued Benefits	198,659	124.7%	123.5%
SG Minimum Benefits	148,328	167.0%	193.3%

*The above totals exclude accumulation liabilities of $230,845,000 (including allocated pensioners) and additional accumulation balances for defined benefit members of $8,120,000 as at 31 December 2022. The benefit totals also include the actuarial value of the lifetime and deferred pension liabilities $105,548,000 at 31 December 2022.
**The above vested benefits (pension) and actuarial value of accrued benefits are determined by assuming eligible members take 50% of their benefits as a deferred lifetime pension upon resignation and 100% of their benefits as a lifetime pension upon retirement.

The coverage levels at 31 December 2022 were similar to the levels at the previous actuarial investigation (apart from the coverage of SG Minimum Benefits).

The following positive factors:

- A significant reduction in the active membership from 208 members to 79 members which resulted in the excess assets being spread over a smaller membership base; and
  The changes of assumptions adopted for this investigation;

were offset by the following negative factors:

- Investment earnings of 4.6% p.a. on assets supporting active defined benefits over the three year period which were lower than the assumed long term rate of 5.75% p.a.;
- Investment earnings of 4.7% p.a. on assets supporting pension liabilities over the three year period which were lower than the assumed long term rate of 6.75% p.a.;
- Pension increases of 3.0% p.a. which were higher than the previous assumption of 2.25%; and
- Salary growth of 3.5% p.a. which was higher than previous assumption of 3.0% p.a.;
- The Employer contribution holiday in respect of defined benefit members; and
- The use of defined benefit assets to meet insurance premiums for accumulation members.

Assumptions

I have updated the assumptions adopted to value the Plan liabilities from those used in the previous investigation to reflect changes to the economic environment. There has been:

- An increase in the long-term gap between the assumed rate of investment earnings and the rate of salary increases used to determine the Actuarial Value of Accrued Benefits from 2.75% p.a. to 3.45% p.a.;
- An increase in the long-term gap between the assumed rate of investment earnings and the rate of pension increases used to determine the value of pension liabilities from 4.5% p.a. to 5.25% p.a. (for NC pensioners) and 4.85% p.a. (for BCARP pensioners);
- The introduction of short-term pension increase assumptions for the first two years after the date of the investigation of 5.0% p.a.

These changes have decreased the Actuarial Value of Accrued Benefits and the value of pension liabilities included in the other liability measures.

The Vested Benefit measures shown above assume the Plan continues to operate ‘as is’ until the last pensioner dies. In the event of a Plan wind up, or termination of pension payments, prior to the natural cessation of the pensions, different measures of benefit liabilities may apply, and further financing from the Employers may be required to meet the resulting benefit liabilities. Please refer to the discussion in Section 9 for more detail.

Recommended Contribution Rates and Projections

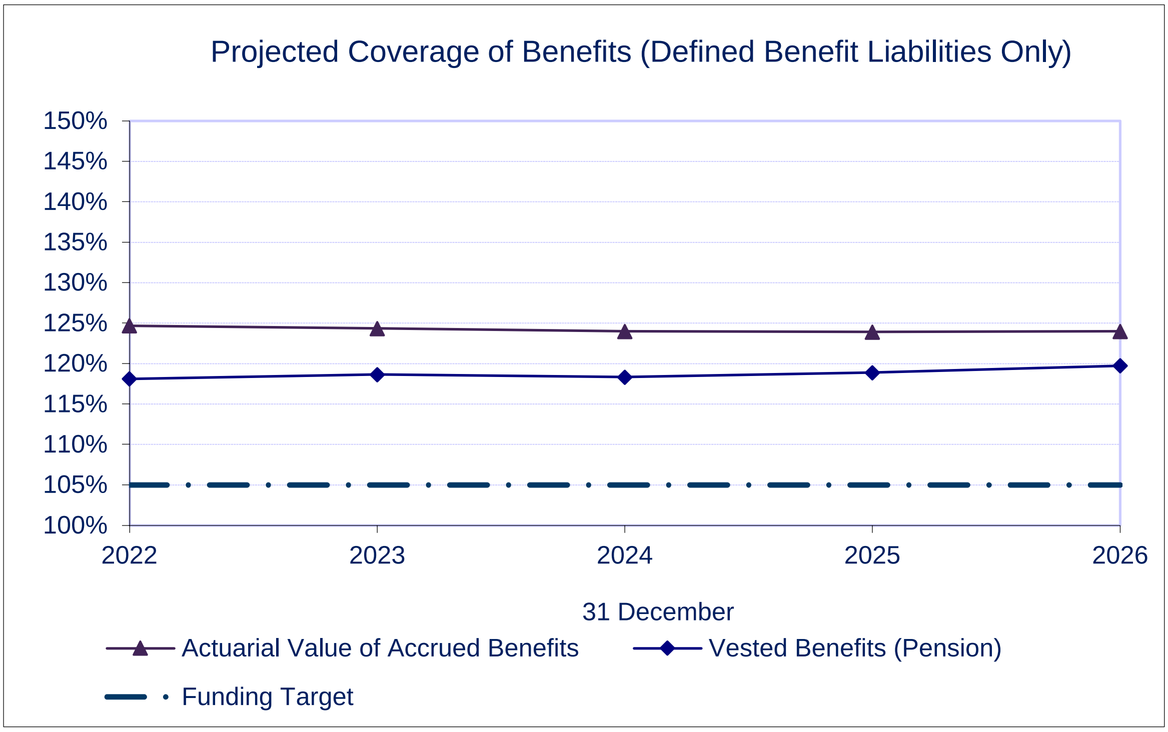
At 31 December 2022, the Plan was in a satisfactory financial position. The 118.1% coverage of the Defined Benefit Vested Benefits (Pension) was higher than the financing objective of 105% coverage adopted for this investigation.

Based on the financial position at 31 December 2022, I recommend that the Employers contribute to the Plan in accordance with the following contribution program:

Benefit Category	Contributions Rate (% salary)
Defined Benefit members	– Nil for all members in respect of Defined Benefits; and – Any additional contributions that will meet the Superannuation Guarantee requirements in respect to the difference between OTE and superannuation salaries.

Others (Accumulation members)	– The maximum of 12% of salaries and the amount required to meet Superannuation Guarantee legislation for BP accumulation members; and – At the rate required to meet Superannuation Guarantee legislation or employment agreements for SG only members.

I have prepared the following projection of Plan defined benefit assets and defined benefit liabilities based on the assumptions adopted for this investigation and the recommended contribution holiday in respect of defined benefit members and allowing for any material experience after the investigation date as detailed in this report:



The graph above shows that the recommended contributions are anticipated to result in assets of at least 105% of Defined Benefit Vested Benefits (Pension) which is the financing objective adopted in this investigation.

Risks

The above projection is based on the assumptions adopted, which represent a single scenario from a range of possibilities. The future is uncertain and the Plan's actual experience will differ from these 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. Consequently, the Trustee should review coverage of Vested Benefits (Pension) quarterly on an approximate basis. The Trustee's monitoring of the experience specified in the Notifiable Events section of the Funding and Solvency Certificate will provide a further means of identifying adverse experience which warrants an immediate review of the Plan's financial position.

Sections 7 and 8 provide illustrations of the impact of investment volatility on the Plan's net financial position and the projected coverage of Vested Benefits (Pension).

Sections 7, 8 and 10 discuss other risks associated with the liabilities, including salary growth risk, legislative risk and risks around the provision of insurance benefits within the Plan.

I discuss in Section 9, risks related to the Plan's pension liabilities, including inflation risk, longevity risk, and risks involved if the pension liability were to be valued by a third party (for example, by a life office).

