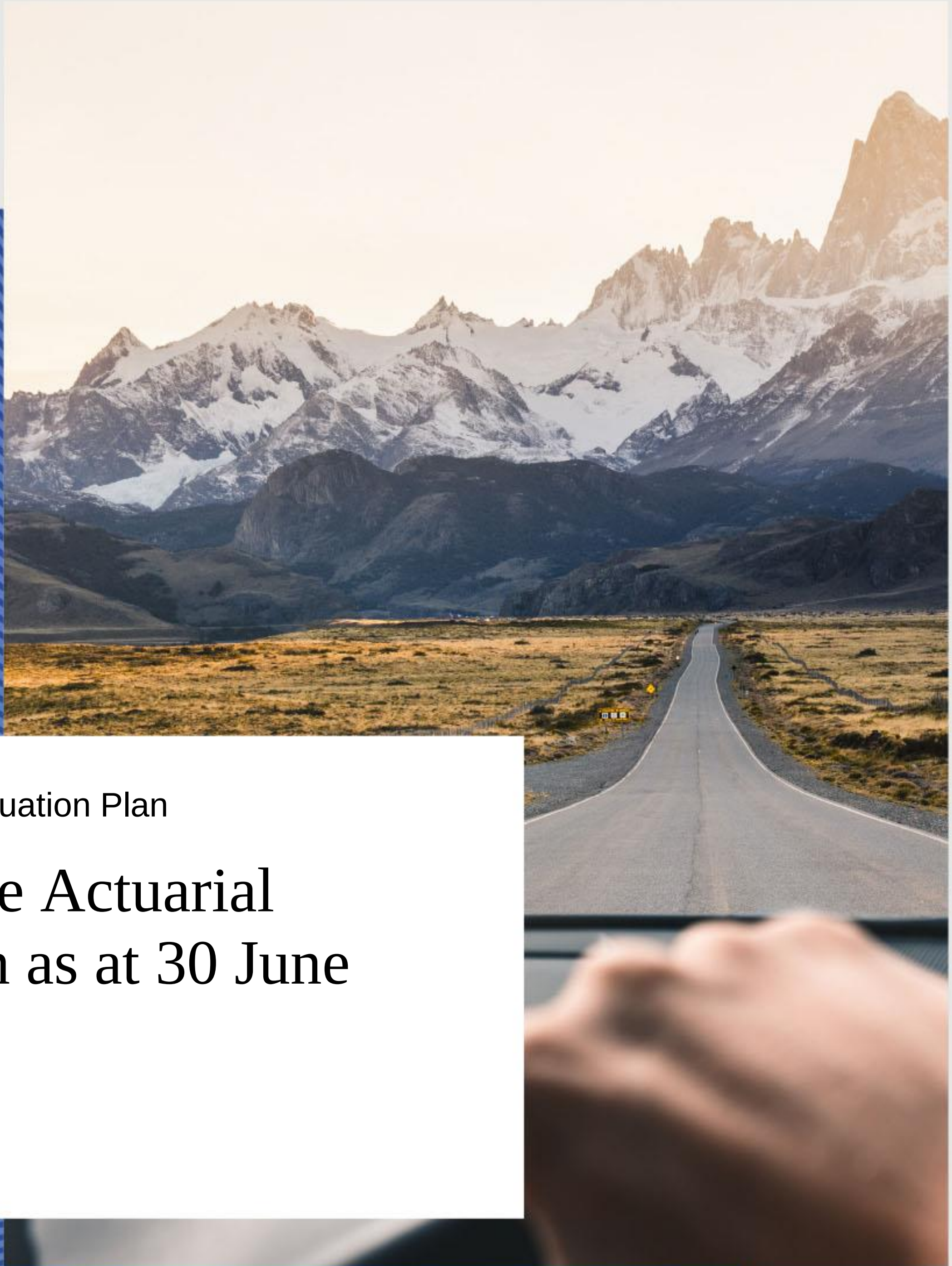

Air Liquide Superannuation Plan

Report on the Actuarial Investigation as at 30 June 2022

23 December 2022

Summary

We are pleased to present my report to the Trustee of the Air Liquide Superannuation Plan, NULIS Nominees (Australia) Limited, on the actuarial investigation into the Air Liquide Superannuation Plan as at 30 June 2022. The Plan is a sub-fund of the MLC Super Fund.

This Summary sets out the key results and recommendations contained in this report.

Solvency

The financial position of the Plan has improved over the intervaluation period, as shown in the increased Vested Benefits Index from 139.8% as at 30 June 2019 to 149.8% as at 30 June 2022.

The solvency measures as at 30 June 2019 and 30 June 2022 are also shown below:

Measure	30 June 2019	30 June 2022
VBI	139.8%	149.8%
PVABI	188.2%	149.8%
MRBI	189.3%	181.6%

Funding

The company contribution rate was determined under the Projection funding method as at 30 June 2022.

Taking into account the projected financial position of the Plan over the next three years, we recommend the Company contribute:

- nil in respect of defined benefit members, until at least 30 June 2025.
- the member contribution rate (including any appropriate allowance for contributions tax) where the Company meets the cost of member contributions on their behalf; and
- at the required amounts to meet any Superannuation Guarantee, contractual or any other obligations in respect of accumulation liabilities (including those with respect to defined benefit members) in the Plan.

