MSD Australia Superannuation Plan

Actuarial Valuation as at 1 July 2024

17 December 2024

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Towers Watson Australia Pty Ltd
ABN 45 002 415 349
AFSL 229921

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Section 1: Purpose and Summary

The MLC Super Fund – MSD Australia Superannuation Plan Sub-Plan ("the Plan") provides benefits for defined benefit members which are of the "defined benefit" type where benefits are defined by salary and period of membership. There are also a significant number of Accumulation Members. Additional accumulation benefits are also provided for most Defined Benefit Members.

With such a Plan, a regular actuarial review is necessary to:

- examine the sufficiency of the assets in relation to members' accrued benefit entitlements;
- determine the recommended Company contribution rates required to ensure that the Plan maintains a satisfactory financial position;
- examine the suitability of the Plan's insurance and investment arrangements;
- satisfy Clause 5.6 of Section 2 of the Trust Deed; and
- meet the reporting requirements of APRA Prudential Standard SPS 160 Defined Benefit Matters ("SPS 160"). Under SPS 160 an actuarial investigation is required at least every three years. Annual valuations for plans providing pensions are required unless APRA approves a longer period and we understand that APRA approval has not been given for this Plan.

This report has been prepared for the Trustee, NULIS Nominees (Australia) Limited in my capacity as Plan Actuary. The Effective Date of this actuarial valuation is 1 July 2024.

This report is an annual valuation and has been prepared in accordance with Professional Standards 400, 402, 404 and 410, issued by the Institute of Actuaries of Australia. The previous valuation was a triennial valuation and was conducted by me effective 1 July 2023 with the results set out in a report dated 20 December 2023.

Boehringer Ingelheim ("BI") is the sponsoring employer for Merial section members.

Reliance statement and data

This report is provided subject to the terms set out herein and in our engagement letter dated 10 June 2009 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.

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 or the Company 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.

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

Summary of Contribution Recommendations

In summary, we recommend the following Company contribution rates in respect of Defined Benefit Members from 1 July 2024.

	MSD	Merial (BI)	Schering-Plough	Organon (ex-MSD members)	Organon (ex-Schering-Plough member)
Contributions on Total Remuneration (TR)	11.60%	NA	Nil	11.60%	Nil
Contributions on Bonus (and other OTE)	10.31%*	NA	11.50%*	10.31%*	11.50%*

* These contribution rates should increase in line with changes to the Superannuation Guarantee contribution requirements.

The contributions on TR are unchanged from the recommendations contained in the triennial actuarial valuation effective 1 July 2023. The contributions on bonuses and other OTE have increased in line with changes to the Superannuation Guarantee contribution requirements.

Contributions for Accumulation Members (including Transferred DB members) should continue to be made at rates as agreed with individual employees, being at least equal to the amount required to satisfy the Superannuation Guarantee legislation (currently 11.50% of Ordinary Time Earnings).

Funding Status Measures

Vested Benefits

Vested benefits are the benefits payable if all Members voluntarily resigned from service. As at the valuation date, the net assets of the Plan are sufficient to cover the vested benefits. The ratio of the Plan's assets to vested benefits is 117.9% at 1 July 2024.

Assuming:

a. the benefits described in the Participation Agreement remain unchanged;

b. Company contributions are paid at the recommended rate; and

c. the future experience of the Plan is in accordance with the assumptions made in this actuarial valuation.

then the assets of the Plan should remain in excess of the vested benefits up to 1 July 2027. On this basis, the financial position of the Plan is expected to remain satisfactory.

Present Value of Accrued Benefits

The present value of accrued benefits is the actuarial value (using the assumptions and methodology detailed in this report) of the expected future benefits payable from the Plan to the current members and their dependents in respect of Plan membership completed up to the date of the actuarial investigation.

The Plan's net assets are adequate to cover the present value of the accrued benefits of all members of the Plan at the valuation date. The ratio of the Plan's assets to the present value of accrued benefits at 1 July 2024 is 117.8%.

Minimum Benefits

The Plan is *"solvent"* if the net realisable value of the assets of the Plan, less the value of the benefit entitlements of former members, exceeds the Minimum Requisite Benefits (MRB). Former members includes pensioners.

As at the valuation date the net assets of the Plan exceeded the MRBs and the Plan was in a solvent financial position. The ratio of the Plan's net assets supporting defined benefits to the total MRB was 120.1% at 1 July 2024.

Investments

The Trustee has developed formal objectives and a policy for the investment of the Plan's defined benefit assets. At 1 July 2024, the investment policy has assets supporting the Plan's MSD, Merial (BI) and Organon (ex-MSD members) defined benefit liabilities invested 76.5% in growth assets such as shares and property. Schering-Plough Organon (ex-SCP members) defined benefits have a lower 74% allocation to growth assets. The current investment policy is considered suitable to the Plan's liabilities in respect of active membership at 1 July 2024.

Overall, we consider the investment strategy for pension assets to be appropriate, provided the employers accept the funding risks associated with the strategy. An Asset Liability Modelling study was completed in 2018 to assist MSD in understanding their exposure to investment risk and to consider alternative investment strategies including de-risking of pension investments. MSD agreed to a change to the investment strategy which became effective 16 September 2019 and which broadly leaves the growth / defensive split unchanged but with some adjustments to the underlying asset classes.

As the pension assets continue to increase as a proportion of defined benefit liabilities, we recommend that the investment strategy be reviewed in conjunction with each full triennial valuation.

Pension Conversion Factor

The most recent change to the pension conversion factor was to move to a 6.5% factor at age 65 less an age reduction of 1.5% p.a. which was transitioned in over the 21 months commencing 1 August 2014 and was completed on 1 May 2016.

In the 1 July 2023 actuarial valuation we recommended the Trustee and Employer retain the current Pension Conversion Factor basis. We recommend that the Pension Conversion Factors be reviewed in conjunction with each full triennial valuation.

Shortfall Limit

As required under SPS160 the Trustee has adopted a Shortfall Limit for the Plan of 97%. I consider that this Shortfall Limit remains appropriate, taking into account the investment strategy and the benefit design, and hence it does not need to be reviewed at this time.

Operational Risk Financial Requirement (“ORFR”) Reserve

As a sub-plan of the MLC Super Fund, we understand that ORFR reserves are not held at the sub-plan level but instead are held at the MLC Super Fund level. As such the Net Assets quoted in this valuation are net of ORFR Reserve amounts.

Superannuation Guarantee

The Company’s Superannuation Guarantee obligation is either fully or partly met for all Members by the minimum benefits provided under the Plan. The required Benefit Certificate is dated 23 February 2024.

Funding and Solvency Certificates dated 23 February 2024 (MSD, Merial (BI), Schering Plough, and Organon), have been issued to the Trustee corresponding to the above mentioned Benefit Certificate. The purpose of the certificates is to specify the required Company contributions needed to fund the minimum benefits used to offset the Superannuation Guarantee charge. Pursuant to the SIS Act, a superannuation fund is “*solvent*” if the net value of its assets exceeds the minimum Superannuation Guarantee benefits. At 1 July 2024, the Plan is solvent and based on the actuarial assumptions, we see no reason why an Actuary will not likely be able to certify the solvency of the Plan in three years’ time on this basis.

Insurance

In comparison with the Plan’s assets the total amount of insurance protection against death and total and permanent disablement benefits is adequate as at 1 July 2024 and is secured by a life insurance policy with MLC Life Limited, which generally insures the excess of death/TPD benefit over the vested benefit.

The temporary disablement benefit is fully insured, hence the amount of insurance is not influenced by the level of the Plan’s assets, and we consider the level of insurance to be adequate.

Defined Benefit Pensions

The Plan pays defined benefit pensions. In accordance with 23(h) of SPS160, and Professional Standard 410, issued by the Institute of Actuaries of Australia, the Actuary is required to make an opinion on the probability of the Plan being able to meet the pension payments in respect of members currently in receipt of pensions.

The liabilities to pensions in payment rank ahead of the liabilities for accruing members on windup of the Plan, under Clause 15.1.1 of Schedule 2 of the MSD Australia Superannuation Plan Participation Schedule. Further we have carried out stochastic projections of the Plan's assets and pension payments with the results indicating a high probability, of at least 90%, the Plan will be able to meet all expected future pension payments. I therefore believe there is a high probability that the Plan will be able to pay these pensions as required under the Plan's governing rules.

Regulatory Requirements

Prudential Standard SPS160, made under Section 34C of the Superannuation Industry (Supervision) Act 1993 requires certain specific information to be included in actuarial reports. A summary of this information is included in Appendix D to this report. Note that this is a summary only and, although the Trustee may choose to provide this summary to any members who request details of the actuarial valuation, members are entitled to request a copy of the full report.

Next Valuation

The next valuation for the Plan will be held effective 1 July 2025 and will be an annual valuation.

