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19 December 2024

Solvay Interox Superannuation Plan: Actuarial Investigation as at 30 June 2024

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Understand the implications of decisions and the likely outcomes.

Insight

Navigate the regulatory and business environment, and unlock the value of data.

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Foster a culture of strong governance to confidently manage uncertainty.

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1 Executive summary and recommendations

1.1 Introduction

I have carried out an actuarial investigation of the Solvay Interox Superannuation Plan (the Plan), a defined benefit plan within the Retirement Portfolio Service superannuation fund, as at 30 June 2024. The investigation is required under the Superannuation Industry (Supervision) Act 1993 (SIS).

This report has been prepared for the Plan's Trustee, OnePath Custodians Pty Ltd, and will also be provided to the principal employer participating in the Plan, Solvay Interox Pty Ltd (Solvay).

The main purposes of the investigation are to:

- Examine the financial condition of the Plan at the valuation date.
- Recommend the employer contributions required by Solvay to meet its continuing benefit obligations, and to maintain the Plan in a sound financial condition.
- Consider the appropriateness of the Plan's investment and insurance arrangements.
- Satisfy the actuarial investigation requirements of the Superannuation Industry (Supervision) Act 1993 (SIS).

I carried out the previous actuarial investigation of the Plan, as at 30 June 2021. My report was dated 21 December 2021.

This report complies with the Actuaries Institute's *Professional Standard 400 Investigations of the financial condition of defined benefit superannuation funds.*

1.2 Financial position at 30 June 2024

At the valuation date, there were two defined benefit members. Total vested benefits (i.e. the benefits immediately available to members on resignation or retirement) were [redacted], backed by Plan assets of [redacted]

The Plan was in a satisfactory financial position (as defined under SIS) at the valuation date, with the Plan's defined benefit section assets providing 107% coverage of members' vested benefits.

1.3 Valuation assumptions

The key financial assumptions adopted for the 30 June 2024 valuation are as follows:

Assumption	Return (% p.a.)
Discount rate / return on assets (net of investment expenses and tax)	3.5%
Salary increases	3.0%

1.4 Valuation of Plan liabilities

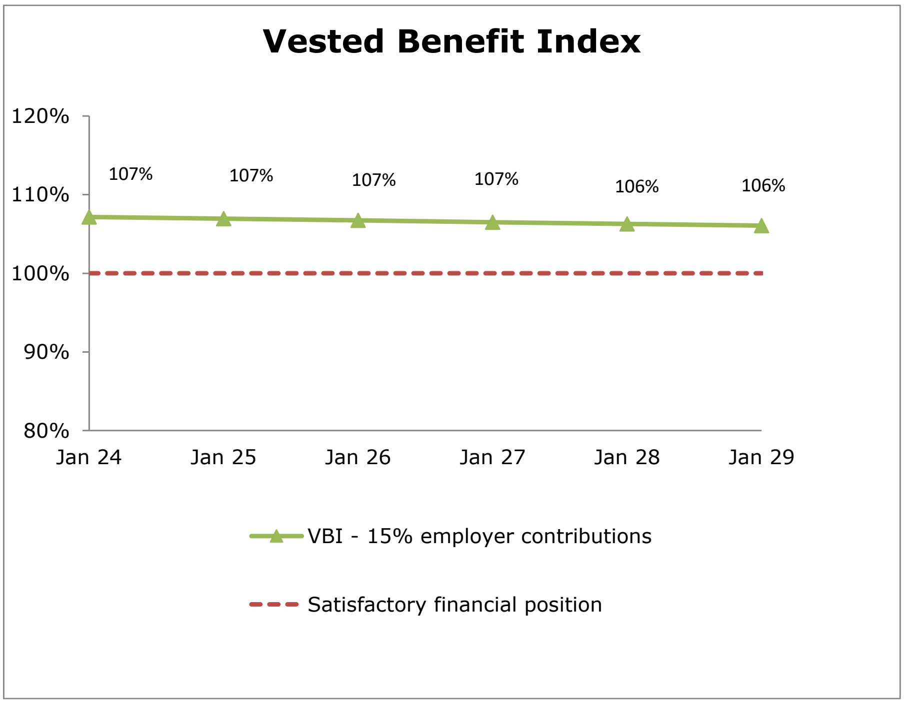
The results of the valuation as at 30 June 2024 can be summarised as follows:

Valuation balance sheet 30 June 2024	
Plan assets	[redacted]
Employer liabilities:	
Past service liabilities	[redacted]
Future service liabilities	[redacted]
Future expenses at [redacted]	[redacted]
less: Future member contributions	[redacted]
Total employer liabilities	[redacted]
Surplus/(Deficit)	[redacted]

On the assumptions adopted, the amount required to meet the Plan's future benefits and expenses is [redacted] requiring an employer contribution rate of 11.1% of defined benefit member salaries.

