Willis Towers Watson

Nissan Superannuation Plan

Report on the Actuarial Investigation as at 31 March 2019

30 September 2019

Summary

I am pleased to present my report to the Trustee of the Nissan Superannuation Plan, Towers Watson Superannuation Pty Ltd (AFSL 236049), on the actuarial investigation into the Nissan Superannuation Plan as at 31 March 2019.

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

Solvency

The financial position of the Plan has deteriorated over the intervaluation period, as shown in the reduction in the Vested Benefits Index from 111.2% as at 31 March 2016 to 103.3% as at 31 March 2019.

The solvency measures (considering defined benefits only) as at 31 March 2016 and 31 March 2019 are also shown below:

Measure	31 March 2016	31 March 2019
VBI	111.2%	103.3%
PVABI	108.1%	102.9%
MRBI	150.9%	143.2%

Funding

The company contribution rate determined under the Aggregate funding method is calculated as 8.9% of salaries as at 31 March 2019.

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

Membership Category	Recommended Company contribution rate (as a % of Salaries)
DCD Section A (Staff level)	The applying SG[1] minimum rate credited to Members, plus an allowance of 1.0% for insurance premiums and expenses.
DCD Section B (Exec level)	14.0%[1] credited to Members, plus an allowance of 2.0% for insurance premiums and expenses.
DBD Class 1 (Staff level)	3.0%
DBD Class A (Exec level)	8.9%[2]

[1] The greater of the above contribution rate and the rate determined by applying the (SG) Minimum rate to Ordinary Time Earnings (OTE).
[2] Includes deemed Member contributions (5.9% gross of tax).

WillisTowersWatson

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Throughout this report the following terms are used:

Plan
Nissan Superannuation Plan

Trustee
Towers Watson Superannuation Pty Ltd (AFSL 236049)

Company
Nissan Motor Co. (Australia) Pty Ltd

Trust Deed or Rules
The Plan's Trust Deed dated 23 December 1977 including subsequent amendments.

The Investigation Date or Valuation Date
31 March 2019

Plus a monthly amount of $24,000 in relation to Plan expenses.

Other Matters involving Actuarial Oversight

I further recommend that the Trustee monitor the financial position of the Plan quarterly throughout the following investigation period.

An actuarial review of the Plan is required every three years. The next actuarial investigation of the Plan should be conducted with an effective date no later than 31 March 2022 and the recommended company contribution rates will be reviewed at that time or at an earlier date if considered appropriate as a consequence of the regular review of the VBI or as required by legislation.

I am not aware of any event since 31 March 2019 that warrants review of the recommendations in this report.

Tracy Polldore
Fellow of the Institute of Actuaries of Australia

30 September 2019

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Introduction

Scope

This investigation has been prepared effective 31 March 2019 for Towers Watson Superannuation Pty Ltd (AFSL 236049), the Trustee of the Plan, by the actuary to the Plan, Tracy Polldore, FIAA.

The main aims of the investigation are to examine the current financial position of the Plan and the long-term funding of the Plan's benefits, and to provide advice to the Trustee on the contribution rate at which the Company should contribute and on any other matters the actuary considers relevant.

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

This actuarial review has been conducted in order to meet the Trustee's obligations in accordance with Prudential Standard SPS 160 (SPS160) issued under section 34C of the Superannuation Industry (Supervision) Act (SIS Act).

This report has been prepared in accordance with Professional Standard 400, dated June 2017, issued by the Institute of Actuaries of Australia.

Previous Actuarial Investigation

The previous actuarial investigation of the Plan was carried out by Tracy Polldore, FIAA as at 31 March 2016, with the results of that investigation set out in a report dated 20 December 2016.

The report concluded that the Plan was not in an unsatisfactory financial position (as defined by SIS legislation) at that date, and recommended that the Company contribute to the Plan at:

From 1 April 2016 to 31 March 2017:

Membership Category	Recommended Company contribution rate (as a % of Salaries)
DCD Section A (Staff level)	The applying SG minimum rate[1] credited to Members, plus an allowance of 1.0% for insurance premiums and expenses
DCD Section B (Exec level)	14.0%[1] credited to Members, plus an allowance of 2.0% for insurance premiums and expenses.
DBD Class 1 (Staff level)	3.0%
DBD Class A (Exec level)	8.9%[2]

From 1 April 2017:

Membership Category	Recommended Company contribution rate (as a % of Salaries)
DCD Section A (Staff level)	The applying SG minimum rate[1] credited to Members, plus an allowance of 1.0% for insurance premiums and expenses
DCD Section B (Exec level)	14.0%[1] credited to Members, plus an allowance of 2.0% for insurance premiums and expenses.
DBD Class 1 (Staff level)	3.0%
DBD Class A (Exec level)	8.9%[2]

[1] The greater of the above contribution rate and the rate determined by applying the (SG) Minimum rate to Ordinary Time Earnings (OTE).
[2] Includes deemed Member contributions (5.9% gross of tax).