The funding position, and in particular the coverage of vested benefits by Plan assets, should continue to be monitored quarterly and on such other date as any one or more of the Participating Employers, the Trustee or the Actuary may determine from time to time.

Daniel Ham
Fellow of The Institute of Actuaries of Australia

17 December 2024

D: MN | TR: JD | ER, CR: DH

Towers Watson Australia Pty Ltd
ABN 45 002 415 349 AFSL 229921
Level 16, 123 Pitt Street
Sydney NSW 2000
Australia

T +61 2 9285 4000

https://wtwonlineau.sharepoint.com/sites/tctclient_652841_msd_25/documents/04.01_actl_valn/5_deliverables/msd valuation report 1 july 2024.docx

Section 2: Background and Data

The Plan was established as a sub-plan of the Plum Superannuation Fund on 1 May 2011 by successor fund transfer from the MSD Australia Superannuation Plan (the former Plan) which was initially established in accordance with the Trust Deed dated 28 April 1967 with subsequent amendments, and transferred in accordance with the Participation Schedule between NULIS Nominees (Australia) Limited and the employers.

On 1 July 2016, the Trustee transferred all assets and members of the Plum Superannuation Fund in respect of the Previous Plan on a successor fund basis to the MLC Super Fund (**Fund**) established by trust deed dated 9 May 2016 (as amended) (**Deed**). The members and assets attributable to the Previous Plan were transferred to a plan in the Plum Division of the Fund, called the MSD Australia Superannuation Plan (**Plan**).

Under Schedule 2, Clause 35.1.1 of the Participation Agreement, the company is required to contribute at the rate determined by the Trustee on the advice of the Actuary.

The Plan is a regulated complying superannuation fund under the SIS Act and for taxation purposes.

All Defined Benefit categories have been closed to new entrants since 1 March 2004. Since then, all new members have joined the Accumulation categories.

A summary of the main provisions of the Participation Agreement incorporating all amendments made to date, is included as Appendix A to this report.

On 1 May 2013, all members of the Schering-Plough Superannuation Fund were transferred to the MSD Australia Superannuation Plan by way of a successor fund transfer. A summary of the main provisions for these members is included in Appendix A to this report.

Sources of Information

We have relied on the administrative and accounting records at 1 July 2024, as currently stored on the Plum administration system. Where possible, the information provided has been checked for reasonableness and is considered suitable for the purposes of this investigation.

Data

The membership details are summarised in Appendix B. In brief, there were 819 members as at 1 July 2024, of which 31 were active Defined Benefit Members, 1 were Retrenched DB members and 85 were lifetime pensioners with pensions of $5,625,118 p.a. in payment. We have checked a sample of the membership data for internal consistency and are satisfied as to the accuracy of this sample.

Previous Recommendations

We have previously recommended that the pension conversion factors be reviewed and formally confirmed by the Employers. The pension conversion factors were reviewed in the 1 July 2023 triennial valuation and it was recommended that no change be made to the current factors given the significant change in market conditions since 1 July 2020. We recommend this be reviewed again at the next triennial valuation of the Plan at 1 July 2026.

The Trustee has adequately addressed all other recommendations made in the previous valuation report at 1 July 2023.

Company contributions paid to the Plan over the year to 30 June 2024 have been in line with the recommendations of the Actuary as follows, except the monthly expense contributions for MSD, Merial and Organon (ex-MSD members) of $20,000, $3,000 and $2,000 per month respectively, which have not been made over the period from 1 July 2023 to 31 December 2023. Given the strong investment performance over the year to 30 June 2024, this has not had a material impact on the financial position of the Plan.

	MSD	Merial (BI)	Schering-Plough
Contributions on Total Remuneration (TR)	11.60%	NA	Nil
Contributions on Bonus (and other OTE)	9.91%	NA	11.00%
Monthly Expense Contributions (from 1 July 2023 to 31 December 2023)	$20,000	$3,000	Nil
Monthly Expense Contributions (from 1 January 2024)	Nil	Nil	Nil

	Organon (ex-MSD members)	Organon (ex-Schering-Plough member)
Contributions on Total Remuneration (TR)	11.60%	Nil
Contributions on Bonus (and other OTE)	9.91%	11.00%
Monthly Expense Contributions (from 1 July 2023 to 31 December 2023)	$2,000	Nil
Monthly Expense Contributions (from 1 January 2024)	Nil	Nil

The Companies also pay pre-tax member contributions for members who have elected to make voluntary contributions by salary sacrifice.

Section 3: Assets and Investment Strategy

Accounts

We have been supplied with cashflow reports covering the 12 months to 30 June 2024 in relation to the Defined Benefit Assets. The administrator has also provided accumulation asset data as at 30 June 2024.

We have reconciled the statistical data on exits provided for the purposes of this valuation with the amounts appearing in the accounts for benefit payment purposes.

The Plan's accounts indicate that the employers have been contributing in accordance with the recommendations of the last valuation report, except the MSD, Merial and Organon (ex-MSD members) expense contributions of $20,000, $3,000 and $2,000 per month for the period from 1 July 2023 to 31 December 2023.

Net Market Value

The breakdown of the market value of the Plan's assets by investment manager at 30 June 2024 is summarised below:

Market Value of Assets at 30 June 2024	$
MLC Conservative Balanced	1,259,126
MLC Stable	715,353
MLC Cash	2,125,382
MLC Fixed Interest	178,493
MLC Incomebuilder	20,155
MLC International Shares	180,512
MLC Aggressive	276,474
MLC Australian Fixed Interest Index	6,657
MLC Australian Shares	580,204
MLC Balanced	5,021,673
MLC Flexible Assertive	116,790
MLC Growth	4,333,494
MLC High Growth	2,536,113
MLC Low Cost Balanced	4,176,957
MLC Low Cost Conservative Balanced	416,815
MLC Low Cost Growth	1,060,914
MLC Property	145,465
MYSUPER Cash Portfolio	144,776
MYSUPER Conservative Balanced Portfolio	2,231,492
MYSUPER Growth Portfolio	51,511,955
MLC Australian Shares Index	2,078,579

MLC International Shares Index (Hedged)	966,445
MLC International Shares Index	2,195,763
MLC Australian Property Index	87,863
MLC Flexible Moderate	46,680
Schering Plough Defined Benefit - Vanguard Growth Index Fund	1,485,270
MSD Defined Benefit Tailored Units	107,029,152
Investment Manager Balances*	**190,928,551**

* Investment Manager Balances at 30 June 2024 may vary slightly due to rounding.

We have adjusted the investment manager balances to allow for estimated tax, contribution and benefit payables to match our liability data as follows. We have further itemised Accumulation balances for Accumulation members to identify defined benefit assets.

	$
Investment Manager Balances	**190,928,551**
Less Current Payables	2,163,011
Plus Contributions Receivable	0
Total Net Assets	**188,765,540**
Less Accumulation Assets	81,596,972
Defined Benefit Assets	**107,168,567**

No changes have been made to the methodology of valuing the Plan's assets since the previous valuation.

Defined Benefit Assets by Employer

Schering Plough defined benefit assets are maintained via separate investments and a separate reserve account so are immediately identifiable.

MSD, Merial (BI) and Organon defined benefit assets are maintained via joint investments and a joint reserve account. The notional split of defined benefit assets attributable to Merial (BI) has been calculated from the Merial (BI) notional assets at 1 July 2014, updated on a quarterly basis to 1 July 2024 for actual Merial (BI) cashflows (employer contributions, member contributions, benefit payments etc) and a pro-rata share of insurance and other expenses, applied with declared Plan investment returns. A similar notional split of defined benefit assets attributable to Organon has been calculated from the Spin-off date of 1 June 2021.

	$
Schering Plough	811,916
MSD	88,204,006
Merial (BI)	14,334,771
Organon	3,817,874
Total Defined Benefit Assets	**107,168,567**

As noted in Section 1 we understand that the Operational Risk Financial Requirement ("ORFR") reserve is held at the MLC Super Fund level. As such, the total defined benefit assets are net of ORFR reserve amounts.

Nature of Defined Benefit Liabilities

The level of the defined benefit liabilities does not bear the same direct relationship with the assets as exists with accumulation liabilities.

Whereas the defined benefit liabilities reflect salary growth, the supporting assets depend on a range of factors including:

i. the level of Company contributions, and
ii. the level of investment returns.

In this case, it is the Company which bears the investment risk as the level of contributions depends on the level of investment returns achieved.

An investment strategy which is framed with a long-term perspective will often adopt relatively high levels of growth assets in order:

i. to secure attractive long term investment returns, and
ii. to provide an opportunity for capital appreciation and dividend growth, which gives some protection against inflation (as benefits are linked to Salary growth which is also influenced by inflation).

The main constraint in this situation occurs if potential fluctuations in asset values mean the total asset value could fall below the level of vested benefits, placing the Plan in an unsatisfactory financial position.