Contents

Throughout this report the following terms are used:

Plan
Air Liquide Superannuation Plan

Trustee
NULIS Nominees (Australia) Limited

Company
Air Liquide Australia Limited

Trust Deed or Rules
The Plan's Trust Deed and Participation Schedule

The Investigation Date or Valuation Date
30 June 2022

Other Matters involving Actuarial Oversight

We further recommend that:

- The Trustee to retain the shortfall limit to 100% based on the current investment structure of the Plan;
- The Trustee continue to monitor the financial position of the Plan quarterly throughout the following investigation period;
- Current external insurance arrangements for death and disablement benefits be retained, subject to the Trustee giving consideration as to whether the external insurance formula with respect to defined benefit members should be amended to remove the reference to Accrued Retirement Benefit;

  We also recommend that the Insurance Policy terms be amended to correct the reference to Vested Benefits (e.g., to refer to it as the amount payable under the Plan's Participation Agreement as a Retirement or Leaving Service Benefit).
- The Trustee, in consultation with the Company, consider whether member contributions could be met via the Plan's assets. Before implementing such an approach, the Trustee should seek legal and taxation advice and further actuarial advice confirming the appropriateness of the approach; and
- While in our opinion the Investment Strategy remains appropriate from a funding point of view, the Trustee consider whether further advice should be sought in relation to confirm in its opinion that the Investment Strategy continues to be in the Plan member's best financial interests.

In line with requirements under legislation and Trust Deed, the next actuarial investigation of the Plan should be conducted with an effective date no later than 30 June 2025. The recommended company contribution rates will be reviewed at that time or at an earlier date if considered appropriate as a consequence of the regular review of the VBI or as required by legislation.

We are not aware of any event since 30 June 2022 that warrants review of the recommendations in this report.

Anthony Chan
Fellow of the Institute of Actuaries of Australia

23 December 2022

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DO: RC | TR: KL | CR/ER: AC

https://wtwonlineau.sharepoint.com/sites/tctclient_1004652_AirLiq_FY2/Documents/04.01_Actl_Valn/5_Deliverables/AirLiquide_Actuarial_Investigation_2022.docx

Section 1: Introduction

Scope

This investigation has been prepared effective 30 June 2022 for NULIS Nominees (Australia) Limited, the Trustee of the Plan, by the actuary to the Plan, Anthony Chan, FIAA.

Current legislation and the Trust Deed require an actuarial investigation and report to be due at least every three years for defined benefit funds not paying a defined benefit pension. The main aims of the investigation are to examine the current financial position of the Plan and the long-term funding of the Plan's benefits, and to provide advice to the Trustee on the contribution rate at which the Company should contribute and on any other matters the actuary considers relevant.

This investigation is primarily interested in the defined benefit liabilities of the Plan, and unless otherwise specified, this report relates only to such defined benefit liabilities. The Defined Contribution liabilities of the Plan, including those that relate to the voluntary accumulation component of defined benefit members, are fully funded and do not impact upon the Defined Benefit liabilities. No investigation is required regarding the Defined Contribution liabilities, although in my recommendations we have continued to recommend that the Company contribute to meet any Superannuation Guarantee, contractual or any other obligations in respect of such liabilities.

This report has been prepared in accordance with Professional Standard 400, dated March 2020, issued by the Institute of Actuaries of Australia.

Previous Actuarial Investigation

The previous actuarial investigation of the Plan was carried out by David O'Keefe, FIAA as at 30 June 2019, with the results of that investigation set out in a report dated 25 September 2019.

The report concluded that the Plan was not in an unsatisfactory financial position (as defined by SIS legislation) at that date, and recommended that the Company contribute nil to the Plan with respect of defined benefit members and to contribute the member contribution rate where the Company meets the cost of member contributions on their behalf.

We understand that the Company has contributed amounts consistent with these rates.

The report also recommended that the Trustee give consideration to adjusting the insured benefit formula to reduce the level of the Plan's death and total permanent disablement insured benefits. We understand that the Trustee has considered this and concluded that no adjustments should be made.

Experience since 30 June 2022

Since 30 June 2022 the experience of the Plan has been as follows:

- The net return on the Plan's assets from the valuation date to 30 September 2022 was approximately -1.38%; and
- one member has exited the Plan effective July 2022.

While the actual experience since 30 June 2022 has not had a material impact on the recommendations in this investigation, the exit of one of the two remaining defined benefit employees had materially affected the funding ratios. Therefore, to allow for this, in this valuation we have taken into account experience since 30 June 2022 when carrying out the projection of the financial position of the Plan from that date.

Limitations

This report is provided subject to the terms set out herein and in our engagement letter dated 7 September 2022 and the accompanying Terms and Conditions of Engagement. This report is provided solely for the Trustee's use and for the specific purposes indicated above. It may not be suitable for use in any other context or for any other purpose.

Except where we expressly agree in writing, this report should not be disclosed or provided to any third party, other than as provided below. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by us for any consequences arising from any third party relying on this report or any advice relating to its contents.