1.5 Vested benefit projections

The graph below indicates that with a resumption of employer contributions at the rate of 15% of salaries, the vested benefit index is expected to remain close to its 30 June 2024 level for the next five years.



1.6 Contribution recommendations

I recommend that Solvay should:

- From 1 February 2025, increase its contribution rate from nil to 15% of salaries to fund defined benefit section benefits, and
- Continue to contribute 3% of salaries towards members' Award accounts in the accumulation section of the Plan.

These contribution rates include allowance for the Plan's insurance premiums and administration and consulting fees.

1.7 Next actuarial review

The next actuarial investigation of the Plan for SIS purposes will be due as at 30 June 2027.

I understand that the Trustee monitors the Plan's defined benefit asset coverage of vested benefits on a monthly basis, and will notify me if this measure falls towards 100%.

John Newman
Fellow of the Institute of Actuaries of Australia
19 December 2024

Peer reviewed by
Stephen Crump, FIAA

2 The Plan

2.1 Description

The Plan is a defined benefit sub-plan within the Retirement Portfolio Service (RPS). OnePath Custodians Pty Limited is the RPS Trustee. Insignia Financial Ltd (Insignia) provides administration services to the Plan.

The principal employer participating in the Plan is Solvay Interox Pty Ltd (Solvay).

The Plan is regulated by the Australian Prudential Regulation Authority (APRA) under the Superannuation Industry (Supervision) Act 1993 (SIS). As a regulated and complying plan, employer contributions are tax deductible to Solvay, but subject to tax in the hands of the Trustee, and the Plan's investment income is subject to concessional rates of tax.

The Plan contains a closed defined benefit section, and an accumulation section open to new members. Although the Plan is administered as two separate sections, the Trustee has confirmed that the RPS's structure allows cross-subsidies between these sections so that employer costs, and shortfalls or surpluses, can be taken together across the Plan as a whole.

Solvay uses the Plan to meet its Superannuation Guarantee (SG) obligations under the Superannuation Guarantee Administration Act 1992.

2.2 Trust Deed

The Plan is governed by the provisions of the RPS Trust Deed, and the Plan's Employer Application Form and Benefit Specification Schedule, and any subsequent deeds of amendment.

For ease of reference, the Plan's governing provisions are referred to collectively in this report as the Trust Deed.

The benefit provisions relating to the Plan's defined benefit members are summarised in Appendix 1 to this report.

3 Data

3.1 Data provided, and reliance on data

My investigation is based on 30 June 2024 Plan membership and investment data provided by the Plan's administrators, Insignia.

I have checked the data for reasonableness and consistency with the Trust Deed and the data provided for previous investigations of the Plan. However, I have not independently verified the data, hence my report necessarily relies on the completeness and accuracy of the data provided.

3.2 Defined benefit membership

At the valuation date, the closed defined benefit section of the Plan contained two active members, both members of Category 1, and both aged in their late 50s.

The valuation of the defined benefit section includes allowance for the accumulation accounts maintained within the defined benefit section, i.e. member contribution accounts, deemed (pre-tax) member contribution accounts, surcharge accounts, and the notional employer accounts forming part of the Plan's Minimum Requisite Benefits (i.e. Superannuation Guarantee minimum benefits).

The valuation makes no allowance in either the assets or the liabilities for the members' 3% Award accounts, or for any rollover or voluntary account balances that members may have in the accumulation section of the Plan.

3.3 Vested benefits

For the two defined benefit members in force at 30 June 2024, total vested benefits were [redacted].

3.4 Asset value

The defined benefit section asset value was [redacted] at the valuation date, based on the Plan's Statement of Account for the 2023-24 financial year.

This was the value of the Plan's holding in the Optimix Conservative investment option at the valuation date. Based on the information provide by the Plan's administrators, I am not aware of any amounts payable to or from the Plan that would require adjustment to this asset value.