While the impact of a sudden sharp fall in asset values can be limited by maintaining a buffer of assets over and above the level of vested benefits, the level of the buffer may never be sufficiently high to safeguard against all investment outcomes. However, the buffer should be at a level where the risk of the asset values falling below the level of vested benefits under a particular investment strategy is acceptable to the Trustee and the Company.

In this regard, a lower buffer may be acceptable where the Company is willing and able to accept short-term variations in contributions as part of underwriting the defined benefits of the Plan. In this case, short-term variations in company contributions may result from:

i. reducing a buffer that has grown too large, or
ii. rebuilding a buffer that has fallen or become negative.

An alternative for a Plan which does not have a sufficient asset buffer above the level of vested benefits is to adopt a more conservative investment strategy. While this may reduce short-term fluctuations in asset values, it is also likely to reduce long-term returns and hence result in increased company contributions in the long-term.

In summary, a balance needs to be achieved between these short-term and long-term considerations in funding the defined benefit liabilities.

Defined Benefits – Investment Objectives and Guidelines

The Trustee's principal investment objectives for the MSD (including MSD, Merial (BI) and Organon (ex-MSD members) defined benefit assets are:

a. Real Return Objective

To achieve average returns at least 3% p.a. over the growth in inflation over rolling ten-year periods.

b. Standard Risk Measure

High. Estimate of 4 to 6 negative annual returns in any 20-year period.

The Trustee's principal investment objections for the Schering-Plough (including Schering-Plough and Organon (ex-SCP members) defined benefit assets are:

a. Real Return Objective

To achieve average returns at least 2.75%p.a. over the growth in inflation over rolling ten-year periods.

b. Standard Risk Measure

High. Estimate of 4 to 6 negative annual returns in any 20-year period.

We have taken account of the investment objectives of the Plan and the investment guidelines under which the Plan's investment managers operate in setting our actuarial assumptions in Section 4 of this report.

Investment Strategy

In order to meet the investment objectives set for the Defined Benefits Section, the Trustee has adopted a specific long term benchmark allocation to each asset class.

The table below shows the benchmark asset allocation for the respective Defined Benefits Section as at 1 July 2024:

Asset Class	Benchmark Asset Allocation as at 1 July 2024 MSD/ BI /Organon (ex-MSD)	Benchmark Asset Allocation as at 1 July 2024 Schering-Plough / Organon (ex-Schering-Plough)
Australian Shares	25.0%	27.0%
Overseas Shares	40.0%	37.0%
Property	9.0%	4.0%
Listed Infrastructure	2.5%	3.0%
Alternatives	0.0%	3.0%
Fixed Interest	21.5%	17.0%
Cash	2.0%	9.0%
Total	**100.00%**	**100.00%**

Suitability of Investment Strategy

The defined benefit categories within the Plan were closed to new members effective 1 March 2004. The age profile of these categories will gradually increase. At 1 July 2024, the average age of active defined benefit members was 54.2 years old, so their investment timeframe is still relatively long-term at present. This is particularly so, given the lifetime pension available to members on retirement.

At the valuation date, the Plan held a buffer of assets supporting the defined benefits, and the assets were more than the amount sufficient to cover the Plan's vested benefits at 1 July 2024.

As the Plan is closed to new defined benefit members, the investment timeframe will decline as defined benefit members retire and either exit the Plan or move into the pension phase. As this occurs, there may be justification for moving to a more defensive portfolio which would reduce the expected volatility of the financial position of the Plan.

An Asset Liability Modelling study was completed in 2018 to assist MSD in understanding their exposure to investment risk and to consider alternative investment strategies including de-risking of pension investments. MSD agreed to a change to the investment strategy which became effective 16 September 2019 and which broadly left the growth / defensive split unchanged but with some adjustments to the underlying asset classes.

On the basis that Vested Benefits coverage and funding requirements will continue to be reviewed quarterly and at 1 July each year, and subject to any comments below in regard to pensioners, we consider the current investment strategy to be suitable.

Considerations Relating to Lifetime Pensions

The Plan has sufficient liquidity to make pension payments from regular cashflows. The current investment strategy is to invest 76.5% of assets in the 'growth' asset classes of shares and property. The lifetime pension liabilities however comprise a fixed income stream for life, indexed in line with CPI (capped at 5% p.a.). In our opinion, there is a significant mismatch between the assets and liabilities for lifetime pensioners. The fact that there is a mis-match between assets and liabilities does not necessarily mean that the investment strategy for lifetime pension assets is inappropriate. What it does mean is that there is a funding risk in respect of lifetime pensioners that must be quantified and acknowledged by the Employer and the Trustee.

Overall, we consider the investment strategy for pension assets to be appropriate, given that the employers accept the funding risks associated with the strategy. As noted above, an Asset Liability Modelling study was completed in 2018 to assist the employer in understanding their investment risk and to consider alternative investment strategies.

The current funding position at 1 July 2024 would support a partial derisking of the investments backing the pension liabilities, but we would recommend further investigation be carried out to understand the implications of such a change (if there was a desire for derisking by the Employer).

I consider the assets held by the Plan to be suitable for meeting the future expected benefit payments for the pension members of the Plan. We also consider the assets, including future contributions, to be sufficient to provide for the risk of longevity.

Upon the death of a lifetime pensioner, payments continue to be payable to the reversionary spouse (if a reversionary spouse exists). Where no reversionary spouse pension is payable, or the reversionary spouse dies, the liability ceases.

Suitability of Crediting Rate Policy

The Trustee credits members' accumulation accounts with actual investment returns (net of fees and taxes) from the underlying assets. I consider this crediting rate policy to be suitable.

The interim crediting rate policy for defined benefit members on exit is to apply a 10 year bond rate for the period from the previous quarter end to date of payment, which allows for considerable disparity between interim returns and actual Plan investment earnings for exiting members. We understand however that the Trustee has considered this risk, and are accepting of it within their risk framework.

Section 4: Valuation Method and Actuarial Assumptions

To carry out an actuarial valuation in respect of defined benefits, it is necessary to decide on:

- the valuation method to be adopted
- the value of the assets for the purposes of long term assessment, and
- the assumptions as to the factors which will affect the cost of the benefits to be provided by the Plan in the future

Valuation Method

Attained age method

The funding method adopted at the previous full triennial valuation at 1 July 2023 was the Attained age method which has been retained for this valuation. A full description of the Attained age methodology was included in our 1 July 2023 valuation report dated 20 December 2023.

Actuarial Value of Assets

For the purposes of this valuation, we have valued assets at their market values at 30 June 2024 adjusted for tax and payables as detailed in Section 3.

Valuation Assumptions

As this is an annual actuarial valuation, a review of the valuation assumptions is not normally required. However, given the financial assumptions were reviewed for the Trustee for the purposes of AASB1056 reporting as at 30 June 2024, we have adopted the revised financial assumptions in this actuarial valuation.

Investment Return

The assumption for investment returns at the 1 July 2023 valuation was 7.00% p.a. net of tax and 7.5% p.a. gross of tax.

The Plan's net of tax investment return over the year to 1 July 2024 in respect of the Defined Benefit assets was 10.9% for the MSD members and 11.5% for the Schering-Plough members. The investment return was approximately 3.9% higher for MSD members and 4.5% higher for Schering-Plough members, than the assumed rate (net of tax) of 7.0% for the year to 1 July 2024. This outperformance for MSD and Schering-Plough members has had a positive impact on the Plan's financial position.

For this valuation, we have decreased the long term net of tax future investment return to 6.75% p.a. and maintained the long term gross of tax future investment return at 7.5% p.a. These assumptions are broadly consistent with the Trustee's investment objectives and consistent with our long term expected returns for each asset class and the correlations between those asset classes in which the defined benefit assets are invested.

Salary Inflation

The assumed rate of salary inflation was 4.0% p.a. at the last valuation.

The average rate of growth of Benefit Salaries for Defined Benefit members who were present at both the last and current valuation dates was 3.9%. The actual increase in salary growth has been below the assumed level which has had a positive impact on the Plan's funding position.

Further, we have analysed the salary experience by employer with the following results showing broadly consistent growth for the employers over the year to 1 July 2024:

- Merck Sharp & Dohme: 3.9%
- Schering-Plough: 2.5%
- Organon: 3.6%

We have maintained the salary growth assumption at 4.0% p.a. for this valuation.

Over the long term, it is the "gap" between the investment return (net of tax) and salary inflation assumption that is important when valuing member's liabilities. In this valuation we have decreased the "gap" from 3.0% p.a. used in the previous valuation to 2.75% p.a.

Over the year to 1 July 2024, the actual "gap" was 7.0% (i.e. 10.9% less 3.9%) for MSD and 9.0% (i.e. 11.5% less 2.5%) for Schering-Plough which had a positive impact on the Plan's financial position.