We consent to the Trustee making a copy of this report available on the Plan's website where required in accordance with the relevant legislation.

The Trustee may make a copy of this report available to its auditors, the Company and to any person to whom the Trustee may be required to provide a copy under relevant legislation, but we make no representation as to the suitability of this report for any purpose other than that for which it was originally provided and accept no responsibility or liability to the Trustee's auditors the Company or any third party in this regard. The Trustee should draw the provisions of this paragraph to the attention of its auditors and the Company when passing this report to them.

In preparing this valuation, we have relied upon information and data provided to us orally and in writing by the Trustee and other persons or organisations designated by the Trustee. We have relied on all the data and information provided, including Plan provisions, membership data and asset information, as being complete and accurate. We have not independently verified the accuracy or completeness of the data or information provided, but we have performed limited checks for consistency. The data and information we have relied upon is shown in the "Additional Information" section of this report.

In our opinion, all calculations are in accordance with requirements of applicable legislative requirements, and the procedures followed and the results presented conform to applicable actuarial standards of practice.

Section 2: Solvency

When assessing the adequacy of the assets and future contribution rates, both the long-term and short-term solvency positions should be considered. To assess the solvency position, we have considered the following funding solvency measures:

- Vested Benefits Index (VBI), the ratio of assets to the vested benefits, which represent the total amount which the Plan would be required to pay if all members were to voluntarily leave service on the investigation date;
- The Present Value of Accrued Benefits Index (PVABI), the ratio of assets to the present value of accrued benefits, which represents the value in today's dollars, of expected future benefits payable based on membership completed to the valuation date,[1] and
- The MRBI, the ratio of assets to the portion of the Minimum Requisite Benefits as defined in the Plan's Benefit Certificate that relates to defined benefits.

The following table shows the above indices as at the valuation date, as well as the prior valuation date.

	As at 30 June 2022			As at 30 June 2019		
Measure	**Value of Liability**	**Value of Assets**	**Index**	**Value of Liability**	**Value of Assets**	**Index**
VBI	$943,000	$1,413,000	149.8%	$1,403,000	$1,961,000	139.8%
PVABI	$943,000	$1,413,000	149.8%	$1,042,000	$1,961,000	188.2%
MRBI	$778,000	$1,413,000	181.6%	$1,036,000	$1,961,000	189.3%

Overall, the VBI has increased from those at the previous investigation date. This is primarily a result of an exit of one of the three remaining defined benefit employees as at 30 June 2019 .

The PVABI has decreased, which we expect is due to a combination of investment return experience, the difference between the PVAB and the benefit payment with respect to the exit over the period as well as any differences used in valuing the liabilities between WTW and the previous actuary. The higher gap between the expected level of future investment returns and salary and pension increases has reduced the level of the present value of accrued benefits, which in isolation, resulted in an improvement of the PVABI.

In addition, we note that the MRBI has reduced over the intervaluation period. In addition to the factors described above, we have been advised by the Plan's administrator that the stated amount of MRBs as at 30 June 2019, and the value the administrator provided to WTW as at 30 June 2022, may have been underestimated. While investigation is ongoing to confirm the nature and extent of this, we have adjusted the value of the Minimum Requisite Benefits as at 30 June 2022 to take into account the expected impact of this understatement, resulting in a reduction in the MRBI over the three-year period.

[1] Benefits have been apportioned to past service by calculating the projected benefit payable using only service that is completed to the valuation date in the benefits formula. For accumulation-style benefits the accrued benefits do not include the value of future contributions.

The VBI is above 100% as at the valuation date, and as such, the Plan is to be treated as being in a satisfactory financial position as at that date.

Retrenchment Benefits, Other Discretionary or Contingent Benefits

The benefit payable on retrenchment is materially the same as the resignation benefit, and therefore the Plan does not have any material additional funding strain that would be caused by any retrenchments.

We understand that the Plan has not historically paid any material discretionary benefits so we have not analysed the impact such discretionary benefits. There are no other material contingent benefits offered by the Plan.

Termination Benefits

Under the Trust Deed, the benefits required to be paid on termination are amounts determined by the Trustee with the advice of the actuary. In any case, the amounts to be paid would be limited by the amount of assets available in the Plan.

Further, upon termination, it could become necessary to liquidate existing assets. It is noted that the assets are invested in units in pooled superannuation trusts and therefore there is minimal risk of not having the ability to release any future income tax benefit, or having to sell illiquid assets on a forced basis.

If the Plan was ever terminated, the Trustee would need to seek both actuarial and legal advice at that time to consider the method of determining and payment form of benefits from the Plan.