At the valuation date, the Plan's defined benefit section assets provided 107% coverage of members' vested benefits, i.e. a margin of [redacted]

4 Plan’s experience since previous investigation

4.1 Benefit changes

Since the previous actuarial valuation of the Plan, there have been no changes to the Trust Deed relating to the calculation of member benefit entitlements.

4.2 Membership changes

At the 30 June 2021 valuation date, the Plan had five active defined benefit members. Three of these members have either since terminated employment and been paid their benefits from the Plan, or reached age 65 and been transferred to the accumulation section of the Plan.

The Plan no longer contains any members entitled to pension benefits.

4.3 Employer contributions

The previous valuation report recommended that from 1 February 2022, Solvay should contribute to the Plan at the following rates:

- Nil% of salaries towards the defined benefit section, plus
- 3% of salaries towards members’ 3% Accounts in the accumulation section of the Plan, plus
- if any retiree should elect to take their benefits in pension form, an additional lump sum assessed at that time.

I also recommended that all Plan expenses could continue to be met from Plan assets.

Prior to February 2022, the recommended employer contribution rate to fund defined benefit section benefits was 15% of salaries.

I understand that Solvay’s contributions to the Plan have been in accordance with these recommendations.

4.4 Investment returns and member salary growth

The Plan’s defined benefit section assets are invested in the Optimix Conservative fund.

Prior to April 2024, Plan assets were invested in the UBS Defensive investment option. When that option was discontinued, Plan assets were transferred to Optimix Conservative.

Based on movements in unit prices, I estimate the Plan's investment return for the three-year period to 30 June 2024 as -1.6% p.a., distributed by investment option as follows:

Period	Option	Return (% p.a.)
Jun 2021 to Apr 2024	UBS Defensive	-2.2
Apr 2024 to Jun 2024	Optimix Conservative	+6.4

Over the same period, salary growth for the remaining two members has averaged 3.2% p.a.

The corresponding assumptions adopted for the previous investigation were 4.0% p.a. and 3.0% p.a. respectively, i.e. a real return of 1.0% p.a.

The lower than assumed investment return, and to a lesser extent the higher than assumed salary increase rate, will both have had unfavourable financial impacts on the Plan.

4.5 Expenses

Over the past three years, the Plan's insurance premiums and administration fees have averaged [redacted], or around 1.0% of total 30 June 2024 defined benefit member salaries.

5 Investments

5.1 Plan investments

The Plan's defined benefit assets are currently invested wholly in the Optimix Conservative fund.

5.2 Optimix Conservative fund

The Optimix Conservative fund's investment objective is to provide stable returns over the medium term by investing in a diversified portfolio of mostly defensive assets with some growth asset exposure, and to achieve total returns after fees in excess of the benchmark over a rolling three-year period.

At 30 June 2024, the fund had a 24% allocation to growth assets (equities and property) with alternative assets (10%) possibly providing some further exposure to growth.

5.3 Investment objectives

For an ongoing plan paying benefits linked to members' salary growth, it is appropriate to maintain some reasonable exposure to growth assets, as the plan's investment returns will then be expected to outperform measures such as AWOTE or CPI over reasonably long periods such as five years.

However, the inclusion of defensive assets should reduce the potential volatility of investment returns. This should better secure the Plan's asset coverage of members' accrued benefit entitlements, and reduce the possibility of negative investment returns requiring additional employer contributions to rectify.

For the Plan's two defined benefit members, vested benefits are currently equal to their minimum requisite benefits (i.e. Superannuation Guarantee minimum benefits), which are in accumulation form. On the valuation assumptions adopted, the members are expected to receive accumulation benefits at age 65 or earlier retirement.

This means that the investment risk for Solvay is asymmetric. If the Plan's exposure to growth assets were to be increased, the expected higher investment returns would be passed on to the members' accumulation benefits via higher crediting rates. However, the associated higher volatility of investment returns would increase the risk of assets not covering members' salary-related defined benefits, hence requiring additional employer contributions to rectify.

On balance, I am satisfied that the Plan's investment objectives are appropriate.

5.4 Crediting Rate policy

I have been advised that the Trustee sets interim and final crediting rates based on movements in the Plan's investment unit prices, which are net of allowance for investment tax and investment management fees.

I consider that the Trustee's crediting policy remains appropriate for the Plan.

5.5 Shortfall limit

For the purpose of APRA's Superannuation Prudential Standard 160, the Trustee is required to set a shortfall limit. This is the extent to which the Trustee considers that a plan 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 fund assets, the Plan can be restored to a satisfactory financial position within one year.