Plus a monthly amount of $15,000 in relation to Plan expenses. This additional amount was subsequently increased to $24,000 commencing 1 October 2017.

In addition to the rates recommended above, the Company also makes salary sacrifice contributions equal to 5.9% of salary in respect of any DBD Class 1 Member who have chosen this option, and any voluntary salary sacrifice contributions made by all Members.

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

Experience since 31 March 2019

Since 31 March 2019 the experience of the Plan has been as follows:

- The net return on the Plan's assets from the valuation date to 20 August 2019 was approximately 4.0%; and
- No members have exited the Plan.

The actual experience since 31 March 2019 has had a reasonable impact on the Plan. Because of this, experience since 31 March 2019 was considered when carrying out the projection of the financial position of the Plan from that date.

Limitations

This report is provided subject to the terms set out herein and in our engagement letter dated 14 June 2000 and the accompanying Terms and Conditions of Engagement. This report is provided solely for the Trustee's use and for the specific purposes indicated above. It may not be suitable for use in any other context or for any other purpose.

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

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

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

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

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

Solvency

Solvency Measures

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

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

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

	As at 31 March 2019			As at 31 March 2016		
Measure	Value of Liability	Value of Assets	Index	Value of Liability	Value of Assets	Index
VBI	$7,974,000	$8,238,000	103.3%	$7,823,000	$8,702,000	111.2%
PVABI	$8,009,000	$8,238,000	102.9%	$8,050,000	$8,702,000	108.1%
MRBI	$5,752,000	$8,238,000	143.2%	$5,768,000	$8,702,000	150.9%

Overall, the indices have reduced from those at the previous investigation date. This is primarily a result of the lower level of company contributions made compared to the cost of accrual (including Plan expenses), although the negative impact of this was partially offset by positive financial experience over the intervaluation period.

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

Retrenchment Benefits, Other Discretionary or Contingent Benefits

Vested benefits are greater than the benefit payable on retrenchment and therefore, given vested benefits are fully funded, the Plan does not have any additional funding strain that would be caused by any retrenchments.

Termination Benefits

The Trust Deed of the Plan requires that Members receive a minimum benefit equal to their vested benefit on termination of the Plan. Any surplus may then be distributed as additional benefits. Hence, if the Plan had been terminated as at 31 March 2019, the assets of the Plan would have been sufficient to provide for Members' termination benefits, as defined in the Trust Deed.