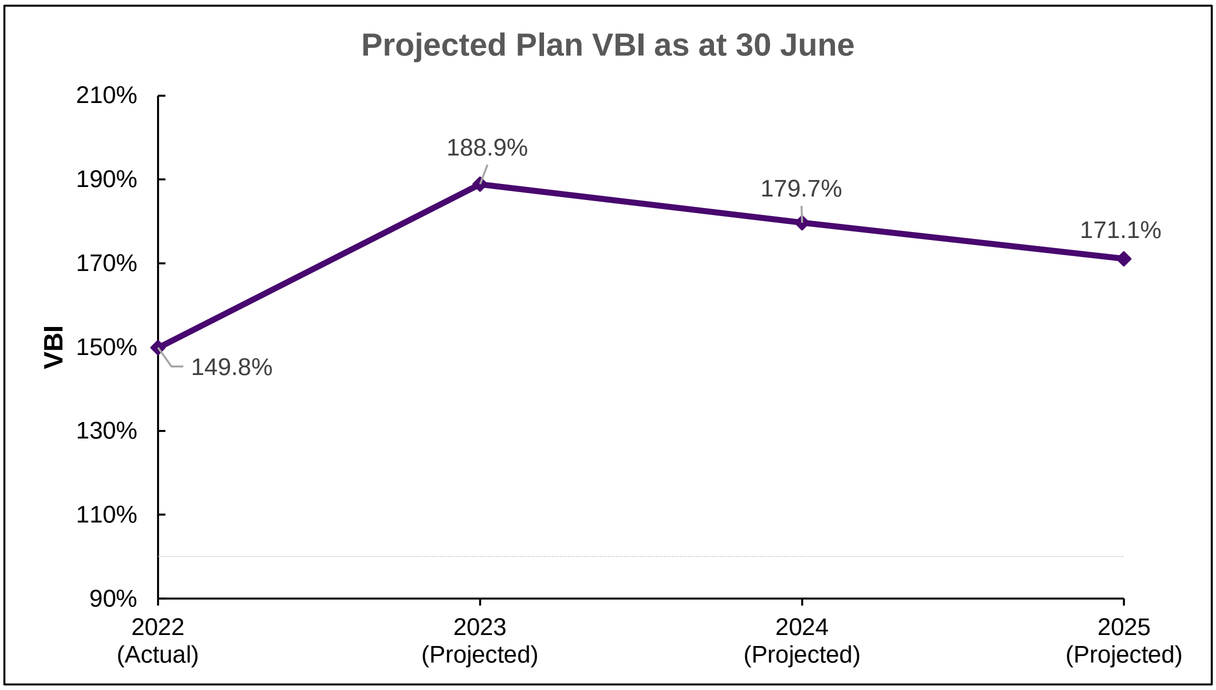
Section 3: Funding

This section considers the long-term funding of the Plan and assesses the contributions required in order to fund benefits payable in future years. To determine the long-term contribution rates, we have used the Projection funding method as described in the "Additional Information" section of this report.

Recommended Contribution Rates

The Trustee has a solvency target of maintaining the VBI to be above 100%, to keep the level required for the Plan to be in a satisfactory financial position. The recommended future contribution rates have been determined based on a projection of the Plan's Vested Benefits Index over the next three years.

The following graph illustrates the Plan's projected funding position, as measured by the VBI, over the next three years following the effective date of this actuarial investigation of 30 June 2022, assuming that the Company continues to contribute under the current contribution basis:



As can be seen from the graph, on the basis of the selected actuarial assumptions, the calculated long-term company contribution rate of Projection is sufficient to maintain the VBI well above 100%.