Rates at which Members Leave Service and Retire

We have retained the assumptions used at the previous valuation. Statistically significant results based on actual experience are not available from a fund of this size.

Rates at which Members Leave due to Death or Total and Permanent Disablement (TPD)

In view of the small size of the Plan membership we have retained the long-term assumptions from the previous valuation.

New Members

All Defined Benefit categories have been closed to new entrants since 1 March 2004. Since then, all new members have joined the Accumulation categories.

Expenses and Insurance Premiums

We have retained the expense assumption of 1.0% of Benefit Salaries for active member expenses and our long term rate of insurance premium expenses of 1.0% of Benefit Salaries.

In accordance with Professional Standard 410, we have considered the cost of future administration of pension payments. For this valuation we have retained the allowance for the costs of future pensions of 0.2% p.a. of pension assets. The liability calculations in this report have allowed for the cost of future pension payments of 0.2% p.a. via a reduction to the gross of tax discount rate of 7.5% p.a. (i.e. 7.3% p.a. after 0.2% p.a. reduction for pension expenses). This has resulted in an increase to the current pension liability of $1,037,474.

The insurance premiums of Accumulation members are financed through defined benefit assets, offset by specific extra Company contributions.

Pension increases

Pension increases are reviewed as at 1 July each year and determined as the lesser of:

- the increase in the CPI in the year to the preceding 31 March; and
- 5% per annum.

The pension increase since the last valuation was 3.6% for the year to 1 July 2024, relative to CPI of 3.6% for the year ending 31 March 2024. This has had a negative impact on the Plan’s financial position.

We have decreased our pension increase assumption from 2.75% p.a. at the previous valuation to 2.60% p.a. which is in line with our long term inflation assumption at the valuation date.

Over the long term, it is the “gap” between the investment return and pension increase assumptions which is important when valuing the pension liabilities. For this valuation, we have increased the “gap” from 4.55% p.a. used in the previous valuation to 4.70% p.a. (or from 4.75% p.a. to 4.90% p.a. before the reduction of 0.2% p.a. to allow for future pension expenses).

Rate of take-up of Pensions

We have maintained the pension take-up assumption adopted at the previous valuation, that is 50% of lump sum retirement benefits overall would be converted to a pension.

Pensioner Mortality

We have retained the ALT 2015-17 mortality rates with a scaled adjustment of 50% at age 55 up to 100% at age 100. The rates are then assumed to reduce each year beyond 2016 in line with the published 25 year improvement factors in the ALT 2015-17. There have been no updates released to the Australian Life Tables over the investigation period.

Adequacy of Insurance

The insurance coverage of the Plan is considered adequate if the assets of the Plan are sufficient to cover the Death and TPD benefits of the Plan after any insured components have been allowed for.

The Plan currently has death and TPD insurance with MLC Limited. Cover is generally provided up to the automatic acceptance level (AAL) with cover above this level subject to underwriting.

The current level of insurance in respect of Defined Benefit members is calculated as:

$$\textit{Insured Benefit} = 18\% \times \textit{Benefit Salary} \times \textit{Future Service to Normal Retirement Age}$$

Adequacy of the Plan's insurance cover	Defined Benefit Members $ million
Lump Sum Death Benefits* (A)	41.28
Less Aggregate Group Life Insurance (B)	14.08
Plan's Exposure (A – B)	27.20
Plan's Defined Benefit Net Assets	43.58

Net Assets exclude an amount of $63.59 million in respect of Pensioner liabilities.

* The Lump Sum Disablement Benefit is equal to the Death Benefit for all members, or less where cover has been restricted by the insurer.

The Plan's Defined Benefit Net Assets as at 1 July 2024 of $43.58 million is sufficient to meet the Plan's Exposure of $27.20 million. The current insurance arrangements are considered adequate and no changes are recommended.

We also understand that insurance arrangements are in place for the death (funeral) benefits of former retired employees.

Effects of assumption changes

The changes to the assumptions since the 1 July 2023 actuarial valuation has resulted in a decrease of $979,915 in the Actuarial Value of Accrued Benefits and a decrease of $924,049 in the vested benefits. This is a result of the increase in the gap between the gross of tax investment return and pension increase which was slightly offset by the decrease in the gap between the net of tax investment return and salary inflation.

Summary of Valuation Assumptions

A summary of our valuation assumptions is set out in Appendix C to this report.

Section 5: Solvency and Funding Measures

There are several methods used to assess the current financial situation of the Plan. These measures are dealt with below.

In line with legislative and actuarial requirements, the net assets used to calculate the funding status measures was $188.766 million, being the Fair Value of assets disclosed in the account. Defined Benefit Assets are $107.169 million, as noted in Section 3.

Vested Benefits

Pursuant to superannuation law, a fund (or a section of a fund) is in a *“satisfactory”* financial position if the assets of the fund cover the vested benefit entitlements of the members of the fund.

The Vested Benefits represent the benefit entitlements of Members should they voluntarily leave the Plan, but for members over age 55, include an estimated value of the pension option available to these members, allowing for our 50% assumption on the take-up of the pension.

The Vested Benefits of the Plan at 1 July 2023 and 1 July 2024, separated into the main benefit types are as follows:

	1 July 2023 Vested Benefits ($,000) (TOTAL)	1 July 2024 Vested Benefits ($,000) (MSD)	1 July 2024 Vested Benefits ($,000) (Merial (BI))	1 July 2024 Vested Benefits ($,000) (Schering-Plough)	1 July 2024 Vested Benefits ($,000) (Organon)	1 July 2024 Vested Benefits ($,000) (TOTAL)
Savings Accounts of DB Members*	4,049	2,898	-	-	935	3,833
Vested Company Funded Defined Benefits of Members with DB Liabilities	23,272	20,961	-	323	2,170	23,454
Lifetime Pensioners	62,557	51,275	11,625	442	243	63,585
Accumulation Members including Retained Benefits and Spouses	77,749	63,164	2,683	15,750	-	81,597
Total Vested Benefits	**167,627**	**138,298**	**14,308**	**16,515**	**3,348**	**172,469**
Market Value of Assets	**179,563**	**151,368**	**17,017**	**16,562**	**3,818**	**188,765**

* Savings accounts for Schering-Plough DB members have investment choice and are treated as Accumulation liabilities (and assets). Savings accounts for MSD DB members are eligible for pension conversion at retirement so are treated in this report as Defined Benefit liabilities.

The Vested Benefits Index is a test of the Plan’s solvency if all Members voluntarily resigned (if under 55) or retired (if over 55) on the review date.

Note that Vested Benefits have been measured at 1 July 2024, not 30 June 2024 as are shown on member benefit statements and included in the 30 June 2024 funding position update provided to the Trustee. A material difference emerges due to the FAS definition which is a review date definition that increases on 1 July each year. We consider the 1 July measure of Vested Benefits to be more appropriate than the 30 June measure for the purposes of this valuation.

The following table shows the progression of the Vested Benefits Index over the review period in respect of Defined Benefits only*:

	1 July 2023 (TOTAL) ($,000)	1 July 2024 (MSD) ($,000)	1 July 2024 (Merial (BI)) ($,000)	1 July 2024 (Schering-Plough) ($,000)	1 July 2024 (Organon) ($,000)	1 July 2024 (TOTAL) ($,000)
Market Value of Assets	101,814	88,204	14,335	812	3,818	107,170
Vested Defined Benefits*	89,878	75,134	11,625	765	3,348	90,872
Vested Benefits Index	113.3%	117.4%	123.3%	106.1%	114.0%	117.9%

* The "Defined Benefits Only" figures illustrate the financial position of the Plan in respect of the Defined Benefit liabilities. As a result, amounts in respect of accumulation liabilities of $81,597,000 at 1 July 2024 and $77,749,000 at 1 July 2023 have been excluded from the Value of Assets and the Vested Benefits respectively.

As at 1 July 2024, the net Market Value of the assets of the Plan were higher than the Vested Benefits and the Plan was in a satisfactory financial position. The ratio of the Plan's assets supporting defined benefits to the Vested defined benefits was 117.9%. At the previous valuation effective 1 July 2023, this ratio was 113.3%. Since 1 July 2023, the ratio has been positively impacted due to investment returns being materially higher than expected along with the net impact of the change in assumptions.

Minimum Benefits

The Minimum Benefits Index is the ratio of the Plan's assets to the Minimum Benefits, as described in the Plan's current Benefit Certificate. As at 1 July 2024, the most conservative estimate of the Minimum Benefits Index was 120.1%. This estimate includes in the Minimum Benefits the estimated current value of the investment linked account for members in the Plan at 30 June 1992 that accrued prior to 30 June 1992. At the previous valuation effective 1 July 2023, this ratio was 117.5%. Since 1 July 2023, the ratio has been positively impacted mainly due to investment returns being materially higher than expected along with the net impact of the change in assumptions.