I have been advised that the Trustee has set a shortfall limit of 100% for the Plan i.e. for the Plan to not be in breach of this limit, Plan assets need to provide at least 100% coverage of defined benefit members' defined benefit interests. In my opinion, currently there is no need to review this shortfall limit.

6 Insurance

6.1 Death and TPD benefits

For members of the defined benefit section, death and TPD benefits are fully insured under a group life arrangement. The insured portion of each member's death and TPD benefit is the excess above the member's vested benefit.

In my view, this fully insured approach is appropriate, given the small size of the defined benefit section and the potential variability of claims experience.

7 Valuation methodology and assumptions

7.1 Methodology

For the purpose of this valuation, I have used the aggregate funding method, which I consider appropriate for a small defined benefit plan closed to new entrants.

This method calculates the employer contribution rate required to fund members' future benefit payments, in respect of both past and future service, taking into account the Plan assets held at the valuation date. If the Plan's future experience is in line with the assumptions adopted, this contribution rate is expected to remain unchanged until the last defined benefit section member leaves the Plan.

The liabilities for projected future benefit payments are split into a component in respect of service prior to the valuation date (the past service liability) and a component in respect of service after the valuation date (the future service liability). The past service liability for each member at the valuation date has been assessed subject to a minimum of that member's vested benefit, i.e. the benefit that member would have been entitled to had he or she left the Plan at that date.

7.2 Financial assumptions

The financial assumptions used in the valuation are:

Assumption	Return (% p.a.)
Discount rate / return on assets (net of investment expenses and tax)	3.5%
Salary increases	3.0%

Based on the Optimix Conservative option's relatively low exposure to growth assets, I have reduced the investment return assumption from 4.0% p.a. (the assumption used for the 30 June 2021 valuation) to 3.5% p.a. In practice, however, the change has very little impact because on both previous and new assumptions, members are expected to receive accumulation benefits.

7.3 Demographic assumptions

I have adopted a nil decrement basis, and assumed that members will remain within the Plan until age 65.

7.4 Expenses and insurance costs

Over the past three years, the Plan's insurance premiums and administration fees have averaged [redacted] Based on the Plan's recent experience, I have assumed that consulting fees will amount to [redacted], and hence included allowance for total Plan expenses of [redacted]. I have assumed these will increase at 3.0% p.a.

7.5 Superannuation Guarantee

The valuation includes allowance for minimum Superannuation Guarantee benefits, based on the current SG rate of 11.5%, increasing to 12.0% from 1 July 2025.

8 Funding Status

8.1 Benefits

This section examines the Plan's ability to meet defined benefit members' benefits at the valuation date. I have measured the Plan's asset coverage of the following benefits:

a) Superannuation Guarantee minimum benefits

b) Vested benefits

c) Actuarial value of accrued benefits

8.2 Asset coverage of member benefits

At the valuation date, defined benefit section assets amounted to [redacted], and provided the following coverage of member benefit entitlements:

Benefits	Amount	Asset coverage
SG minimum benefits	[redacted]	107%
Vested benefits	[redacted]	107%
Actuarial value of accrued benefits	[redacted]	107%

8.3 Benefits on termination of the Plan

In the event that Solvay terminates its participation in the Plan, the Trust Deed requires any arrears of contributions to be paid into the Plan but does not impose any additional funding requirements.

9 Valuation Results

9.1 Valuation balance sheet

The results of the valuation as at 30 June 2024 can be summarised as follows:

Valuation balance sheet 30 June 2024	
Plan assets	[redacted]
Employer liabilities:	
Past service liabilities	[redacted]
Future service liabilities	[redacted]
Future expenses at [redacted]	[redacted]
less: Future member contributions	[redacted]
Total employer liabilities	[redacted]
Surplus/(Deficit)	[redacted]

On the assumptions adopted, the valuation balance sheet shows an expected employer funding requirement of [redacted], requiring an employer contribution rate of 11.1% of defined benefit member salaries.

9.2 Progression since 30 June 2021

At 30 June 2021, there was expected to be a relatively small actuarial surplus of [redacted] (i.e. approximately 7% of then Plan assets) even if employer contributions to the Plan were suspended over the future lifetime of the defined benefit membership.

Hence I recommended that Solvay could reduce its employer contribution rate to nil, from February 2022. On the valuation assumptions adopted, it was expected that Plan assets would provide at least 110% coverage of vested benefits over the five-year period from the valuation date.