Other Findings and Recommendations

Suitability of Policies

I am satisfied that the following current policies for the defined benefit section of the Plan are suitable:

- The investment policy;
- The crediting rate policy;
- The insurance arrangements (subject to the comment regarding the Self-Insurance Reserve below);
- The Shortfall Limit (for the purposes of SPS 160); and
- The Trustee's monitoring process to incorporate quarterly reviews of the financial position.

Recommendations

I recommend that the appropriate level of the Self-Insurance Reserve be reviewed.

Actions Required by the Trustee

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 Employers to contribute in line with the recommendations.

2

Introduction

Background of the Plan

The Plan is operated for the benefit of employees of BP Australia Group Pty Ltd and Castrol Australia Pty Ltd and is an employer plan in the Plum Division of the MLC Super fund. The Trustee of the Plan, NULIS Nominees (Australia) Ltd, holds a Registrable Superannuation Entity Licence under the SIS legislation and operates the Plan as required under the Trust Deed.

Plan members receive lump sum defined benefits on retirement, death or disablement. Certain eligible members are able to convert their lump sum benefits into a lifetime pension. I set out a high-level summary of the benefits provided in Appendix A.

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

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

The governing rules of the Plan are set out in the MLC Super Fund Trust Deed dated 9 May 2016 (as amended) and the Plum Superannuation Fund Participation Schedule dated 28 September 2010 (as amended).

Purpose

I have prepared this report exclusively for the Trustee of the BP Superannuation Plan for the following purposes:

- To present the results of an actuarial investigation of the Plan as at 31 December 2022;
- To review Plan experience for the period since the previous actuarial investigation as at 31 December 2019;
- To recommend contributions to be made by the Employers intended to allow the Plan 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 Plan's Trust Deed for actuarial investigations of the Plan's financial position; and
- To meet legislative requirements under relevant Commonwealth superannuation legislation; these include the Superannuation Industry (Supervision) Act 1993 and associated regulations (SIS legislation) and SPS 160 issued by APRA.

My report satisfies Professional Standard 400 issued by the Actuaries Institute setting out requirements for actuarial investigations of defined benefit superannuation funds.

The previous actuarial investigation was conducted as at 31 December 2019 by me, on behalf of Mercer, and the results are contained in a report dated 30 June 2020.

Significant Events since the Investigation Date

I am unaware of any significant events that have occurred since 31 December 2022 which would materially impact on the findings or recommendations in this report.

3

Experience since the Last Investigation

Data Provisions

To prepare this report, I have relied on financial and participant data provided by the Plan's administrator. The data used is summarised in this report. I have not independently verified or audited the data provided but have performed a range of broad "reasonableness" checks and tested for consistency with previous records. I am satisfied that the data is sufficiently accurate for the purposes of this actuarial investigation.

I have also relied upon the documents, including amendments, governing the Plan as provided by the Trustee. The Trustee is ultimately responsible for the validity, accuracy and comprehensiveness of this information. If the data or Plan 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.

Membership

The membership of the Plan's defined benefit section has changed since 31 December 2019 as follows:

	Total	NC	BCARP
Active members at 31 December 2019	208	167	41
Exits	129	105	24
New Entrants	0	0	0
Active members at 31 December 2022	79	62	17
Total salaries at 31 December 2022	$19,272,000	$16,005,000	$3,267,000
Average salaries at 31 December 2022	$244,000	$258,000	$192,000
Average age at 31 December 2022	53 years	54 years	52 years

In addition, there were 1,204 members at 31 December 2022 with total salaries of $186,618,000 and total benefits of $230,845,000 whose benefits are determined wholly on a defined contributions (or 'accumulation') basis. All new members join the accumulation section of the Plan.

There are 146 pension members at 31 December 2022 who are in receipt of a lifetime pension from the Plan (163 at the last investigation date). These pensions are paid as defined pensions and so these members are treated as Defined Benefit members.

This does not include any pensioners who are paid account-based pensions. The account-based pensioners are treated as members of the accumulation section.

There are 7 members who have a deferred pension in the Plan with a total annual pension amount of $0.4m (5 at the last investigation date). These members are also treated as Defined Benefit members.

During the period under review the number of active defined benefit members within the Plan decreased from 208 to 79 members. This means that the excess assets are spread over a smaller number of members so that the coverage of the benefit liabilities (when expressed as a percentage) has increased accordingly.

The active defined benefit membership split by age as at 31 December 2022 is shown in the following table for information.

Age Group	Number	Vested Benefits (Pension) ($000)	Actuarial Value of Accrued Benefits ($000)
40 to 44	1	*	*
45 to 49	15	15,571	13,959
50 to 54	33	42,642	38,343
55 to 59	24	35,278	31,024
60 to 64	6	10,292	9,349
>= 65	-	-	-

* removed for privacy reasons

Investment Returns and Crediting Rates

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

Year Ending	Investment Return active member assets (p.a.)	Crediting Rate(p.a.)	Investment Return pensioner assets (p.a.)
31 December 2020	3.8%	3.8%	3.9%
31 December 2021	15.6%	15.6%	16.0%
31 December 2022	-4.6%	-4.6%	-4.8%
Compound Average	**4.6%**	**4.6%**	**4.7%**

The average investment return for the three-year period to 31 December 2022 was 4.6% p.a. on assets supporting active defined benefit members and 4.7% p.a. on assets supporting pension liabilities. This compares to our long-term assumptions at the last actuarial investigation of 5.75% p.a. and 6.75% p.a. for active and pension assets respectively. The overall actual return was lower than the long-term return assumed at the previous investigation, which had a negative impact on the Plan's financial position.

Note that the crediting rate has very little impact on members' benefits.

Salary Increases

Salaries for the current defined benefit members increased by an average of 3.5% p.a. over the period compared to the long- term assumption at the last actuarial investigation of 3.0% p.a.. The higher salary increases than assumed had a negative impact on the Plan's financial position, as most of the Plan's liabilities are salary related.

Pension Increases

Pensions increased by around 2.8% p.a. over the period compared to the long-term assumption at the last actuarial investigation of 2.25% p.a. The higher pension increases than assumed had a negative impact on the Plan's financial position.

Pension Take up Rates

The last investigation as at 31 December 2019 assumed eligible BCARP members would take their retirement benefit as a pension rather than a lump sum and 50% of their resignation benefits as a deferred pension. The pension take-up rate for members eligible for retirement and resignation benefits over the period were around 100% and 60%, respectively. Overall, the experience had a neutral impact on the Plan's financial position.

Pensioner Mortality

Over the period under investigation, the value of pension liabilities reduced by more than expected due to the death of 41 pensioners. This had a slight positive impact on the Plan's financial position.

Contributions

The Employer contributions paid since the date of the previous actuarial investigation were as follows:

Benefit Category	Contributions Rate (% salary)
Defined Benefit members	– Nil for all members in respect of Defined Benefits; and – Any additional contributions that will meet the Superannuation Guarantee requirements in respect to the difference between OTE and superannuation salaries.
Others (Accumulation members)	– The maximum of 12% of salaries and the amount required to meet Superannuation Guarantee legislation for BP accumulation members; and – At rate required to meet Superannuation Guarantee legislation or employment agreements for SG only members.

The Employer contributions rates for the defined benefit members were in accordance with the prior actuarial investigation and subsequent contribution recommendations.

The Employer contribution holiday meant that the excess assets in the Plan were used to fund benefit accrual and defined benefit expenses over the period and had a negative impact on the Plan's financial position.

Insurance Premiums for Accumulation Members

Over the period under investigation, defined benefit assets were used to fund insurance premiums for accumulation members. This had a negative impact on the Plan's financial position.