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

Funding

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

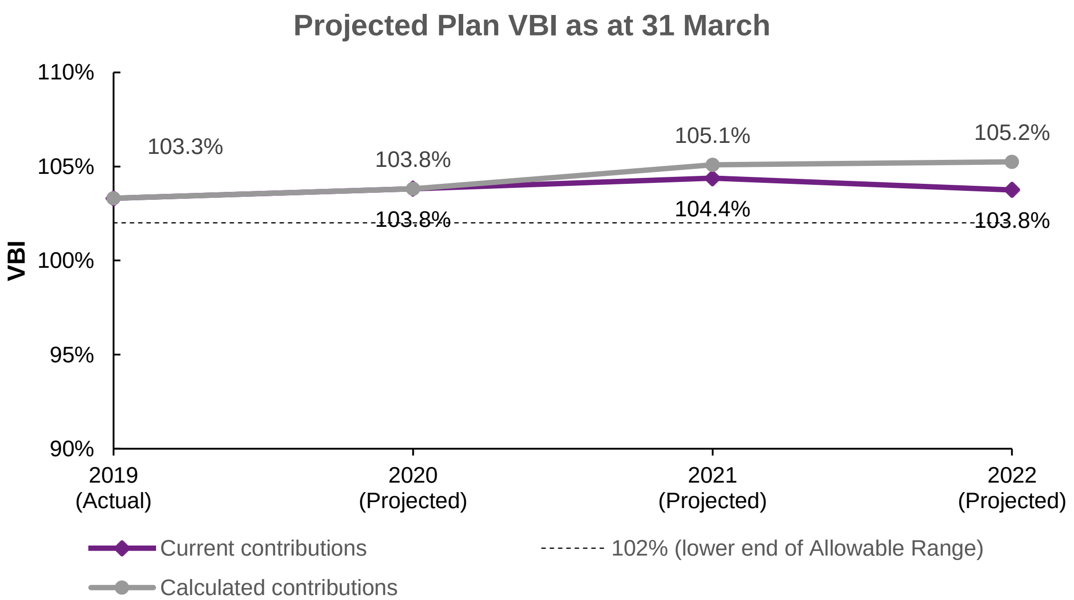
Long Term Funding results

The long-term Company contribution rate is calculated in the table below.

Calculation of Company Contribution Rate	$ or %
Total Service Liability	$8,816,000
Less Fair Value of Assets	($8,238,000)
Less Present Value of Member Contributions	$230,000
Liability to be funded by Company Contributions	$348,000
Present Value of 1% of Salaries	$46,000
Liability to be funded, as a percentage of salaries	7.6%
Required contribution rate, after allowing for tax and other costs	**8.9%**

The contribution rate calculated as at 31 March 2016 was 3.5%. The increase in the Company contribution rate calculated is mostly attributed to the change in the financial assumptions adopted for the current investigation and the weaker financial position as at the investigation date.

The Company has a Funding Policy dated 1 February 2012 that aims to maintain the Vested Benefits Index (VBI) within an Allowable Range of 102% and 112%. We have projected the Plan's VBI over the next three years based on the contributions calculated above (commencing from 1 April 2020) and also on current contribution rates.



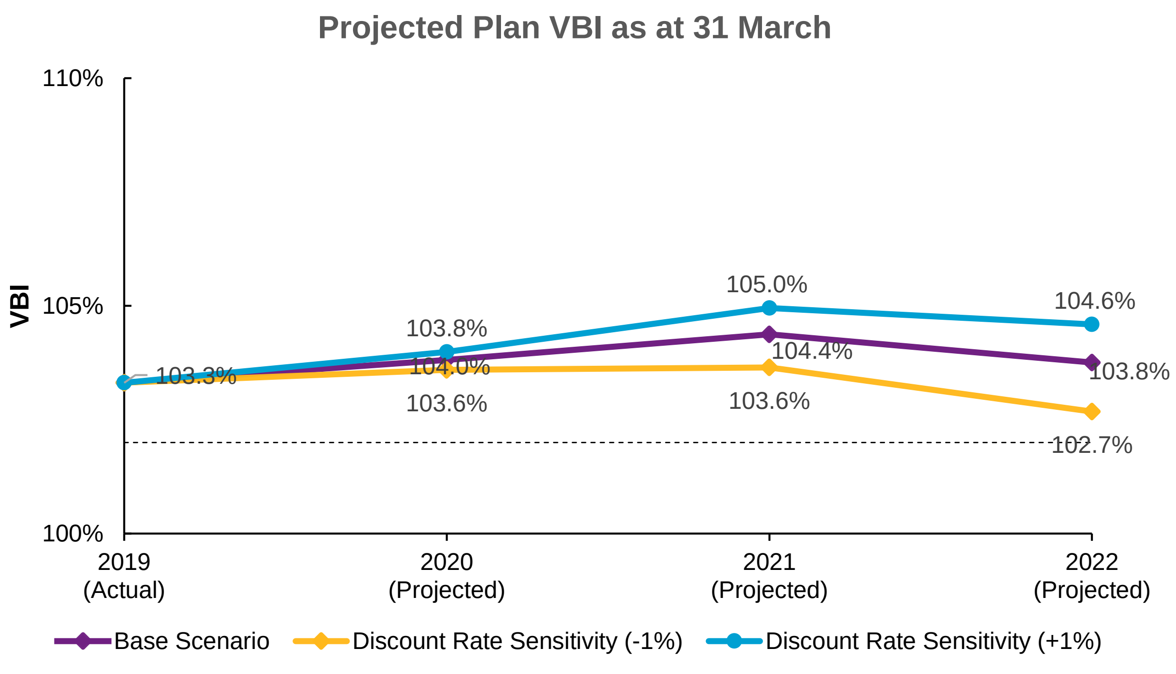
As can be seen from the graph, the current contribution rates remain sufficient to maintain the VBI within the Allowance Range of the Company's Funding policy.