The change in funding requirement over the period is attributable largely to the Plan's poor investment performance over the period (i.e. -1.6% p.a. actual vs 4.0% p.a. assumed) particularly for the now discontinued UBS Defensive investment option.

9.3 Impact of variation in assumptions

Normally with a defined benefit plan, the key valuation assumption is the difference between the assumed Plan investment return of 3.5% p.a. net of tax and investment expenses, and the salary growth rate of 3.0% p.a., i.e. a real rate of return of 0.5% p.a.

Other things being equal, if the Plan's investment return exceeds defined benefit members' salary growth by more than 0.5% p.a., the Plan's actuarial deficit will be smaller than expected. Conversely, the actuarial deficit will be greater than expected if the Plan's real rate of investment return is lower than expected.

However, because the Plan is expected to provide accumulation benefits on retirement, the employer contribution rate is relatively insensitive to small variations in these key financial assumptions:

Investment return	Surplus/(Deficit)	Employer contribution rate required
2.5% p.a.	[redacted]	11.2%
3.5% p.a.	[redacted]	11.1%
4.5% p.a.	[redacted]	10.9%

Salary growth	Surplus/(Deficit)	Employer contribution rate required
2.0% p.a.	[redacted]	10.9%
3.0% p.a.	[redacted]	11.1%
4.0% p.a.	[redacted]	11.2%

These tables do not indicate the bounds of all possible outcomes. In practice, the Plan's experience may lie outside the ranges illustrated.

9.4 Events since the valuation date

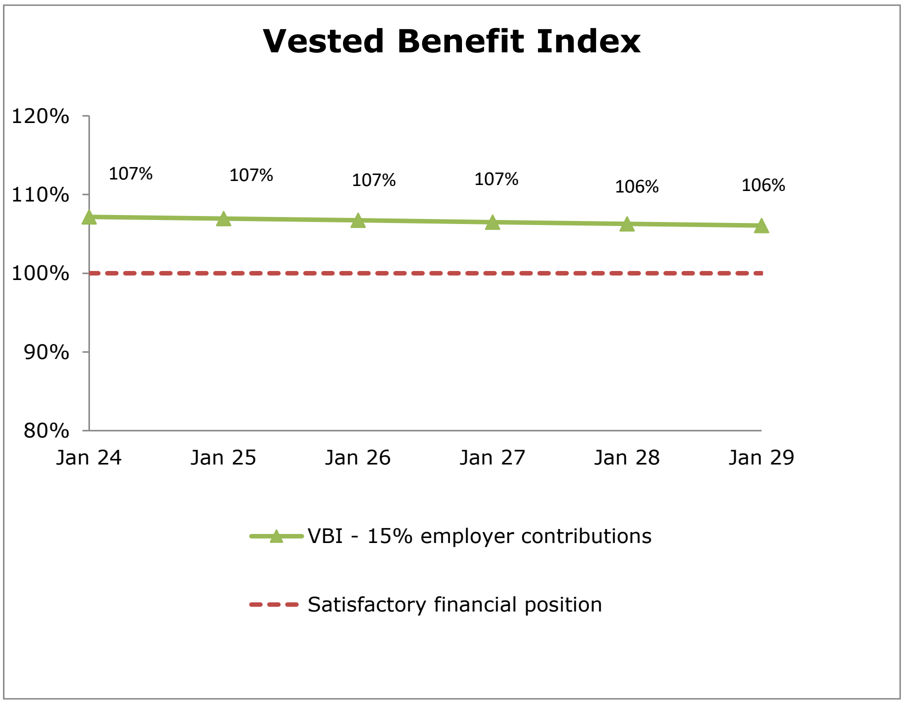
Based on the unit prices advised by Insignia, I estimate the Plan's investment return for the period 30 June to 30 November 2024 as 3.5% (8.6% p.a. annualised). This will have improved the Plan's financial position.

9.5 Vested benefit projections

The graph overleaf summarises the Plan's projected asset coverage of member vested benefits over the five-year period from the valuation date, allowing for:

- Employer contributions at the higher rate of 15% of defined benefit salaries.
- 3.5% p.a. investment returns and 3.0% p.a. salary increases (with no allowance for the higher than assumed investment return to 30 November 2024).
- Insurance premiums, administration and consulting fees of [redacted] p.a., increasing at 3.0% p.a.