Impact of the Experience on the Financial Position

The main experience items affecting the Plan's financial position during the period from 31 December 2019 to 31 December 2022 were as follows:

Item	Assumption at previous review	Plan experience	Comment on effect
Investment returns	5.75% p.a. for actives and 6.75% p.a. for pensioners	4.6% p.a. for actives and 4.7% for pensioners	negative effect – investments grew at a lower rate than assumed
Salary increases	3.0% p.a.	3.5% p.a.	negative effect – benefit liabilities grew at a higher rate than assumed
Pension increase	2.25%	2.8%	negative effect – pension liabilities grew at a higher rate than assumed
Employer contributions for defined benefit (DB) members		Contribution holiday	negative effect – Employer contribution less than cost of benefit accrual and DB expenses
Insurance premiums for accumulation members		Met from DB assets	negative effect – reduction in DB assets
Pension mortality		41 deaths	slight positive effect – fewer ongoing pension liabilities
Membership changes	208	79	positive effect – excess assets are spread over a smaller number of members

4

Actuarial Assumptions

The ultimate cost to the Employers of providing the benefits to members is:

- The amount of benefits paid out; and
- The expenses of running the Plan, including tax;

less

- Members' contributions; and
- The return on investments.

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

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

These assumptions include investment returns, salary/wage increases, crediting rates, pension increases, the rates at which members leave the Plan for various reasons, and other factors affecting the financial position of the Plan.

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.

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/pension 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:

	Assumption
Investment returns (after tax, investment and asset-based administration fees) – Pre-retirement	6.75% p.a.
Investment returns (after tax, investment and asset-based administration fees) - Post retirement	7.75% p.a.
Crediting rate (after tax and investment fees)	6.75% p.a.
Salary increases	3.3% p.a.
Pension increases	BCARP - 4.9% p.a. for first two years; thereafter 2.9% p.a. NC – 5.0% p.a. for first two years; thereafter 2.5% p.a.

The assumptions for investment returns are based on the expected long-term investment returns for the Plan's current benchmark investment mix, calculated using Mercer'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.

The salary increase assumption is based on long term economic forecasts for future increases in average weekly earnings (AWOTE) and discussions with the Principal Employer.

Demographic and Decrement Assumptions

The following tables show the assumptions that have been made concerning the rates at which members will leave the Plan for a variety of reasons.

Retirement

The rates at which members are assumed to leave the Plan due to retirement are set out below.

Age Last Birthday	Percentage of members age x at beginning of year assumed to leave the Plan during the year on account of early retirement
x	%
55	15
56-57	10
58-65	20
66-69	25
70	100

Death and Disablement in Service

The rates at which members are assumed to leave the Plan due to death and total and permanent disablement (TPD) are set out below.

	Percentage of members age x at beginning of year assumed to leave the Plan during the year on account of:	
Age Last Birthday	Death	Disablement
x	%	%
40	0.08	0.10
45	0.12	0.14
50	0.20	0.22
55	0.36	0.00
60	0.63	0.00

Resignation

I have assumed 4% of males and 6% of females will leave the Plan each year due to resignation.

Retrenchment

No specific allowance is made for the possibility of future retrenchments.

Ill - Health

No specific allowance is made for members leaving the Plan due to ill-health.

Pension Take-up Rate

I have assumed that eligible BCARP members will choose to take 50% of their benefits as a deferred pension upon resignation and 100% of their benefits as a lifetime pension upon retirement.

Pensioner Mortality and Future Improvement in Mortality Rates

Examples of the assumed pensioner mortality rates and future improvement in mortality rates are set out in below. Pension mortality rates are based on Mercer's latest report into public sector pensioner mortality in Australia. Future improvements in mortality rates are based on the Australian Life Tables (ALT) 2015-17 25-year improvement factors.

Age Last Birthday	Rates of Mortality (deaths per 10,000 lives)		Rates of future improvement (% p.a.)	
x	Male (%)	Female (%)	Male (%)	Female (%)
50	18	9	1.6	1.5
55	21	13	2.0	1.8
60	26	18	2.6	2.2
65	41	28	3.0	2.4
70	79	55	3.0	2.4
75	153	107	2.8	2.3
80	327	226	2.3	2.0
85	703	491	1.6	1.4
90	1,358	1,082	0.9	0.8

Other Assumptions

New Members

The Plan's defined benefit section is closed to new entrants and I have made no allowance for new members.

Expenses

Administration costs, management expenses and consulting fees plus the net cost of salary continuance insurance (SCI) premiums for defined benefit members are deducted from plan assets. Based on recent experience, these are assumed to average $350,000 p.a. indexed by 2.5% p.a. (for expenses) and 0.5% of defined benefit members' salaries (for SCI premiums). The cost of death and total and permanent disablement (TPD) insurance is allowed for in the valuation of Defined Benefits by allowing for assumed rates of death and TPD.

I have also made an allowance for the net cost of group life and SCI premiums for accumulation members to be deducted from defined benefit assets. Based on recent experience, these are assumed to be $1.2 million p.a., increased by 2.5% p.a.

Tax

I have assumed that the current tax rate of 15% continues to apply to the Plan's assessable income, along with current tax credits and deductions.

All future Employer and member salary sacrifice 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 contributions tax.

I have made no allowance for:

- 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.

Impact of the Changes in Assumptions

I have summarised in the table below the changes in assumptions from those used in the previous investigation and the reasons for the changes:

Assumption	Investigation at 31 December 2022	Investigation at 31 December 2019	Reason for change
Investment returns- Pre -Retirement	6.75% p.a.	5.75% p.a.	Reflects higher expected investment return outlook
Investment returns- Post -Retirement	7.75% p.a.	6.75% p.a.	Reflects higher expected investment return outlook
Salary increases	3.3% p.a.	3.0% p.a.	Reflects higher expected future wage growth
Pension Indexation	BCARP - 4.9% p.a. for first two years; thereafter 2.9% p.a. NC – 5.0% p.a. for first two years; thereafter 2.5% p.a.	2.25% p.a.	Reflects the higher expected future inflation outlook
Expenses and SCI premiums (DB members)	0.5% of DB salaries plus $350,000 increasing by 2.5% p.a.	1.5% of DB salaries	Based on recent experience. More appropriate to express expenses in dollar terms given expected decline in DB salaries over time.
Insurance premiums for accumulation members	$1.2m increasing by 2.5% p.a.	2.0% of DB salaries	More appropriate to express in dollar terms since not related to DB salaries

The overall impact of the changes in assumptions was to:

- Decrease the Actuarial Value of Accrued Benefits by $8.2m; and
- Decrease the assessed long-term employer cost of future service benefits (excluding any allowance for DB expenses and SCI premiums, and for the cost of premiums for accumulation members) by 1.3% of salaries.

5

Assets

Market Value

The net market value of the Plan's assets as at 31 December 2022 was $486,673,000 (based on data provided by the Plan's administrator at 31 December 2022).

Calculation of Defined Benefits Assets at 31 December 2022	
Net market value of the Plan's assets as at 31 December 2022	**$486,673,000**
Less accounts for accumulation members	$230,845,000
Less accumulation accounts for defined benefit members	$8,120,000
Net assets to support the defined benefit liabilities of the Plan	**$247,708,000**

Operational Risk Reserves

The assets to meet the Trustee's Operational Risk Financial Requirement (ORFR) are held separately from the assets of the Plan.

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

The Australian Prudential Regulator Authority (APRA) is conducting a review into the existing Prudential Standard SPS 114 Operational Risk Financial Requirement (SPS 114) with enhanced obligations for trustees. The Trustee will likely require a review of its ORFR strategy when the new prudential standard is in effect.

Investment Policy

Assets backing defined benefit liabilities

The Plan's investment strategy for assets supporting defined benefit liabilities (including pensioner liabilities) currently involves benchmark exposures of 78% to 'growth' assets such as shares and property and 22% to 'defensive' assets such as cash and fixed interest. 'Growth' assets are expected to earn higher returns over the long term compared to 'defensive' assets, but also to exhibit more variation in returns from year to year.