Sensitivity Analysis – contribution rate and projections

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

	This Valuation Basis	Scenario 1 Investment Return Sensitivity +1%	Scenario 2 Investment Return Sensitivity -1%
Investment Returns	3.4%	4.4%	2.4%
Salary Increases	2.50%	2.50%	2.50%
Present Value of Accrued Benefits Index	102.9%	103.6%	101.8%
Long Term Contribution Rate (before any adjustment for surplus or deficit)	14.8%	14.3%	16.7%
Past Service Liabilities	$8,009,000	$7,952,000	$8,090,000

Similarly, the Plan's projected VBI over the next three years under the varied assumptions, assuming current contribution rates continue, are shown in the graph below:



These results show that the required Company contribution rate, as well as the Plan's projected financial position, is reasonably sensitive to long-term actuarial assumptions. While the sensitivities have been selected to be illustrative of reasonable changes in the valuation assumptions, they do not represent the upper or lower bounds of possible outcomes and more extreme outcomes are possible.

Summary

After considering the above results, the Company's Allowable Range specified in the Funding Policy and following discussions with the Company, we believe that current Company contribution rates are sufficient to meet the funding requirement of the Plan i.e.

Membership Category	Recommended Company contribution rate (as a % of Salaries)
DCD Section A (Staff level)	The applying SG minimum rate[1] credited to Members, plus an allowance of 1.0% for insurance premiums and expenses.
DCD Section B (Exec level)	14.0%[1] credited to Members, plus an allowance of 2.0% for insurance premiums and expenses.
DBD Class 1 (Staff level)	3.0%
DBD Class A (Exec level)	8.9%[2]

[1] The greater of the above contribution rate and the rate determined by applying the (SG) Minimum rate to Ordinary Time Earnings (OTE).
[2] Includes deemed Member contributions (5.9% gross of tax).

Plus a monthly amount of $24,000 in relation to Plan expenses.

Accordingly, I recommend that the Company contribute at the rates set out above until at least 31 March 2022 in respect of defined benefit members.

I continue to recommend that the Company contribute at the required amounts to meet any Superannuation Guarantee, contractual or any other obligations in respect of accumulation liabilities in the Plan.

We further recommend that the VBI position continue to be monitored quarterly throughout the following investigation period, to ensure that these contribution recommendations remain appropriate.

Other Matters Involving Actuarial Oversight

Investments

Investment Strategy

The return objective of the Plan's Investment Strategy for assets supporting defined benefits are:

a. Real Return Objective

- To achieve a return (net of tax and investment expenses) that exceeds the increase in CPI by at least 2.5% pa over moving five year periods.

b. Downside Risk Objective

- To limit the probability of a negative return over moving 1 year periods (calculated each quarter) to approximately 1 in 5-6 years.

To meet this objective, the assets supporting defined benefits are invested in the Balanced 50/50 investment option which has specific long term benchmark allocations to each asset class.

The actual and benchmark asset allocation of the Plan as at 31 March 2019 is:

Asset Class	Benchmark Asset Allocation %	Actual Asset Allocation %
Australian Equities	23.0	23.0
Global Equities (unhedged)	12.0	14.8
Global Equities (hedged)	12.0	9.5
Global Real Estate Investment Trusts (Hedged)	3.0	3.0
Total Growth	50.0	50.3
Australian Fixed Interest	20.0	29.6
Global Fixed Interest (Hedged)	20.0	10.2
Australian Cash	10.0	9.9
Total Defensive	50.0	49.7

In my opinion an investment strategy as described above is suitable for a Plan of this type having regard to its financial position, the underlying liabilities and the capacity of the respective employers to meet any funding shortfall.

Crediting Rate

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

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

Liquidity

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

Shortfall Limit

The Trustee currently has an approved shortfall limit of 98.0%.

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

Group Insurance

Death and Disablement Benefits

At the investigation date, the Plan has death and total and permanent disablement insurance with AXA/AMP in respect of the future service portion of members' death and disablement benefits.

The formula used to calculate the level of insurance for defined benefit members is:

Insured Component = Accrual Rate x Salary x Future Service to Age 65

As at the valuation date, the amounts of (over)/under insurance in the Plan are shown in the table below:

	($'000)
Total Death & TPD Benefits	9,004
Less Insurance Cover	1,412
Plan Exposure	7,592
Less Plan Assets[1]	(8,238)
(Over)/Under Insurance	(646)

[1] This asset figure is net of the operational risk financial requirement (ORFR) reserve.