Actuarial Value of Accrued Benefits

An indication of the funding status of the Plan is given by the ratio of assets to the Actuarial Value of Accrued Benefits (AVAB). This is called the Actuarial Value of Accrued Benefits Index (AVABI).

AVAB represents the value in today's dollars of future benefits based on membership completed to the review date, allowing for future salary increases, investment earnings and expected incidence of payment. For an existing lifetime pensioner whose benefit is fully accrued it is equal to the Vested Benefit. *"Accrued Benefits"* has the meaning given in Regulation 9.27 of the SIS Regulations.

It is important that the AVAB Ratio is not used to compare the level of funding between superannuation funds but is used as a measure to assess the funding status of a superannuation fund from time to time. Different superannuation funds can be expected to have different AVAB Ratios depending on the age and employment history of the members.

The following table shows the progression of the Actuarial Value of Accrued Benefits Index over the review period for Defined Benefits Only*.

	1 July 2023 (TOTAL) ($,000)	1 July 2024 (MSD) ($,000)	1 July 2024 (Merial (BI)) ($,000)	1 July 2024 (Schering-Plough) ($,000)	1 July 2024 (Organon) ($,000)	1 July 2024 (TOTAL) ($,000)
Market Value of Assets	101,814	88,204	14,335	812	3,818	107,170
Actuarial Value of Accrued Benefits*	89,864	75,166	11,625	713	3,453	90,957
Actuarial Value of Accrued Benefits Index	113.3%	117.3%	123.3%	113.9%	110.6%	117.8%

* The "Defined Benefits Only" figures illustrate the financial position of the Plan in respect of the Defined Benefit liabilities. As a result, amounts in respect of accumulation liabilities of $81,597,000 at 1 July 2024 and $77,749,000 at 1 July 2023 have been excluded from the Value of Assets and the Actuarial Value of Accrued Benefits respectively.

Note that in the calculation of the Actuarial Value of Accrued Benefits (AVAB), a minimum of the member's Vested Benefit for each individual has been applied to the AVAB for Schering-Plough members but not for Merck members. At the previous valuation effective 1 July 2023, this ratio was 113.3%. Since 1 July 2023, the ratio has been positively impacted due to investment returns being materially higher than expected along with the net impact of the change in assumptions.

As at 1 July 2024, the net Market Value of the assets of the Plan are more than 100% Actuarial Value of Accrued Benefits.

A fully secured position is represented by a ratio of 100.0%. At this level, if the Plan were closed to new entrants and no further benefits were allowed to accrue to current members, assets would be sufficient to meet all future benefit payments if the actuarial assumptions are borne out in practice.

Market Value of Pensions

We consider that if the current pensions in payment were to be valued on an equivalent market retail annuity basis, the current pension liability of $63,584,355 could rise by around 20% - 30% with a correspondingly large effect on the Vested Benefits Index and Actuarial Value of Accrued Benefits Index as part of the Plan placing both indices at approximately 100%.

Shortfall Limit

As required under SPS 160, the Trustee has adopted a Shortfall Limit for the Plan of 97%. I consider that this Shortfall Limit remains appropriate, taking into account the investment strategy and the benefit design, and hence it does not need to be reviewed at this date. The shortfall limit is defined in paragraph 10 of SPS 160 as:

"… the extent to which an RSE licensee considers that a fund can be in an unsatisfactory financial position with the RSE licensee still being able to reasonably expect that, because of corrections to temporary negative market fluctuations in the value of fund assets, the fund can be restored to a satisfactory financial position within one year."

Should the financial position of the Plan breach the Shortfall Limit, additional interim Actuarial investigations will be required with rectification plans to be put in place to address the unsatisfactory financial position.

Benefits Payable on Termination

On termination of the Plan, Schedule 2, Clause 15.1.1 of the Participation Schedule states that assets should be applied in the following order (in summary):

a. to meet all expenses (including tax) and liabilities of the Plan;

b. to provide an annuity for each Pensioner;

c. to pay the withdrawal benefit in respect of each member for whom a benefit was payable prior to the termination date;

d. to pay the accrued lump sum retirement benefit in respect of each member who is still an Employee, or the sum of accounts in respect of each Spouse member and Retained Benefit member.

The termination provisions do not specify a minimum benefit to be paid, but do apply Plan assets in an order of priority. A minimum of the Vested Benefit should ideally be available to all members.

In a termination situation, however the requirement to provide an annuity to each Pensioner is a potentially onerous obligation as it is very likely that the assets required to purchase annuities for the existing pensioners would significantly exceed the value of pension liabilities contained in this report. The priority given by the Trustee to pensioners on termination in such circumstances will currently mean that potentially less than 100% of vested benefits would be available to other members. This is a risk that should be given further consideration by the Trustee and the Companies.

Benefits Payable on Retrenchment

There is a retrenchment benefit defined in the Trust Deed for the Plan for MSD employees between the ages of 48 and 55. Retrenched employees have the option of retaining their leaving service benefit in the Plan until age 55, at which time a minimum lump sum defined benefit is applied equal to the member's accrued retirement multiple at retrenchment times their Final Average Salary at retrenchment, with no salary growth to age 55. Conversion to a lifetime pension is not available at age 55.

As the retrenchment benefit does not provide any immediate benefit over the leaving service benefit, current retrenchment benefits do not require separate calculation.

Summary

The levels of the indices in respect of Defined Benefit liabilities (including pensions) have increased during the period 1 July 2023 to 1 July 2024 mainly due to favourable investment returns experienced over the period along with the net impact of the change in assumptions.

Experience Post Valuation Date

The levels of the funding measures would have improved as a result of higher than expected returns on the Fund's defined benefit assets over the period since 30 June 2024, which have been 4.4% for the MSD assets and 5.1% for the Schering-Plough assets for the period from 30 June 2024 to 31 October 2024.

There are no other known factors that will have a significant effect on the Plan's financial position at the date of this report.

Section 6: Valuation Contribution Results

It should be emphasised that the funding indices shown in Section 5 relate to the current position at the review date. A projection of the Plan is required to assess the adequacy of Company contribution rates to provide defined benefits in the future.

Such a projection has been carried out using the funding method and assumptions discussed in Section 4 and set out in Appendix C. The results of the valuation are summarised in this section.

Projection of Results

For Defined Benefit Section members, we have tested the impact of the adoption of the recommended Company contribution rates above, by projecting the cash flows of the Plan and the build-up of the Plan's assets over the next 5 years, compared to the projected levels of the Vested Benefits.

Year ending	VBI*	ABI*
1 July 2024	119.5%	119.6%
1 July 2025	121.0%	121.0%
1 July 2026	122.7%	122.6%
1 July 2027	124.5%	124.4%
1 July 2028	126.9%	126.8%
1 July 2029	129.7%	129.4%

* Includes amounts in respect of Lifetime Pensioners but excludes Accumulation Section liabilities.

If the Company contribution rates are maintained shown in this Section are paid, then we expect the Vested Benefits Index (VBI) to remain above 100% over the five years to 1 July 2029, assuming the valuation assumptions are borne out in practice.

Summary of Contribution Recommendations

We recommend the following Company contribution rates in respect of Defined Benefit members.

	MSD	Merial (BI)	Schering-Plough	Organon (ex-MSD members)	Organon (ex-Schering-Plough member)
Contributions on Total Remuneration (TR)	11.60%	NA	Nil	11.60%	Nil
Contributions on Bonus (and other OTE)	10.31%*	NA	11.50%*	10.31%*	11.50%*

* These contribution rates should increase in line with changes to the Superannuation Guarantee contribution requirements.

Contributions for Accumulation Section members (including Transferred DB members) should continue to be made at rates as agreed with individual employees, being at least equal to the amount required to satisfy the Superannuation Guarantee legislation (currently 11.50% of Ordinary Time Earnings).

Future Review

The financial status of the Plan is sensitive to actual financial experience (principally, investment returns and pension increases) and membership movements. We therefore recommend that a check is placed on the Vested Benefits Index each quarter, and also as at each 1 July following the annual review, and also at any time if the Defined Benefit membership reduces significantly, in order to confirm that the Plan maintains coverage of vested benefits.

The next actuarial valuation is due at 1 July 2025.