The actual and strategic asset allocations for the assets supporting the defined benefit liabilities at the investigation date are as follows:

Asset Class	Actual Allocation	Strategic Asset Allocation
Australian Equities	39%	39%
Overseas Equities	27%	27%
Property	9%	9%
Growth Alternative	3%	3%
Total Growth	**78%**	**78%**
Fixed Interest	14%	14%
Defensive Alternative	5%	5%
Cash	3%	3%
Total Defensive	**22%**	**22%**
Total	**100%**	**100%**

The defined benefit liabilities are not affected by the investment return on the Plan's assets. The volatility of the Plan's investment returns will therefore affect the financial position of the Plan 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 Plan's liabilities is unknown. The expected weighted average term of the Fund's Defined Benefit liabilities in respect to both active members and current pensioners, calculated by applying the assumed decrements to members' expected future benefits, is 10 years. The expected term of the Plan's liabilities is therefore such that the Plan is expected to benefit from the higher returns expected from 'growth' assets over the medium to long term.

I am satisfied that the current investment strategy is appropriate in view of the Plan's longer term cash flows and the financial support provided by the Employers.

This conclusion takes into account my understanding that the Employers understand the possible variability in future contributions associated with the current investment policy. If the Employers have a different view, then this policy should be reviewed.

Assets backing accumulation benefit liabilities

The Plan 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 Plan'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 Plan's accumulation liabilities and related assets are fully matched.

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

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

Crediting Rate Policy

Defined Benefits

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

For the period up to the date of leaving service

Members' notional defined benefit account balances are based on the accumulation of member and notional employer contributions with investment earnings at the Crediting Rate.

The Crediting Rate is determined based on the actual earning rate of the relevant defined benefit assets, after allowance for tax and investment costs, asset-based administration fees and any applicable rebates. The crediting rate is declared monthly after the actual earning rate for the month becomes available. For benefit payments, interim crediting rates apply for the period up to the date of leaving service for which a declared rate is not yet available. The Interim Crediting Rate is determined as the gross Commonwealth Government 10-year Bond Rate based on the rate of the last business day of the previous quarter.

Whilst the quarterly update of the interim rate theoretically allows some scope for anti-selection, taking into account the nature of the benefits and the fact that the crediting rate has little impact on members' benefits, I consider that the current frequency of review of interim rates is appropriate.

For the period from the date of leaving service

Late Payment Interest (LPI) are earnings applied to a member's Defined Benefit component of their total benefit from the date their Defined Benefit crystallises (usually the date that they cease employment with the sponsoring employer) until the date of actual payment of their benefit from the Plan.

The Late Payment Interest rates are calculated quarterly as 85% of the 90 day bank bill rate.

Accumulation Benefits

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

- Earnings credited to the accounts 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 daily basis. Rules relating to the prices at which units are bought and sold are designed to prevent selection against the Plan by members.
- 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.
- No investment reserves are held. Net investment earnings are fully passed on to member accounts via unit prices.

Documentation

The methodology for determining the crediting rate and the interim rate is set out in the Trustee's Product Management Standard Operating Procedures dated 17 July 2018.

Conclusion

Based on a review of the main features, I consider that the crediting rate 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 Plan (i.e. a market shock or sudden downturn in investment markets).

6

The Actuarial Approach

Financing Objective

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

- 100% of accumulation account balances plus
- 105% of Defined Benefit Vested Benefits (Pension).

Accumulation account balances are matched by specific assets and do not require any additional margins. However, most of the defined benefit liabilities are linked to salaries and not to the returns on the underlying assets. A margin in excess of 100% coverage of vested defined benefits is therefore desirable to provide some security against adverse experience such as poor investment returns and pensioners living longer than assumed. I consider the target margin of 5% is suitable.

Based on the assumptions adopted for this investigation, achieving the financing objective of 105% of Vested Benefits (Pension) for defined benefit members would also result in at least 100% coverage of the Actuarial Value of Accrued Benefits and a satisfactory margin of coverage over SG Minimum Benefits. Hence, I do not consider it necessary to adopt specific financing objectives in relation to these benefit liability measures.

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

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 Net 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.

I have set the financing objective on the basis that members' reasonable expectations on termination would be to receive their vested benefit entitlement, allowing for 50% of eligible members' resignation benefits and 100% of eligible members' retirement benefits to be taken as a pension (and, in the case of current and deferred pensioners, the lump sum value of their pension, on the actuarial assumptions adopted for this investigation).

Provisions of the Trust Deed

The rules of the Plan require that:

- The Trustee ensures an actuarial investigation of the Plan is conducted when required by legislation. Accordingly actuarial investigations are carried out at three yearly intervals as an exemption from annual investigations has been granted by APRA; and
- The Employers must contribute at the rate determined by the Trustee, after consulting the Principal Employer, on the advice of the actuary to the Plan, although other provisions of the rules enable the Employer to notify the Trustee of its intention to reduce, suspend or terminate contributions to the Plan.

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. The level of the Employer contributions may vary from time to time to ensure that the Plan remains on course towards its financing objective (minimum 105% coverage of Vested Benefits (Pension)).

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

Changes in Financing Method

The Target Funding method was used at the previous investigation.

7

Financial Position of the Plan

Funding Status

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. Vested Benefits (Pension) assumes that an eligible BCARP member will choose to take 50% of their resignation benefit as a deferred lifetime pension and the remainder as a lump sum benefit and 100% of their retirement benefit as a lifetime pension. Vested Benefits (Lump sum) assumes that all members will choose to take all their benefits as a lump sum on leaving service.

The Vested Benefits for current and deferred lifetime pensioners are the present value of the future pension payments.

At 31 December 2022, the Plan assets represented 118.1% of the Vested Benefits (Pension) and hence the Plan was considered to be in a "satisfactory financial position" under SIS legislation. The 118.1% coverage was also significantly above the financing objective of 105% coverage adopted for this investigation.

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).

The Plan assets at 31 December 2022 were 167.0% of MRBs and hence the Plan was considered to be "solvent" under SIS legislation.

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 the actuarial assumptions and method outlined in the previous sections. In determining the value, I have not applied a minimum of the vested benefits. Further details concerning the calculation of the Actuarial Value of Accrued Benefits are set out in Appendix B.

The Plan Assets as 31 December 2022 represented 124.7% of the Actuarial Value of Accrued Defined Benefits.

The following table shows these funding measures at both the previous and current investigation dates.

Defined Benefits Only*	Position at 31 December 2022 $000	Asset Coverage	Coverage at 31 December 2019
Assets	247,708		
Vested Benefits (Lump sum)	207,117	119.6%	120.5%
Vested Benefits (Pension)**	209,709	118.1%	117.1%
Actuarial Value of Accrued Benefits	198,659	124.7%	123.5%
SG Minimum Benefits	148,328	167.0%	193.3%

*The above totals exclude accumulation liabilities of $230,845,000 (including allocated pensioners) and additional accumulation balances for defined benefit members of $8,120,000 as at 31 December 2022. The benefit totals also include the actuarial value of the lifetime and deferred pension liabilities $105,548,000 at 31 December 2022.
**The above vested benefits (pension) and actuarial value of accrued benefits are determined by assuming eligible members take 50% of their benefits as a deferred lifetime pension upon resignation and 100% of their benefits as a lifetime pension upon retirement.

These percentages show that the funding status of the Plan has remained broadly unchanged since the last investigation due to the experience discussed in Section 3 and the changes in actuarial assumptions discussed in Section 4.

Actuarial Balance Sheet

In the following actuarial balance sheet table, I show an alternative view of the financial position, where the Plan's future contributions are shown as an asset and the future benefits (based on both past and future service) and expenses as a liability.