The table above shows that death and disablement benefits are fully covered by insurance policies. We consider the current insurance arrangements adequate. Based on the overall circumstances of the Plan and the potential costs of changing any insurance arrangements we recommend that the current insurance formula be maintained.

Additional Information

Risks

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

Risk	Approach taken to risk
Investment returns on the existing assets could be insufficient to meet the Company's funding policy	The Trustee takes advice from the Plan Actuary on possible assumptions for future investment returns. In setting the future contributions the Plan Actuary considers the effect on the future financial position if investment returns are less than expected. The Trustee is able to agree further contributions with the Company at subsequent valuations if future returns prove insufficient.
Salary increases could be different from that assumed which could result in higher liabilities	Salary increases are generally linked to price inflation. The Trustee invests in assets that are expected to be correlated to future inflation in the longer term (sometimes referred to as "real" assets). This means that, over the longer term, such assets are expected to keep pace with inflation. Such assets include equities, property and index-linked bonds.
Falls in asset values might not be matched by similar falls in the value of the Plan's liabilities	The Trustee considers this risk when determining the Plan's investment strategy. It consults with the Company in order to understand the Company's appetite for bearing this risk and takes advice on the Company's ability to make good any shortfall that may arise. To the extent that such falls in asset values result in deficits at future valuations, the Company would be required to agree a recovery plan with the Trustee to restore full funding over a period of time.
Plan members remain employed longer than assumed	The Trustee adopts withdrawal assumptions that it regards as reasonable estimates of the expected future working lifetime of members. To the extent members continue to accrue benefits within the Plan for longer than expected this could cause the Plan's actual projected VBI to be lower than expected. To the extent the Company's Funding Policy targets a buffer above Vested Benefits this should not create a material risk.
Legislative changes could lead to increases in the Plan's liabilities	The Trustee takes legal and actuarial advice on changes in legislation and consults with the Company, where relevant.

Economic risk   Legal risk   Demographic risk

Benefits Summary

The Plan commenced on 1 October 1977. Its operations are governed by a Trust Deed dated 23 December 1977, as amended from time to time. The Nissan Executive Superannuation Trust (the NEST) commenced on 31 October 1986. Effective 1 November 2000, all Members and assets of the NEST were transferred into the Plan. The Plan is now closed to new Members.

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

Reference should be made to the Trust Deed for a full statement of the DBD's terms and conditions. This summary contains the main features only.

Categories of Membership

There are two remaining sections of membership in the DBD:

Class 1: former Class 1 Members who did not accept the offer to convert to defined contribution only benefits in the DCD.

Class A: former NEST Members who did not accept the offer to convert to defined contribution only benefits in the DCD

The DBD is now closed to new Members.

Contributions

Members: 5% (these contributions may be reduced or waived by the Principal Employer, during which time they are deemed to have been paid by the Member. Currently, Member contributions for Class A members are deemed).

All Members can make voluntary additional contributions.

Company: At the rates advised to the Trustee by the Actuary to ensure the stability of the Plan and to secure the rights of the Members.

Definitions

Normal Retirement Date

A Member's 65th birthday.

Final Average Salary (FAS)

The average of the Member's annual rate of salary during the three years prior to date ceased service.

Normal Retirement Benefit

A lump sum calculated as a percentage of the Member's FAS. The percentage is based on class and membership as follows:

Class 1 Members

15% times the number of years (pro-rata for completed months) of membership of Class 1.

Note that additional benefits apply in respect of membership of previous Nissan funds.

Class A Members

20% times the number of years (pro-rata for completed months) of membership of Class A.

Note that additional benefits apply in respect of membership of previous Nissan funds and membership of Class 1 prior to the Member joining Class A.

Early Retirement Benefit

Within 10 years of Normal Retirement Date, a lump sum calculated as for normal retirement but based on FAS and membership to the date of early retirement.

Note that the benefit payable on normal or early retirement is subject to a minimum of the resignation benefit.

Late Retirement Benefit

Members can continue to accrue benefits as described above up to age 70.

After age 70, the benefit payable is the lump sum that would have been payable at age 70, with interest at the Plan Earning Rate up to the date of leaving Service.