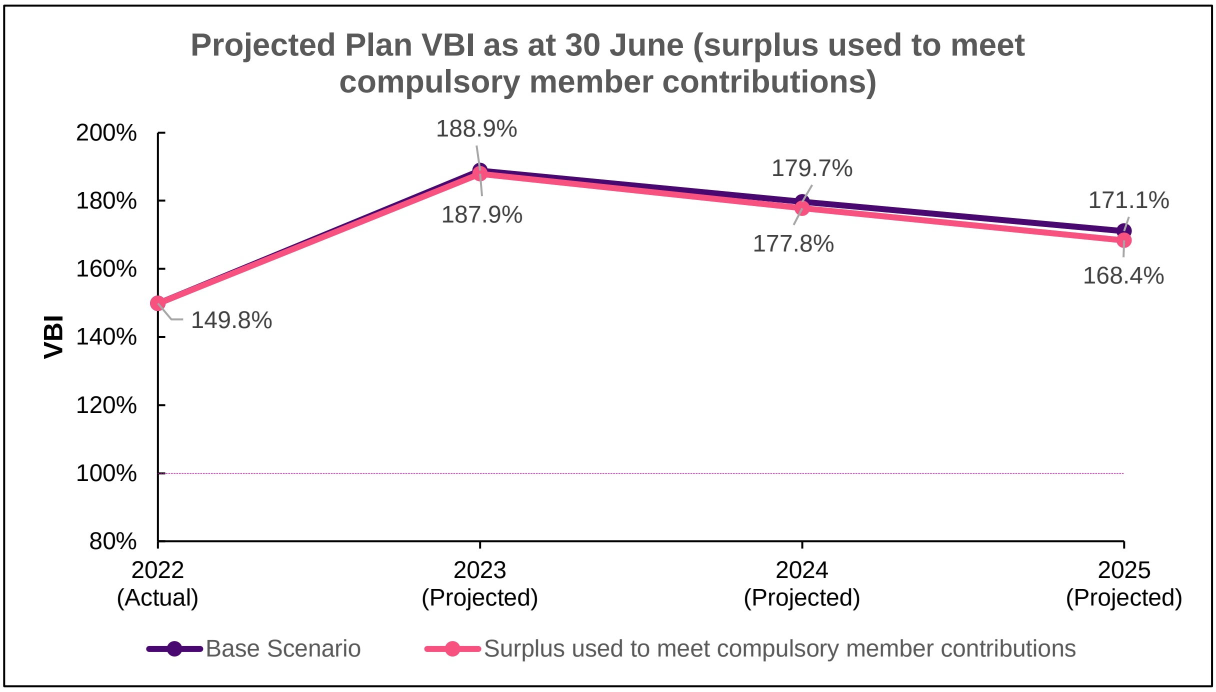
Sensitivity Analysis

Before making a recommendation on the level of contributions that the Company should make to the Plan, it is useful to consider the sensitivity of the analysis above to reasonable variations in the valuation assumptions. The following table shows the impact on the VBI projections, if key assumptions had been varied as described below:

	Assumptions		VBI at 30 June 2025
	Discount Rate	Salary Inflation	
Base	6.5%	4.0%	171.1%
DR +2%	8.5%	4.0%	172.3%
DR - 2%	4.5%	4.0%	169.8%
SI +2%	6.5%	6.0%	171.0%
SI -2%	6.5%	2.0%	171.2%

These results show that the Plan's projected financial position over the medium term is not very sensitive to long-term actuarial assumptions, driven mostly by the benefit design of this Plan. Please note that while the sensitivities have been selected to be illustrative of reasonable changes in the valuation assumptions, they do not represent the upper or lower bounds of possible outcomes and more extreme outcomes are possible.

Because of the strong financial position of the Plan, subject to legal, taxation and further actuarial advice, the possibility for the surplus (instead of the Company or by the member directly) being used to meet compulsory member contributions on their behalf could be considered. The following graph illustrates the impact of the projected VBI as at the end of the upcoming intervaluation period at 30 June 2025, if the surplus is used to meet such contributions:



This projection illustrates that it is possible for the Company and Trustee to consider whether member contributions could be met in this manner. As noted above, before doing so, further advice should be obtained, including legal advice to confirm that this is possible under the Plan Rules, legislative and other requirements, tax advice as to any possible tax implications for the member, and further actuarial advice to confirm that it remains appropriate as at the time of intended implementation.

Recommendation and Summary

Taking into account the projected financial position of the Plan over the next three years, we recommend the Company contribute:

- nil in respect of defined benefit members, until at least 30 June 2025.
- the member contribution rate (including any appropriate allowance for contributions tax) where the Company meets the cost of member contributions on their behalf; and
- at the required amounts to meet any Superannuation Guarantee, contractual or any other obligations in respect of accumulation liabilities (including those with respect to defined benefit members) in the Plan.

We recommend that the Trustee, in consultation with the Company, consider whether member contributions could be met via the Plan's assets. Before implementing such an approach, the Trustee should seek legal advice and further actuarial advice confirming the appropriateness of the approach.

On the basis of the above results, and having regard to the Company's preferences as well as the long-term target objective of the Trustee to achieve a funding target of a VBI of 100%, we believe that a Company contribution rate of nil is sufficient to meet the funding requirements of the Plan.

Accordingly, we recommend that the Company contribute at the rates set out above until at least 30 June 2025 in respect of defined benefit members.

We continue to recommend that the Company contribute at the required amounts to meet any Superannuation Guarantee, contractual or any other obligations in respect of accumulation liabilities (including those with respect to defined benefit members) in the Plan.

We further recommend that the VBI position (and other measures of solvency) continue to be monitored quarterly throughout the following investigation period, to ensure that these contribution recommendations remain appropriate.

Section 4: Other Matters involving actuarial insight

Investments

Investment Strategy

The return objective of the Plan's Investment Strategy for assets supporting defined benefits is to achieve capital and income growth, while minimising the risk that the benefits to members will not be adequately covered. To meet this objective, the assets supporting defined benefits are invested in units in the MLC Super Fund and comprise of approximately 70% "growth" assets (e.g. shares and real estate) with the remaining 30% invested in cash and fixed interest investments.

The actual and target asset allocation as 30 June 2022 of such assets is shown in the below table:

Combined Portfolio	Actual	SAA
Australian Shares	26.9%	27.1%
Global Shares (unhedged)	19.0%	17.9%
Global Shares (hedged)	13.0%	15.1%
Property	4.6%	4.3%
Alternatives (Growth)	4.1%	3.8%
Private Equity	1.2%	0.8%
Infrastructure	1.1%	1.0%
Total Growth Assets	**70.0%**	**70.1%**
Fixed Income	21.7%	22.1%
Credit	2.1%	1.9%
Cash	4.2%	4.1%
Alternatives (Defensive)	2.0%	1.8%
Total Defensive Assets	**30.0%**	**29.9%**

As at 30 June 2022, the Plan has two defined benefit members. Since that date and as at the time of writing, one of the two members has had their benefit paid from the Plan. For the remaining defined benefit member, their accumulation-style benefit currently exceeds their underlying defined benefit by a modest margin, with this margin expected to grow over time under the chosen actuarial assumptions. Because this accumulation-style benefit receives interest at the same rate as that earned by defined benefit assets, as long as the accumulation-style benefit applies by some margin, the return objective for the Plan's defined benefit assets effectively becomes the return objective for the underlying accumulation balances.