Section 7: Material Risks

Material Risks

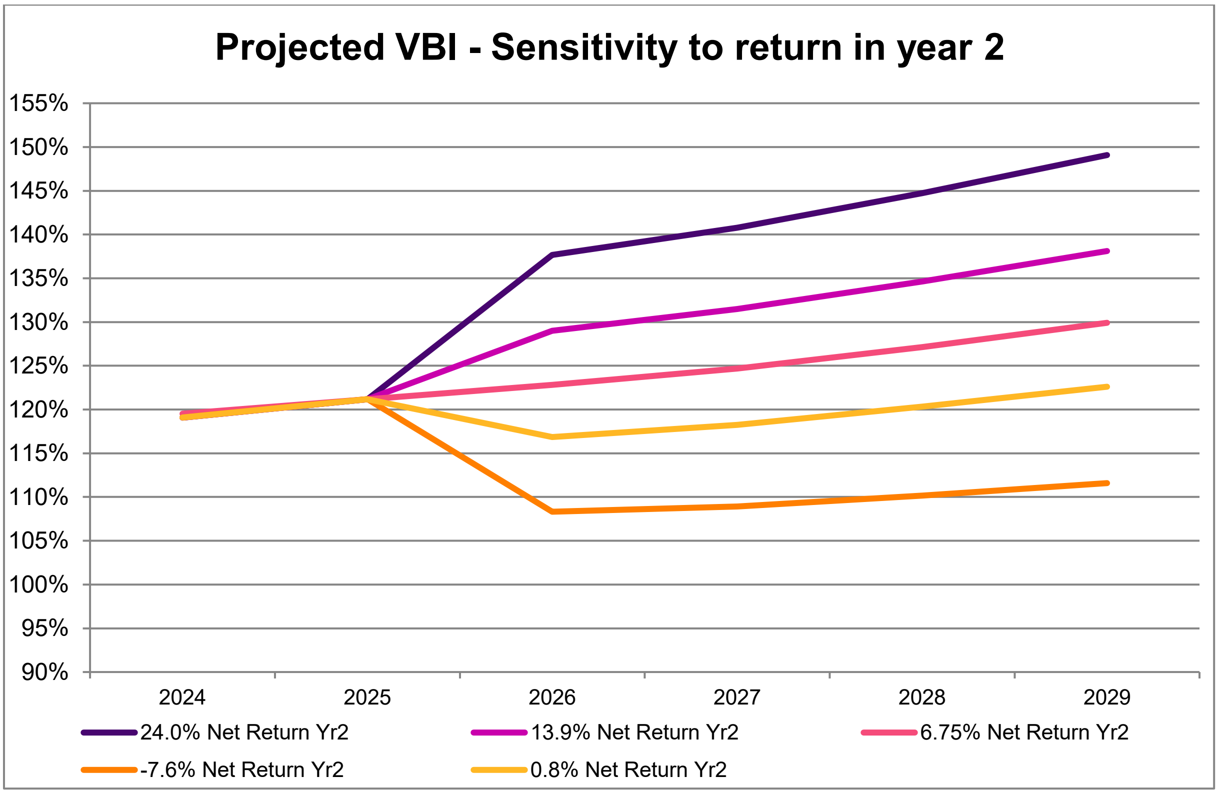
Salary Inflation

For this valuation, we have adopted a salary inflation assumption of 4.00% p.a. However, if actual salary increases are greater than this, with all other actuarial assumptions borne out, then the funding position (Vested Benefits Index) will worsen and increased Company contributions may be required.

Investment Returns

For this valuation, we have adopted an investment return assumption (net of tax and investment management expenses) of 6.75% p.a. However, if actual investment returns are less than this, with all other actuarial assumptions borne out, then the funding position (Vested Benefits Index) will worsen and increased company contributions may be required.

The following graph highlights the sensitivity of the Plan's funding position (Vested Benefits Index) to an investment return different to that expected in the year to 30 June 2026 (year two of the projection). Returns for year three and onward are assumed to be the long term expected return of 6.75% p.a. (net of tax) and 7.3% p.a. (gross of tax and net of pension expenses).



Pension indexation

For this valuation. I have adopted a pension indexation inflation assumption of 2.60% p.a. However, if pension indexation increases are greater than this, with all other actuarial assumptions borne out, then the funding position (Vested Benefits Index) will worsen and increased Company contributions may be required.

Pensioner mortality

The assumption for pensioner mortality makes allowance for both socio economic factors and improvements in pensioner mortality in the decrement basis used to value pension benefits.
If pensioners experience improvements in mortality at greater rates than allowed, or experience lighter mortality than anticipated in the socio economic factors, then the cost of the pensions will increase, and the financial position of the Plan will be worse than anticipated. The reverse is also true, i.e. if mortality improvement proves to be less than our allowance, or socio economic factors not as light, the cost of the pensions will decrease.

Change to investment strategy

Any change to the investment strategy that impacts on the future expected return on the assets supporting Defined Benefit Members' entitlements will potentially have material impact on the financial position of the Defined Benefit section of the Plan particularly in the case of changes to the investment strategy for pension assets. Prior to any change to the investment strategy, we recommend that we be asked to undertake an assessment of the potential impact on both the financial position of the Plan and future Company contribution requirements.

Appendix A: Summary of Benefits

MSD AUSTRALIA SUPERANNUATION PLAN

SUMMARY OF BENEFITS AS AT 1 JULY 2024

Eligibility

The Defined Benefit Section has been closed to new members since 1 March 2004. All new members since this date are Accumulation Section members.

Definitions

Normal Retirement Age

First day of the month co-incident with or next following the member's 65th birthday.

Early Retirement Conditions

Age 55 and 5 years' Fund Service; or

Age 60.

Transferred DB Member

A member of the Plan on 29 March 2004 who later elected (prior to 1 July 2008) to become an Accumulation member.

Frozen DB (Choice of Fund) Member

A Defined Benefit member of the Plan who elected (prior to 1 July 2008) another fund for their Company superannuation contributions, under the Choice of Fund legislation.

Benefit Salary

The member's annual base rate of remuneration at 1 July plus 50% of the bonuses received in the previous financial year.

Final Average Salary

One third of the highest total of the member's Benefit Salaries for any 3 consecutive Annual Review Dates (1 July) in the last 10 financial years.

Fund Service

Years and complete months since the date the member joined the Plan, ignoring any period of membership since becoming a Transferred DB member or Frozen DB (Choice of Fund) member.

Savings Account

This account is maintained in respect of each Defined Benefit and Frozen DB (Choice of Fund) member, who may contribute on a voluntary basis. Any contributions these members make are credited to their Savings Accounts. This account is increased or decreased at the Credited Interest Rate.

Investment Linked Account

This account is maintained in respect of each Defined Benefit and Frozen DB (Choice of Fund) member and prior to 1 July 2008 was credited with extra contributions over and above Superannuation Guarantee requirements. From 1 July 2008, this account receives no contributions and is increased or decreased at the Credited Interest Rate.

Statutory Account

This account is maintained in respect of each Defined Benefit and Frozen DB (Choice of Fund) member and is credited with Company contributions according to the following schedule:

Year commencing	1 July 2024	1 July 2025 onwards
MSD (Divisions excluding MMD)		
% of Total Remuneration	10.31%	10.71%
+		
% of Bonus*	10.31%*	10.71%*

** Assumes bonus is structured as inclusive of super, otherwise minimum contributions at full SG Rate on bonus applies.*

This account is increased or decreased at the Credited Interest Rate and is fully vested and preserved in accordance with statutory requirements.

Company Account

This account is maintained in respect of each Accumulation Section and Transferred DB member and is credited with Company contributions made at rates as agreed with individual employees, being at least equal to the amount required to satisfy the Superannuation Guarantee legislation (currently 11.5% of Ordinary Time Earnings). This account is increased or decreased with investment earnings according to the member's chosen investment option.

Member Account

This account is maintained in respect of each Accumulation Section and Transferred DB member. Any voluntary contributions these members make are credited to their Member Account and increase/decrease with investment earnings, according to the member's chosen investment option.

Rollover Account

This account is maintained in respect of each Accumulation Section and Transferred DB member. Any rollovers these members make are credited to their Rollover Account and increase/decrease with investment earnings according to the member's chosen investment option.

Where tax is payable on contributions, it will be debited from accounts.

Surcharge Account

Instalments paid by the Plan in respect of any member under the Superannuation Contributions Tax (Assessment and Collection) Act 1997 are recorded on the member's Surcharge Account. This account is increased or decreased at the Credited Interest Rate for Defined Benefit members or according to the investment earnings of the member's chosen investment option for Accumulation Section members. The balance of the account is deducted from the benefit payable in respect of the member when it is paid.

SUMMARY OF BENEFITS – DEFINED BENEFIT MEMBERS

Normal and Early Retirement Benefit

A Lump Sum Benefit equal to the member's Savings Account less the member's Surcharge Account and Family Law Account plus the greater of:

a. 13% of Final Average Salary for each year of Fund Service; and

b. the member's Investment Linked Account and the member's Statutory Account.

The Lump Sum Benefit may be wholly or partly paid as an **Annual Pension Benefit** as explained below.

This benefit is subject to a guarantee for some members that the benefit will be no less than that applying under the Rules of the Plan as at 1 October 1990.

The **Annual Pension Benefit** is equal to:

Pension Conversion Factor × Lump Sum Benefit (or DB Lump Sum Benefit for Transferred DB Members) reduced by 1.5% for each year and complete month between the date of retirement and the Normal Retirement Date,

where Pension Conversion Factor equals 6.5%.