Death and Total & Permanent Disablement (TPD) Benefit

A lump sum calculated as for normal retirement but based on potential membership and the Member's prospective FAS at the Normal Retirement Date assuming that salary is unchanged from the date of death or disablement.

Leaving Service Benefit

A lump sum consisting of:

- Member contributions accumulated with interest at the relevant earning rates up to the date of exit; plus
- a further 10% of (a) for each completed year of Membership in excess of the first four years of membership (subject to an overall maximum of 100%).

Note that additional benefits may apply in respect of membership of previous Nissan funds.

In exceptional circumstances, such as retrenchment or serious ill-health the Principal Employer may, in its absolute discretion, direct the Trustee to increase the benefit paid up to an amount not greater than the actuarial reserve.

Accumulation Benefit

An Accumulation Account is maintained in respect of each Member of the Plan. Upon exit for any cause, the balance in the Account is payable to the Member, subject to preservation requirements. In practice, these Accounts are credited with the Company's 3% productivity award contributions plus interest at the Plan's declared interest crediting rate.

Superannuation Guarantee

All benefits are subject to the minimum benefit required under the Superannuation Guarantee (SG) legislation. The current Benefit Certificate was signed by Tracy Polldore, FIAA, on behalf of Towers Watson Australia Pty Ltd on 1 June 2015.

The Benefit Certificate in effect for the review period was signed by Tracy Polldore, FIAA, dated 1 June 2015.

Surcharge

Surcharge was abolished from 1 July 2005.

Relevant Members' benefits are reduced as necessary in order to meet the cost of the surcharge not met by the Company, in respect of periods prior to 30 June 2005.

Discretionary and contingent benefits

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

Changes to the benefits

Since the valuation as at 30 June 2016 no changes have been made to the Plan's benefits.

Summary of Data Used in this Investigation

Membership Data

Australian Administration Services Pty Limited (AAS) has responsibility for maintaining member records, payment of benefits and other administrative tasks of the Plan.

Membership details of the Plan as at 31 March 2019 were taken from the AAS administration system. We have checked the data for consistency and believe it to be sufficient for the purposes of this actuarial review.

The following table shows a summary of the membership as at 31 March 2016 and 31 March 2019:

	31 March 2016	31 March 2019
Number of Members	16	11
Average Membership	26.2 years	30.3 years
Average Age	57.3 years	58.2 years

Assets Data

The value of the Plan's assets as at 31 March 2019 was taken from the audited financial statements. The assets have been adjusted for the overstatement of the Plan's deferred tax liability by $204,000.

The adjusted fair value of assets as disclosed, less any amount held to meet the Operational Risk Financial Requirement, was $32,786,000. Because this investigation is focused on the defined benefits, we have deducted an amount of $24,548,000 from this value in respect of accumulation liabilities (including unvested DBSA amounts) to calculate the value of assets that are used to support defined benefits. The resultant value of $8,238,000 was used in this valuation to determine contribution recommendations and Funding Status Measures.

Other than where noted, we are satisfied that there are no material data discrepancies and that the data provided is suitable for the purpose of this investigation. We have relied on the information provided for the purposes of this investigation. Although we have no reason to doubt the quality of asset information provided, the results of this investigation are dependent on the quality of the asset information. Any changes to the asset values above will have an impact on the outcome of the investigation and any resulting recommendations.

Funding Method, Assumptions and Experience

Funding Method

In this valuation, I have used the Aggregate Funding Method to determine the level of company contributions required. Under this method, I calculated the level of company contributions to be equal to the difference between the expected cost of members' future benefits and other relevant costs (such as administration expenses), and the expected level of future value of assets. This is then expressed as a percentage of salaries, by comparing the amount against the expected present value of 1% of members' salaries.

This funding method is suitable for this valuation as it calculates the expected long-term cost to the Company to fund benefits and other expenses that are payable by the Plan.

In producing my recommendations, I have also taken into account the pace of funding required to maintain certain short term solvency measures, in particular, that legislation requires the VBI to be above 100% and that the lower end of the Allowable Range within the Company's Funding Policy is 102%.

In the previous actuarial investigation, the Aggregate Funding Method was also used to determine the level of long term contributions. In my view this method remains appropriate.