In this light, the Trustee may wish to consider whether the risk and return objective of the Plan, as currently stated, continues to be in the member's best financial interests.

Notwithstanding the above, in my opinion an investment strategy as described above continues to be within a range of strategies suitable for a Plan of this type having regard to its financial position, the underlying liabilities and the capacity of the respective employers to meet any funding shortfall.

However, we recommend that the Trustee consider whether further advice should be sought in relation to confirm in its opinion that the Investment Strategy continues to be in the member's best financial interests.

Crediting Rate and Investment Reserving Policy

The Plan's policy credits defined benefit member accounts with actual investment returns (net of fees and taxes) from the underlying assets. In our view, this remains appropriate.

Liquidity

Taking into account the ready sale of the Plan's assets from time to time, in our opinion the Plan has sufficient liquidity to meet payments from regular cashflows.

Shortfall Limit

The Trustee currently has an approved shortfall limit of 100%.

Based on the Plan's benefit design and its target asset allocation described above, in our opinion the 100% shortfall limit remains reasonable for the Plan.

Insurance

Death and Total Permanent Disablement Benefits

At the investigation date, the Plan has death, total and permanent disablement and temporary incapacity/income protection insurance with MLC Life Limited in respect of the future service portion of their death and disablement benefits.

For defined benefit members, the formula used to calculate the level of insurance is:

Death/total and permanent disablement Benefit less the Greater of Vested Benefit, or Accrued Retirement Benefit

Under this formula, no additional benefit would be payable above the member's Vested Benefit if their Vested Benefit exceed their Accrued Retirement Benefit. This could be the case when:

- The member's accumulation-style Leaving Service Benefit is greater than the amount worked out under the defined benefit formula; or
- The member is above age 55 and entitled to the retirement benefit (in which case the Vested Benefit would always be at least equal to or greater than the Accrued Retirement Benefit).

While it is currently the case that the member's Vested Benefit exceed their Accrued Retirement Benefit, it may not always be the case. In such an instance and if the member is not eligible to receive the retirement benefit, it is possible that a small funding strain could be created in the event of the member's death/total and permanent disablement benefit. Depending on the funding position of the Plan at such a time, it is possible that it could have a material detrimental impact on it at that time.

Therefore, while we consider the current insurance arrangements adequate given the funding position of the Plan and also the circumstances of the member, we recommend the Trustee consider whether the formula used in calculating the level of insurance be amended to remove the reference to the Accrued Retirement Benefit. Further, we also note that the Insurance Policy refers to the Vested Benefits as defined under the Plan's Participation Schedule, but the reference is not current. We recommend that the Insurance Policy terms be amended to correct this (e.g., to refer to Vested

Benefits as the amount payable under the Plan's Participation Agreement as a Retirement or Leaving Service Benefit).

For accumulation members, as the amount insured on their death is equal to the excess of their death benefit over their accumulation balance, the amount at risk is fully insured and there is no funding strain.

Salary Continuance Benefits

In addition to the above arrangements, salary continuance benefits are provided to Plan members which are fully insurance by MLC Life Limited in the case of total and temporary disablement. On this basis, I consider that the Plan's insurance arrangements are suitable to protect the Plan against adverse salary continuance claims experience.

Section 5: Additional Information

Risks

The table below summarises the main risks to the financial position of the Plan.

Risk	Approach taken to risk
Investment returns on the existing assets could be insufficient to meet the liabilities	The Trustee takes advice from the Plan Actuary on possible assumptions for future investment returns and expected salary increases. In setting the future contributions, the Plan Actuary considers the effect on the future financial position if real investment returns (i.e., investment returns in excess of salary increases) are less than expected.
Salary increases could be different from that assumed which could result in higher liabilities	While all remaining members currently have the accumulation form of benefits applying and it is expected that they will receive the accumulation benefit upon exit, the Trustee and Company should be aware that poor investment returns or higher than expected salary increases may result in defined benefits applying. In the case of lower than expected investment returns this will also impact on the value of the assets available to cover defined benefits. The Trustee is able to agree further contributions with the Company at subsequent valuations if future returns prove insufficient.
Legislative changes could lead to increases in the Plan's liabilities	The Trustee takes legal and actuarial advice on changes in legislation and consults with the Company, where relevant.

Economic risk

Legal risk

Benefits summary

The Plan was established to provide superannuation benefits to employees of the Air Liquide Australia Limited. Its operations are largely governed by a Participation Agreement dated 3 December 2018.

The Plan is a regulated complying superannuation fund under the Superannuation Industry (Supervision) Act and qualifies for concessional tax treatment.

There are two defined benefit categories of membership in the Plan. Category A members contribute at a rate of 5.0% of salary, whilst Category B members contribute at 2.5% of salary. The Plan also has an accumulation only division. The Plan's liabilities are provided as lump sum benefits based on the period of membership and salary over the last few years of membership.