Death Benefit

A lump sum equal to the member's Savings Account less the member's Surcharge Account plus the greater of:

a. the member's Investment Linked Account and the member's Statutory Account;

   plus

   18% of Benefit Salary for each year remaining to age 65.

b. 3 times Benefit Salary.

This benefit is subject to a guarantee for some members that the benefit will be no less than that applying under the Rules of the Plan as at 1 October 1990.

Total and Permanent Disablement Benefit

A lump sum equal to the Death Benefit.

Salary Continuance Benefit

A monthly income of $^1/_{12}$th of 75% of Benefit Salary, payable after 3 months disability for a maximum period of 2 years. Employees must meet eligibility conditions to be covered for insurance.

Resignation Benefit

A lump sum equal to the sum of:

a. Savings Account;

b. Statutory Account;

c. Investment Linked Account;

less

d. Surcharge Account and Family Law Account.

Pension Option

A pension payable for life, guaranteed to be paid for at least 10 years at the full level in the event of death within this period. Upon death, the pension continues to be paid to the member's spouse at the rate of two-thirds the pension in payment at the time of death. Pensions are increased each year in line with inflation up to a maximum of 5%.

The rate at which a lump sum retirement benefit can be converted to a pension (Pension Conversion Factor) is determined by the Trustee on the advice of the Actuary.

Frozen Retained Benefit

Defined benefit members who transfer to employment with Merck overseas may leave their benefit in the Defined Benefit Section of the Plan until they leave or retire from their position. They remain defined benefit members of the Plan and their benefit is frozen and increases or decreases in line with the Defined Benefit Credited Interest Rate.

Retrenchment Benefit

Defined Benefit members who have been retrenched and at the date of retrenchment are between the ages of 48 and 55, have an option of retaining their leaving service benefit in the Plan until age 55. The benefit payable at age 55 is the lump sum defined benefit based on the member's accrued retirement multiple at retrenchment, times their Final Average Salary at retrenchment, with no salary growth to age 55. The retrenchment benefit is subject to a minimum of the member's resignation benefit. Conversion to a lifetime pension is not available at age 55.

SUMMARY OF BENEFITS – ACCUMULATION MEMBERS

Resignation and Retirement Benefit

A lump sum equal to the sum of all accounts.

Death and Total and Permanent Disablement

A lump sum equal to the member's Resignation Benefit at date of death/TPD plus an insured component. Employees must meet eligibility conditions to be covered for TPD insurance.

Salary Continuance Benefit

A monthly income of $^{1}/_{12}$th of 75% of Benefit Salary, payable after 3 months disability for a maximum period of 2 years. Employees must meet eligibility conditions to be covered for insurance.

SUMMARY OF BENEFITS – TRANSFERRED DB MEMBERS AND FROZEN DB (CHOICE OF FUND) MEMBERS

Note that Frozen DB (Choice of Fund) members do not receive any Company contributions and do not receive any insurance benefits.

Normal and Early Retirement Benefit

For these members, the Normal and Early Retirement benefit is the sum of (a) and (b) as follows:

a. a DB Lump Sum Benefit equal to the greater of:

    i. 13% of Final Average Salary for each year of Fund Service; and

    ii. the member's Investment Linked Account and the member's Statutory Account,

plus

b. an Accumulation Lump Sum Benefit equal to the member's Member Account plus the member's Company Account plus the member's Rollover Account less the member's Surcharge Account and Family Law Account.

The DB Lump Sum Benefit may be wholly or partly paid as an **Annual Pension Benefit** as explained above.

Resignation Benefit

For these members, the Resignation benefit is a lump sum equal to the sum of all accounts.

Death and Total and Permanent Disablement

For Transferred DB members, a lump sum equal to the member's Resignation Benefit at date of death/TPD plus an insured component. Employees must meet eligibility conditions to be covered for insurance.

For Frozen DB (Choice of Fund) members, a lump sum equal to the members' Resignation Benefit at date of Death/TPD. No insurance benefit applies.

Salary Continuance Benefit

For Transferred DB members, a monthly income of $^{1}/_{12}$th of 75% of Benefit Salary, payable after 3 months disability for a maximum period of 2 years. Employees must meet eligibility conditions to be covered for insurance.

For Frozen DB (Choice of fund) members, no salary continuance benefit applies.

Funeral Benefits

Under the Old Rules of the Plan that applied prior to 1 October 1990, there is a closed group of former retired employees (who were once members of the Plan but are no longer members as their retirement benefits have been fully paid out) who have an entitlement to a $2,000 payment on their death. As at 1 July 2024, there remain 83 of these former retired employees.

SUMMARY OF BENEFITS – SCHERING-PLOUGH MEMBERS

Categories

A: Defined benefit staff
B: Defined benefit executives
NC: Accumulation only members

In addition, there are separate categories for retained benefit members, spouse members and insurance only members.

Eligibility

Full time employees from commencement of service are eligible to join the Accumulation or Insurance Only category. The Defined Benefit categories were closed to new members from 1 October 2005.

Contributions

Category	Member Contributions	Company Contributions
A	5% of salary	Actuarially determined
B	2% of salary	Actuarially determined
NC	Voluntary	11.5% of Ordinary Time Earnings (as capped for SG purposes) or such higher amount as required to comply with SG legislation

The Employer also meets the cost of insurance and expenses of running the Fund for all active members.

Definitions

"Normal Retirement Age" is age 65.

"Final Average Salary" is calculated as the average of the three years' annual Salary prior to retirement.

"Superannuation Salary" is the annual rate of basic salary or other amount as determined by the Company and advised to the Trustee.

"Membership" is calculated using complete years and months with a part month counted as one month.

DEFINED BENEFITS

Normal Retirement Benefit

i. Lump sum benefit equal to 16% × Membership in Category A or B × Final Average Salary; or

ii. Annual Lifetime Pension benefit equal to 1.6% × Membership in Category A or B × Final Average Salary.

Early Retirement Benefit

Payable after age 55:

i. Lump sum benefit equal to 16% × Membership in Category A or B × Final Average Salary; or

ii. Pension benefit equal to 1.6% × Membership in Category A or B × Final Average Salary × (1 – $^1/_3$% × 12 × Potential Membership to Age 65 in Category A or B)

Resignation Benefit

A lump sum equal to the sum of the Basic Benefit, Company Financed Benefit and Vested Benefit.

Basic Benefit is calculated as 5% × Membership in Category A or B × Final Average Salary.

Company Financed Benefit is calculated as M × Final Average Salary where M is calculated at the aggregate of the following benefit accruals:

Membership Period	Percentage Accrual
Prior to 30 June 1992	3.0% per year
From 1 July 1992 to 31 December 1992	4.0% per year
From 1 January 1993 to 30 June 1995	5.0% per year
From 1 July 1995 to 30 June 1998	6.0% per year
From 1 July 1998 to 30 June 2000	7.0% per year
From 1 July 2000 to 30 June 2002	8.0% per year
From 1 July 2002 to 30 June 2013	9.0% per year
From 1 July 2013 to 30 June 2014	9.25% per year
From 1 July 2014 to 30 June 2021	9.5% per year
From 1 July 2021 to 30 June 2022	10.0% per year
From 1 July 2022 to 30 June 2023	10.5% per year
From 1 July 2023 to 30 June 2024	11.0% per year
From 1 July 2024 to 30 June 2025	11.5% per year
From 1 July 2025 onwards	12.0% per year

Accrued Benefit is calculated as 16% × Membership in Category A or B × Final Average Salary.

Vested Benefit is calculated as 5% × Membership in Category A or B × (Accrued Benefit – Basic Benefit – Company Financed Benefit).

In addition to the benefits above, defined benefit members are eligible for additional accumulation benefits on normal retirement, early retirement, resignation, death or disability.

Death Benefit

A lump sum benefit equal to the greater of the prospective normal retirement benefit and 4 times Superannuation Salary.

Total and Permanent Disablement Benefit

As for Death Benefit.

Total and Temporary Disablement Benefit

After 90 days waiting period, the member can apply for monthly income benefit equal to 75% of salary payable for a maximum of 24 months.

ACCUMULATION BENEFITS

For the accumulation category the Company contributes at the rate of 11.5% (or in accordance with the rate specified in the SG Act) of Superannuation Salary. The Company also meets the expenses of running the Fund for this category.

Member contributions are voluntary.

Part of the death and total and permanent disablement benefit not covered by the accumulation of member and Company contributions with investment earnings (positive or negative) less tax is provided through an insurance policy.

The total and temporary disablement benefits are provided through an insurance policy.