Assumptions

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

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

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

Financial Assumptions

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

Investment Returns

The rate of return on the Plan's Assets (net of tax and investment expenses that are deducted from the investment return) from 31 March 2016 to 31 March 2019 are set out in the table below:

Year Ending	Net Investment Return
31 March 2017	9.9%
31 March 2018	5.0%
31 March 2019	8.1%
Overall	**7.7% p.a.**

Over the three-year period to 31 March 2019 the assets held in the Plan returned 7.7% p.a. which is higher than rate assumed in the previous investigation of 4.25% p.a. (net of tax and investment expenses). In isolation, this has had a positive impact on the financial position of the Plan.

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

Based on models of future investment returns developed by Willis Towers Watson, the current long term expectations of investment returns net of taxation and investment management expenses and the current strategic asset allocation of the Plan is 3.4% p.a..

Salary Increases

The average salary increases during the investigation period for the members remaining in the Plan as at 30 June 2019 was 2.9% p.a. This is slightly lower than the salary increases assumption adopted for the previous actuarial investigation of 3.0% pa. This has had a slightly positive impact on the financial position of the Plan.

The Company has confirmed that it expects long-term salary increases for the remaining members to average 2.5% p.a., which implies a real wage inflation of 0.5% p.a. above the current long term expectations of price increases of 2.0% p.a. based on modelling by Willis Towers Watson. This assumed rate of real wage inflation is consistent with that adopted at the previous review. I have therefore adopted this rate for the purpose of this investigation.

Administration Expenses and Insurance Costs

An expense allowance of $240,000 per annum ($20,000 per month) including insurance premiums has been made, this is consistent with recent experience.

Taxation

Allowance has been made for the 15% tax on future Company contributions, although it has been adjusted for allowable deductions such as administration and insurance expenses.

Demographic Assumptions

Rates of resignation, death and total and permanent disablement (TPD)

Sample exit rates at which members leave the Plan per year per 10,000 members:

Age	Resignation	Death	TPD
25	1,638	7	1
30	1,044	7	1
35	1,000	10	2
40	867	15	4
45	533	25	9
50	200	46	20
55	-	80	49

Rates of (Early) Retirement

Sample of rates at which members retire from the Plan per year per 10,000 members:

Age	Retire
55-59	1,000
60-64	1,500
65	10,000

Statistical Statements Under SPS 160

Nissan Superannuation Plan

Actuarial Investigation as at 31 March 2019

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

Plan Assets

At 31 March 2019 the net market value of assets of the Plan, excluding any amount held to meet the Operational Risk Financial Requirement (ORFR), was $8,238,000.

Projection of Defined Benefit Vested Benefit Index

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

Date	Defined Benefit Vested Benefits Index
31 March 2019	103.3%
31 March 2020	103.8%
31 March 2021	104.4%
31 March 2022	103.8%

Accrued Benefits

The value of the accrued liabilities of all members as at 31 March 2019 was 102.9%.

In my opinion, the value of the assets of the Plan at 31 March 2019 was adequate to meet the liabilities in respect of accrued benefits in the Plan (measured as the present value of members' accrued entitlements using the actuarial assumptions).

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

Vested Benefits

The value of the vested benefits of all members as at 31 March 2019 was $7,974,000.

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

Minimum benefits

The value of the liabilities in respect of the minimum benefits of members as at 31 March 2019 was $5,752,000 which is less than the value of assets held at that date.

Funding and Solvency Certificates

Funding and Solvency Certificates for the Plan covering the period from 31 March 2016 to 31 March 2019 required by the Superannuation Industry (Supervision) Act have been provided. In my opinion, I am likely to be able to provide Funding and Solvency Certificates for the Plan covering the period from 31 March 2019 to 31 March 2022.

Membership Category	Recommended Company contribution rate (as a % of Salaries)
DCD Section A (Staff level)	The applying SG minimum rate1 credited to Members, plus an allowance of 1.0% for insurance premiums and expenses.
DCD Section B (Exec level)	14.0%[1] credited to Members, plus an allowance of 2.0% for insurance premiums and expenses.
DBD Class 1 (Staff level)	3.0%
DBD Class A (Exec level)	8.9%[2]

[1] The greater of the above contribution rate and the rate determined by applying the (SG) Minimum rate to Ordinary Time Earnings (OTE).
[2] Includes deemed Member contributions (5.9% gross of tax).

Plus a monthly amount of $24,000 in relation to Plan expenses.

In addition, I continue to recommend that the Company contribute at the required amounts to meet any Superannuation Guarantee, contractual or any other obligations in respect of accumulation liabilities in the Plan.

Tracy Polldore
Fellow of the Institute of Actuaries of Australia

30 September 2019

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