The main provisions of the Plan are summarised as follows:

Normal Retirement Age (NRA)	Age 65.
Salary	The amount with the Company certifies to the trustee as being the Member's base wage or salary or earnings.
Final Average Salary	The average of the 3 years of the Member's Salaries immediately preceding the calculation date used for a benefit.
Service	Period of employment with the Company in respect of which the member receives Salary or temporary disablement income and any period of absence from employment which the Company determines shall be included.
Leaving Service Benefit	Member contributions accumulated with interest, plus the vested portion of a part of this amount (currently 100% for all remaining members).
Retirement Benefit	The minimum of: • A multiple, based on the applicable accrual rate for the Category and the number of years of the member's service, of the member's Final Average Salary; • Seven times the member's Final Average Salary; or • the member's Leaving Service Benefit.
Death/total and permanent disablement Benefit	The member's Retirement Benefit had the member survived until the Normal Retirement Age and had the member's salary remained unchanged from the date of death to the member's Normal Retirement Age plus any additional Group Life Insurance.
Total and temporary disablement Benefit	12.5% of the member's death and total and permanent disablement benefit payable on a monthly basis after a three month waiting period, payable to age 65. Subject to a maximum of 75% of salary or amount of $30,000.

The defined benefit categories of the Plan are closed to new entrants.

Discretionary and contingent benefits

No future discretionary benefits or discretionary increases in benefit have been allowed for in the calculation of the technical provisions and statutory estimate of solvency, other than our understanding of established practices in benefit calculations.

Changes to the benefits

Since the valuation as at 30 June 2019 no changes have been made to the Plan's benefits.

Summary of Data Used in this Investigation

Membership Data

Plum Financial Services Ltd (the Plan administrator) has responsibility for maintaining member records, payment of benefits and other administrative tasks of the Plan.

The Plan administrator provided data in respect of members of the Plan as at 30 June 2022, including members who had left the Plan since the last investigation date.

We have checked a sample of the membership data for internal consistency and are satisfied as to the accuracy of this sample.

The Plan administrator has advised us of some possible issues that are currently under investigation, in relation to the member accounts and the Minimum Requisite Benefits. For the purposes of this actuarial investigation, we have estimated the expected impact of the issues, and made suitable allowances in the asset and various liability measures as at 30 June 2022.

The following table shows a summary of the membership as at 30 June 2019 and 30 June 2022:

	30 June 2019	30 June 2022
Number of Members	3	2
Average Age	58.5	57.0
Average Past Company Membership	31.5	34.0
Average Superannuation Salary	$87,000	$84,000

Assets Data

The Plan administrator provided unaudited asset information for the Plan as at 30 June 2022. The fair value of assets supporting defined benefit liabilities as disclosed, which we understand excludes any amount held to meet the Operational Risk Financial Requirement, was $1,420,000.

As discussed above, we have adjusted the value of the Plan assets to allow for the expected impact of the possible issues identified by the Plan Administrator above by reducing the value as at 30 June 2022 by approximately $7,000. The resultant value of $1,413,000 was used in this valuation to determine contribution recommendations and Funding Status Measures.

While there are no audited financial accounts prepared for the Plan, audited financial statements are prepared for the MLC Super Fund in aggregate. We are satisfied that there are no material data discrepancies and that the data provided is suitable for the purpose of this investigation. We have relied on the information provided for the purposes of this investigation. Although we have no reason to doubt the quality of asset information provided, the results of this investigation are dependent on the quality of the asset information. Any changes to the asset values above will have an impact on the outcome of the investigation and any resulting recommendations.

Funding Method, Assumptions and Experience

Funding Method

In this valuation, I have determined the level of company contributions required by projecting members' expected future benefits, and the expected level of future value of assets on the basis of selected assumptions, and compared its levels against relevant funding objectives. If the funding objectives are not expected to be achieved, alternative company contributions were determined in order to achieve the funding objectives.

This funding method is suitable for this valuation as it takes into account the expected growth of the Plan's assets and liability profile in the short-term in determining the company contributions.

In producing my recommendations, we have also taken into account the pace of funding required to maintain certain short term solvency measures, in particular, that legislation requires the VBI to be above 100% and that the Trustee has a funding target of 100%.

In the previous actuarial investigation, the Aggregate funding method was used to determine the level of contributions. In my view it is appropriate to adopt the Projection method due to the Plan membership only having one defined benefit member remaining following July 2022.

There is no impact of the change in the choice of funding method on the results of this investigation. There would be no change to my recommendations in this report if the Aggregate method is used instead of the Projection method.

Assumptions

In order to determine the value of expected future benefits and Plan assets, it is necessary to make assumptions regarding the timing and amount of future benefit payments, expenses and contributions. In doing so it is important to examine the experience of the Plan since the last valuation to see whether the previous assumptions have been borne out in practice.

While each of the assumptions used is normally the actuary's best estimate of future experience, in practice, the actual experience in any (short) period can always be expected to differ from the assumptions to some extent. However, it is intended that over longer periods, they will provide a reasonable estimate of the likely future experience and financial position of the Plan.