Actuarial Balance Sheet as at	31 December 2022	31 December 2019
		$M
Value of Plan Assets - Defined Benefit	247.708	361.839
Present Value of future Employer contributions (at rate recommended)	0.000 (0.0%)	0.000 (0.0%)
Present Value of future Member contributions (at rate(s) specified in Trust Deed)	0.000	0.000
Total available Assets	**247.708**	**361.839**
Present Value of future defined benefits payments in respect of membership after the investigation date	17.524	40.865
Present Value of future defined benefits payments in respect of membership accrued at the investigation date	198.659	292.915
Present Value of future Plan operating costs and tax on contributions	11.249	7.773
Total Liabilities	**227.432**	**341.553**
Excess/(Deficit) of Assets to value of benefits	20.276	20.286
Net Financial Position as a % of Total Liabilities	9%	6%

The Plan's net financial position is defined as the difference between the Total assets and the Total liabilities. As shown in the table above, the net financial position of the Plan as a percentage of Total liabilities has improved since the previous actuarial investigation.

The results indicate that the current assets are expected to be sufficient to fund future payments in respect of defined benefits if future experience matches the assumptions, even without Employer defined benefit contributions. Taking into account the financing objective, I believe the recommended defined benefit contribution holiday is appropriate and provides a margin for future adverse experience, at least for the time being.

Employer Future Service Cost

Based on the assumptions adopted for this investigation, I estimate that the Employer's long-term 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)
NC	19.6%
BCARP	28.7%

An average rate for current members is 21.3% of salaries.

The Employer's long-term funding cost above includes the expected SCI premiums (of 0.5% of DB salaries) and allowance for contributions tax, but excludes an allowance for expected defined benefit expenses.

The assessed long-term costs for future service have decreased since the last investigation due to:

- the change in assumptions as outlined in Section 4; and
- the change in the membership profile of the Plan.

Recommended Contributions

Based on the Trustee's financing objective described above and the results of this investigation, I recommend that the Employers continue to contribute as per the last actuarial investigation recommendations (see table below), noting that quarterly funding updates will be performed and used to check the ongoing viability of the Employer contribution holiday.

Benefit Category	Contributions Rate (% salary)
Defined Benefit members	– Nil for all members in respect of Defined Benefits; and – Any additional contributions that will meet the Superannuation Guarantee requirements in respect to the difference between OTE and superannuation salaries.

Others (Accumulation members)	– The maximum of 12% of salaries and the amount required to meet Superannuation Guarantee legislation for BP accumulation members; and – At the rate required to meet Superannuation Guarantee legislation or employment agreements for SG only members.

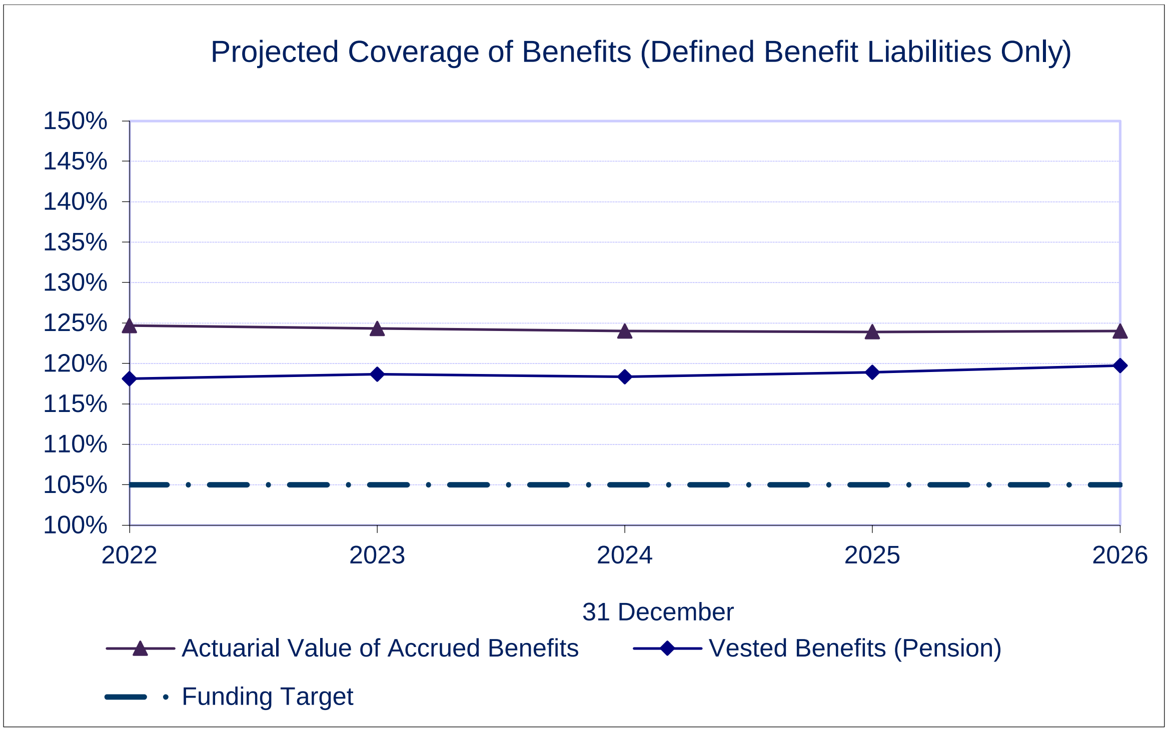
In practice, it is likely to be necessary to vary the Employer contributions at some point in the future to achieve the Trustee's financing objective.

Projected Financial Position

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

- The actuarial assumptions adopted for this investigation;
- The recommended Employer contribution holiday.

The results of the projection are as follows:



This projection is based on the assumptions adopted, which represent a single scenario from the range of possibilities. The future is uncertain and the Plan'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, as discussed below.

The projection above shows that the recommended contributions are anticipated to result in assets of at least 105% of Defined Benefit Vested Benefits (Pension), which represents the financing objective adopted in this investigation, over the period to 31 December 2025.

The graph also shows the coverage level of assets compared with the Actuarial Value of Accrued Benefits. The recommended contributions are projected to result in asset coverage of at least 100% of the Actuarial Value of Accrued Benefits.

Sensitivity Analysis

I have tested the effect of changes to the key assumptions on the value of liabilities and the Plan's net financial position.

The liabilities shown in this report are calculated using the following best estimate assumptions

- Investment returns for assets supporting active defined benefit liabilities of 6.75% p.a.;
- Investment returns for assets supporting pension liabilities of 7.75% p.a.;
- Salary growth of 3.3% p.a.;
- Pension increases of 4.9% p.a. for the first two years and 2.9% p.a. thereafter for BCARP pensioners:
- Pension increases of 5% p.a. for the first two years and 2.5% p.a. thereafter for NC pensioners.

As both future investment returns and future salary/pension increases are unknown, it is almost certain that actual experience will differ from these assumptions.

It is the difference between the investment return rate and salary growth rate/pension increase rate (commonly referred to as the 'gap') that is crucial rather than the individual assumptions, because the value of the assets move with investment returns while most of the Plan's defined benefit liabilities grow with salaries/pension increases.

To quantify the sensitivity of the net financial position to my assumptions, I have calculated the change in liability based on the following scenarios:

- Decrease the long-term investment return assumption by 1% p.a.;
- Increase the Salary growth and Price increase assumption by 1% p.a.;
- A shock scenario, where the value of net assets suddenly reduces by 10%;
- Decrease in the long-term investment return assumption by 1% AND the value of net assets suddenly reduces by 10% (known as the "Adverse assumptions").

All other assumptions, including the Employer contribution rates, are assumed to remain the same.

The effects of these changes are shown below.