Appendix B: Details of Membership

MSD AUSTRALIA SUPERANNUATION PLAN

Membership as at 1 July 2024

	Number of Members	Total Benefit Salaries $	Average Salaries $	Average Age (Years)	Average Completed Membership* (Years)
MSD Actives	25	6,122,693	244,908	54.0	25.4
SCHP Actives	1	**	**	**	**
Organon Actives	5	1,027,039	205,408	55.3	23.1
Retrenched DB	1	N/A	N/A	**	**
TOTAL	**32**	**	**	**	**

* Membership to date of transfer to Accumulation Section / external fund or date retrenched.

** Amounts not shown for privacy purposes.

Pension Membership	Number	Annual Pensions $	Average Age (weighted by Pension) (Years)
Ex-MSD Pensioners	72	4,524,103	76.8
Ex-Merial (BI) Pensioners	10	1,037,031	77.7
Ex-Schering-Plough Pensioners	2	*	*
Ex-Organon Pensioners	1	*	*
TOTAL	**85**	*	*

* Amounts not shown for privacy purposes.

The weighted average term of the defined benefit liabilities as at 1 July 2024 is 9.7 years.

In addition to these 32 employee members with Defined Benefit entitlements and 85 pensioners, there were:

- 273 employee members in the Accumulation Category (excluding Transferred DB members); and
- 429 Insurance Only and Retained Benefit members.

Appendix C: Valuation Method and Assumptions

Valuation Method

Attained Age

Asset Value

Market value at the valuation date.

Investment Returns

6.75% p.a. compound (net of investment expenses and taxes).

7.3% p.a. compound (net of investment expenses but before tax is deducted, net of pension expenses of 0.2% p.a.).

Inflationary Salary Increase

4.0% p.a. compound.

Rates of Pension Increase

2.60% p.a. compound for both current pensions in payment and future pensions.

Rates of Mortality, Total and Permanent Disability (TPD), and Leaving Service

Examples of rates at which members leave the Plan per year per 10,000 members:

Age Last Birthday	Death	TPD	Leaving Service (Male)	Leaving Service (Female)
25	4	1	1,000	2,667
30	4	1	1,000	1,967
35	5	2	1,000	1,300
40	7	3	867	867
45	11	7	533	533
50	17	14	200	200
55	27	25	0	0
60	45	53	0	0

Rates of Early Retirement

The number of members reaching a given age who are expected to retire are as follows:

Age Last Birthday	Number per year per 10,000 members	
	Males	Females
55	1,000	2,000
56	1,000	2,000
57	1,000	2,000
58	1,000	2,000
59	1,500	2,000
60	1,500	2,000
61	1,500	2,000
62	1,500	2,000
63	2,000	2,000
64	4,000	4,000
65	10,000	10,000

Rates of Retrenchment

Nil.

Pensioner Mortality

We have adopted a scaled adjustment of 50% to age 55 up to 100% at age 100 of the mortality rates published in the ALT2015-17. The rates are then assumed to reduce each year beyond 2016 in line with the published 25 year improvement factors in the ALT2015-17.

Pension Take-up

It was assumed that, across the entire Plan, 50% of total retirement and early retirement benefits would be taken as a Pension.

Pension Conversion Factor

The annual pension conversion factor at age 65 is 6.5%.

Future Expense Allowance

Investment management expenses are allowed for in the investment return assumptions shown above which are assumed to be net of investment expenses.

Administration expenses for active members have been assumed to equal 1.0% of Defined Benefit members' Benefit Salaries. An allowance of 0.2% of has been made for pension expenses. This has been deducted from the gross of tax discount rate, resulting in a rate of 7.30% p.a. assumed in relation to pension assets.

Group life insurance costs equal to 1.0% of Defined Benefit members' Benefit Salaries have been allowed for in determining deductible expenses for tax purposes.

New Entrants

No allowance for new entrants.

Taxes

Tax on investment income is allowed for in the Investment Returns shown above.

Tax on contributions has been allowed for as 15% of Company contributions reduced by allowable deductions (administration and insurance costs). No allowance has been made for GST or Reduced Input Tax Credits.

Surcharge Tax

No allowance has been made for the Surcharge Tax as the Trustee offsets any tax payable by the Plan against the benefits of the relevant members, if the member does not reimburse the Plan for the surcharge payable.

Composition of Membership

It has been assumed that members remain in their current Category.

It has also been assumed that the same proportion of current membership remains in each defined benefit category as at present in determining a single Company contribution rate.

Maternity Leave and Leave of Absence

For any Defined Benefit members who were on maternity leave or leave without pay at 1 July 2024, a reserve has been established equal to their Accrued Retirement Benefits.

For any Transferred DB members and Choice of Fund members at 1 July 2024, a reserve has been established equal to their defined benefit component of their Accrued Retirement benefit.

Reserve for Accumulation Benefits

An amount of $85,429,888 represents the total accumulation benefits of members at 1 July 2024.

This figure includes $81,596,972 representing the total accumulation benefits for the Accumulation members, Spouse members and Retained Benefit members, as well as the Accumulation Section benefit for the Schering-Plough defined benefit members.

Voluntary accounts totalling $2,897,817 in respect of Merck defined benefit members and $935,099 in respect of Organon defined benefit members are also included.

The Valuation results set out in Section 6 makes no allowance for future contributions to these accumulation accounts as the future contributions and the benefits they produce are assumed to offset one another.

Appendix D: Statements required under Regulation 23 of SPS160

The statements required under paragraphs 23(a) to (h) of SPS 160 for regular investigations are set out below. Note, these are provided in relation to the Plan's defined benefit liabilities only.

a. Plan Assets

The net market value of the Plan's assets attributable to the defined benefit liabilities at 1 July 2024 was $107,168,567. This amount is the amount provided by the Plan Administrator and excludes assets attributable to accumulation members but includes the accumulation balances of defined benefit members.

This value of assets at 1 July 2024 was used to determine the recommended Company contribution rates and assess the funding status measures and is also referred to as the "actuarial value" of the assets.

b. Projection of Vested Benefits

The projected likely future financial position of the defined benefit category of the Plan during the three years following the valuation date and based on my best estimate assumptions is as follows:

Date	Assets ($m)	Vested Benefits ($m)	Vested Benefits Index (%)
1 July 2024	107.2	89.7	119.5%
1 July 2025	107.4	88.7	121.0%
1 July 2026	107.9	88.0	122.7%
1 July 2027	108.5	87.2	124.5%

c. Accrued Benefits

In my opinion, the value of the assets of the defined benefit members of the Plan at 1 July 2024 was adequate to meet the liabilities in respect of the accrued benefits of defined benefit members of the Plan (measured as the value of members' accrued entitlements using the valuation assumptions). We consider that the assumptions and valuation methods set out in this report are appropriate for determining the accrued liability.

d. Vested Benefits

At 1 July 2024 the Plan was in a satisfactory financial position, as defined in SPS 160. In my opinion the Plan does not need to be treated as being in an unsatisfactory financial position. The shortfall limit does not need to be reviewed.

e. Minimum Benefits

At 1 July 2024 the value of the minimum benefits of the defined benefit members of the Plan was $89,244,198, which was less than the defined benefit assets at that date. Minimum benefits are as defined in Regulation 5.04 of the Superannuation Industry (Supervision) Regulations.

The coverage of the MRBs for all defined benefit members of the Plan as at 1 July 2024 was 120.1%, and for all Plan members (including accumulation members) was 110.5%.

f. Funding and Solvency Certificates

Funding and Solvency Certificates for the Plan covering the year to 1 July 2024 have been obtained. The Plan was solvent, as defined in the Superannuation Industry (Supervision) Regulations at 1 July 2024. In my opinion, the solvency of the Plan will be able to be certified in any other Funding and Solvency Certificate required under the Regulations during the period to 1 July 2027.

g. Recommended Company Contributions

The recommended company contributions in respect of Defined Benefit members are as follows:

	MSD	Merial (BI)	Schering-Plough	Organon (ex-MSD members)	Organon (ex-Schering-Plough member)
Contributions on Total Remuneration (TR)	11.60%	NA	Nil	11.60%	Nil
Contributions on Bonus (and other OTE)	10.31%*	NA	11.50%*	10.31%*	11.50%*

* These contribution rates should increase in line with changes to the Superannuation Guarantee requirements.

The Company should also pay pre-tax member contributions for members who have elected to make voluntary contributions by salary sacrifice.

h. **Defined Benefit Pensioners**

In my opinion, as at 1 July 2024 there is a high degree of probability that the Plan will be able to pay pensions as required in the governing rules.

Daniel Ham
Fellow of The Institute of Actuaries of Australia

17 December 2024

D: MN | TR: JD | ER, CR: DH

Towers Watson Australia Pty Ltd
ABN 45 002 415 349 AFSL 229921
Level 16, 123 Pitt Street
Sydney NSW 2000 Australia

T +61 2 9285 4000

https://wtwonlineau.sharepoint.com/sites/tctclient_652841_MSD_25/Documents/04.01_Actl_Valn/5_Deliverables/MSD Valuation Report 1 July 2024.docx

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