In the short-term, as the actual experience emerges differently to the experience implied by the assumptions, the financial position of the Plan will also vary from that expected. However, adjustments to Company contribution rates, if any, can be made to reflect these differences in the following actuarial investigation.

Financial Assumptions

Valuation assumptions can be broadly divided into demographic assumptions, which relate to characteristics of current and future members of the Plan, and financial assumptions, which are assumptions other than demographic assumptions. The following sections first consider the financial assumptions that are to be adopted for this valuation.

Investment Returns

The rate of return on the Plan's Assets (net of tax and investment expenses that are deducted from the investment return) from 30 June 2019 to 30 June 2022 was 3.9% p.a. which is lower than rate assumed in the previous investigation of 5.5% p.a. (net of tax). In isolation, this has had a negative impact on the financial position of the Plan.

While short-term differences between actual investment return experience and the actuarial assumption can affect the long term financial position of the Plan as measured by the actuarial investigation, the assumption used in the investigation must be based on long-term expectations since the investigation involves valuing payments in the future.

Based on models of future investment returns developed by Willis Towers Watson, the current long term expectations of investment returns net of taxation and investment management expenses and current strategic asset allocation of the Plan is 6.5% p.a.. On this basis, we have assumed a long-term investment earning rate of 6.5% p.a. for this investigation, which is higher than the assumed long term earning rate used for the previous investigation was 5.5% p.a..

Salary Increases

The average salary increases during the investigation period for the members remaining in the Plan as at 30 June 2022 was 2.8% p.a. This is lower than the salary increases assumption adopted for the previous actuarial investigation of 4.0% pa. In isolation, this has had a positive impact on the financial position of the Plan.

For the purpose of this investigation, we have assumed that long-term salary increases for the remaining members to average 4.0% p.a., which is consistent with a margin of 1.0% of real salary increases above the current long term expectations of price increases of 3.0% p.a. based on modelling by Willis Towers Watson.

Administration Expenses and Insurance Costs

For preparation of the VBI projections, we have allowed for the expected costs of administration expenses and insurance premiums of approximately $41,000 p.a., increasing in line with future expected price inflation, during the projection period.

This includes an allowance for insurance premiums in respect of accumulation members who transitioned on 1 June 2002 from the previous superannuation Plan for whom the Company pays a small proportion of the premiums from age 50.

Demographic Assumptions

Rates at which Employee Members Cease Service

There are a small number of employee members remaining in the Plan, therefore, we have assumed that all Employee members would only cease service when they retire at their Normal Retiring Age of 65 (or above if they are currently at this age). We have retained this assumption because of the size of the Plan and the mature age of the members, where applying assumed decrement rates before retirement would not be appropriate because it would not adequately capture the impact of the event of a member ceasing service.

Statutory Statements Under SPS 160

Air Liquide Superannuation Plan

Actuarial Investigation as at 30 June 2022

The statements required under paragraphs 23(a) to (i) of SPS 160 for interim and regular investigations are set out below:

Plan Assets

At 30 June 2022 the net market value of assets of the Plan, excluding any amount held to meet the Operational Risk Financial Requirement (ORFR), was $1,413,000.

Projection of Defined Benefit Vested Benefit Index

Based on the actuarial assumptions we project that the likely future financial position of the Plan over the three years following the investigation date will be as follows:

Date	Defined Benefit Vested Benefits Index
30 June 2022	149.8%
30 June 2023	188.9%
30 June 2024	179.7%
30 June 2025	171.1%

Accrued Benefits

The value of the accrued liabilities of all members as at 30 June 2022 was $943,000.

In my opinion, the value of the assets of the Plan at 30 June 2022 was adequate to meet the liabilities in respect of accrued benefits in the Plan (measured as the present value of members' accrued entitlements using the actuarial assumptions).

This assessment has been made using assumptions and a valuation method which we regard as reasonable.

Vested Benefits

The value of the vested benefits of all members as at 30 June 2022 was $943,000.

In my opinion, the financial position of the Plan is not unsatisfactory and the shortfall limit does not need to be reviewed at this time.

Minimum benefits

The value of the liabilities in respect of the minimum benefits of members as at 30 June 2022 was $778,000 which is less than the value of assets held at that date.

Funding and Solvency Certificates

Funding and Solvency Certificates for the Plan covering the period from 30 June 2019 to 30 June 2022 required by the Superannuation Industry (Supervision) Act have been provided. In my opinion, we are likely to be able to provide Funding and Solvency Certificates for the Plan covering the period from 30 June 2022 to 30 June 2025.

Company Contributions

The report on the actuarial investigation of the Plan at 30 June 2022 recommends the Company to contribute:

- nil in respect of defined benefit members, until at least 30 June 2025.
- the member contribution rate where the Company meets the cost of member contributions on their behalf; and
- at the required amounts to meet any Superannuation Guarantee, contractual or any other obligations in respect of accumulation liabilities in the Plan.

Payment of Pensions

The Plan does not have any lifetime pension members.

Pre-July 1998 Funding Credit

No pre-July 1998 funding credits have been granted to the Plan.

Anthony Chan
Fellow of the Institute of Actuaries of Australia

23 December 2022

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