Scenario	Net financial position $M	Change in net financial position $M	Net financial position as % of all defined benefit liabilities %
Base assumptions as shown previously	20.276		9%
Decrease investment return by 1% p.a.	-1.174	-21.450	0%
Increase salary increase by 1% p.a.	13.876	-6.400	6%
Increase pension increase by 1% p.a.	5.721	-14.555	2%
Shock scenario - immediate 10% reduction in net value of assets	-4.495	-24.771	-2%
Adverse assumptions	-25.945	-46.221	-10%

8

Key Risks

Investment Volatility

I have considered the impact of investment volatility on the Plan'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 Plan's defined benefit investment strategy.

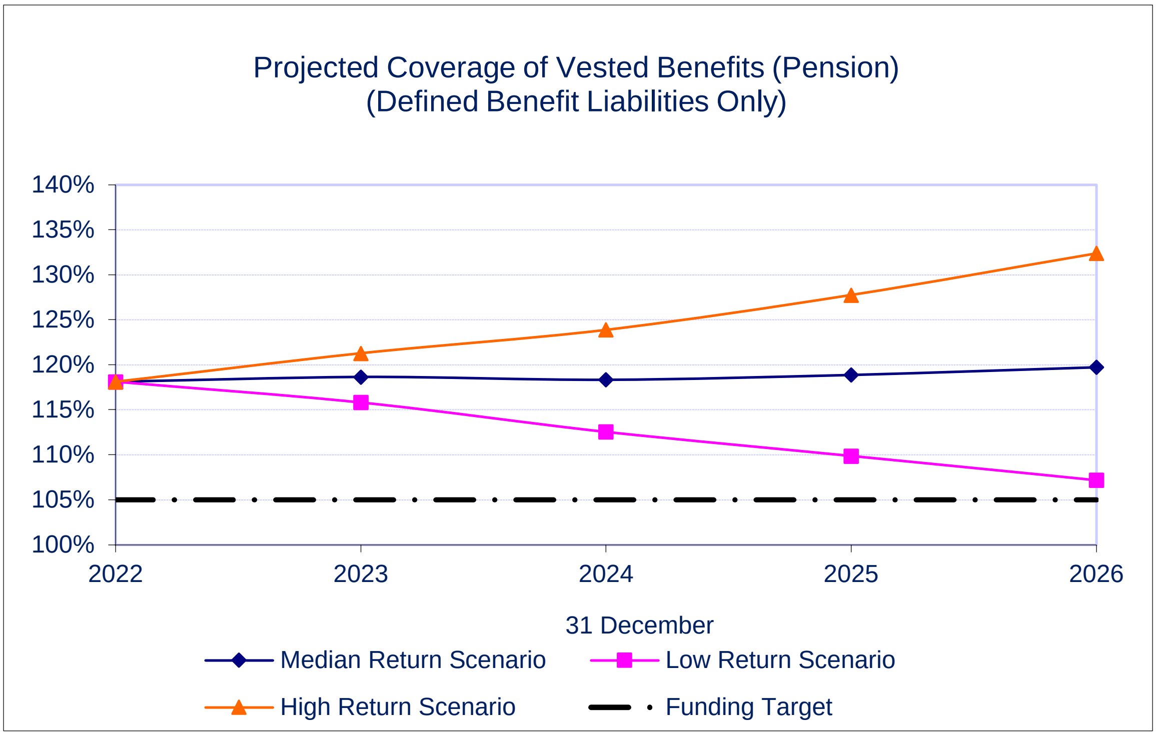
Almost all of the current vested benefits for defined benefit members are linked to salaries and not linked to investment returns. Therefore, the Plan's vested benefits coverage is highly sensitive to changes in the investment return assumptions.

Using the investment return model and assumptions adopted, there is approximately a 10% chance of the Plan's cumulative investment return being less than the "low return" scenario in future. Similarly, there is approximately only a 10% chance of the Plan's cumulative investment return being greater than the "high return" scenario in future.

1 January 2023 to 31 December	Assumed Cumulative Investment Return (%)		
	"Low Return"	Valuation	"High Return"
2023	4.1%	6.75%	9.2%
2024	8.4%	14.0%	19.2%
2025	12.9%	21.6%	30.2%
2026	17.5%	29.9%	42.2%

The cumulative investment return is the total return from 1 January 2023 up to 31 December in the year shown. The returns apply to assets supporting the liabilities of active members, with higher returns assumed for assets supporting pensioners. The extent of variation allowed for in these projections reflects the Plan'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 (Pension) 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 (Pension) at 31 December 2025 will fall in the range from 110% to 128%.

The “Low return” scenario and the “High return” scenario shown above are illustrations only and show what may occur under assumed future experiences that differ from my 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 fact, there is a 1 in 20 chance that the investment return could be less than minus 11% in any year based on the current Plan asset allocation.

In my view, the Trustee should be satisfied with the expected level of security that the Employer contribution holiday provides over the next few years.

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 Employers.

For example, if the assumed future salary increase rate was increased by 1% p.a. with no change in other assumptions, then the Actuarial Value of Accrued Benefits would increase by $4.8 million (Employer funding cost impact $4.8m /0.85 = $5.6m) and the future service cost would increase by 1.1%.

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% p.a. illustrated in the example above.

Legislative Risk

This risk is that the Commonwealth Government could make legislative changes that 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 Employers and is a real risk with the current level of government debt and rising interest rates.

9

Pension Liabilities and Related Risks

As shown in Section 3, the Plan currently has 146 lifetime pensioners, as well as 7 deferred pensioners. Lifetime pensioners present particular risks to the Plan as there is uncertainty relating to the level of future payments and the period for which they will be paid.

Future Pension Increases

The risk is that pension increases will rise more rapidly than assumed, increasing benefits in payment and potentially requiring additional employer contributions. This risk is borne by the Employers.

For example, if the assumed future pension increase (or indexation) rate was increased by 1% p.a. with no change in other assumptions, then the Actuarial Value of Accrued Benefits would increase by $14.3m (Employer funding cost impact $14.3m/0.85 = $16.8m). The future service cost would increase by 0.6%.

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

Longevity Risk

The risk is that pensioners live longer than assumed, resulting in pension payment costs for more years. This risk is borne by the Employers.

For example, if the assumed pensioner mortality rates were to be 10 per cent lower, with no change in other assumptions, then the Actuarial Value of Accrued Benefits would increase by $1.9m (Employer funding cost impact $1.9m/0.85 = $2.3m).

Impact of using a Buy-In Contract to Fund the Pension Liability

The basis used to value defined benefit pension entitlements for the purposes of this investigation is considered suitable taking into account the Plan's current circumstances, including the existing assets and assuming the ongoing support of the Employers. However, The Trustee could reduce these risks by purchasing a buy-in contract for the lifetime pensioners of the Plan.

In a buy-in contract, a premium is paid to an insurer and a bulk annuity contract is issued to the Plan. The annuity contract is considered an investment held by the Plan. The payment of pensions is still the responsibility of the Trustee, paid to retirees from the Plan assets and not directly by the insurer. The insurer then pays the Plan the value of the pensions agreed in the bulk annuity contract. Therefore, the assets and liabilities associated with the contract remain on the balance sheet but are very well matched.

To illustrate the cost of purchasing a buy-in contract I have downloaded Challenger (the main annuity provider in Australia) annuity rates from their advisor portal. Based on this information (e.g. the average price to provide the current lifetime pensions, based on their interest rate, pension increase assumptions and mortality assumptions) the pension liability would be valued at $142 million (i.e. $37 million higher than their valuation in this investigation), with a resulting reduction in the coverage of Vested Benefits from 118.1% to 100.4%.

This valuation is based on Challenger's retail pricing for a comparable benefit and pensioner age profile. It is possible that a lower valuation is achievable through negotiation with various annuity providers. There is also a risk that Challenger's retail offering does not fully cater to the Plan's pension benefits arrangement so the actual cost of purchasing a buy-in contract could be higher.