The graph indicates that with an employer contribution rate of 15% of salaries, the vested benefit index is expected to remain close to its 30 June 2024 level for the next five years.


Vested Benefit Index
120%
110%
100%
90%
80%
107%
107%
107%
107%
106%
106%
Jan 24
Jan 25
Jan 26
Jan 27
Jan 28
Jan 29
VBI - 15% employer contributions
Satisfactory financial position

10 Material risks

10.1 Introduction

Professional Standard PS 400 issued by the Institute of Actuaries of Australia requires the actuary to consider and document any material risks to the Plan associated with the actuarial assumptions, or related to the ongoing actuarial management.

10.2 Investment return

The key assumptions made in this report are the investment return assumption of 3.5% p.a., and the salary growth assumption of 3.0% p.a., i.e. an assumption that the Plan's real investment return will be 0.5% p.a.

If the Plan's investment returns are lower than expected, or salary growth higher than expected, Solvay may need to increase its contributions to the Plan to fund members' future benefits.

11 Recommendations

11.1 Contributions

I recommend that Solvay should:

- From 1 February 2025, increase its contribution rate from nil to 15% of salaries to fund defined benefit section benefits, and
- Continue to contribute 3% of salaries towards members' Award accounts in the accumulation section of the Plan.

These contribution rates include allowance for the Plan's insurance premiums and administration and consulting fees.

11.2 Next actuarial review

The next actuarial review of the Plan will be due as at 30 June 2027.

I understand that the Trustee monitors the Plan's defined benefit asset coverage of vested benefits on a monthly basis, and will notify me if this measure falls below towards 100%.

Appendix A. Benefit Summary

Benefit Summary	
All Categories:	
Normal Retirement Date (NRD)	65th birthday
3% Account (maintained in accumulation section)	Members receive the balance of their 3% Account (based on accumulated employer contributions of 3% of salary, less allowance for tax) on leaving the Plan for any reason.
Voluntary Accounts (maintained in accumulation section)	Member voluntary contribution and rollover accounts (if any) are payable on exit from the Plan for any reason.
Surcharge Account	The member's liability for contributions surcharge is maintained as a negative accumulation account within the defined benefit section of the Plan.
Category 1:	
Final Average Salary (FAS)	Average of the member's five highest salaries at the Review Dates (1 July) prior to the member's leaving service date. On early retirement, death or TPD, FAS is calculated assuming salary at previous Review Date continues up to NRD.
Member contribution rate	5% of salary
Normal Retirement Benefit	A lump sum benefit of 12.5% of FAS for each year of service.
Early Retirement Benefit (from age 55)	Normal Retirement Benefit based on actual service, reduced by 0.25% for each complete month that date of leaving service precedes NRD.
Death Benefit	Prospective Normal Retirement Benefit, assuming member remains in service to NRD.
Total and Permanent Disablement (TPD) benefit	Prior to age 60: Death Benefit After age 60: Early Retirement Benefit
Withdrawal and Retrenchment Benefit	Twice the member's contribution account balance

Appendix B. Short Report

The following statement has been prepared for compliance with Regulation 9.31 of the Superannuation Industry (Supervision) Act 1993.

I have carried out an actuarial valuation of the Solvay Interox Superannuation Plan, a sub-plan of the Retirement Portfolio Service, at 30 June 2024 and certify the following:

a) At the valuation date, the value of Plan assets available to meet the liabilities of the defined benefit section of the Plan was [redacted]

b) The value of the Plan assets was sufficient to meet the value of the liabilities in respect of accrued benefits at the valuation date. I expect the Plan's assets to remain sufficient to cover the liabilities in respect of accrued benefits over the three-year period following the valuation date.

c) I recommend that Solvay should:

- From 1 February 2025, increase its contribution rate from nil to 15% of salaries to fund defined benefit section benefits, and
- Continue to contribute at the rate of 3% of salaries towards members' Award accounts in the accumulation section of the Plan.

d) All required Funding and Solvency Certificates have been issued for the Plan. I believe it is likely that an actuary will be able to certify the solvency of the Plan in any Funding and Solvency Certificate that may be required during the three-year period following the valuation date.

e) At the valuation date the Plan was in a satisfactory financial position (as defined in SIS Regulation 9.04). Subject to Solvay paying the contributions recommended above, I expect the Plan to remain in a satisfactory financial position during the three-year period following the valuation date.

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