Purchasing a buy-in contract is likely to be affordable but will reduce the overall funding position of the Plan. Therefore, the Plan may require additional Employer financing to retain the security of members' benefits.

There are additional risks associated with a buy-in that would need to be considered, such as:

- Counterparty risk – the risk that the annuity provider defaults on their obligations
- Mismatch risk – the risk that the annuity provider cannot provide annuities that match the lifetime pensioners benefits exactly

In addition, there are likely to be additional costs relating to purchasing a buy-in contract which could represent approximately 0.25% of the Plan's assets.

Impact of a Possible Wind Up

As set out in Section 6, I have set the financing objective on the basis that the pensioners' reasonable expectations on termination of the Plan would be to receive a lump sum equal to the value of their pension as determined by the actuarial assumptions adopted for this investigation.

However, this approach may not be realistic or fair for pensioners if a buy-in contract could be purchased to fund the lifetime pensioners.

In the event of wind up, a buy-in contract would become a buy-out and the responsibility of paying the pensions would be passed onto the annuity provider.

If these annuity purchases were to occur in a wind up situation and there was insufficient support from the Employers to make up the difference, then the priority order of assets, as set out in the Trust Deed, becomes important.

Section A9 of the Participation Agreement covers the termination of employer contributions. Section A9.4 refers to Clause 24 of the former BP Pension Scheme Trust Deed. This deed appears to give priority on wind-up to the benefits of existing pensioners and deferred pensioners over those of active members, whether they be defined benefit or accumulation members. Hence, it is likely that the current active members would be adversely affected in a wind up situation should there be insufficient support from the Employers.

I do not suggest that a wind up is likely to occur, given the information available to me. Rather, in the interests of the Trustee and the Employers having full information, I set out in the following table the additional costs that could occur in a wind up and the resulting assets available for the current members.

	$ M
Net assets available	247.708
Less possible wind up costs	(0.619)
Less cost of providing annuities for current pensioners	(142.496)
Net assets available for current active members	104.593
Vested benefits (Pension) for current active members	104.161
Potential coverage of vested benefits for current active members	100.4%

Under this scenario, the coverage of Vested Benefits (Pension) for current active members reduces from 136.5% to 100.4%.

10

Insurance Risks

Insurance

For accumulation members, death and lump sum total and permanent disablement (TPD) benefits 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 TPD benefits) is:

Non Contributory:

Death/TPD Benefit less Vested Benefit

BCARP:

19% x Highest Yearly Salary x Future Service (years & complete months) to age 65

The total amount insured should cover the excess of the death/TPD benefits over the Plan'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 31 December 2022 for the Plan was as follows.

	Active Defined Benefit members	$000
	Death/TPD Benefits	129,399
less	Sum Insured	27,506
less	Assets	142,160
	Uncovered Death/TPD Benefits	(40,267)

The value of the defined benefit assets exceeds the Death/TPD Benefits of the remaining active members. In theory, the Trustee could consider changing the sum insured formula with a view to reducing the degree of over-insurance and the associated premiums. However, there are a number of practical difficulties with such a change. These include:

- Navigating the regulatory environment relating to self-insurance and insurance management frameworks;
- Accommodating movement in the levels of surplus; and
- The cost of implementing the insurance changes, which could potentially outweigh the premium savings.

I therefore conclude that the sum insured formula is not inappropriate and provides adequate protection for the Plan.

Documentation

The death and TPD insurance arrangements are underwritten by MLC Limited ("the insurer") and outlined in a policy dated 1 August 2021 between the Trustee and the insurer. The purpose of the insurance policy is to protect the Plan against unexpectedly large payouts on the death or disablement of members.

Self Insurance

A Self-Insurance Reserve exists in the Plan. While the Plan has insured the risk associated with providing death and disability benefits with an external provider from 1 October 2010, this policy does not cover claims in respect of deaths or disabilities that occurred prior to 30 September 2010. The purpose of the Self-Insurance Reserve is to meet these liabilities.

As at 31 December 2022, the Self-Insurance Reserve had assets of $1,489,000. The current value of assets in the Reserve exceeds the previously recommended amount of $825,000 and is therefore considered more than sufficient. There could be scope to reduce the Self-Insurance Reserve amount and I recommend that the size of the reserve be reviewed.

Conclusion

I consider that the Plan's current insurance arrangements are suitable, subject to a review of the level of the Self-Insurance Reserve.

11

Prudential Standards

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

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".

I understand that the Plan's Shortfall Limit, determined by the Trustee on the basis of previous actuarial advice, is 100%.

The Shortfall Limit is expressed as the coverage level of the defined benefit Vested Benefits (Pension) by the defined benefit assets. It is appropriate to consider the following factors when determining if the Shortfall Limit remains appropriate:

- The guidance provided in the relevant Actuaries Institute Practice Guideline 499.08: Shortfall Limit Required under APRA Prudential Standard 160 dated March 2023;
- The investment strategy for defined benefit assets, particularly the benchmark exposure of 78% to "growth" assets;
- The results of this investigation regarding the extent to which the current and projected Vested Benefits are not linked to the investment return on defined benefit assets (i.e. salary-based benefits and Defined Benefit pensions) and the current and projected relativity between Vested Benefits and Minimum Requisite Benefits.

Based on the above, I recommend the Trustee maintain 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. I 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 employer contributions recommence.

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 for each plan. If this monitoring process indicates that the 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); and

- A Restoration Plan is required to be put in place if an Interim Actuarial Investigation finds the plan has breached its Shortfall Limit. The Restoration Plan must be designed to return the plan 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.

The Trustee has a policy of reviewing the Vested Benefit (Lump Sum) funding level on a quarterly basis. An estimate of the funding position based on the pension take-up assumption at the most recent actuarial investigation is also included in the monitoring so that the ongoing suitability of the agreed funding program can be reviewed quarterly having regard to emerging investment experience (which is the most variable and dominant item).

I consider that the adopted monitoring process is appropriate.

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

Requirements due to Unsatisfactory Financial Position

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 is 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 (Pension) 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, I consider that:

- The Plan is not in an unsatisfactory financial position; and
- The Plan 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.

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 prudential 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 Plan's financial position is not unsatisfactory (or about to become unsatisfactory).

The Plan's assets are sufficient to fully cover the SG Minimum Benefits at 31 December 2022. Therefore, the Plan is not considered to be technically insolvent.

Statements Required by SPS 160

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

(a) The value of the Plan's assets as at 31 December 2022 was $486,673,000. This value excludes assets held to meet the Operational Risk Financial Requirement

(b) In my opinion, the value of the liabilities of the Plan in respect of accrued benefits as at 31 December 2022 was $437,624,000. Hence, I consider that the value of the assets at 31 December 2022 is adequate to meet the value of the accrued benefit liabilities of the Plan as at 31 December 2022. Taking into account the circumstances of the Plan, the details of the membership and the assets, the benefit structure of the Plan and the industry within which the Employers 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 Sections 4 and 6 of this report. Assuming that the Employers contributes in accordance with my recommendations based on the assumptions used for this actuarial investigation, I expect that assets will remain sufficient to cover the value of accrued benefit liabilities over the period to 31 December 2025.

(c) In my opinion, the value of the liabilities of the Plan in respect of Vested Benefits (Pension) as at 31 December 2022 was $448,674,000. Hence, I consider that the value of the assets at 31 December 2022 is adequate to meet the value of the vested benefit liabilities of the Plan as at 31 December 2022. Assuming that the Employers contributes in accordance with my recommendations 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 2025. Hence, I consider that the financial position of the Plan should not be treated as unsatisfactory as defined in SPS 160.

(d) In my opinion, the value of the liabilities of the Plan in respect of the minimum benefits of the members of the Plan as at 31 December 2022 was $387,293,000. Hence the Plan was not technically insolvent at 31 December 2022.

(e) A projection of the likely future financial position of the Plan over the 3-year period following 31 December 2022, based on what I consider to be reasonable expectations for the Plan for the purpose of this projection, is set out in Section 7 of this report.

(f) Based on the results of this investigation, I consider that the Shortfall Limit does not require review. Comments are set out earlier in this section.

(g) In respect of the 3-year period following 31 December 2022, I recommend that the Employers contribute to the Plan at least:

Benefit Category	Contributions Rate (% salary)
Defined Benefit members	– Nil for all members in respect of Defined Benefits; and – Any additional contributions that will meet the Superannuation Guarantee requirements in respect to the difference between OTE and superannuation salaries.
Others (Accumulation members)	– The maximum of 12% of salaries and the amount required to meet Superannuation Guarantee legislation for BP accumulation members; and – At rate required to meet Superannuation Guarantee legislation or employment agreements for SG only members.

(h) The Plan 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 2022;
- I expect to be able to certify the solvency of the Plan in all Funding and Solvency Certificates that may be required in the three year period from 31 December 2022.

(i) In my opinion, there is not a “high degree of probability”, as at 31 December 2022, that the Plan will be able to meet the pension payments as required under the Plan’s governing rules. This is because the Plan does not currently hold sufficient reserves to meet the “high degree of probability” test and the Actuaries Institute Guidance Note 465 does not allow future employer contributions to be taken into account in the assessment for the “high degree of probability” statement. In practice, it is anticipated that the Employers will provide adequate funding to enable pensions to be paid in full.

12

Actuarial Certification

Actuary’s Certifications

Professional Standards and Scope

I have prepared this report in accordance with generally accepted actuarial principles, Mercer’s 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 Plan. 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(s) to the Plan. The Employers may consider obtaining separate actuarial advice on the recommendations contained in the report.

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

Actuarial Uncertainty and Assumptions

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

Future funding and actual costs relating to the Plan are primarily driven by the Plan’s benefit design, the actual investment returns, the actual rate of salary growth, the actual rate of pension increase and any discretions exercised by the Trustee or the Employers. The Plan’s actuary does not directly control or influence any of these factors in the context of an actuarial investigation.

The Plan’s future financial position and the recommended Employer contributions depend on a number of factors, including the amount of benefits the Plan 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 Plan’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 shows the impact on the Plan's financial position if alternative assumptions were to be adopted.

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

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

Additional Information

The next **actuarial investigation** is required at a date no later than 31 December 2025. At that time, the adequacy of the Employer contribution levels will be reassessed. The monitoring process recommended may lead to an earlier reassessment ahead of the next full actuarial investigation.

The next **Funding and Solvency Certificate** is required at least 12 months before the expiry of the current Funding and Solvency Certificate (which expires on 30 June 2027).

The next **Benefit Certificate** is required following the expiry of the current Benefit Certificate (which expires 30 June 2023). The current Benefit Certificate is designed to accommodate changes to the legislated Superannuation Guarantee schedule.

Further Information

Please contact me to provide any supplementary information or explanations about this actuarial investigation as may be required.

Mark Nelson

Fellow of the Institute of Actuaries of Australia

30 June 2023

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

Richard Codron

Fellow of the Institute of Actuaries of Australia

Appendix A

Plan Design

Summary of Benefits

A simplified 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.

Members' Contributions (% of salary)	Deemed at a rate of 5% of salaries
Normal Retirement Age	60
Early Retirement Age	The earlier of: - the age at which the member's age plus membership equals 75; or - 55.
Phase-in Age	The earlier of: - the age at which the member's age plus membership equals 65; or - 50.
Membership Period	Years and complete months of membership, subject to a maximum of 35 years.
Personal Accumulation Account (PAA)	3% productivity contributions prior to 1 January 1995 accumulated with interest, subject to a minimum of the accumulation at a 'floor' rate based on the yield available on Commonwealth government bonds.
Highest Yearly Salary (HYS)	Greater of: - Member's highest Salary received as an Employee and a Member at any time during his or her latest period of membership of the Plan immediately prior to ceasing to be an Employee but ignoring the period before 1 April 1994; and - Final Average Salary
Discount Factor (DF)	For members who have not reached the Phase-in Age: 1 – 0.02 x (55 – A) where: A equals the member's age, subject to a minimum of 30 and a maximum of 55. For members who have reached the Phase-in Age: f + (1 – f) x X / 60 where: f equals [1 – 0.02 x (55 – Phase-in Age)], with Phase-in Age subject to a minimum of 30 and a maximum of 55. X equals the period between the date the Phase-in Age was attained and the calculation date, subject to a maximum of 60 months

Normal Retirement Benefit	A lump sum equal to the sum of:
	- 16% of Highest Yearly Salary (HYS) x Membership Period; plus
	- the member's PAA balance at 1 January 1995, with interest; plus
	- the greater of:
	    - 3% of HYS for each year of membership after 1 January 1995; and
	    - the member's PAA balance accruing after 1 January 1995.

Death/Total and Permanent Disability Benefit	A lump sum equal to the sum of: - 16% of HYS x prospective Membership Period to NRA; plus - the member's PAA balance at 1 January 1995, with interest; plus - 3% of HYS for each year of prospective membership after 1 January 1995 to NRA.
Temporary Disability Income Benefit	An income benefit equal to 75% of Salary payable for up to 2 years, commencing after a member was absent from employment for 3 continuous months. Defined benefits continue to accrue whilst a member is receiving a Temporary Disability Income Benefit.

Benefit on Ill-Health	A lump sum equal to the sum of:
	- 16% of HYS x Membership Period; plus
	- 12% of HYS x prospective future Membership Period to NRA; plus
	- the member's PAA balance at 1 January 1995, with interest; plus
	- the greater of:
	    - 3% of HYS for each year of membership after 1 January 1995; and
	    - the member's PAA balance accruing after 1 January 1995.

Benefit on Resignation	A lump sum equal to the sum of:
	- 16% of HYS x Membership Period x DF; plus
	- the member's PAA balance at 1 January 1995, with interest; plus
	- the greater of:
	    - 3% of HYS for each year of membership after 1 January 1995; and
	    - the member's PAA balance accruing after 1 January 1995.

Pension Option	BCARP members have the option to take all or part of the Retirement Benefit or TPD Benefit as a pension equal to: - 1/10 * lump sum benefit outlined above If the Retirement Benefit becomes payable before the member's Normal Retirement Date, the pension is reduced to reflect the period to the Normal Retirement Date.
Pension Provisions	BCARP pensions are indexed in line with the average of the increase in Average Weekly Ordinary Time Earnings and CPI. NC pensions are indexed in line with the increase in CPI, subject to a maximum increase of 5% (or such higher rate as approved by the Principal Employer). On the death of a pensioner, the pension paid to a reversionary beneficiary is two-thirds of the pension paid to the main pensioner.

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

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 Plan's current Benefit Certificate.

Under current legislation the SG rate is currently 10.5% and will increase by 0.5% p.a. from 1 July 2023 until it reaches 12% from 1 July 2025.

Appendix B

Calculation of the Actuarial Value of Accrued Benefits

I have calculated the Actuarial Value of Accrued Benefits 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.

Defined Benefits

The past membership components of all defined benefits payable in the future from the Plan 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:

Retirement:	based on the member's accrued benefit multiple or relevant account balances at the investigation date
Death and Disablement:	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
Resignation:	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

The weighted average term of the accrued benefit liabilities is 10 years.

Accumulation Benefits

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

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.

Mercer Consulting (Australia) Pty Ltd
ABN 55 153 168 140
AFS Licence # 411770
Collins Square
727 Collins Street Melbourne VIC 3008
GPO Box 9946 Melbourne VIC 3001
+61 3 9623 5555